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FORT WINGATE DEPOT ACTIVITY, GALLUP, NEW MEXICO

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Fort Wingate Depot Activity, Gallup, New Mexico, Restoration Advisory Board (RAB) Meeting, Tuesday, August 9, 1994

Paul Baca Professional Court Reporters

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FORT WINGATE DEPOT ACTIVITY
RESTORATION ADVISORY BOARD MEETING

Tuesday, August 9, 1994

2:10 p.m.

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115 West Hill

Gallup, New Mexico

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A G E N D A

MR. FISHER: I would like to welcome everyone here to the Restoration Advisory Board meeting. We are starting just a few minutes late, as I was hoping additional people would show up.

What I would like to do -- first off, some of the people who are here were at the last meeting. I've forgetten names. Sally is the only woman I have on my list.

MS. NOE: Every meeting you've had.

MR. FISHER: That's great. What I would like to do is just go around and have everybody kind of introduce themselves so everybody will know who you are and who you work for, what your responsibilities are.

We have right down here a court reporter. I've asked her to come and take minutes of the meeting, of which you will all get a copy, once it is sent to me.

We'll start right here. Go ahead.

MS. DOYLE: I am Kathy Doyle from the U.S. Army Armament, Munitions and Chemical Command, AMCCOM, Rock Island, Illinois.

We are going to be picking up the real estate actions for the BRAC actions on it.

MS. BECK: Mary Jane Beck, also from

Headquarters, AMCCOM. I'm a realty specialist there.

MR. CHIA: I am Sing Chia with the EPA, Region 6, from Dallas. I am the EPA representative on the BRAC cleanup team, Fort Wingate.

MR. PFEIL: John Pfeil. I work for the New Mexico Environment Department. I am the State representative on the BRAC cleanup team.

MR. HAMILTON: John Hamilton, Gallup Independent.

MR. FISHER: Larry Fisher, and I am the Fort Wingate BRAC environmental coordinator and co-chairman of the Restoration Advisory Board.

MR. WALDEN: Malcolm Walden. I am the base transition coordinator for Fort Wingate and, as such, I am also a member of the BRAC cleanup team and Restoration Advisory Board.

MR. HERREN: I am Robert Herren with Cope Memorial Chapel.

MS. NOE: I am Sally Noe. I am a historian, and I represent McKinley County.

MR. WINKLER: Joe Winkler, New Mexico Environment Department. I've just been asked to serve on the committee.

MR. FOREMAN: Stephen Foreman with the City of Gallup.

MR. HAASBEEK: I am John Haasbeek with ERM, subcontracted for technical support to the Army Environmental Center.

MR. ALEXANDER: I am Tim Alexander and I am with the Army Environmental Center.

MR. EGNACZYK: I am Steven Egnaczyk, with ERM also.

MR. FISHER: If you don't mind, during our meeting, if you have any questions or any responses, if you would please state your name so she can -- I'm sure she won't be able to remember all the names just by one go-around.

If you'd state your name, then she can get your name on the minutes before you ask your question or provide any comments. Appreciate it.

What I would like to do right now -- hopefully, all of you have an agenda in front of you. The next item on the agenda is basically talking about selecting a community co-chairperson.

Also, down in the last part there, 3:30, "Restoration Advisory Board Involvement," I've decided it would probably be a good idea to move that up and talk about both those items at the same time, because they are related.

What I would like to do is select a -- or

have, actually, the members of the Restoration Advisory Board select a co-chair that will be co-chair with myself on this committee. And if you need to think about that for a little bit, how you would like to do that --

The reason I am kind of pushing this right now is, if we can, if you feel comfortable with it, there is some training that will be provided the 18th and 19th, in San Diego, on the Restoration Advisory Board and what your responsibilities as a co-chair would be. And if you can determine who you would like to be a co-chair or co-chairperson, whatever --

MS. NOE: I am Sally Noe. I would like to recommend Steve Foreman.

Now, I realize that the Zunis are not represented here, nor are the Navajos. However, we feel that the representation from the City would be very important, as a hub area for all entities.

And since there are some programs that Steve could go to, that he is available and he also has some expertise, I think that he would be an excellent person to head the committee, to represent us here.

MR. WALDEN: Malcolm Walden. I would second that.

MR. FOREMAN: You are very kind.

MS. NOE: You owe me now.

MR. FISHER: Okay. Actually, the Restoration Advisory Board is the one that selects the person, and that is okay with us. That's fine.

MR. WALDEN: Excuse me. Isn't the Restoration Advisory Board all of us?

MR. FISHER: Well, that's true, but it is supposed to be selected by -- yes, community. That is the way I understood it. I may be wrong, because I am just -- this is new to me, too.

If that's fine with Steve --

MR. FOREMAN: Yes, it is.

I again reiterate what Sally said. I would would have felt more comfortable if representatives from Zuni and Navajo were here, but I will say, the issue of environmental cleanup is one issue on which there truly is a consensus amongst all of the members and that is the one issue where we have had no problems whatsoever in terms of a shared determination.

MR. WALDEN: I would suggest you put it to the question.

MS. NOE: For all of us?

MR. WALDEN: Just make it -- put it on the floor, raise the question and see if he carries

it.

MS. NOE: I have moved.

MR. WALDEN: And I seconded.

MR. FISHER: Steve, congratulations. I don't know Robert's Rules of Order. That's why I'm sitting here like a dummy.

MR. PFEIL: John Pfeil. Let me just ask -- you know, because of the potential contentiousness, you know, or maybe noncontentiousness related to all this -- is there --

Basically, the Restoration Advisory Board has just been asked to pick a co-chair. There is really no more information about how you go about doing that.

Let me just ask, were the Navajos and Zunis involved in the last meeting? Was a representative --

MR. FOREMAN: There were representatives from Navajo Environmental. There were no Zuni representatives at the last meeting.

MR. PFEIL: Larry, have they been invited to be part of the RAB?

MR. FISHER: Yes.

MR. WALDEN: Absolutely.

MR. FOREMAN: As a matter of fact, I even urged the representatives of both Navajo and Zuni

yesterday to get people up here if at all possible.

MR. PFEIL: That's probably a reasonable sort of thing to have on the record, it seems to me.

MR. WALDEN: I can testify, because I saw written, formal invitations were sent to them.

MS. NOE: Also, the Zunis and Navajos are chairmen and co-chairmen of the other regional committee, so we have representation with the people meeting all the time.

MR. FISHER: Okay, very good. Thank you.

MR. WALDEN: If I may, I think that you ought -- just to make sure that you are now on safe ground procedurally, you ought to call for the question and make sure it carries by acclamation. That way you are on safe ground.

I will just step in here and say, all those in favor of Steve Foreman assuming the role of co-chairperson signify by saying "Aye."

MEMBERS IN ATTENDANCE: Aye.

MR. WALDEN: Any opposed? (No response.)

Okay, the "ayes" have it by acclamation. Mr. Foreman, step up here.

MR. FISHER: Thanks. While Steve is coming up, I have an attendance roster I would like to send around and have everybody sign, if you will, please. Start right over here and kind of go around, if you will.

What I would like to do now, I also have kind of a fact sheet that I would like to hand out, concerning the Restoration Advisory Board. And I did talk about it last time, but I would like to go over a few things, probably give you a little bit more information.

I'll wait just a couple of minutes until everybody gets a copy here. There are some copies for the ones behind you.

MS. NOE: All right. Will you be sending these to the Zuni and Najavo people, the representatives on the committee?

MR. FISHER: Yes, I will. Thank you.

MR. CHIA: Just to follow up on Sally's question, you might want to identify for the record the Zuni or Navajo representative.

MR. FISHER: The names that we have -- I don't have them representing anybody, so maybe somebody could help me here -- does David Kelly sound like --

MR. FOREMAN: Boyd Nystedt.

MR. FISHER: I have a Mr. David Kelly and Boyd Nystedt, Navajo EPA, represents the Navajo.

MR. FOREMAN: No, Zuni did not attend the previous meeting.

MR. FISHER: We will make efforts to get the Zuni more involved.

MR. FOREMAN: I had also suggested to the Wingate for Wildlife Coalition that they attend today's meeting. They have a membership of rougly 200 persons interested in environmental issues and habitat protection at Wingate but, for some reason, they are not here today.

MR. WALDEN: Also, Mr. Jeff Condrey, who represents a group called Fort Wingate MRS, as in Mrs., had expressed interest in being a member of this. I know he was invited. Apparently, he had a conflict, because he is not present either.

MR. FISHER: I will see if I can get the names of individuals from the wildlife group in particular, and then we can send out some information to them.

MS. NOE: The contact person is Buddy Menapace --

MR. FOREMAN: Yes.

MS. NOE: -- for that group. He's the one we've all been working with.

MR. FISHER: Spell that.

MS. NOE: M-e-n-a-p-a-c-e, Menapace.

MR. FISHER: What I would like to do now is just go over this fact sheet. I know everybody can read it, but we will just go over it together.

The Restoration Advisory Board again, is intended to bring together members who reflect the diverse interests within the local community, and what we would like to do is to have a continued two-way flow of information, concerns, values and needs between the community, the Department of Defense and the regulators.

As far as community member expectations, the terms, Restoration Advisory Board members are expected to serve at least a two-year term, are expected to attend all RAB meetings, are expected to communicate with local community members and interest groups concerned with specific installation cleanup and conversion issues and to report back.

It is also important to serve as a direct and reliable conduit for information flow to and from the community, so we really need that. And you need to honestly represent information you receive. So you

are going to be very honest, I am assuming.

RAB members will be asked to review various information on installation cleanup and conversion activities, including draft and possible final documents -- we are going to talk a little bit more about that today -- proposed plans and final plans, status reports and any other reports that are generated, to try to give you an opportunity to review and comment on that so we can have your input on what we are doing.

If anybody wants to resign, you need to submit your resignation in writing to either of the RAB co-chairs.

Then down here we talk about selection of the co-chair. It says that the DoD co-chair, which is myself, will have sufficient authority and ability to fully undertake RAB chairperson responsibilities.

The community chairperson will be selected by the community members of the RAB and, if you would like or you may decide later, you can rotate the co-chair responsibilities as deemed appropriate. And once we get going here, I will try to help you out a little bit, as much as I can. This is all new to me.

Each Restoration Advisory Board should develop a mission statement which should outline the

purpose, scope, goals and objectives of the Restoration Advisory Board. A set of operating procedures should also be developed by the Board and should include membership policies, meeting frequency, process for public review and comment, method for announcing RAB meetings and procedures for public participation and responding to their questions and comments at these meetings.

Sounds like a lot right off the bat. Like I said, we will try to give you some help, some information on how to set that up.

The meeting format, of course, will vary. I would like informal meetings. I know that is not always the case. I have to learn these other rules of order. I've never been involved in anything where I had to do that.

Basically, the format should include review of old business, presentation or update by project technical staff and RAB member discussions, a question-answer-input-discussion period for non-RAB community participants, a list of action items for the members and then things to discuss at the next meeting.

