09.04-04/04/91-00188

UNITED STATES MARINE CORPS
MARINE CORPS BASE
CAMP LEJEUNE, NORTH CAROLINA 28542-5001

IN REPLY REFER TO:
6286
BEMD

04 APR 1991

From: Commanding General, Marine Corps Base, Camp Lejeune
To: Commander, Atlantic Division, Naval Facilities Engineering Command, Code 1822, Camp Lejeune Remedial Project Manager, Norfolk, VA 23511-6287

Subj: TECHNICAL REVIEW COMMITTEE MEETING

Encl: (1) TRC Transcript of 21 March 1991 Meeting
(2) TRC List of Attendees from 21 March 1991 Project Manager's meeting

1. We would like to thank you for your participation in the most recent Technical Review Committee (TRC) meeting. Enclosures (1) and (2) are provided for your information.

2. We look forward to working with you on this project. If you have any questions regarding this matter, please contact Stephany Del Re-Johnson, Installation Restoration Program, Environmental Management Department at (919) 451-5093.

Julian I Wooten

JULIAN I. WOOTEN
By direction

TECHNICAL REVIEW COMMITTEE

21 March 1991

PERSONS PRESENT:
Julian Wooten, AC/S, EMD
Stephany Del Re, IRP Manager
Laurie Boucher, LANTDIV
Daryl Hutson, NUS Corp
Andrew Kendrick, NUS Corp
Vicki Bomberger, NUS Corp
Rick Shiver, N.C. Div of EnvMgt
Capt Glen Kelly, OSJA, CLNC
Capt K. D. White, DAO, CLNC
Capt J. S. Hinkle, OSJA, CLNC
Robin Savage, LANTDIV
Jack Butler, N.C. Superfund Sect
Mickey Hartnett, EPA, FedFac Sect
Al Austin, Facilities Dept, CLNC
Andrew Kissell, Atlantic Div, NavFacEng
Jim Meredith, EPA Region IV
Carl R. Froede, US EPA Region IV
Major Dave Mercier, EACO, CLNC
Mary Wheat, MCAS, New River

ENCLOSURE (1)

WOOTEN: I'm Julian Wooten, Assistant Chief of Staff, Environmental Management, here at Camp Lejeune. I'd like to welcome all of you here today. Many of you I have met. For the record, as we get started here, I think we should go around the table and get each one of you to tell who you are and what agency you represent, and then as we move along in the meeting, if you have some comments again, give your name and then proceed on with whatever question or comment that you might have.

I have with me here, Stephanie Del Re. I think most of you know her. She is our Installation Restoration Manager here at Camp Lejeune. We also have Rep's from LANTDIV, Laurie Boucher and Andy Kissell. I believe at this time--Andy, are you or Laurie going to take over and introduce the contractors and tell us what we're planning to do?

KISSELL: Laurie.

BOUCHER: Will everyone introduce themselves first?

WOOTEN: Yes. Al, if you would, start and we'll go around the table, and then those who are sitting to the side here.

AUSTIN: My name is Al Austin. I'm from the Facilities Department here at Camp Lejeune.

HARTNETT: I am Mickey Harnett. I am the Chief of the Department of Defense Remedial Unit in our Federal Facility Section in EPA, with the Super Fund Program.

BUTLER: I am Jack Butler with the State of North Carolina in the Super Fund Section.

SAVAGE: I'm Robin Savage and I'm with LANTDIV, Environmental Quality Division.

BOUCHER: I'm Laurie Boucher and I'm the Camp Lejeune Remedial Project Manager for LANTDIV.

BOMBERGER: I'm Vicki Bomberger. I am with NUS Corporation. We're consultants to LANTDIV on some of the work being done here at Lejeune.

KENDRICK: I'm Andy Kendrick. I am also with NUS; I'm the Project Geologist.

SHIVER: I am Rick Shiver. I work for the North Carolina Division of Environmental Management.

HUTSON: I'm Daryl Hutson and I'm also with NUS Corporation, and I am the Project Manager.

DEL RE: I'm Stephanie Del Re, Camp Lejeune's IR Manager.

KISSELL: I'm Andrew Kissell. I am an Environmental Engineer with the Atlantic Division, Naval Facilities.

MEREDITH: I am Jim Meredith with EPA Region IV. I'm the Senior Remedial Project Manager.

FROEDE: I'm Carl Froede and I am the Remedial Project Manager for Camp Lejeune with EPA.

MERCIER: I am Major Dave Mercier. I am Special Counsel, Environmental Law for Eastern Area Counsel Office here at Camp Lejeune.

WHEAT: Mary Wheat, Environmental Manager, MCAS, New River.

HINKLE: Steve Hinkle, Office of the Staff Judge Advocate here at Camp Lejeune.

WHITE: Ken White with the Base Public Affairs Office, Community Relations Representation for the Installation Restoration Program.

KELLY: Glen Kelly and I'm also with the Staff Judge Advocate's Office here at Marine Corps Base, Camp Lejeune.

WOOTEN: Okay. Laurie. Do I need to move over?

BOUCHER: No, I'll stand here. We have hired NUS Consultants out of Pittsburgh, Pennsylvania, to carry out some of the installation restoration work at Camp Lejeune. They have recently developed the project plans--which you should have all received in the mail about two months ago--for site inspections at nine sites that--we aren't sure with most of these sites if we have any contamination at all, and we're doing these investigations to see if we do have contamination or if we don't and we can drop them from the program. So at this time I'll turn the program over to Vicki Bomberger of NUS.

BOMBERGER: I'd like to start out by apologizing. I'm at the end of a cold. I hope you all can here me at the end of the room, particularly when I'm competing with the construction. (Referring to construction noise from the outside.)

BOMBERGER: As Laurie said, what we're going to do today is provide an overview of the planning documents that we've prepared for these nine specific sites, and what I intend to do is just spend about five minutes or so here setting the stage for you, and then I'm going to turn it over to Daryl and he's going to be discussing each site individually. Actually, probably most of the people in the room here are a heck of a lot more familiar with this map than I am (referring to an overhead transparency) but that sets the stage for Camp Lejeune, and the sites that we're going to be discussing are shown by number, and this figure is out of the work plan--if you have it with you.

Actually, environmental work has been underway here at Lejeune for almost ten years. Back in 1983, the Navy initiated the IAS which was a study reviewing the entire base, locating potential hazardous waste sites, and as a result of that study--I can't remember how many sites were identified--but a number of them where the suspicion for contamination was fairly high automatically moved on into the Navy's program, and sampling and analyses were conducted at those sites. There were many sites, however, after doing literature review, discussions with employees here at the base, visual inspection, that the contractor at the time and the Navy felt really were not problem sites and were actually dropped from the program at that point. Some of the sites we're going to be discussing today are--at least six of them--are these sites that were originally dropped, and now we're going to go back and take a little bit closer look for a variety of reasons just to see if that was the proper process at the time, and if not, these sites are going to have to move on into an RI. One of the sites that we're taking a look at in this work plan is a site where we do have a little bit of data, but it just isn't sufficient to determine whether we need to drop it or it has to move on into the formal Navy Super Fund Program. And in addition to that, there are two sites that have just been recently identified. So these nine sites are sort of a composite for a variety of reasons that weren't included in some of the ongoing work that's been done since 1983.