These are the roles and responsiblities for myself, the DoD installation co-chair, and I will try

to have adequate administrative support. I am not sure -- I have to find out a little bit more about this. I don't think there is any money to be given out, but I will try to do anything I can to try to support anything that needs to be -- maybe, through our office, make copies, newspaper announcements, whatever. Things like that that I can pay for out of my funds there at Tooele.

The co-chair. Steve, these are your responsibilities. Only four compared to my eight. But anyway, the community co-chair should coordinate with myself, the DoD co-chair, to prepare and distribute an agenda prior to each RAB meeting.

The community co-chair should ensure that community members participate in an open and constructive manner and should ensure that community issues and concerns related to cleanup are raised and should also assist with the dissemination of information to the public.

And it looks like you are in a pretty good position to actually do the work for the City of Gallup.

RAB community members. Well, I will just let you go ahead and read that. Responsibility for representing the committee and interest groups and all

their concerns and everything like that.

Basically, you can take this home and review it a little bit more. If you have any questions or anything, please feel free to call me. I will be in touch, of course, with Steve Foreman on all this.

Are there any questions now? I do have -- I will have to talk to Steve a bit later, but this is a little bit of information on this joint DoD/EPA workshop, EPA Region 6. It includes southern California, New Mexico, Texas, Oklahoma, Arkansas and Louisiana.

It is in San Diego, California, on August 18 and 19. And we will discuss that, because I will need your address and information to try to get him lined up to go to it. The Army will buy his ticket, send a ticket to you, just so everybody knows.

You will probably have to pay for the hotel and everything like that, and you will be reimbursed, so keep all your receipts and everything for all that. There is a place to stay. If that's full, there are other hotels in the area.

I've heard this is a very informative meeting for new co-chairpersons.

MR. WALDEN: I can give a little input on that. This is the sixth or seventh -- there's been

a series of these they've had across the country. This is the next to last. Happens to be our turn here now.

Some of the other folks in my office have been to some of the other ones, ones up in Seattle, Denver; and they've been extremely informative, not only from the viewpoint of actual procedures for the RAB to follow, so that it gives you a running start, but they also have a guest speaker there who speaks on dealing with public issues and potentially hostile issues and gives a lot of insight on how to do that.

So it is very worthwhile.

MR. FISHER: Thank you. If there are no further questions concerning the Restoration Advisory Board or the co-chair, what I would like to do now is go to the next item on the agenda, the review of the Fort Wingate Depot Activity environmental investigation summary.

Tim -- I have the wrong name down here. Tim Alexander.

MR. ALEXANDER: Thank you very much and welcome, I guess. This is the second meeting. I attended the first meeting, and I wasn't sure who was going to be here this time around. It is rather crucial to at least get people to start thinking about

some of the issues that are before us.

There's a lot of work that has been done. Not a lot of decisions have been made, and that is important. There is a lot of work to do. So in order to do that, I am providing a little presentation which attempts to achieve the following objectives.

I don't want to take a lot of time. I want to spend a short amount of time. We do want to provide a lot of information for the next couple of hours, but we are going to have many, many meetings in which to bite off more and more parts of the effort that has taken place for the last several years, actually, at Fort Wingate. So today, again, it's basically a cursory introduction to some of the work that's been done pursuant to the Comprehensive Environmental Response Compensation Liability Act, CERCLA.

As you know, those who attended the reuse meeting this morning, there is other work ongoing that deals with ongoing regulatory issues or compliance issues, as I term them, UXO or safety issues, issues related to ordnance handling and disposal --

MR. FISHER: You need to move over, Tim, so everybody can see you, see the screen.

MR. ALEXANDER: Sure, Larry.

I have lost my train of thought. I'm sure I will pick it up again. Okay. So again, to review the purposes. One is we want to -- forgive us for the n. It was Saturday, last Saturday, as a matter of fact -- reinforce the relationship between the RAB and the restoration activities.

I am going to outline the cleanup process. John Haasbeek with ERM is going to discuss or introduce us to this concept of risk communication, which is really a determinant in the whole process. And Steve Egnaczyk is basically going to review a lot of the work that's been done over the last couple of years out here, in a very, very summary fashion.

Okay. Moving on. The Restoration Advisory Board. We just went over the roles and responsibilities of the Restoration Advisory Board, and we know that this is the short list.

The RAB will be reviewing our working documents, and there have been many and, actually, there is a repository. I have a list of the repositories. Again, I didn't know who the audience was going to be.

I brought with me a list of repositories. One such repository is right here, the library here in Gallup. There's another -- I think the Zuni office in

Window Rock, Arizona.

MR. WALDEN: Navajo, in Window Rock.

MR. ALEXANDER: There's a third one -- I have them on a piece of paper. We can hand them out.

Another function will be to not only review these working documents but, certainly, to provide your input on these documents, through this forum, to the Army, EPA and the State. And, of course, as you heard, it's been termed that you are a conduit of information back to the public, and that is true. So you serve as an information source back to those in the community.

MR. PFEIL: If I could ask a question, Tim. It's all kind of very vague. How does the conduit work? Basically, comments are developed in response to reviewing documents.

MR. ALEXANDER: That is correct.

MR. PFEIL: Is this the primary forum for bringing those comments forward, or are they kind of -- can any RAB member officially write Larry, or is there something a little more specific?

MR. ALEXANDER: I can give my own opinion about that. I think, going through the process, you will establish a mechanism in which to

communicate through the Board and back to the community, but I would think that the Restoration Advisory Board members would want to interact through this forum, the Restoration Advisory Board, and they would want to bring their comments here.

Now, certainly, they are individual citizens, too, and there is an opportunity in the process for public comment and public hearing. So that is -- but that, again, is an issue that you can work out when you establish how you would like your Board members to participate, whether it is through this Board or whether you are going to have them speak through the Board and as individual citizens.

You know, that is something to be determined. I would think, frankly, folks would feel comfortable in airing the issues right here so that, basically, we can discuss it collectively, get the first chop at the community's feeling about a selected alternative or an alternative that we would like to put forth.

We would like to understand it right away, maybe before we actually have a public hearing so that, you know, those factors can be taken into consideration and, frankly, even influence an alternative before it goes through public comment.

MR. FISHER: If we have citizens who don't feel comfortable, they can present their ideas and questions and comments to one of the members of the Board. Then you can present it here at the Board.

MR. ALEXANDER: Absolutely. I would think that would be something desirable, that folks not only represent themselves here, but we have -- you know, we want to cover a variety of interests and, hopefully, the folks can represent those interests.

So you folks will work out the details. And frankly, our role, if I haven't mentioned it, really is to support this Advisory Board and provide, basically, technical information, statuses, that kind of thing. We will do that on an ongoing basis, as requested.

A quick review. Again, we are talking about four areas of interest. One area, work being done pursuant to CERCLA. Okay. There is specific language in CERCLA -- that is the statute -- which directs us, federal agencies to evaluate potential contamination at federal facilities and gives us a specific mechanism for addressing the problems that are identified and the need to clean up.

Not all sites we are investigating will actually require cleanup, as you will see. What I

have here -- this is actually the process that is outlined in the National Contingency Plan. The National Contingency Plan is actually a set of regulations that are written to support the statute, CERCLA.

And typically, this is how it is outlined for a site which becomes a Super Fund site. I mean, we have all -- it's been around now for -- since 1980, so we have all heard about Super Fund in one way or another: Mill tailings out here in the West or solvents impacting drinking water supply.

But this process as outlined -- frankly, we are directed to mirror this process. There are some exceptions. So, if we don't fit the criteria for listing on the National Priorities List, well, then we are not going to be listed on the National Priorities List. So these two steps here really don't have a lot of meaning right now.

These steps here, discovery, CERCLA preliminary assessment, site inspection, are really -- I think if you will read the guidance documents, they pretty much discuss them and the concept of being in the site discovery phase.

What site discovery is all about is basically going back and doing things like reviewing

existing literature on a given site like Fort Wingate. We went to Fort Wingate. We wanted to learn about its problems.

One of the first things we are going to do is evaluate all existing documentation, and that includes going to even County resources, aerial photographs, even interviewing some of the workers on site, some members of the community, et cetera.

And the objective here is to --

MS. NOE: Question. Hasn't that already been done for Fort Wingate?

MR. ALEXANDER: Yes, yes.

MS. NOE: We got the document this week.

MR. ALEXANDER: Yes, we do -- what was that last remark?

MS. NOE: This week.

MR. ALEXANDER: Actually, that document's been around. It actually went into the repository. That work was done principally in 1980 -- or 1990, excuse me.

MS. NOE: But there has been an Environmental Impact --

MR. FISHER: Statement.

MS. NOE: Statement.

MR. WALDEN: There was an Environmental Impact Statement done for the closure legislation, to support the closure. There has not been, to my knowledge, an Environmental Impact Statement completed to support reuse. I think it is important to draw that distinction.

MR. ALEXANDER: Yes. I am going to tell you something. We went over those four areas of -- we identified four areas of interest. We are actually talking specifically about one area.

Again, what I am discussing here is the process that goes back and evaluates Fort Wingate as a whole. And there are other areas of interest, like regulatory interests. I can describe them, if you would like.

But basically it's evaluating where there potentially could be any environmental or public health problem associated with an operation, with an activity, et cetera. I will get into that a little more.

That's the whole purpose of this process, kind of screening sites out and focusing on sites that have become more important to us in terms of really understanding what's there and what we need to do about it, if it actually presents a problem.

That is the process I am trying to describe right now. We are going to get into that. I am going to give you a skeleton, and these gentlemen are going to follow that up with, hopefully, some more fundamentals. The idea here is to give you enough information for you to go back over to the repositories and start looking at this information.

We will be back to really start talking about some technical issues, be a lot more specific, you know, down the road. This is just the beginning, so if you don't get it all, don't worry. In fact, I can bring back some rudimentary information that basically goes into detail just about what I am talking about today.

So the first part of the process is site discovery. We determine that there is a potential problem or, frankly, we recognize right off the bat that there is a problem at a given operation, et cetera.

Then we move it through this process right here, which becomes more important to us. It is actually, what do you do? Okay. Well, the whole thing is, you do a Remedial Investigation/Feasibility Study.

What is a remedial investigation? I am

jumping ahead in my spiel. But the common sense perspective of what it is: Let's define the problem.

In our term of art we always say, Let's define the nature and extent of the problem, how large of an area have we impacted, whether it's through the soil, through the surface water, groundwater, sediment in a creek, et cetera. Let's define how big this problem is.

We move into what is termed a feasibility study, which is basically an evaluation of alternatives for action. Among those alternatives, though, is essentially a no-action alternative. I'm just throwing that out to make you aware of that. That is evaluated.

Once we move through this component right here, we actually generate a Record of Decision. That Record of Decision is actually subject to public debate, public comment, public hearings.

Once we have our hearing, receive all the comments, et cetera, a Record of Decision is finalized. And I will add that basically, in this case, the regional administrator and the State actually offer concurrence in this document, along with the Army. And basically, that is the decision for the site.

Question?

MS. BECK: Is Fort Wingate an NPL site?

MR. ALEXANDER: Fort Wingate is not an NPL site, no. By no stretch of the imagination is Fort Wingate an NPL site. That, obviously, is a remedial action.

MR. WINKLER: NPL, could you tell us exactly what stands for?

MR. ALEXANDER: That stands for the National Priorities List. How do you become a National Priorities List site? There is actually an objective system called a hazard-ranking scoring that qualifies a site for the National Priorities List, so there are established criteria which are objective in nature.

There is input into a model. The model spits out a score and, if your score is above 28.5, then bingo, you have met the threshold for the qualifier that can make you a National Priorities List site.

We don't have that problem here. There's a lot of reasons for that. Okay. The National Priorities List is composed of what is termed the nation's worst hazardous waste sites, the Super Fund list. That is, in fact, what the National Priorities

List is. Okay.

But again, let me just go back and reemphasize, Congress made no distinction when it said, "Look, you are going to use the National Contingency Plan" -- and it is outlined -- "to conduct investigations and follow up a path for cleanup of sites at a federal facility, regardless of whether it is on the National Priorities List or it is just a site that requires some form of remediation."

MS. BECK: Question. Remediation, of course, is triggered by need. By that I mean, if we have property and it is going to be dirtied up again by another Army entity or federal agency, there's no need to clean it up. I don't see -- you don't clean it up just to be cleaning it up. It depends on --

MR. ALEXANDER: That's half true, whatever -- that's too broad a generalization. What generates the need for an action -- and that is what John is going to be talking about a little bit -- and that is in the National Contingency Plan. Okay.

It describes how, based on risk to the public health or the environment -- and there is a threshold for parameters such as carcinogens and noncarcinogens. John is to get into all that, I think. And, basically, you have to exceed that

threshold.

Now -- I mean, I don't want to get too detailed. All we are trying to do is create an interest. We can get into that down the road. But essentially, the risk-based determination determines, really, a need for action, remediation. So if you exceed a certain threshold of risk, it says, "Okay, now respond."

But there's a whole host -- in fact, there's nine factors that go into determining, you know, what that response actually is. Okay. It's not only risk based. It may beome risk based in the absence of other environmental standards, laws, regulations which dictate, under a given set of conditions, that these specific standards be implemented.

In the absence of those standards, we go back, then, and rely on risk to help us understand how clean is clean.

Now, to focus on the comment you made, you know, given -- a particular use of the piece of property may become an important parameter in actually evaluating how clean you have to clean up a piece of property; and again, that may be a risk-based determinant.

In other words, if you are going to be there

for eight hours a day in a light-industry setting. Are you going to be there 24 hours a day, actually acting as a resident on that site?

MS. BECK: Or if you are giving the property to the National Guard, or what if the Army is going to continue to use the property?

MR. ALEXANDER: Those are considerations. I am talking way beyond what I wanted today.

MS. BECK: Sorry.

MR. ALEXANDER: In 1990, there was a preliminary assessment done. There was site discovery work done. It was done by Argon National Laboratories for the Army Environmental Center, and this is what they did. They came in and evaluated the conditions -- in very broad terms, the conditions of the facility.

They reviewed past industrial operations, storage operations. They looked at the training activities. And they looked at the disposal operations, of which some are now very central to our objective of environmental restoration at Fort Wingate.

Among them, probably one of the most important, is the ordnance burning and demolition

ground. I put that up there because it was carried through. We did look at that, through that area in our environmental assessment.

But it's a perfect case in point that we were actually looking to address that area under the Resource Conservation and Recovery Act or RCRA. RCRA mandates that we do that.

So here we have two sets of standards up here. CERCLA says, okay, you are going to evaluate all of the sites through CERCLA. But no, this is a special case. Frankly, we are acting under interim status or an interim status permit to conduct certain activities, and that lends itself to closing -- or addressing any problems at that facility, the open burning/open detonation ground, under the Resource Conservation and Recovery Act, and we are doing that. But we are not talking about what dictates the needs there today. We are talking just about CERCLA.

We went through and looked at the landfills. We looked at the wastewater treatment plant facility. We looked at incinerators. We looked at parts-cleaning operations. There was a heck of a lot that was looked at. Steve is going to talk about it.

What we did at the end of this process, there was a screening that was done. It directed our

investigation to very specific areas of concern. Steve is going to tell you how we got there. I am going to turn it over --

One more slide. I kind of went through this information right here already, but it probably wouldn't hurt to take two minutes to say -- this is really where we are at in the process at Fort Wingate. That is the document, Sally, that you have talked about, that showed up here recently.

MR. EGNACZYK: It might have been the Environmental Impact Statement.

MR. ALEXANDER: This is another document, then. It may be on file, you know. I'll have to check that. Remedial Investigation and Feasibility Study, it will be called, for Fort Wingate.

And again, the whole purpose of the remedial investigation is, let's define the problem. Let's characterize the contamination. Let's define the current risks to humans and the environment.

MR. WALDEN: Could you -- there might be a little bit of confusion, at least on my part, maybe some others. You are talking about CERCLA. You haven't addressed CERFA.

Is there interface between CERCLA and CERFA?

CERFA documents -- the RAB has CERFA. It's been distributed.

MR. ALEXANDER: Yes. I don't really want to talk about CERFA today, because there is more -- this gets so complicated. There's such an interweaving of requirements and specific mandates through various laws that there is no way that I can, in this quick overview, try to help folks understand.

MR. WALDEN: I guess I am not asking for detail but, for instance, Steve has CERFA sitting in front of me. I know I distributed it out to the members of -- the reason it got to the RAB. Maybe you ought to touch on it.

MR. ALEXANDER: I'll be glad to touch on it, if that's the request, Malcolm. Let me get through this and then I will go back and look at CERFA, just take two minutes to look at CERFA. Then we can let Steve and John get on.

To reiterate, the remedial investigation is to define the problem, characterize the nature and extent of the problem, to define current risk to human health and the environment.

The feasibility study, then, is, let's look at the problem. Let's analyze solutions and basically screen alternatives. Again, the NCP is very specific

about how we go about doing that. Through that, we generate a proposed plan.

The proposed plan picks the alternatives. It goes out to the public for comment. We respond to the comments, generate a Record of Decision and move on to remedial action.

Now, to get on with CERFA. What is CERFA? CERFA was actually CERCLA amended in 1992. There were terms and conditions relative to property transfer that were very broad in the initial statute.

Under CERFA -- okay -- the Community Environmental Response Facilitation Act -- what they said, you know, was that it placed a burden on the federal government to basically identify clean parcels of property expeditiously so we can return them for some other use.

That was one of the key components of CERFA. So we did that. The CERFA report then identifies -- and in our case, the Army's case, what we did was we looked at four groups of parcels -- there are CERFA parcels -- which, based on existing documentation which we had the opportunity and the good fortune to have done the remediation -- the remedial investigation and feasibility study.

So all that information, in addition to all

the historical information, went into the CERFA report. So we had a lot of -- huge body of information that went into that analysis.

Based on that we said, this parcel is clean. This parcel is clean. This parcel is clean, et cetera. There has been no hazardous release -- right -- hazardous substance release. There's been no petroleum product release. There's been no storage for over one year.

These parcels are good to go. There's no concerns about lead-based paint or asbestos in the buildings, et cetera. These are ready to transfer. That's what a CERFA parcel is.

There is a CERFA-qualified parcel. Okay. There are a number of qualifications, most of which lend themselves to the potential for release of a hazardous substance, for release of a petroleum constituent.

For safety considerations, those are all qualified. There are CERFA -- what we call dirty parcels, where we know, through documentation, there's been some sort of release, there's been storage over a year, et cetera.

Then there are CERFA-excluded parcels. Those are parcels which the Army may want to retain.

Okay. That's basically what's in the CERFA document. The document was designed -- and it serves the Army more than one purpose -- but to meet the requirements of the Act -- it was to generate a document which identified parcels which were clean and could be subject to transfer right away.

Now, the other big component of CERFA is this: As the Army -- it relates to the contents of deeds. You know, it is very important now that we document our findings in deeds, of hazardous substances found on the property, et cetera.

Another aspect of it and, lastly, extremely important to us, is that the Army will now, pursuant to CERFA, warrant that, in the event that we find contamination later down the road and it is our problem, basically, we will come back in and address it.

It has some rather broad implications and that's a rather severe standard and that's what CERFA introduced as an amendment in 1992 to CERCLA.

I know that's a heck of a lot to cover in one meeting. We can come back and talk about CERFA, in particular. But really, again, like I say, one more time, we just want to generate some interest and get folks to start looking at what is in the

repositories and become more familiar with the information. And we will be back again, time and time again, to address issues specifically and to enjoy your comments, really.

So with that you've got an outline. You've got a skeleton of what's been happening with CERCLA.

Well, John is going to talk -- John is with ERM out of headquarters in Exton. I think John is sometimes in Colorado, the Denver office, sometimes the Albuquerque office.

John is going to talk about risk communication a little bit. Remember, this is a big piece of the puzzle in CERCLA. Everything is based on -- there is a risk determinant that triggers action. It's extremely important --

MR. FOREMAN: I have a question. In the preliminary assessment report done in 1990, there is one omission -- what appears to me, at any rate, to be an omission -- and that was some sort of thorough investigation in terms of groundwater in the local aquifer.

The City of Gallup commissioned, probably some six years ago, a hydrologic study of the aquifer, and the hydrologist that did that study concluded that, in the Wingate area, there was an anomaly in the

sense that the aquifer actually comes to the surface at the aquifer. That's why there is plentiful water resources at Wingate.

MR. ALEXANDER: Are you talking about the artesian condition?

MR. FOREMAN: Right.

That being the case, I think I would like to echo Governor Lewis of Zuni's concern about the possibility of the migration of contaminants through the aquifer.

In looking over the CERFA report, I just saw one instance of some drilling done to determine some very local potential for groundwater contamination; but it seems to me that the general question of the analysis of the potential of contaminant migration in the aquifer is actually, perhaps, one of the preeminent questions of the environmental condition --

MR. ALEXANDER: I'm going to tell you -- I can answer that question, but John Pfeil here is from the Groundwater Remediation Bureau, New Mexico Environmental Division.

John, if you wouldn't mind talking about the general hydrology of Fort Wingate, because I know Steve is going to talk about some of the efforts we have taken in terms of installing monitoring wells or

attempting to install monitoring wells, many of which did not yield any water because of the depth of regional flow.

But would you mind helping me out?

MR. PFEIL: No. In brief, I think there are a couple of different areas of interest in terms of groundwater. The groundwater in the vicinity of the administration, where most of the buildings are on the base, the administration area, occurs at what we think is probably between 1,100 hundred and 1,200 feet below the ground surface.

There's been a series of wells put in, as Tim had suggested, around various areas of concern on the base, many of them down to a couple of hundred feet. A few of them -- I don't know -- maybe a relatively small percentage. Maybe 10 or 20 percent --

MR. EGNACZYK: Four of them had any water detected at all when we were doing our investigation activity. We did sample those wells, as well as sampling the water-supply well for the installation. That was sampled during our environmental investigation activity.

MR. PFEIL: Right. So that area, what we believe is that the water is very, very deep. The

little bit of water we are getting in the monitor wells we believe is probably perched on small amounts of water perched on clay layers, basically not usable for domestic or any other purpose.

There is another area --

MR. ALEXANDER: Productivity is the problem.