The objection of our investigation for every one of these sites is the same, however. We want to determine ultimately whether there are no contaminants of concern at these sites and/or if we do find some minor contamination, that the risk assessment would demonstrate that there is no threat to the human health or the environment, and at which point, the site would be dropped from further investigation.

The second objective is that some of the contaminants that were detected are at low levels, but additional data is going to be

required before we can either drop or continue it on. Obviously we hope we don't have a lot of sites in that particular category.

And ultimately, the last objective would be to determine whether there is extensive contamination and we're going to have to conduct a remedial investigation. Probably even more so we hope we don't have too many in that category.

As Laurie mentioned, what we're discussing today is a series of planning documents. There is the work plan which provides for the scope of the investigation and the rationale for what we are going to be sampling and analyzing. There is a second volume that more specifically discusses how the sampling and analysis will be conducted; and lastly, there is a document that will discuss the health and safety plan, how we will ensure that the people working on the site when doing this work will be properly protected in the event that there is contamination on the site.

I'm going to mention briefly--and again I think you are all aware of this--that this base was established in 1940. That's 50 years ago. I don't think the phrase "toxic waste" was coined at that point. Neither were there requirements for reporting how much material was disposed, where it was disposed, what types of materials were disposed, and as a result of that, many of the sites we're taking a look at, there just isn't enough historical information available to determine what might have been disposed. This makes it difficult for us when we are trying to develop an appropriate analytical program, but one that is also cost effective. Wherever possible you really don't want to have to go out and sample and analyze for all possible constituents.

One thing that we are going to be doing, once the results are back in--while we will be looking at any number of concerns here on the base, there are three that are somewhat unique to this particular base that we will really be taking a close look at. First of all is ground water. I don't know if you are all aware of it or not, but all the Base domestic water that you drink comes from ground water beneath Camp Lejeune, and that's obviously a priority, to determine whether ground water is a problem or not.

A second problem unique to a base like Camp Lejeune is its location. Relative topographically, there are wetlands, and wetlands--as I'm sure most of you know--is a very large issue in North Carolina. And lastly, we also have concerns about the equatic environment. North Carolina has a large commercial fishing and shellfish industry, and in addition to that, there is also the tourist fishing, and even Base personnel and local community personnel that use the waters around the Base.

To that end, we have scoped our investigation to make sure that these issues are all addressed, and as a result, as Daryl goes through each site, we have ground water samples that we're going to be collecting, and most of these ground water samples are preliminarily the shallow aquifer--sort of a first line of defense--that's what we're going to take a look at. Secondly, we're going to be taking a look at some surface water/sediment samples at several of the sites, and we also are going to be taking a look at some soil samples.

To go back to the geology just for one real quick moment, for anyone that is not familiar with the hydrogeology of the Base, it's essentially a series of flat-lying unconsolidated units that have been tilted on end. At Camp Lejeune, there is an upper layer which would be something like this sand unit (referring to transparency) and if there were ever hazardous constituents that would migrate down through the soil, it would hit the ground water in that sand unit first. Throughout the Base, there are confining and semi-confining units beneath that sand, clay-type material, which hopefully in many instances would prevent further contamination from migrating even lower into the next underlying aquifer, which is the aquifer that your Base wells are placed in.

This is just one last quick overhead (referring to transparency)--and I'm going to turn it over to Daryl--showing a little bit more clearly that topographically at the Base, you have a range between ten and twenty feet beneath sea level. You don't have a lot of high expressions topographically. This results is very shallow gradient in your water table. It also makes determining ground water flow directions difficult in very localized areas. For example--and that isn't really shown on this figure--in the areas of the runways. Most of the water in the surface aquifer tends to flow in the direction of the slope. This is just important to remember when we're taking a look at where we placed our monitoring wells at the sites Daryl is going to be discussing.

As a minimum, we would like to see--wherever we see that ground water is going to be a problem--three wells, so you can do a triangulation and determine the actual ground water flow location. This figure also shows again the relationship between the superficial aquifer, the confining or--as we really know here is a semi-confining bed, and the deeper aquifer that you obtain your well supply from.

I'm going to go ahead and turn it over to Daryl. I want to make one other real quick comment. We are going to be doing these one site at a time with question and answer at the end of each

site. I think in general you should feel free to go ahead and ask a question at any time. Perhaps I guess more quickly, if anyone has a question on anything I've mentioned so far before we move on to the site specific issues. Okay.

HUTSON: As Vicki pointed out, we're going to cover each site individually, and do feel free to ask questions, although at the end I do leave a time for questions.

Just to give you a quick overview of what I'll cover on each site, I'll start out with the general background and kind of let you know what's been going on at that site, and as far as providing some type of--let you know physically what it looks like topographically, me and Andy Kendrick here the last couple of days have gone out to the different sites with a video cam, and we actually took some video footage of the sites. Some of the sites are not as good as the others, but I think it will give you a general idea of the vegetation and, like I said, the topography and what physically is there on the site.

The first site I'm going to cover--I'm actually going to go through the sites in the order of the work plan. It varies a little bit from the agenda. And all the overheads I'm going to show are actually in the work plan as well, so if anyone has a problem seeing, you can refer to that.

The first site we're going to discuss is Site #7 which is the Tarawa Terrace Dump. (Transparency overhead.) The dump is estimated to be about five acres in size, and it actually came about with the construction of the housing that's on the opposite side of Tarawa Boulevard there, not shown on the map. It is believed that it was used probably sometime in the 50's, and it was closed sometime probably around 1972. Basically what we believe that we will find in the dump is construction debris, maybe some household trash. In addition you'll note the Wastewater Treatment Plant on the bottom of the figure, and at the beginning of the site, you'll notice on the video, there is some filture media that's from the Wastewater Treatment Plant that has been placed on the site. In the video it will look more like a orangy sand. I'd like to point out that there has been no previous investigations performed thus far on Tarawa Terrace, so it truly is a site inspection, and we're basically trying to determine if indeed there is a problem with hazardous waste, and if there is a threat to the environment.

Right now I'll move the TV over. I will try to describe what hopefully you can see. (Video recording on TV monitor.) Right now what you're looking at is the Wastewater Treatment Facility that was on the bottom of the map, and as he scans around, you're now

looking back from the bottom of the map into the site. You'll see that it's heavily vegetated--it's very woody. And right there at the bottom is the filter media from the Wastewater Treatment Plant. This clearing here is an electrical right of way that actually goes all the way from the treatment plant to Tarawa Boulevard, so it will help--as far as site access--the drillers or whatnot when they're trying to do the borings and the wells will probably go down that right of way and then off into the site. You may be able to tell--I don't know--some of the uneven disturbed areas. This is an actual--this is right in the right of way--and it's a mound, and I don't know if you can see, but there's some concrete and some construction debris coming up. You really can't tell, but there's like some little disturbed areas from the general landfill out into the woods.

MEREDITH: What kind of media is that? Is it sand?

HUTSON: They're calling it sand, but it's more like some type of a bead.

WOOTEN: It's a by-product of the Wastewater Treatment process here. They put sand in there, and it uses iron now--limestone that they use in lime treatment that creates this.

MEREDITH: From the water treatment?

WOOTEN: They've used that in our Sewage Treatment Plant drying beds over the years.

MEREDITH: I see.

HUTSON: Where we are now is actually on the other side of Tarawa Terrace--kind of like behind the community center--and basically there's just some miscellaneous trash debris. That happens to be a drum right there. You can see some of the disturbed moundy areas on the actual site in the topography. It is actually heavily forested and vegetated. It's not going to be real easy to get down there.

KISSELL: Did those trees grow subsequent to the place being used as a dump, or was the dump used with the trees there?

HUTSON: Probably a mixture of both. I think some of the trees were originally there probably as it was used as a dump. Some of the pine trees have grown up since. They grow pretty quickly. Hopefully that gives you some better idea of what--you know--instead of just looking at a map.

I want to summarize real quickly what we will be doing at this site to try to determine and characterize the site to see if there has been a problem as far as hazardous waste dumping or anything like that. We plan to install three 25-foot ground water monitoring wells and place five 15-foot soil borings. I'm going to show you where we've roughly identified where we'll place them, and you may have noticed in the work plan, what we've said was that it will be actually located in the field by the project geologist. But just to give you the general feel for the rationale of why we have them in the general areas that we do, especially with perhaps the monitoring wells, it's believed that ground water flow is off down to the south towards Northeast Creek. So monitoring well #3 as well as monitoring well #1 will be down gradient wells, and what this would provide is that anything that would be leaking out of the groundfill that would get into the ground water, if it was, would be picked up by these two wells. And monitoring well #2 would be--we call it "up gradient" but it would probably be more right in the center of the site where we suspect the problem. And with monitoring wells, we'll also get soil analyses, too, when they're drilling the wells, which is all these. We'll take a sample at the top of the soil surface then right above the water table. And then the borings will also be located in areas where you can visually see a disturbance or we suspect that there has been--that there's a likely chance that there is contaminations and that they likely may be hazardous.

HARNETT: Is there some basis for the 25-foot depth or is that your best guess?

HUTSON: That's our best guess. We don't even think we'll probably go 25 foot. We'll go until we hit the shallow aquifer which could be anywhere from two feet to 12 or 15 feet, and then we'll actually go down an extra--you know--once you hit ground water, you go down another ten feet and screen it. So 25 foot is just an estimate for pricing and whatnot.

HUTSON: Any questions, comments?

HARNETT: You had mentioned that the site was used for--some of the material came from sludge drying beds or had been used in sludge drying beds, and I believe when we originally looked at the site, we asked what waste had gone into the sludge drying beds, and they indicated at that time that it was strictly sanitary waste water. There were no industrial discharges from--in the Camp Lejeune process that went into that treatment.

WOOTEN: If I could remind you to give your name before you ask your question or make any comments so we'll know down the road when we get ready to type this thing up.

HARNETT: Mickey Harnett with EPA. I just wanted to know if you had any change to that information. That was what we had understood when we first looked at that site a year or two ago--that is was strictly sanitary waste water sludge and no industrial waste water.

HUTSON: That's correct. Okay, we'll move on to the next site which is Site #63 which is the Verona Loop Dump. The Verona Loop Dump is estimated to be between three and four acres in size. Basically--I don't know if you're familiar, but it's on the--relative to where it is on the Base, it's off--and what is that area--Verona. But it's where they do a lot of training and field exercises, just to give you an idea, and basically what this dump was used for was any of the waste that was associated with the training and it was done out in the field.

This is another one where--I don't know if the video is all that helpful except it shows you the general vegetation and what's going on visually at the site. You're looking right into the middle of the site. There's an access road that drives right into the center. It's very heavily forested and similar in terrain to Tarawa Terrace. There are areas where you can visually see disturbed soils. There are actually fox holes that they use in training around the area. You can see just general disturbed areas. I think--there's a creek that runs off to the far extreme right of the dump. You can see there's a nice indication of a mounded area. We also saw a black snake while we were out here but we didn't get it on the film.

Right here is an exploded ordnance shell. There were a couple of those laying around the site. This is another disturbed area. You can see some concrete. Just some general munitions, the shells--I think one was a big, plastic rocket-launcher, the green, and there is also a trinsic you'll see here that was used in some type of training exercise.

FROEDE: Was the ground wet at any point, Daryl, when you were out there walking around?

HUTSON: No, just down around by the far side where the creek is. But the last time we were there--this was actually wet.

FROEDE: Would you say the creek was intermittent or would you say it was running constantly?

HUTSON: The creek was running constantly.

KENDRICK: Yes--I'm Andy Kendrick--when we were there, it was high tide, and a lot of the streams around the base are tidal in nature, so that when the tide is in, they are full of water, although you would be pushing it to say they're flowing. As the tide comes in, they flow in and as the tide goes out, they flow out.

HUTSON: Just to quickly go over what we propose to do as far as sampling goes, we're going to install three 25-foot wells as well as six 15-foot soil borings. In addition to that, we're going to take three surface water/sediment samples. If the site is in the condition it is now, we'll take those samples out of the creek that runs along the side, but if not, we can get a surface water/sediment from the center of the site in the trench area where there happens to be water standing, we'll do that. So in this case, it's going to really bear on what we find when we get out there. And to quickly show you where we propose the sample locations (referring to transparency)--the soil borings and the surface water/sediments as I just explained, the surface water/sediments will be either from the creek that runs along here or from the wet area in the site, and the soil borings will be in the areas where we can visually see some type of disturbance and where--you know--a pile of spent munitions shells or whatever, we'll put in a boring there to maximize detection of any type of contamination on the site. And finally the monitoring wells--it's not shown here but I think it's New River that is up side of here, so those monitoring wells #1 and #2 would be the "down-gradient" wells which would pick up anything that's gone down into the ground water--that leaks down into the ground water and is now moving off-site, as well as monitoring well #3 which would just be somewhere more up-gradient. That would be in a visibly disturbed area.

KISSELL: Which ones did you say were considered down-gradient?

HUTSON: Wells #1 and #2. The New River is out that way. Any other questions?

(Negative response.)

HUTSON: Okay, I'd like to move now to the Crash Crew Burn Pit. The burn pit was actually--there has been some work down at the burn pit by ES&E. This is the site where we do have some bit of information. We don't feel it's enough to go ahead and perform a risk assessment. ES&E didn't take any type of soil analysis, so--all they did was put in some borings and do a field check to see if they smelled or saw anything suspicious. Originally there

were three monitoring wells installed. One of them has gone by the wayside, and there are still two. In addition, you'll notice that little square there is actually an underground storage tank that has been installed over the last couple of years out there. It's a 3500 gallon underground storage tank, as well as a sump--this little square there. You'll actually be able to see this pretty well on the video.