MR. FOREMAN: We are speaking about the hogback deformation there. I believe that is the hogback deformation.

MR. PFEIL: Yes. The other thing I was going to mention -- so there you have the issue of the regional water.

What we are concerned with is the area down gradient from the OB/OD or the Open Burn/Open Detonation area, where we actually have detected, in one of the wells up there -- we have reason to believe that at least the shallow alluvial aquifer up there could be contaminated.

MR. ALEXANDER: That's about eight feet below ground surface. The conditions -- I will tell you, as we get into the specifics of these various settings, we can really be very detailed about what is there and about what we are finding.

What I think we are looking at there is very

trace amounts of any contaminants, and it is associated with the explosive operations. So there are explosives. You know, that occurred over many, many, many years.

MR. EGNACZYK: This might help, also. Here's a map of the installation. I think it might be worthwhile to note here that you have a very large installation. There's 35 square miles here.

I am sure that the geologists present here can certainly speak to the fact that the conditions of the installation are really going to vary across the installation. The area, the administration over here, where you have a water-supply well, this area, for example, around the TNT washout lagoon area, where we did put some of our wells. But there are also wells all around the installation that had been placed around the installation previously that we did sample or attempt to sample during our investigation activity.

The area that John was just talking about is upground of the burning ground area. I believe there's a difference in elevations, maybe 1,200 feet, something like that, between the administration area and the demolition-burning ground area. So you are going to find variable conditions across the

installation, on a piece of land this size.

MR. ALEXANDER: Is that fair?

MR. FOREMAN: Of course, now -- but actually, then, on this map, we are actually getting back close toward that hogback area where, then, you have detected some actual contamination.

MR. PFEIL: That is right.

MR. FOREMAN: You describe it as being eight feet into the alluvial soils. I would open the question, what further investigation has been made?

MR. PFEIL: We are asking the Army Environmental Center to place additional monitor wells down gradient, downstream, if you will, from the OB/OD to further characterize whether contaminants, indeed, are there and whether they have the ability to migrate down through that system either via -- you know, through the groundwater.

MR. FOREMAN: When you are saying "downstream," you are referring to a northerly direction?

MR. PFEIL: That is right. I mean, it's always been --

MR. FOREMAN: Wouldn't it make more sense, in terms of this concern, to have them going toward China?

MR. PFEIL: Restate that another way.

MR. FOREMAN: Rather than going down. Rather than going northerly.

MR. WALDEN: If you're speaking about migration, ordinarily, when you are concerned about migration, you are concerned about migration into the flow and off installation.

MR. FOREMAN: Well, what I think the concern is is contaminants percolating or leaching into a broader aquifer; and that exposure, I believe, is to the south of that.

Now, whether they flow to the north, leach down and then go back to the south -- there are a number of scenarios that are feasible, dependant upon the particular geologic mechanics.

But it would just seem to me, then, that those need to be very, very thoroughly explored.

MR. PFEIL: One thing I might state about the OB/OD is we haven't settled upon a solution, but I believe the Department probably is going to be interested.

We have talked about this, talked about this a little bit with Tim, about wells that go deeper than the shallow wells in that area to make us feel pretty confident that there isn't any material flowing

towards the regional aquifer.

MR. FOREMAN: Again, I would like to say, this is a personal assurance that I gave to Governor Lewis of Zuni Pueblo when I also noticed some anomaly or potential that needed to be investigated here, since Zuni pueblo, particularly, is potentially impacted by this, that this would be a concern.

MR. WALDEN: His concern was southward drift into their watershed.

MR. PFEIL: Let me ask you this. Maybe my geography -- I was a little confused by that part of the resolution this morning regarding the watershed concerns of the Zunis -- does not the Zuni reservation lie primarily to the south of the Fort Wingate property?

MR. WALDEN: South and west.

MS. NOE: South and west.

MR. FOREMAN: You have to realize there's a crown on the Fort Wingate property; water running to their direction.

MR. PFEIL: Right, okay.

MR. FOREMAN: And that is not the -- I mean, this is simply part of that general question of their concerns, also. You know, sheep grazing in there.

MR. ALEXANDER: Can I respond to that in a general way? That's being looked at right now. We haven't settled on a resolution. We have already proposed a closure plan that there is dialogue ongoing about right now.

Obviously, we will be sharing that information with this committee. But yes, groundwater is a concern. We have already offered -- made part of our proposal to monitor that condition, actually put some definition on just what the nature of that problem is.

Everybody knows there were a couple of what we call hits, whatever, term of art. But it is being addressed, both in the perspective of closing up the area -- there is a lot more to come on that issue.

MR. CHIA: Sing Chia, EPA.

I would like to state, in order to address your question, Tim and John have done a lot of work. In trying to put together the final closure requirements, I would suggest, when you have your final closure plan submitted to Mark, have a sort of short presentation to the RAB members.

At that time, Steve will have a lot more information to respond to his questions.

MR. ALEXANDER: I think that's a good

suggestion. We will be glad to do that, you know, if that is your requirement, if that is the committee's will.

MR. CHIA: Really, I think it will serve as a good opportunity to give a first cut of the information to the general public through the committee. It will help later on in finalizing the closure plan, as it goes through the public meetings, whatever is necessary.

MR. ALEXANDER: Again, you know, in terms of cleanup, no decisions have been made on anything on that post, essentially, through the CERCLA process or through that RCRA closure of the OB/OD area.

So this is a timely gathering, because we are actually advancing towards critical points in that process. We would like to accelerate the consideration of those issues, so this is a good opportunity to work with this committee in doing that.

MS. NOE: Are you also doing a check on the school-site wells? You know, Fort Wingate School that's just on the edge of Fort Wingate?

MR. PFEIL: They were tested.

MR. EGNACZYK: We did not sample those wells, but we had wells in that vicinity.

MS. NOE: There are concerns about that from the parents and students.

MR. WALDEN: Migration concerns, again?

MS. NOE: Yes.

MR. PFEIL: I suspect those wells would be checked under the Safe Drinking Water Act.

MR. ALEXANDER: Sure.

MS. NOE: I have no idea, but it's --

MR. WINKLER: I don't know if Safe Drinking Water Act sampling would address these particular contaminants.

MR. ALEXANDER: I know that is true. Again, we are getting into a lot of specifics here that are some really good questions. Okay. Whether we want to really start delving into specific issues at this first meeting is really up to you-all.

MR. FOREMAN: I think, Tim, my own personal feeling is that it is good to go ahead with this. It can be pretty tiresome to speak of processes and formalities without directly addressing issues.

I believe these are very critical issues, as a matter of fact, to address, and are the essence of public concern. So I believe it would very appropriate to go ahead and address them.

MR. WALDEN: If I could offer a comment. This is -- in approximately the last year dealing in great detail with Fort Wingate, this is the first time I have heard members of the community bring forth any specific environmental issue, you know.

Since this is the first one that has come forward, I have to echo what Steve said. It's got to have some feeling. I think it is worth addressing now.

MR. ALEXANDER: I am just debating -- that's where we are going. We are going to talk about risk-based determination, then get into specifics, in a summary way, of what was actually done out there, what we found.

Then that might help give some information about some -- those are some very good issues. Everybody is worried about the implications of contamination from a given site or location at Fort Wingate migrating off site, but that is not what we have seen through our investigations to date.

So for me to directly say, okay, well, you know, here's the rationale why there are wells located here, here, here, here; or based on even a medium sample such as a soil sample, those soil samples were not above background in terms of metal contamination;

or there were no organics or explosives present --

You know, I'm not prepared. I don't have that information with me today. These are issues that are fair. And then, frankly, hopefully, we will draw the same conclusions about what the present condition is at Fort Wingate down the road. We are not really prepared, nor have we brought the material to go into that kind of detail.

But again, you know, just to get the whole CERCLA perspective on it is that -- I will do the process. Okay. What we have done in the past is we have developed work plans. These work plans go to regulatory agencies with very specific charges to address those very same types of issues.

You know, obviously, you folks haven't been participants in that; but frankly, there have been both State and, actually, other federal agencies involved in the review of that work effort. Nothing to date has suggested that that is a problem at Fort Wingate. That is the bottom line. That is what is important.

Now again, to bring out the specific technical reasoning behind those conclusions today -- you know, I am going to have to basically step back and basically deliver it to you in a very specific

presentation, because you get a feel about each individual site to actually carry through the analysis, i.e., how much of a problem is there?

I think you will see. This is only the second meeting.

MS. NOE: One of the things is that people have come to listen to you people, and they have been hesitant about asking questions that they thought would be stupid questions.

And so consequently, Steve and I and the Zuni people and Navajos also, now, are beginning to get some feel on, yes, okay, these are the concerns for the people who live right here in this vicinity.

We don't live anyplace else, so -- it is a rural area. We are concerned. And so it is only recently -- even though you have been coming, it is only recently we get this kind of feedback from just whoever is walking down the street and saying, "Have you looked at this?"

MR. ALEXANDER: Just -- I am going to allude to the process, and I am really going to turn it over to these guys. That's really who you want to turn to for specifics.

MR. PFEIL: Sally, I think it's fair to say there is no such thing as a stupid question. I

think all of us feel that way.

MS. NOE: I know. You know, people have a tendency to ask -- even if you are on the committee, a lot of times, you've got to have three or four discussions with them to even get a question. So --

MR. PFEIL: Right.

MR. ALEXANDER: I am going to punt --

MR. FISHER: Thank you, Tim.

MR. ALEXANDER: Turn it over to John.

MR. HAASBEEK: I am John Haasbeek, subcontracted to Tim to provide them with technical support on all the investigations that are currently ongoing out at Fort Wingate. Tim's asked me to put together a brief discussion -- he asked me to be very brief -- on risk assessment.

I thought, in doing that, the first question I really needed to ask and try to answer for you folks is, what is risk assessment? Why is it important? Why am I here talking to you about this stuff?

I don't have a formal presentation. I would like this to be very informal. I would like people to speak up and ask questions if I say stuff that doesn't make sense to you. There are definitely people in the room that know this stuff at least as well as I do.

There may be some other folks in the room to whom this is something completely new. So I will try and keep it as general as I can.

Tim kind of went over the process of what CERCLA -- what the federal government requires, through the National Contingency Plan, be done to investigate environmental pollution or contamination at Fort Wingate.

In that process, there are a number of real critical decision points, and the big ground-breaking step that the National Contingency Plan made was it required a risk-based or risk-management approach to making those decisions.

That is where the term was coined, and that is really the fundamental basis of why we use this area of science or this field of expertise called risk assessment. Well, the science, the way of actually doing this, of actually figuring out what risk assessment means was sort of provided by the National Academy of Sciences. That was the original group that came up with a publication called "Risk Assessment and the Federal Government Managing Process."

They laid out a framework of how to do risk assessments, and then that framework has been filled in by agencies such the federal EPA, the various state

environmental agencies and other government agencies such as the Department of Defense have contributed technical guidance documents.

So this whole science of risk assessment was mandated originally through Congress and then has been filled in with science and with how-to's and with guidance from the agencies involved in governing and regulating the CERCLA process.

I am going to be using the chalkboard. If you prefer, I can roll it around or just ask some of the members of the committee to possibly turn their heads a little.