The Crash Crew Burn Pit was used in the mid 1950's. In about 1975, it was actually lined and an asphalt berm was put around it help control the fuel oils that were put in there. Also there's a ditch that runs along this far side where ES&E took the surface water/sediment samples. Right now, just to show you real quick, a picture of what's going on right there. (Referring to video.) This right here is the burn pit. You see a helicopter in the background that's used in some kind of training out there. It's been basically gutted but it's a real live helicopter. You can see the berm that completely circles it. Off to this side is where the ditch is located. That is the sump, and right now he's coming in on the ditch. Actually this is a flagging for where we're going to take the surface water/sediment samples.

FROEDE: Was there any evidence of any petroleum sheen on that water--that wet area?

HUTSON: Yes, a slight bit. Right there is one of the wells that ES&E put in. It's at the southern end of the site, which would make it #3. And there are some vans that are gutted that they use out there as well. But basically you can tell it's pretty much an open field. This is the underground storage tank with the concrete pad that's over the top of the tank. This would be where we're going to locate the monitoring well that we put in. This is the other existing monitoring well at the northern end of the site.

Real quick, just to brief you again on what ES&E found while they were there. They did find traces of chromium and hexachromium as well as lead, oil and grease, and phenols in the ground water, and they found chromium, lead, oil and grease, and phenols in the sediment samples. They did not--the surface water samples were clean.

Just quickly to brief you on what we're proposing here. Like I said, we're going to install the one new monitoring well, and hopefully we'll be able to use the other two monitoring wells, purge them out, get them cleaned up, and take two samples out of those. What we're going to be analyzing for would be benzene, toluene, ethylbenzene, xylenes, as well as total petroleum hydrocarbons, PCB's, and TCL and organics.

SHIVER: Rick Shiver. I guess the only question I have to ask is, aren't these wells a little far away from the source to be of great use in detecting the presence or absence of a plume?

HUTSON: It may be to find the plume, but to actually tell if there is a problem, no, the wells are not too far away to pick up any kind of contaminants. It's been used since the 50's and if there had been a problem in the past before the burn pit was lined, it would have gone that far. I may point out that the well that we're going to put in is actually close--let me just show you real quick (referring to transparency). It may have been deceptive too because these locations have not been surveyed in on the map, so they are not necessarily true to scale either. Once we actually get out there and do the work, we'll have them surveyed in and plotted on this map, so you could actually measure it with a ruler and tell how far away it was. This monitoring well #2 is probably about 20 yards from the burn pit, which would be--and roughly the one that we're going to put in here which is #4, it's going to be probably about 15 yards from it.

BOMBERGER: Daryl--this is Vicki Bomberger--the other issues, since petroleum hydrocarbons are one of the main problems here, they tend to sit on top of the ground water, and as the water fluctuates and goes up and down, they essentially sort of form a layer of fuel in the sub-surface, and since these are more then ten, twenty years old, if there is petroleum out there, it will have traveled a distance but the entire length between, there will still be evidence of contamination.

HUTSON: Right, and you'll notice the two borings that we're going to put in, we're going to bore right in--I mean there's a problem too from the practicality standpoint, you know, because they're still using the burn pit, and we can't really put a monitoring well right smack dab next to it, and nor do we actually need to because, like she said, when we do the soil borings, we'll sample--what happens is, as they do the boring, they will sample every three feet because we're not really certain where the water table is. So that way you ensure that you get the sample right above the water level. As she says, it fluctuates up and down. There will be some traces of it in the soil as well.

SHIVER: I just wonder. You have done a water table contour map for that facility so you do have some data.

HUTSON: Right, ES&E did that.

SHIVER: It just seems, for example, that you have your well #4 up-gradient of this UST that you seem to be concerned about.

HUTSON: No, we're not concerned with the UST. That was put in last year.

SHIVER: Okay, and so the purpose of the location of well #4 had--

HUTSON: Well, let me also explain something, too. When ES&E did the ground--since ES&E has done what they did for the ground water flow, what has happened is a whole contour of the site possibly could have changed, because what has happened is they've built a runway right over here. A runway is now right here, and when all the concrete, you know, you can't really be certain that the ground water is actually still flowing in the same direction, so now what it does is it actually physically slopes in a horizontal slope and it's even a little more accentuated slope. So what we're trying to do there is to kind of pick up and see if now there's a chance that maybe the ground water is flowing that way. That's what that well would be doing is picking up any of the contaminants that may be coming off the site that way, since we're just not sure.

FROEDE: I've got a question. Carl Froede, US EPA Region IV. In looking at the video and then looking at your map here, I didn't notice--and you all can clarify, both you and Andy--is there some sort of oil/water separator or some mechanism--

HUTSON: Right.

FROEDE: To prevent overflow--in other words, it rains six inches, it rains two inches, what's to prevent an overflow event happening at this fire protection training area?

HUTSON: The berm is actually--it's probably maybe a foot.

FROEDE: And it's lined all the way up and over the top of the berm, because in the video, it looked like there was just sand mounded around the sides.

HUTSON: I can't swear to you that it's lined, but I know it's lined and I would assume--it appears that it's been lined up and over.

FROEDE: Okay.

DEL RE: This is Stephany Del Re. It is lined, however, in the past it was not lined.

FROEDE: Okay. But what about current rain events? I mean, what mechanisms are being instituted to prevent a big rain event from overflowing the burn pit?

DEL RE: Stephany Del Re again. The berm is quite high. I'm not for sure if a hurricane passing through would cause enough rain to have it overflow or not, to be perfectly honest with you. Mary, you might--

WHEAT: Mary Wheat. There is an oil/water separator. There is a hole at the bottom and then there's piping into an oil/water separator. So it would take an awful lot of water to fill the berm and then to go over in the fuel/water separator. There have in years past been overflows. There is also a valve that releases that to the oil/water separator, and there have been human errors where they failed to open or close the valve and there have been overflows. But for the most part, it doesn't happen routinely.

FROEDE: Another question. Is there someone that comes along and maintains the pumping of this oil/water separator? What is the mechanism in this oil/water separator? In other words, it's being released to the oil/water separator--fine. The oil is being separated from the water physically, but there might be some desolve constituents in the water itself. Is that just being released out on the ground?

WHEAT: EMD at Camp Lejeune maintains that oil/water separator, so now I'm not familiar with their routine, but it is regularly maintained. And the crash crew people go out there on a daily basis and check the levels, and if they see that it's getting full, they call.

FROEDE: So someone comes along then and pumps it?

WHEAT: Yes.

DEL RE: Stephany Del Re. Danny Sharp's group specifically goes out and monitors that area, and he does have two crewmen that go out there and check it. Unfortunately he's not here at the moment, but we can get some information from those two individuals that check it if you like.

FROEDE: I'd just like to know what the results are--if they're releasing the water out on the ground and that may be a reason for the oily sheen in the drainage ditch along the side, or--you know--what's the mechanism? How are they disposing of the water? Is it going to the DRMO staging area? What's going on? So you can just let me know later.

DEL RE: Stephany Del Re. It's going to the DRMO staging area. But again we can provide records for that.

FROEDE: Okay.