The steps that Tim went over. The first step in the process he characterized as RI, remedial investigation. He called that the definition-of-the-problem step. Let's go out there. Let's collect some information and try to figure out what it is that we have.

The next step that he mentioned is called FS, which is thought of as a feasibility study, but that is basically the step where we would evaluate ways to remediate the problem.

As you can probably guess, there is a pretty big and important decision step which connects these two, which is, based on all the information we have

collected at this site, is there a need to solve a problem? Is there a problem at all? Is there some form of contamination we have to clean up?

That is the first critical decision, and that decision is made based on risk. The National Contingency Plan defines the guidance for making that decision as being protection of human health and the environment; and that phrase, "Protection of human health and the environment," has become the key phrase and the guiding directive for making these risk-based decisions.

Are we protecting people? Are there going to be adverse impacts to people's health or to the environmental plants and animals as a result of what we found at the site?

There is also -- before we get to what is called the Record of Decision, RoD, there is another question to be asked, and this is another topic that Tim hinted on, which is, how clean does the site have to be?

Once we have gone through the process of deciding if there is a sufficient amount of risk or a sufficient problem to warrant considering cleanup, risk again comes in at this point to say, how much do we have to clean that up? How safe is safe? How much

is an acceptable amount of impact to the community, given the amount of money it might take and the effort it might take to clean it up?

So there's a few key elements. That is why I am up here telling you about risk. That is why, as members of the RAB, you will be reading a lot of documents that talk about risk assessment and that rely on risk assessment to support the decisions made.

The next question I want to try and talk about a bit is, what is risk assessment? I keep using this term, risk assessment. It hasn't necessarily been defined yet.

The way most people look at risk, risk is sort of the probability that something adverse is going to happen. That is really a basic definition of risk. That concept has been around for a long time.

For instance, the concept of financial risk has been around since we've had money. When you make an investment -- you've all probably heard of the terms high risk-high yield, low risk-low yield, et cetera. The risk there in financial investing is the risk that you will lose money. The adverse impact or the adverse outcome is losing money.

That's kind of like gambling. The object,

when you walk into a casino, is to come out with more money than you walked in with. The risk is that you won't. So anyone who is going to a casino should do a risk assessment to determine what the probability of this adverse outcome is. If they did, the casinos would probably go out of business.

For us, the adverse outcomes that we are talking about are mandated by the NCP as being human health and the environment. It is fairly easy, probably, to understand what an adverse effect on human health is. Someone gets sick. Someone has some damage done to them. That's an easy concept to grasp.

In terms of the environment, it's much harder to grasp. What is an adverse impact to the environment? Obviously, a devegetated area or an area of land that's contaminated such that it can't be used for what people want to use it for. Those are fairly vague terms, and that is something that has not been solved yet and is still a big question: How do you define an adverse impact to plants and animals?

Today I am not going to really delve deeply into that because that is -- I could talk for hours just on that topic alone and still not get to a conclusion. I just want to make you aware of that

fact, that that is what we are dealing with.

When I talk about health risk, something that is real common terminology that is probably worth going over a little bit is the idea of voluntary risk versus involuntary risk and the idea of familiar risk versus exotic risk. Rather than drawing this up, I'll just give you some examples.

Let's first talk about voluntary risks, risks that you might take on your own, of your own volition. Smoking has been in the newspapers a lot lately. Smoking is a risk. There is definitely a connection between smoking and various types of health effects.

Now, smoking is not only a voluntary risk; it is also a fairly familiar risk. Probably everyone in the room has read enough in the papers to know about emphysema and lung disease and lung cancer and all that sort of thing.

Drinking alcohol has been linked to certain health effects. It is a voluntary risk.

Exotic risks. I don't know if any of you are skydivers, but skydiving is an example of an exotic risk that is voluntary. You chose to do it. It doesn't probably impact our lives very often, so you might consider it exotic.

Involuntary risks are risks that are imposed on you from outside. Not necessarily risks that you cannot do anything about. You could be Howard Hughes and lock yourself up in a room. But risks you wouldn't necessarily chose to take.

For example, secondhand smoke. That's an involuntary risk that you are taking. Allergic reactions to things. Those are fairly familiar, but involuntary risks.

Now, the fourth category is things that are both exotic and involuntary, which is where all of the environmental-contamination risks fall. They are imposed involuntarily on people who want to use the land, and they are also exotic. The types of health effects that come from exposures to the chemicals we are dealing with not just at Fort Wingate, but in environmental pollution across the board, are seen by people as exotic.

So that is probably the worst category to be in, and that makes risk assessment a very important issue, A, because it's been mandated by the government that it will be the driving factor in making these cleanup decisions; but B, the subject we are talking about is involuntary and slightly exotic.

That is an important concept to get across.

What we are really dealing with are two types of risks. Tim had used the terms carcinogens and noncarcinogens. A great deal of distinction is drawn between cancer-causing agents --

I don't know if any of you is familiar with the California laws. They are probably one of the most proactive states in terms of regulating carcinogenic constituents.

There's a whole series of other types of health effects such as liver disease, central nervous system disorders, reproductive system disorders that are caused by exposures to common workplace chemicals. Those all fall into a category of everything other than cancer.

The important thing, the important distinction is that, with cancer, the probability that you will get cancer as a result of a certain exposure is never zero unless the exposure is zero. In other words, there is no, quote, unquote, safe level of a carcinogen. It doesn't matter how little of it you are exposed to; there is a correspondingly small risk that you will develop cancer as a result of that.

Take, for instance, cosmic radiation. It's an involuntary exotic risk. It only takes one radioactive particle entering your body to create the

mutation that may result in a carcinogenic growth. So, unless there is zero cosmic radiation, there will never be a zero risk of cancer.

MR. WINKLER: How would you term cosmic radiation as exotic? What do you consider exotic?

MR. HAASBEEK: That's a good question. The term exotic means something that is unfamiliar and that people react to in a way -- that it is something that they wouldn't expect to see in everyday life.

MR. WALDEN: What are you indicating as cosmic radiation? I thought you were talking about sunburn for a minute. Is that the cosmic radiation you're referring to?

MR. HAASBEEK: There are X-rays, gamma rays, various types of particles flying about the universe, to which we are all exposed.

MR. FOREMAN: The Big Bang thing.

MR. WALDEN: Not very familiar.

MR. FOREMAN: I don't see how that's exotic, but that is -- I would ask you to sort of presss forward so we can sort of get the gist of what you are -- where you are going.

MR. HAASBEEK: Sure. Like I said, please give me some Let me know what I should talk about and what I should skip over.

Anyway, to contrast carcinogens from noncarcinogens, there is no absolutely safe level of a carcinogen, according to the science that's been developed by the National Academy of Sciences and that's implemented by the EPA and state agencies, in doing this risk assessment.

On the other hand, noncancer-causing chemicals, there is a safe level. There is a threshold below which we say there is zero effect. It is okay.

There is a great quote -- I've never actually found out who originally coined the term -- but an individual many years ago said, "Everything is dangerous, but dose makes the poison."

For instance, sugar could be classified as a hazardous substance. If you happen to be diabetic and you eat an overdose of sugar, you might go into shock. You might die, whereas most of us would not consider sugar to be a particularly scary substance. That is something that has a threshold. There is a safe level of sugar intake, and there is an unsafe level. So really, the key thing here now is dose.

We have talked about adverse effects. What are the adverse effects we are looking for? And we said those adverse effects are keyed into the dose,

the amount of a chemical that you intake into your body.

A lot of the documentation that you will read on these risk assessments will be involved in predicting doses. Rather than go into the theory of it, let me just give you an example.

There is a residential user in an area. We predict the dose that that individual receives of a given chemical by knowing how much dirt that person will incidentally eat. Will they grow vegetables in their garden?

If so, will the vegetables take the chemical up out of the soil and how much weight of vegetables will the individual eat? How much air do they breathe per day? How much groundwater do they ingest if they have a domestic supply well and so forth.

All those routes of intake into the body are what go into predicting a dose of a chemical. The EPA and various other research organizations have developed huge data bases of things like, how much air does a person breathe? How much dirt does a person eat? If people use their gardens for subsistence farming, how much food do they eat from those gardens and how much of a given chemical will those vegetables take up out of the soil?

That brings up the concept of a reasonable maximum, because we don't all -- let me use breathing as an example. We don't all breathe at the same rate. We breathe at different rates as we grow up.

In order to make this science what we call conservative, to ensure that it is erring on the side of protectiveness rather than on the side of unprotectiveness, we have taken these data bases and developed these reasonable maximum exposures. So, really, picking the highest value we could reasonably pick, in order to develop these doses.

So that is kind of how the science has gone. We create a scenario of a land use, what the land is going to be used for. We use that scenario to figure out what kind of dose of chemicals will the people using the land that way receive and then, based on this dose/response relationship, we can figure out what the probability is of an adverse health impact as a result of that dose of the chemical.

The question still remains, how are the decisions made? Who decides what is an acceptable health impact?

I have made the statement that there is no safe level of a carcinogen. There is no zero risk. Well, another part of the National Contingency Plan

was the definition of what is an acceptable impact to human health.

And the concept is of a probability, and the National Contingency Plan stated that it is acceptable, for a probability of developing cancer for an individual at a hazardous waste site after it's been remediated -- an acceptable probability is somewhere in the range of one in ten thousand to one in a million.

The implementing agencies, EPA, have decided that the one-in-a-million number is a threshold. If you exceed one in a million, then you go from a remedial investigation to a feasibility study. That is for cancer-causing agents.

For the other agents, the other chemicals we talked about where there is a threshold, it's much simpler. If you exceed the threshold, you remediate.

The importance of the concept of the ten-to-minus-six number, the one-in-a-million number, can't really be overemphasized. It's a very talked about issue, and it's very hard for most people to understand. What does that mean? What does a one-in-a-million risk mean?

At this point it's tough to go into that in a great deal of detail without going on for hours.

What I would rather do is just make you aware of the issue, so you know that there is a substantial amount of discussion on that issue out in the risk assessment field.

One of the things I will definitely leave you with today is kind of like a further reading list. Some of the primary guidance documents out there are available to the public, and if you are going to be involved, as I have been notified that you will be, in reviewing these risk assessments, particularly, in trying to understand them as they relate to the cleanup decisions that are being made at Fort Wingate, then I would strongly advise and urge you to go ahead and get those guidance documents and to read through them.

Anyway, I want to leave you with these three take-home points for this further reading list. I won't write them up unless you would like me to.

The first important and critical take-home point is, the National Contingency Plan, the statute that gives the EPA the authority to implement the CERCLA process, mandated the protection of human health and the environment as the overriding concern for making cleanup decisions. So that is point number one.

Point number two is that the science for implementing that statutory criterion has been developed by the National Academy of Sciences, EPA's various research groups and various reaearch groups in both the state agencies and in the Department of Defense, and that that science is what was followed. That guidance is what was followed at Fort Wingate.

The reason that is an important point is because, to a lot of people, risk assessment seems like kind of a voodoo art, something that is very hard to understand and figure out where it came from. And we want to make sure that everyone understands that this is a process that has been developed over a number of years.

1984, I believe, was the National Academy of Sciences' publication date. And that there is an enormous amount of support and other information out there that is available to you beyond just the people in this room, if you want to learn more about how these decisions are made.

Finally, based on those few points, risk assessment is the fundamental tool for making these cleanup decisions. It is not the only tool. As you go through reading some of the reports that have been prepared, you will find that other statutes are called

into play on specific contaminants, such as, for instance, PCBs are regulated separately under the Toxic Substances control Act.

But risk assessment and this science -- and the importance of what I am getting across to you here -- is the fundamental procedure for making these cleanup decisions.

So, as further reading for those of you who want to get really involved in reviewing the stuff, the National Contingency Plan is a must. It laid the basis for using risk assessment as this decision tool.

The National Academy of Sciences' publication, "Risk Assessment and the Federal Government Managing the Process," is also a critical document to review. That laid out the framework for how risk assessments would be done.

Finally, EPA has a series of documents called, "Risk Assessment Guidance for Super Fund." There are two volumes. Volume 1 has three parts, so all in all, there are four documents.

MS. NOE: Do you have these on a handout?

MR. HAASBEEK: No, I don't, unfortunately.

MS. NOE: Would you get it to us, please?

MR. HAASBEEK: Yes, I certainly will. I will provide you the full reference list for these. But the "Risk Assessment Guidance for Super Fund" series of technical publications is very excellently written technical guidance that basically goes into a lot more detail on some of the concepts I have tried to provide you today.

MR. EGNACZYK: Thanks, John.

MR. HAASBEEK: I am kind of done. So questions, at any time, please feel free to ask.

Steve is now going to talk about --

MR. WINKLER: Could you give us that "Risk Assessment for Super Fund." I missed --

MR. HAASBEEK: I will have a full list of references for these documents distributed to all members of the committee here.

MR. ALEXANDER: I suggest we might be able to get copies of the germane documents, like the Super Fund Public Health Assessment Manual and the NCP. We can actually put them at the repositories so folks don't have to try to get them on their own. We can actually provide them in the repositories.

MR. EGNACZYK: The first place you

might want to go -- basically, this is a copy of the RI/FS that actually exists within the library here. There are four volumes of that document. Don't let it overwhelm you.

There is one document that actually has the text of the RI/FS in it, and the risk assessment process that John led in support of the RI/FS for Fort Wingate is in here and is explained in detail, with a lot of figures and a lot of flow diagrams. That might be the first opportunity for you --

MR. WINKLER: What is the exact title of that book?

MR. EGNACZYK: "Remedial Investigation/Feasibility Study for Fort Wingate." I'll be glad to leave this here for a short time.

MR. FOREMAN: I have a question for John. John sort of prefaced his remarks in this area with precluding the possibility of exploring this.

Essentially, what you've said is there are certain formulas set up by the National Academy of Sciences, and that you intend to follow those formulas. Okay.

Now, the one area you said you didn't want to speak about for hours -- and I would encourage you not to do so -- but that does have a very definite

impact on Wingate regards the habitat of endangered species and species on the candidate list for being endangered species.

You said that's too complex an issue to address. I would ask, then, where and how we are going to address this, because this is a salient area that very much needs to be addressed.

MR. ALEXANDER: It was addressed, as a matter of fact. When Steve gets into his discussion -- I think you will identify and articulate that some of the causes or need for action were generated by the ecological risks and not risks to people. Okay.

MR. EGNACZYK: The assessment is done for both areas, and I will let John expand on that -- both ecological and --

MR. HAASBEEK: The important point I wanted to get across is there is much less guidance out there for doing ecological risk assessment than there is for human health risk assessment. There is certainly plenty of expertise, and we took a very -- what I would characterize as a very innovative and far more detailed approach to the ecological assessment at Fort Wingate than what is called out for by the available guidance, which is primarily the second volume of that Super Fund Risk Assessment Guidance

series that I referenced.

The text of everything that we did in terms of evaluating human health and potential ecological impacts is in this report, and so I strongly advise you to perhaps have a look in there. But we did do a very detailed and quantitative -- the term quantitative meaning we actually calculated numbers rather than expressing opinions on the concentrations of chemicals that were found and what impacts those might have on the various types of wildlife that were found.

And yes, that did include a thorough review of the threatened, endangered list and candidate species. It also included a week-long ecological survey that was performed at the site and is described fully in this report.

MR. FOREMAN: Okay. I guess that I had generally looked over the report. I must have somehow overlooked that. Thank you.

MR. EGNACZYK: First, definitely look inside that. That would be a great opportunity for you-all to generate questions that we can really give some more detailed responses to. Really, there has been a lot of work done.

What I am going to do is just give a brief

overview of the work that has been done. Please feel free -- I've already gotten the gist of some of your questions or concerns. I will try to respond as we go through.

(A recess was taken.)

MR. EGNACZYK: I'd like to get back to the overview. There's been a lot of work done here at Fort Wingate, and that's really an understatement. So I am really going to give you highlights of the activities that were done.

Please feel free -- like I said, I don't have any problem with anyone interrupting me. If they have a question, that's great.

First of all, let me just review a couple of things. Fort Wingate was targeted for closure and decommission under BRAC. The active mission of the installation actually ceased in January of 1993. The property was targeted for final property transfer under BRAC by September of 1995. It is currently under caretaker status under the Tooele Army Depot.

As you all know, there are about 35 square miles or 22,000 acres of territory out on Fort Wingate.

The objectives of the BRAC program were basically to determine -- and this is the buzzword that Tim had used before -- the nature and extent of environmental releases from identified areas requiring environmental investigation.

Now, that takes a little bit of explaining. Basically, when you look at any installation when you are under an evaluation process, whether it be CERCLA or, really, any process, you've got to have some mechanism to really identify the areas where you need to look and where you need to do your sampling.

Obviously, if you've got a lagoon or something like that, a landfill, that pretty much lets you know where you meed to do your sampling to really see if there's been any adverse impacts to that area.

You also have processes -- for example, yesterday, on our tour, we saw there was a paint shop on Fort Wingate. We saw there were maintenance operations. We saw the locomotive storage building.

All those areas had processes that, anyone looking at that from an assessment standpoint, would kind of identify them as areas where we might want to look at that for potential environmental contamination. That is the work that was done in the preliminary assessment that Tim mentioned earlier that

was done by Argon National Labs.

They came, looked at Fort Wingate, looked at the operations that had occurred there in the past or were ongoing at that time, and identified the areas from that that required evaluation from an environmental standpoint -- and there are about 45 of those areas that were looked at on Fort Wingate -- and then transitioned into a work plan that we then implemented the sampling that was stated in that work plan.

We also, then -- because, if you remember, these 45 areas could be areas that, yes, we had a process operating under; or no, maybe somebody might have noticed there or said to someone that there might have been some landfilling activities done over in this area back in 1952, but we really don't know where.

So a lot of our investigation was really going out and proving or disproving the stories or the statements that had been provided to us as part of the background investigation.

So a lot of our sampling was going out to an area where we believed something might have happened and sampling that area to really see if we could find anything. So we had a lot of areas where we might go

out in the middle of a field, take a couple of samples and find nothing.

Well, in the prosess that John had talked about before, the RI/FS process, there's a very pragmatic, very detailed process in carrying a site through that whole RI/FS process to decide whether or not remediation is identified.

So what we identified on Fort Wingate was the fact that we might have a lot of sites that there might not have be any contamination on; that was an area that we were really just trying to make sure that the stories or the background information or documentation really wasn't true, that something had impacted the environment there.

So we developed a screening mechanism. The screening mechanism was done very conservatively. And one of the things you have to remember -- and I think that is a good topic for another point in time -- is the analytical side of this whole evaluation process.

I was lucky enough to start out my career with some old civil wastewater engineers that used to really get into a real belly laugh when they used to discuss old civil wastewater analyses, where they used to look at percentages of different constituents. Now we've got parts per trillion, parts per quadrillion.

We have almost exceeded our capacity to comprehend and understand the analytical data we are getting by the analytical methods we have available to us, and this is something that also complicates the risk assessment process. Every time we are able to get to a lower level of protection, we have to go back and reevaluate what that constituent might mean in the environment or to the public.

So really, we had to develop a screening mechanism to take these 45 sites and really identify the sites that really, truly required an environmental evaluation at Fort Wingate.

As Tim also mentioned previously, we implemented the RCRA interim status closure of a demolition/burning ground area. Now, that area had previously been permitted by the State of New Mexico under the Resource Conservation and Recovery Act.

So we had to address the State of New Mexico's regulatory requirements as well as EPA's requirements in closing that area, and that area was a subset to the RI/FS or CERCLA activities; but also, because of close coordination and communication with the State and with the EPA, we were able to coordinate some of those activities so we were able to carry them along together in the same focus or the same point of

reference, realizing we had two different sets of regulations but, yet, one site and, really, continuous land areas.

MR. WINKLER: What is an AREE?

MR. EGNACZYK: AREE, an area requiring environmental evaluation.

We also wanted to address the real estate or the property transfer issues; for example, the potential asbestos or lead-based paint or radon issues that might be existing within the facilities and structures on Fort Wingate, because we want to be able to provide information to the Army, to the regulatory agencies and to the public about the real estate status of the property, the real property, the buildings, as well as the property itself.

We also needed to implement a cost-effective unexploded ordnance -- which is what UXO means -- survey program. The mission of Fort Wingate was basically the storage and demilitarization of explosives and ordnance.

They had areas on the installation used for the testing of the ordnance, signal flares, mortars. They also had a demolition-burning ground area for the disposal of those same ordnance and munitions items. So there were areas on the installation that, under

our contract, we basically did a survey to delineate the approximate extent of the impact from previous Army activity.

Then, finally, all of this was wrapped together in an RI/FS report; and in this RI/FS report, we basically consolidated a lot of the other reports that were done for the installation into one document. So you basically had everything in one set of binders.

There is a separate report in here on the building evaluation survey that was done on all the buildings, on the southern property investigation that was done for the potential transfer to the Bureau of Land Management and also on the unexploded ordnance surveying activities.

To go back to the nature and extent of the environmental impacts, basically we were trying to provide a final resolution concerning the historic site assessments and evaluation.

As I said before, these previous reports identified areas that they acknowledged as requiring environmental evaluation. We needed to go back -- we are the sweepers, the end guys that are coming through now, at the end of the parade, finally sweeping all this into one big dustpan so that everyone can look at

it and really identify what is there.

So we are trying to pick up all the loose ends of all the different investigations that had been done, all the previous activities that had been done at Fort Wingate.

This was also done with close interaction and coordination between the Army and the regulatory agencies, both EPA, Region 6 out of Dallas, that Sing represents, and John Pfeil and Mark Snyder with the State of New Mexico.

We also maintained, in accordance with the memorandum of understanding -- basically, in doing any of our field investigation activities, we had an archeologist on site that identified any areas where we -- sensitive areas that had been identified to us, where we were doing intrusive investigation activity.

In other words, in the demolition/burning ground area, along the western portion of the installation, if we were doing any soil sampling or doing any investigation activity, we had an on-site archeologist there looking at our locations and making sure we didn't potentially disrupt or disturb any archeologic site.