BOUCHER: This is Laurie Boucher from LANTDIV. I'd just like to point out for any of you that may have wondered. This is the one site out of the nine where we know that we have some site sort of contamination; however, we don't feel that we have enough information to take it into an RI at this point. We hope to gain sufficient information to do a risk assessment and determine if it does pose a risk to human health and the environment. That is the purpose of this site inspection. It's grouped in with the other eight for reasons of practicality; although, it does fall out of that objection slightly.

HARNETT: Mickey Hartnett, EPA. Do you have plans in place yet to replace that with one of the newer concrete fire training pads?

BOUCHER: I don't know.

WHEAT: Yes, there is a MILCON project but it's in out years, so I would suspect it's not going to be replaced within the next three to five years probably.

HARNETT: Has that been entered into your budget process yet and out of your projections or--

WHEAT: It's somewhere in the MILCON process, but I'm not familiar exactly where it is. I can find that out though.

SHIVER: Rick Shiver. I suggest perhaps you should look at your data once again to possibly think about relocating your monitor well or putting in additional monitor wells at this system. I'm not sure your proposal will get you what you want out of this one.

HUTSON: Okay. Real quickly, I'll just show you--I've already pointing out that the soil borings will be located next to the burn pit. I want to point out we're taking five surface water/sediments along the ditch. Three will be located in approximately the same places that ES&E took the sample, and then we're going to take two additional ones just to further characterize what's going on in the ditch. Any other questions or comments?

(Negative response.)

HUTSON: The next site is Site #82 which is the Piney Green Road VOC Area. To give you just a little bit of history as to what's going on here, as you can see Storage Lot 203, which is site #6 in the IAS numbering system--what transpired is that when ES&E was doing work on Site #6, they were doing some sampling in Wallace Creek. You can see where they took surface water/sediment #2 as well as surface water/sediment #1 in the up-gradient--on the up

stream. What ES&E was hoping was that #1 surface water/sediment would be a clean background sample for them. Actually what happened is that they found just some small traces of volatile organics, specifically trichloroethene in the surface water as well as vinyl chloride. So what we're trying to do here, and the purpose of this site being added--this is one of the new sites--is to try and see if we can determine or come up with some source for these VOC's. The monitoring wells, #30, #1 and #3, ES&E sampled and analyzed, and the ground water is clean in those wells. The supply well #651 has some contamination, has some TCE, but it's a deep well and it has been shut down. So we're basically going to try to check out this area, put some monitoring wells, some borings, as well as surface water/sediment samples up and down Wallace Creek to see if we can better characterize what's going on and possible see if we can determine the source for the VOC's.

I may point out that--it's not clear, but it seems that maybe some of the contamination could have just been coming from Piney Green Road itself, or it may have just been a chance hit or what not that ES&E found, because you'll see on the video that there was easy access to that spot on Wallace Creek. So there may not be really any contamination or any type of source out in the actual site. We're going to try to determine that for sure.

AUSTIN: While you have the slide up there--my name is Al Austin, Facilities Department--just for information, we plan to put a Base landfill somewhere--well, that's one of the candidate sites, east of Piney Green Road and that southeast quandrant, so to speak, and DLA has a site approval south of that Lot 203 for a new sewage facility. We have an ANE working on those sites now to determine feasibility for the landfill, and ELA storage, I don't know when that's scheduled--sometime in the future.

DEL RE: Stephany Del Re. We have supplied the contractor who is looking for a location for this Base landfill with the data on the Piney Green area as well as Site #6. So based on that data, I guess they made some calculations that they wanted to utilize the area, but they are aware that it's a hazardous waste area.

HUTSON: I now just show you some quick footage of what the site looks like. (Referring to video.) Right here is Piney Green Road and Wallace Creek. So this would be somewhere around the area where ES&E took their surface water/sediment sample.

FROEDE: Any evidence of any sheen again?

HUTSON: No, sir.

FROEDE: Okay.

HUTSON: You're looking north down Piney Green Road. Now you're seeing the opposite side which would be towards Holcomb Boulevard of Wallace Creek, and all this is the wooded area that is the site. This is the supply well #651.

FROEDE: That's the one that had the TCE hit?

HUTSON: Right, that's been shut down. And there's monitoring well #30 which is located right behind the supply well. That was actually clean. So now we're at the other end of the site, and right off in through here is the actual Piney Green Road Site. The fenced in area is Lot #203.

DEL RE: Stephany Del Re. That monitoring well #30 was a shallow monitoring well, whereas the supply well is a deep well, so you might want to note that difference.

HUTSON: Right. This is actually an access road that's been recently put in. Right now they're doing some deforesting out in the area. What we did find--right on the other side of that berm on that access road, there were a couple of empty drums, so we're going to check it and see if anything could be coming from that, but chances are that's not where the source is for the creek because it's pretty far away.

FROEDE: Carl Froede again. Quick question--did you see any evidence of any trench and fill as you did at the other sites?

HUTSON: No.

FROEDE: No evidence?

HUTSON: No, it was natural smooth topography--what appeared to be. Now you're looking from the center of the site looking down towards Wallace Creek, and Wallace Creek is probably about 300 yards through the woods.

Just real quick, I'll cover our proposed sampling scheme for field investigation. We'll install three monitoring wells, as well as put in six borings, and we're going to collect six surface water/sediment samples from Wallace Creek. The analysis scheme is to analyze for TCL volatile organics as well as pesticides and PCB's. We analyze for pesticides and PCB's because of what's going on at Lot #203. They store transformers and pesticides in that area, so we thought it was prudent just to ensure that there was nothing going down into Wallace Creek from there. And here's a map

of the site just kind of outlining where we're going to do our sampling points. I tried to differentiate between the existing monitoring wells as well as the new monitoring wells. As with the other sites, the actual well locations will be determined out in the field by Andy, but the general scheme is to get two down-gradient monitoring wells as well as one up-gradient well. ES&E determined that the ground water was flowing off at an angle something like that. So monitoring wells #1 and #3 would be the down-gradient wells, and one would be an up-gradient. Although you would think it would be more toward Wallace Creek, New River is off in this direction towards Holcomb Boulevard. And the six borings we'll just locate in the field in areas where the empty drums were located and any other areas where we suspect any type of visual contamination, although we didn't see any when we were out traipsing through the field. We also thought it would be best to go ahead and cross Wallace Creek and just take a couple of borings over there to see if there was anything on the other side in the soil.

Surface water/sediments--we're going to take surface water/sediment samples in the two areas that ES&E did, which would be the same numbers #1 and #2. We're also going to go up-stream and see if there is anything in the water up-stream there to see if there be a source for the volatiles further on up, as well as put a boring up there. The remaining surface water/sediments would just be spread down Wallace Creek to better characterize what's going on in the creek. Are there any other questions?

(Negative response.)