Approximately 100,000 data points -- that is a lot of data points -- were collected through this

environmental investigation. So, as you can see, we really needed a couple of mechanisms to really, number one, manage all the analytical data and, number two, evaluate it and then make sense of all this so we can then present it to both the Army --

MR. ALEXANDER: Number of samples that were actually taken?

MR. EGNACZYK: Yes, 100,000. Well, in a lot of cases, multiple analytical constituents were sampled out of one sample. So basically, you could have sampled for five things out of one soil sample. It was 100,000 data points or constituents analyzed for. So basically, we needed some mechanism.

There are just a couple of brief slides of some of the activities done out there. This is a drilling rig that is putting in one of the soil borings that we did on the installation. I believe we did over 30 soil borings.

We always had the option to transfer that soil boring into a monitoring well if groundwater was encountered. Basically, we did not encounter groundwater in any of the soil borings we installed, so no additional groundwater wells were installed as part of the soil-boring program itself.

That is one of the igloos. As you can see,

one of the very unique things about Fort Wingate is the buffalo population that sometimes assisted and sometimes basically forced us to kind of go around them in doing some of the field sampling activity.

This, just in case none of you has been out there, is one of the 700-some-odd igloos that actually are out on the installation itself. That's a winter shot.

Another shot, in the summer. You can really see what the igloos look like. They're basically earth constructions.

This basically is a wipe sample being taken from inside the floor of one of the igloos. A wipe sample is one mechanism to go through a floor or surface, wall area, and really sample that piece of floor or wall for environmental contamination.

Thanks, Tim. The next one --

MR. ALEXANDER: Glad to help.

MR. EGNACZYK: This is one of the surface water samples. I think that's something I would like to break into a little later. Maybe I could bring some information to bear on some of the concerns you might have had about the watershed area, the Zuni watershed area.

Basically, we identified early on that the

surface water -- potential surface water discharge from the installation might have been one of the ways that activities on the installation might have impacted the surrounding areas over time.

We went to great effort to identify all the surface water drainages off the installation and sample them, if surface water was existing, or from sediment samples, to look at all the possible drainage pathways.

They weren't particular to any operation. That were really where there was a surface water drainage area or a pathway going off the installation that might, in any way, have impacted the surrounding areas.

And one of the areas we also sampled was the Puerco River. We were lucky enough to actually get that in flow conditions over two sampling events. So whereas a lot of times it might have been dry, we were able to get, over two different sampling events all along the length of the Puerco River and the northern border of the installation, various samples from both surface water and sediment.

As we said before, sometimes we had to wait for the local population to let us get on with our activity.

The site screening that was done -- once again, we had 100,000 data points. Basically, we used a tiered screening process to really focus the areas requiring environmental evaluation. What we did is, in John's risk assessment process, there's a very detailed analysis of looking at various constituents and levels and actual levels and regulatory requirements.

We did an initial screening, realizing that -- just to drop back to a little chemistry -- many of you are familiar, out West, with a lot of the mining and metals potential that might be available or existed at the Fort Wingate area and, certainly, in New Mexico and the West.

In a lot of cases, it's very difficult for us to identify what might be, say, an elevation in the level of chromium, when you are standing next to a chrome mine. Or gold. You know, God forbid we find gold. It would be great to find gold.

Basically, you need some process to really look at, when there might be an elevated level of a constituent, where you really need to concern yourself.

Now, on the organic side, Mother Nature didn't make any organics, although I guess you can

kind of call it organic -- certain parts of organics are really on the biological side of things, I think. But really, Mother Nature never made an organic.

So really, if you get a level of detection or detection of an organic -- what Tim referred to as a "hit" before -- you really can see that that is something that wasn't there from Mother Nature, or is something that has come there since then, either manmade or by some other process. Could have been rainfall or some other way.

But it really gives us an initial indicator that we've got to look at something. Metals is a little different. We really need to look at what the background concentrations of those metals might be.

So we really looked at various -- about four or five different locations within the vicinity of the Fort Wingate installation, took what we call background samples from those areas and then averaged those or did some statistics to come up with, basically, a background metals range for Fort Wingate.

We then looked at this data again, because what we want to do, as I said, is drop areas out where, really, there hadn't been any impact, from past activity, of an environmental nature, so we could

really focus on the areas that really required the environmental evaluation.

So these constituent concentrations were screened against background levels, established regulatory criteria -- for example, with PCBs, if there's a number that says that you have to do something if you're over five parts per million of PCBs, then that's a no-brainer. If a site comes up with more than five parts per million of PCBs, we move it through the process.

If it is below any regulatory level that we would ever hope to have to address, then that is something that may not need further consideration. We then, of course, would look at the other screening factors and then take the most conservative numbers.

Conservative risk-based criteria. We looked at the most conservative numbers that John would have to evaluate in the risk assessment process.

Also, secondary factors. If we really thought there was a reason, that we couldn't explain why a constituent was there, we carried that into the full evaluation process. We were very conservative in the process.

This resulted, basically, in four areas proceeding for detailed evaluation in the human health

risk assessment. And as John had talked about before, we took a very conservative approach on the ecological risk assessment side. We carried 23 sites ahead from the ecological risk assessment, because we really weren't sure what the impacts of those constituents were to the ecological conditions at Fort Wingate. We carried those sites into the detailed assessment.

The RCRA closure. Just to give you a little background on that. The RCRA interim status closure of a former open burning/open detonation area.

RCRA, in a nutshell, in case there isn't some knowledge on that -- CERCLA basically goes back in time and tries to address our past ills or our past sins from our environmental community.

RCRA is basically the operating set of regulations. That's what -- if you have an opportunity or if you have a desire to manage hazardous waste or treat hazardous waste or store hazardous waste, the Resource Conservation and Recovery Act is the regulatory system that allows you and monitors your use of those hazardous wastes.

So basically, at Fort Wingate, we had an ongoing hazardous waste management area in the open burning and demolition area. Basically, they were detonating unexploded -- munitions and explosives

items that were no longer needed or had failed quality assurance. They were also doing open burning of certain items that were no longer needed for Army activities.

So those activities were actually managed under the Resource Conservation and Recovery Act, and managed under the State of New Mexico, with oversight from EPA. Basically, that whole program was developed in concert with the performance of the RI/FS, because we didn't want to have two sets of standards or two sets of numbers ongoing for the same site. So we merged them using the most conservative set of numbers or always yielding to the most conservative assessment.

We are going to have recently performed field screening to attempt to assess the environmental impact of the previous site operations. Basically, to blow something up, dirt goes everywhere. There's really no brain work or boundary that says, here is where the bad area is.

So we went out to that area, and we had to delineate an area that basically was the inside of a tree line, where there was open soil and open space. We went through that whole area, did a field screening to try to identify where the previous operations had

occurred, so we could focus our investigation efforts into those areas and provide the information to the State of New Mexico and EPA regarding closure of that area.

Performance of the UXO survey program was a very substantial program. Basically, we tried to survey as much of the installation that had been identified as being previously used by the Army for ordnance activities and also areas that were identified to us as suspect areas around the installation.

And that was done in basically a tiered approach. There was a visual and then a surface and then a subsurface investigation. The visual investigation basically -- and there are some pictures in your guide there.

They basically set a line of personnel on various transects across a piece of property and then walked that piece of property to visually identify items that might be laying on the ground.

From our standpoint, we can only do certain survey activities, and then we turn those remaining activities over to Army EOD units' explosive ordnance detonation activity.

Basically, high density areas within some of

the functional test ranges where we were doing our survey activities, if we would come upon an area where there was a pit or an area where there was a large amount of debris or where there had been some burning activity, that really goes beyond the scope of our surveying activities.

That is really an Army EOD function to remediate that area. We basically located those areas using GPS surveying techniques so the Army EOD folks could come back in, use their satellite coordination systems, which is what GPS is -- same thing you would use with a sailboat or something like that to locate where you are in the navigational system --

Come back to that exact location and be able to pick it up and do the remediation or do the ordnance removal at that spot.

So we basically went through and, where we could survey an area and pick up something obvious, we did; and where we found a high density area, we marked it and the Army EOD folks will come back and address those areas at a later point in time.

MR. ALEXANDER: I would like to interject at this point that this area of interest is active and that, in conjunction with Tooele, the Corps of Engineers, there is a unit out of Huntsville,

MR. WALDEN: And what you're referring to now is going back in to basically tie up if they left anything or if there's anything else found?

MR. ALEXANDER: That is one consideration, yes.

MR. EGNACZYK: So if they find areas where, for example, based on our UXO subcontractor -- we certainly don't do this work -- they identify ordnance items that are too sensitive to move -- and that's another acronym for you. It's called a blow-in-place item or a BIP. So we would actually have to mark those locations and have an Army EOD unit come back in and make a final determination on whether or not they could be blown in place or whether it was something that really didn't require that level of treatment.

And then, for the ordnance items that we would collect -- basically, they fall into two categories: They are alive ordnance items and nonalive ordnance items.

Nonalive ordnance items would be, for example, just shell fragments or pieces of metal that they found around the installation that they would pick up just so that someone else, at a future point in time, would not come walking across and find a

souvenir, not have any idea what it was and take it off the installation and have it be a problem for the Army.

Also, live ordnance items that actually have some potential to have some explosive residue or part of the fusing still in there. That's brought back to a general staging area, and that's what the Army EOD unit came in several times for, is for the pieces we had collected.

They would then come in and then they redetonate those ordnance items, so there is final disposal of those items.

MR. ALEXANDER: There's involvement with the Explosive Safety Board to gain final clearance of certain areas. That's, hopefully, where we will end up in certain areas.

There are other areas we think we want to go back and actually look at and, at this point, it is in the discussion stage, so I can't really be that much more specific. We need Huntsville, you know --

MR. FOREMAN: I have a question. Is my hearing correct in that I thought you said that you took a total of 36 core samples in total?

MR. EGNACZYK: I think there were over 30, you know, locations where we did borings. There

were more samples than actually collected because, in a boring, you may sample at a multiple number of depths.

But just to give the actual number of borings -- the number skips my mind --

MR. FOREMAN: Just to put it in perspective, we are talking about square miles, 36 borings.

MR. EGNACZYK: Well, you have to remember, a boring is a very distinct characterization of a location. In other words, a boring is only going to have an area of impact really, maybe 20 or 30 feet, depending if you are looking at groundwater or no groundwater in the area. If you have an area where there is no groundwater, you are really looking at a very discrete sampling point, that you're really trying to get something by depth.

MR. FOREMAN: That was exactly my point.

MR. EGNACZYK: In a lot of locations, there isn't groundwater existing in the area we were sampling, so we really weren't look at a discrete sampling point.

We were able to locate those in the areas where we had distinct operations. In other words, if

we had -- for example, the TNT washout facility had distinct lagoons that were used in that washout facility, so we were able to see that.

You know, once again, it is very obvious that that area was impacted by previous activity, so that's an area where we located these borings. The fire training area, where we saw the railroad car installation, that's another area where there was an obvious superficial impact from previous operations, and borings were put there.

We also just put borings in any other locations where we thought there had been impacts from previous activity. But -- so I guess I see what you are trying to say, but I can also turn it around at you.