HUTSON: The next site is Site #8Ø which is the Paradise Point Golf Course. The size of this site is about one to two acres. You can see on here that there is a wash area--this is actually the wash area, and this is an area where they store sand for the sand traps on the golf course. This is a sump. There is a ditch that runs around the outskirts of what we call the site. When we were there, there was water flowing pretty freely. The reason for the concern here is, I guess, there could be a chance that maybe some oily substances may have been disposed of behind the machine shop. There's also pesticides kept here for maintaining the golf course. So we're going to see if there's any chance that excess pesticides may have been inadvertently disposed of in this area that's behind the machine shop.

You'll see on the video--it will show you a pretty good idea what the topography looks like, but it's humicky, dry soil area, and all along through here is a mound. It looks almost like sand.

So right now I'll show you so you can get a feel for what it actually looks like. (Referring to video.) Now what you're looking at is the two buildings that are the machine shop. Right there is the sump, and behind it, this pad here is the actual wash area for the trucks that they use to spread the pesticides. And this one enclosure is the sand storage area. The ditch that emcompasses the boundary of the site actually starts right here, and there's a pipe that goes underneath the road that you come in on.

What you see now is the area actually behind the machine shop.

FROEDE: Was there any sheen on that water? I know I keep bringing up the same--

HUTSON: No, there was no visible sheen on it. This is actually looking at the mounded area on the site. Right behind all these mounds is where the ditch runs behind it. There is some evidence of some trees that are dead.

SHIVER: Rick Shiver. Did I see some five gallon--

HUTSON: No, those aren't drums--that's trees.

SHIVER: Trees--okay.

HUTSON: They've cut some pine trees down in the area there. Now I'll show you the ditch behind the mounds. You're looking back, standing almost in the ditch, looking to the back of the mound as it circles around. You will be able to see the ditch.

FROEDE: Carl Froede--quick question. Was there any evidence of stressed vegetation along the line of the ditch, or was it just simply back over in that corner?

HUTSON: No, just actually in that one corner.

FROEDE: Okay.

HUTSON: Just to quickly summarize the field investigation, we propose to put in seven 15-foot soil borings, as well as to collect five surface water/sediment samples from the ditch. We didn't propose to put in any ground water or monitoring wells at this point. Because of the nature of the contaminants, the pesticides and the PCB's are not known nor are they are chlorinated herbicides which is a major problem here. So by just doing the soil and surface water/sediment analysis, we feel we should be able to determine if, indeed, there is a problem with hazardous waste

and if there would be any type of threat to the environment from this data.

Real quick, the sample locations--I failed to mention, we're also going to take three shallow, surface soil samples from the mound itself as well. You can see the soil borings. We're going to have two down by the wash area, two that will be behind the machine shop to try to determine if there has been any problems behind there, and then three on the main area itself. We focused more to the side where the dead folage and dead vegetation had been. And then with the surface water/sediments, we're just going to have to space them out along the drainage ditch just to characterize what's going on--if there's a problem there. Any questions?

(Negative response.)

HUTSON: Okay. The next site would be Site #3 which is the Old Creosote Plant. The creosote plant is about two acres in size, and it was in operation in approximately 1951/52. They put an actual sawmill on the site as well and actually cut the lumber and treated it there to build the railroad. Since then it's been dismantled and basically the only thing left on the site is the boiler chimney from the original operation, as well as one or two concrete pads.

I'll show you the video. You'll notice that there are some trucks and also some materials--engineering materials--that they have used for, I guess, bridge construction. So you'll see it, but other than that, it's really just an open field. Right now we're on the southern end of the site looking out. The structure that you'll see in a minute--we'll zoom in on it--that's the actual chimney from the boiler at the creosote plant. And there are some trailers on the site for storage. As you can see, it's really just an open field, compared to a lot of the other sites. The railroad track runs off along--parallel with the trees.

FROEDE: This is Carl Froede again. Do you all have a good grasp as to understanding where exactly along that railroad the loading was done on the creosote logs?

HUTSON: Yes, we have a pretty good idea.

FROEDE: Are you planning on taking a sample--soil sample?

HUTSON: Right.

FROEDE: Okay.

HUTSON: And there's a road that splits the site into--this is looking down towards Holcomb Boulevard--off to the left there, there is a wet area on the site where we're going to take a sediment sample from. This is looking back the other way down the road. This is just from the northern end of the site looking back to the south. Again there's the boiler chimney, just to give you a feel for the other end of the site. It's again an open field. There's the materials for the bridge construction that are being stored on the site. There is also a ditch area or wet area along the perimeter of the woods right there as well. You can't really see it.

FROEDE: Are you planning on taking a soil sediment sample from there as well?

HUTSON: Yes, a sediment sample, yes. Real quick, just to summarize the field investigation--we're going to do a total of eight borings. Five of them are only going to be shallow borings which will be about five feet in depth, and three we'll go ahead and do all the way down to approximately 15 feet or until we hit the water table. Again, based on the properties of creosote, we don't feel that it would be very mobile, so if there is a problem with creosote, there's a chance that it would go into the ground water, but it would be detectable in the soil. So that concentrating on soil samples, if there is indeed a problem with it at the site, we'll be able to determine it.

Just real quickly, a rough layout of our proposed sample points. Again, it would vary a little bit based upon what the geologist finds out and sees out in the field.

FROEDE: Hypothetically--Carl Froede again--if you were going to install a ground water well, where would you install it? Any idea, Andy?

KENDRICK: That's kind of a hard answer.

BOMBERGER: First of all--this is Vicki Bomberger--that whole area is very flat. There are several quasi wetland areas. I'm not sure that they would technically be wetlands, so I assume what we would have to do at that point would be to take a look at the larger topography beyond just the site, to determine what the closest water area is, and I would assume that's probably the general ground water flow direction. I don't know what it is offhand, where the closest stream is.

HUTSON: Well, basically Wallace Creek is running down through here at the bottom, and then the New River is off on the other side of Holcomb Boulevard.

FROEDE: So do you feel that one well could characterize a ground water contamination--if you were going to pursue it--ground water--

HUTSON: Uh-huh.

FROEDE: Do you think that one well could give you a good realistic representative sample, or do you think that maybe you need two, if you wanted to check for ground water contamination?

BOMBERGER: This is Vicki Bomberger. I would say we'd have to take a look at it again before I could answer that. As flat as it is, potentially you would need three to really determine the ground water flow direction, definitively. But again, as we've discussed, the properties of creosote are such that you tend to pick it up in the soil, as opposed to the ground water in any event.

HUTSON: Any other comments?

(Negative response.)

HUTSON: Okay, we'll move on to the next site which is the Agan Street Dump. Again this is one similar to the one at Tarawa Terrace. It was used when they built the housing on the other side of Agan Street here. So basically what we think we'll find is construction debris as well as household waste, and possibly some waste from the sewage disposal facility as well. That facility is no longer there. You'll see in the video, there is just an open field where it once was. Just in general, there are two creeks that run through that you'll be able to see. Strawhorn Creek really served as a boundary for where the dumping occurred, as well as Stick Creek.

(Referring to video.) Right now we're looking down Agan Street. We're actually standing on where the wastewater treatment plant was. As I said, it's strictly now just an open field. This area, like Tarawa Terrace, is heavily vegetated. Now we're looking back in the tree-lined area, the woods, and that's where the actual landfill is. Once again you can see we're back into the dump. You may be able to detect some disturbed areas--some mounded areas. You can see it's heavily forested. This is a look at Strawhorn Creek, and the water is flowing up towards the screen, and probably about 20 yards is where it will intersect with Edwards Creek.

Again some visual signs of disturbed soil. This is Strawhorn Creek as well. Up towards the top of the screen would be Agan Street, so we're actually on the other side of the site, and he's now moving back, looking back in towards the site. And this is Stick Creek. As you can see, the creeks have quite a bit of water in them. And there was no visible sign of any type of sheen or anything on that creek. And again, this is just--that's Agan Street there--you can see the houses, and this is a building that's right on Agan Street. They apparently used to use it for Cub Scouts or something like that. It doesn't look like they still use it.

WHEAT: It's still their scout hut.

HUTSON: Okay. Quickly I'll just cover the proposed field investigation. We plan to install three monitoring wells, putting in five soil borings to the water table, and collecting five surface water/sediments as well. Again, similar to Tarawa Terrace, since we're not certain a hundred percent as to what was put into the landfill, we're going to analyze for TCL.

FROEDE: Carl Froede again, EPA. Is arsenic on that TCL inorganics list or metals list to your knowledge?

HUTSON: Yes.

FROEDE: So you will be checking for arsenic?

HUTSON: Yes.

FROEDE: And you did make the comment that you believe some of the sludge was disposed in this particular dump site?

HUTSON: I don't know necessarily that we believe it, but the possibility is there, because it was right there at the site.

BOMBERGER: Daryl, excuse me one second. This is Vicky Bomberger. I don't know that we mentioned it, but TCL is essentially the full list of constituents that we analyze for under CIRCLA programs, and I believe there are over 300 on that list. Daryl has a handout.

HUTSON: We have a handout that we can pass around that has all the different compounds that would be on that list.

(Handouts passed out.)

HUTSON: Real quick, here's a post-layout for the sample locations. Again it's going to vary once the geologist gets out in the field, but we've positioned the monitoring wells hopefully to get two of them down-gradient as well as one of them up-gradient. The two

down-gradient monitoring wells would pick up anything that's leaked out where they've buried and gone into the ground water table. Monitoring wells #2 and #3 would be the down-gradient wells, and monitoring well #1 would be the up-gradient wells. The soil borings we will locate in areas that look visibly disturbed or anything that the geologist can use to help clarify where to place them to maximize ensuring that we're going to detect contamination that is present at the site. You can see the surface water/sediment samples. We're going to take three--two directly out of Strawhorn Creek. There's a little--when we were out there, there's an area that's probably 10 by 15 feet, a little pond--not a pond--what you could call a pond, but it's not really that deep. So hopefully when we go back out in the field, it will be there, and we plan to pull a sample out of there, as well as down at #4, and we're also going to take one out of Stick Creek as well. Any other questions?

(Negative response.)

HUTSON: Next is Site #44 which is the Jones Street Dump. Again, it's very similar to Tarawa Terrace and Agan Street as well. Basically the dump was used when they were building the housing from here on out. (Referring to transparency.) There are three or four blocks of housing there, and the dump area is back there behind Jones Street. It's basically--directly behind the houses is a cleared field, and then you can see--as it slopes off towards Edwards Creek, it's a heavily wooded, forested area, which we can see now on the video. (Video on.)

Those are houses along Jones Street that you're looking at right now, and this is the field area which is actually the site. As he moves around, Edwards Creek is actually off to the left.

FROEDE: Carl Froede. Quick question, Daryl. Because of the low level of vegetation there, has that area been used recently? Have they just come in and cleared timber?

HUTSON: I don't know the answer to that. That's what we're assuming happened.

FROEDE: Do you know, Julian?

WOOTEN: No.

WHEAT: I don't believe so. I don't think it's ever been cleared. It's just the nature of the vegetation there.

FROEDE: Okay.

DEL RE: Stephany Del Re. When you go out there, it's quite obvious where they probably dumped material, and it hasn't quite come back yet. Also to get to that fielded area, you have--

HUTSON: There's another little wooded--is that what you were going to say?

DEL RE: Yes.

HUTSON: That intersects the houses. So that field is not directly behind the houses. There's like a line of trees that actually encompasses the whole field, but in between the houses, it's maybe like ten feet in width.

Now, you're looking down in the wooded area down towards Edwards Creek. Again, what we expect to see here is just construction debris as well as household trash that was disposed of in the area. The creek is really--there is a little flow, but there's not a lot of water in it, and this is the same creek that actually runs down into Agan as well, but by the time it gets down there, Edwards Creek is much bigger.

Quickly I'll cover a summary of our field investigation. As with the Tarawa Terrace and Agan Street, we're going to analyze for target compound lead, and we're going to install three monitoring wells, as well as put in five 15-foot soil borings. Real quickly I'll just cover the general layout for the sampling. Monitoring well #1 and monitoring well #2 would be the down-gradient wells, and monitoring well #3 would be up-gradient, but it would probably be located more right in the heart of the site, as well as the five borings placed throughout the site in areas that look visually disturbed or stressed. Any questions?

HARNETT: Mickey Hartnett, EPA. I just have a couple of general comments I'd like to make. Several of these areas are quite near Base housing areas, and I hope you have positions in place that if at any point in this process you really suspect there are hazardous materials on the property or actually determine that there are some hazardous materials out there, that measures will be taken to prevent dependents from playing in those areas, and have it properly posted. It is a common problem that we've come across, where you've got areas where there's known contamination, and the Base dependents are still out there playing in the dirt and streams and everything else. So you need to keep that in mind, as soon as it becomes apparent that that measure may need to be taken.

Another thing I would caution you about--because I remember this from one of the other sites--not one of these--when we surveyed them earlier and did the visual inspections, and that is

don't always assume that holes in the ground are fox holes. There was one site where the Base person we were with assumed some depressions were fox holes, when in fact what they were were collapsed drums that had corroded and caved in. So just keep that in mind. Not every depression is a fox hole around here.

DEL RE: Stephany Del Re. That particular site Daryl was referring to with the fox holes, Verona Loop Road, those are fox holes, but I would take your comment. That area is of concern because it is heavily used by Marines in training, and the same for the housing areas because we have to be somewhat careful with public contact at those sites.

HARTNETT: Mickey Hartnett. Yes, I realize--those probably were fox holes, but I just didn't want you to drop your guard out working at the sites and start assuming every depression is a fox hole.

HUTSON: Well, the moment we've been waiting for, right--the last one. This is a map of Site #65 which is the Engineer Area Dump. Currently this area, as you'll see on the video, is a digging area that the Base uses to train engineers on using bulldozers. In the past, it is thought that this area over here is the battery acid disposal area, and this area where it says "burning area" perhaps is a liquids disposal area. I'll just go ahead and show the video because it gives you a pretty good idea as to actually what the site looks like. (Video on.) We're standing on a fairly large mound at one end of the site, and what you're looking at now is a road to get onto the site. The area here where the pine trees are is the burn area where they used to burn some debris, as well as the liquids disposal area. As you come around, you will see--this is the digging area. You can see all the bulldozers that are there. There is a little creek that runs along the treeline there. The first pond that was shown on the map is approximately right back in there. You will see a better shot of it later. In the far field here, next to the tree area, is the battery acid disposal area. This just gives you an idea that this is a pretty open site, as opposed to some of the others.

Right there is the base of the mound. There are a couple of drums that were sitting there. What you're going to see now is actually where we were standing which was on top of the mound there.

DEL RE: Stephany Del Re to Rick Shiver. Those are drums, not trees.

SHIVER: Right.

HUTSON: There is actually an access road that goes around the site, so you're looking back to the digging area, and over there is where we were. And this is the first pond that you will see on the map, and this is the other pond. They are fairly good size.

KISSELL: Daryl--Andrew Kissell--you panned early on in that particular site across the area where the Marine engineers grade. You don't suspect anything across that area where they're grading? It's just on the perimeter that there are a couple of spots of concern?

HUTSON: Right. We don't suspect anything there, but we are going to take some samples, one or two borings. We're going to put one or two borings out in the digging area just to make sure that there is nothing out there.

DEL RE: Stephany Del Re. That particular area was closed fairly recently compared to a majority of our sites. People here at the Base have been able to point out the boundaries of that dump area, so we're working within those boundaries--people who actually operated the dump.

WOOTEN: Julian Wooten, Camp Lejeune. Those two ponds are natural ponds that have been stocked over the years and are available for recreational fishing. Any reason to suspect that any of this stuff might have migrated to those ponds--if there is anything out there?

HUTSON: There is always that possibility, but from where the--

WOOTEN: I guess really what I wanted to know is, would there be a need to sample maybe the fish in the ponds.

HUTSON: We are going to--I would wait--

DEL RE: Stephany Del Re. In this particular case again, this is a site assessment. We're trying to determine if we have contamination there. We do know we have contamination up in front. I will let you know, Julian. I spoke with Charles concerning the fish in that area and the stocking issue, and we're still working on it.

WOOTEN: I didn't make a connection between the ponds until I saw the video there and I realized that they were for recreational fishing.

HUTSON: Like Stephany said, the areas that we're certain--fairly certain that the dumping occurred were up front. This is a pretty good distance away from where the actual ponds are.

FROEDE: Carle Froede with US EPA. The ponds--when you say "stocked," Julian, are you talking brim, catfish--

WOOTEN: Brim, bass--I'm not sure about catfish, but I know brim. It could very well be catfish, too.

FROEDE: Okay.

HUTSON: Real quick I'll just cover the proposed samplings. We're going to put in three monitoring wells, also put in three 15-foot soil borings, and we're going to collect five surface water/sediment samples. Quickly, you can see where we're proposing to put them. We're just going to put a surface water/sediment sample in each of the ponds and up and down the whole area to characterize what's going on in that little ditch/creek/pond area. We're going to put two of the monitoring wells somewhat down-gradient which would be monitoring well #2 as well as monitoring well #3. Courthouse Bay is actually right in here, so we assume the ground water would flow off towards that way. Monitoring well #3 would be in the battery acid disposal area, and monitoring well #1 would be down in what we think is a liquids disposal area. And then we're going to place the other borings around the site. Any other comments?

SHIVER: On that site or in general?

HUTSON: In general?

SHIVER: Rick Shiver. The one general comment I'd like to make is, I notice that some of your sites where you suspect there is a release of oil or gasoline or a petroleum, that you suggest that when you take a soil sample, you propose to run total petroleum hydrocarbons, but it's the oil and grease method, the EPA 418.1. The state would like to suggest to you that that's an unsatisfactory method for determining whether or not there is the absence or presence of gasoline, diesel in soil samples, and would like to recommend to you that you consider the total petroleum fuel hydrocarbon methods that are in the California guidelines.

BOUCHER: This is Laurie Boucher, LANTDIV. That is something we'll look into.

BOMBERGER: This is Vicki Bomberger from NUS. That could be a mistake in the sampling and analysis plan, because at all of the petroleum sites, one of the things we were going to take a look at were petroleum hydrocarbons relative to North Carolina standards, so that was our original intent. It could have been an oversight in the plan.

BOUCHER: Are there any further questions about any of the four documents, the workplan, health and safety plan, or either of the sampling analysis documents?

(Negative response.)

BOUCHER: Well, we tried to provide, for those of you who haven't had an opportunity to go to the sites, a bird's-eye view of what some of these sites look like by showing you a video. If it's helped you to better understand what the sites look like, if you found it interesting, if you found it boring--whatever your comments are, we'd like some input back to know if you thought it was a good idea, because we might continue to do it or we won't if you didn't find it helpful. But we would like your input on that. We like to make these as interesting as possible.

At the time you come to the TRC, you've already had approximately two months to review the documents, so at this point we're prepared to make revisions to the documents and put out the draft final documents, and go ahead and get the work started. So I ask for any further written comments that you have by the 29th which is next Friday. I know, Rick Shiver, you brought up a few comments today. I'd like for you to put your concerns in writing and send them to us. Comments need to be sent to both Camp Lejeune and to Atlantic Division. The addresses are on a handout over by the door on the lectern. You can pick one of those up as you go out if you like. We should be sending out the draft final documents in approximately six weeks. To those of you that receive the draft documents, if you have some further questions or concerns, you can call Stephany Del Re or myself, Laurie Boucher, at LANTDIV. At this time I'll turn it over to Julian. I believe he has a few closing comments.

WOOTEN: Well, before I do that, I'd like to ask if there is anything that anybody would like to say pertaining to the Technical Review Committee. We, of course, have what we consider three key people that aren't here today, and that's our local rep's here. We got a call from one. What happened to the other two, I'm not sure, but in any event, I think that's something we'll need to look at. If there are no further questions or comments, again I would like to thank you all for the effort to come and participate and help us with our IR program through the Technical Review Committee. At this time I adjourn the meeting.

(Meeting adjourned at 1455, 21 March 1991.)

Project Manager's Meeting

	Organization	Phone #
Stephany DelRé-Johnson	Camp Lejeune	(919) 451-5093
MARY WHEAT	MCAS, NEW RIVER	919-451-6143
Andrew Kendrick	NUS Corp.	412-788-1080
Vicki Bomberger	NUS Corp.	412-788-1080
DARYL HUTSON	NUS Corp.	412-788-1080
Carl R. Froede Jr.	US EPA Region IV	(404) 347-3016
MicKey Hartnett	EPA Fed. Fac. Section	" " "
J. C. "Cham" Meredith	EPA Fed. Fac. Section	"
ROBIN SAVAGE	LANTDIV, ENVIRONMENTAL QUALITY DIV.	(804) 445-4800
Jack Butler	N.C. Superfund Sect.	(919) 733-2801
Laurie Boucher	LANTDIV, CL RPM	804-445-1814
Andrew Kissell	Atlantic Div Naval Fac Eng	(804) 445-2931
DANNY SHARPE	MCB, Camp Lejeune	919 451-5093

ENCLOSURE 12