Can we pincushion --

MR. FOREMAN: Am I allowed to pose a question here?

MR. EGNACZYK: Sure. To follow up on that, though, if you look at this table and realize there's 35 square miles and realize you've got a distinct sampling point, how far do you go and when do you stop?

So really, we used an evaluation process in identifying the areas where there had been activity or

had been impacts, either historical or visual, to select the locations that we did sample because, really, you could spend from now to eternity pincushioning that site, to really look at every grain of sand, but --

Go ahead with your question.

MR. FOREMAN: I assume you have done so to your satisfaction. Again, I would like to point out, we are talking about 36 very discrete samples over 35 square miles.

Given the widely disparate type of activity and the wide range of activity and the variability of the materials handled over a period of years at Wingate, I would, you know, simply ask of you, do you-all feel that that survey was adequate in its scope?

MR. EGNACZYK: I think I was a little -- I didn't explain myself correctly. A boring is one type of soil sample. There were also -- and just total numbers -- 384 surface soil samples collected around the installation.

So a soil boring not only takes a sample at the surface, but you also go down by depth. We also, at various locations -- basically, 384 locations -- took surface soil samples that are zero- to six-inch

samples that aren't necessarily a boring.

MR. FOREMAN: At how many locations?

MR. EGNACZYK: 384 soil samples. I am not sure of the locations. There actually were 127 borings -- I was wrong -- corresponding to an initial 416 subsurface samples. We then also took 82 sediment samples, 25 surface water samples, 211 surface wipe samples, 41 chip samples.

MR. FOREMAN: Do you have that mapped?

MR. EGNACZYK: Yes. Those are all mapped within the RI/FS. Basically, you had probably almost 800 total soil samples taken in the installation.

Sorry.

MR. FISHER: Go on.

MR. EGNACZYK: So that's an example of just the survey activities that were done along the southwestern portion of the installation, where it gets into some of the more rough terrain. You can see there they've got their transect set up;, they've got the people all in line walking the area to identify potential UXO items.

There's a pile of -- I think that's the live stuff that was actually found that ended up being treated by the Army EOD unit.

Real estate-related issues really came from a couple of different perspectives: Lead-based paint, radon, asbestos and PCBs. Basically, we performed a visual survey of the potential land transfer area. Initially on, the southern properties area was identified as an area that was to be released, potentially, to the Bureau of Land Management.

So we were directed to go in there on a quick turnaround and look at that area and try to identify if there had been any Army impacts to that southern properties area.

And there were some areas that were sampled. There were also some areas identified -- there was a previous ballistic missile launch area that we sampled and also put borings in that area. And we also identified several trash and debris areas that were identified to the Army, in the southern properties area.

The environmental survey was basically performed of 147 installation buildings and structures. We looked at lead-based paint.

We basically did this from a very visual perspective of looking inside the buildings, seeing if there was paint that was similar to other buildings, and then, in selected locations, took samples of that

lead -- what we thought was lead-based paint for analysis, to prove that it was, in fact, or wasn't lead-based paint.

Radon. We basically had an Army report that had been previously done at Fort Wingate for radon. We went back in and looked at potential buildings -- there are very distinct locations where radon can be expected to be present.

We went back and looked at those locations and verified that the Army had previously, in their radon survey activity, at least looked at the areas that were likely enough to have the potential for radon. And they did, in fact, look in those kinds of areas.

The radon results were all negative in the previous report and analysis that had been done.

The asbestos-containing material. There was a previous contractor that had come in and done an asbestos survey of the installation buildings and structures.

So we basically went through and did a visual -- I don't to call it verification -- but a visual survey to balance that report and, in most cases, basically added materials that we thought hadn't been or might not have been adequately

characterized as potential asbestos-containing materials, so we could really give the Army a potential worst-case scenario where there might be asbestos on the installation and whether it was friable or nonfriable, and really give them kind of a quick-and-dirty summary of each building and what the potential impacts could be there from asbestos.

We also looked at PCBs. We saw some of the transformers that were labeled nonPCB transformers in the building that had the former locomotive. There were some transformers on the site identified as PCB-contaminated or containing transformers that had been removed from the installation -- had been properly labeled and sampled and had been removed from the installation.

We also identified potential stained areas where they had had previous activity potentially related to PCB materials. We actually went back and sampled those areas and there are, I believe, three buildings that were identified that did have some PCBs that require negotiation and resolution with EPA.

The former TNT washout facility building, 503, is another area we evaluated separately for the presence of residual explosives. That building basically has some washout equipment that still

remains within that building and had been used for previous washout activity.

So we basically went inside the building, and the picture you saw earlier of taking a wipe sample on the floor of an igloo was basically duplicated in that building. We took wipe samples in the wall, some of the equipment and the floor of that building, to see if any residual explosives remain in that building.

There are, in fact, some residual explosives in that building. We identified a potential decontamination approach for the Army to follow in that area.

Then, finally, we also looked at the building construction, really, for structural integrity and overall usable condition. I think this is something that the reuse group dealing with the installation would find very helpful.

There are some buildings out there that are really falling apart or really don't have utilities or really have some other aspects of their condition that really don't make them likely candidates for reuse.

There are other buildings that still have the utilities, still have a lot of the infrastructure intact, that are definitely more usable or more

readily available for reuse or would be more cost effective for reuse.

We tried to give just a quick-and-dirty analysis or summation of the buildings that remain on the installation, what might be available for reuse.

There, for example, is just some of the asbestos insulation on some of the piping on Fort Wingate. It certainly isn't an indication of what exists on Fort Wingate. In fact, it is a very small percentage of the asbestos that we identified on the site.

The RI/FS report -- as I said, a copy would exist within the library -- was basically taken and modified to include a lot of the BRAC issues. The building evaluation report that we put together is included as an appendix to the RI/FS report.

The southern properties investigation that was done for that potential property transer was also included as an appendix to the RI/FS report. A lot of the other issues that weren't necessarily part of the standard RI/FS process were all incorporated into this report, so that you really had, in one document, all of the environmental issues, from our investigation standpoint, related to Fort Wingate.

Historic site assessments and evaluations

were summarized. You will see, basically, why we sampled the areas we did sample, how those areas were identified, what we did to identify them.

The progressive screening and elimination of areas requiring environmental evaluation is logically presented. We tried to put flow charts and diagrams and graphs in there so people could understand the process and how we went through it.

Because we realized it was a very big site with a lot of areas and wanted that not to be the burdening or constricting factor -- we wanted you to be able to get to how we came up with our evaluation and what we proposed be done for the site.

A range of potential management options and order-of-magnitude costs were prepared. That's basically what the feasibility study had done. The NCP that John talked about earlier provides an approach that we are supposed to look at the remedial options available for each area on the installation.

And the feasibility study is basically that part of the document that then goes back and looks at the areas that are requiring remediation, basically fills out the risk assessment as requiring remediation and looks at various options that are available in those areas and what the costs are associated with

those areas.

The RI/FS report then really focused the restoration efforts to the property reutilization issues. We realized that this is a property transfer, that it needs to go over to the public. We tried to focus our remediation efforts to the reuse -- the potential reuse of the installation that the public would want.

The areas that were identified as requiring decontamination are basically the pre-1962 and post-1962 leaching beds that are associated with the TNT washout facility. As you can see, there are basically three sets of lagoons there, and, basically, that is one of the areas we had a concentration of soil borings by depth, in that area.

There were also four groundwater monitor wells existing, surrounding that area. I believe only one of them had any water in at at all when we did our investigation, and I can't remember exactly --

What happens in looking at a groundwater well, just finding water in it doesn't mean you have enough to sample. There are basically sampling procedures you have to go through to do what they call purge the well to recover it, to really see if there is true groundwater sitting there or just stagnant

water that's been in the bottom of the well.

So what happened is we found water in four wells; but after doing our purging process, really only two of the wells recovered with enough water that we could sample that well.

Another area is the former deactivation furnace area -- I'm sorry -- the TNT washout lagoon area, the contaminant constituents of concern identified there were primarily explosives.

MR. ALEXANDER: That was also ecologically driven, Steve, the cleanup.

MR. EGNACZYK: Right. The deactivation furnace area is another that was ecologically driven, came out of the ecological risk assessment for cadmium. There basically is a drainage swale and some surface soil, probably -- I don't believe it went any deeper than five feet. In fact, I think it was shallower than that.

I think we picked a conservative number of five feet as the potential extent of remediation based on surface cadmium concentrations that exceeded the ecological risk assessment.

The pistol range. If you can think of the use of a pistol range, it is basically firing shot into the side of a hill. Surprise, we found lead.

So, basically, there's a bermed area used as a backdrop for the pistol range that had elevated levels of lead, and that is an area that we have recommended as requiring remediation.

Building 5, maintenance building, which really was the building you-all were facing directly in front of you from the building we were meeting in yesterday. That grassy area along the length of the whole front of the building basically had elevated concentrations of pesticide.

We believe that probably came from pesticide use on that area that just had been overdone or whatever. Basically, pesticide concentrations exceeded --

MS. NOE: Grasshoppers?

MR. EGNACZYK: Definitely no mice floating around there. Basically, the concentrations exceeded the levels -- acceptable levels from the risk assessment.

MR. ALEXANDER: You saw the five areas. We know we did some sampling at the OB/OD area. The OB/OB area's being handled under a separate report and through the --

MR. EGNACZYK: The RCRA process. That's all being handled.

MR. ALEXANDER: That's correct. That's going on, too.

MR. EGNACZYK: In summary, as I try to wrap together here, basically, five areas were identified as having constituents in the soil, and they were all soil contamination. As I said, we didn't find any concerns of groundwater or surface water at levels requiring remediation.

And two of the areas -- and this is really now all up to the Army, how they proceed with these areas -- we have proposed them as being IRMs. Basically, that's an interim remedial measure where, if an area is the focus of soil contamination, it is obvious that the only option to that is to just excavate, get it off site. Sometimes it makes a lot more sense just to go ahead and do that, confirm that you removed all of the contamination and really end that issue..

MR. ALEXANDER: Well, the issue is being ended. An IRM would require procedurally -- just so you know why we are not going with their recommendation that we do an IRM -- basically, we are going to put an end to that area and clean it up and be done with it.

If we did an IRM, we would clean it up, then

have to go back again and come up with another Record of Decision saying, basically, there is no action because we have already done the cleanup. We want to avoid that. We want to address the entire issue in one blow, so we don't want to do an IRM. We just want to do a remedial action in those areas.

MR. EGNACZYK: Right. Site restoration issues and costs associated with that have all been integrated into the RI/FS so that, basically, you have a comprehensive assessment of all the issues we looked at on the installation.

Resolution of identified sites was achieved. In fact, we added some sites based on activities that were identified to us through the procession.

For example, another pistol range was identified to us, really, from our UXO survey team. They probably got the most comprehensive, since they walked, literally, every ten feet of the installation in the area we were doing our sampling -- identified to us other locations.

We did expand our investigation to acknowledge those other locations that were identified during our evaluation process.

Prescreening of the environmental data in the areas requiring environmental evaluation was

successful because we were able to focus those areas to the real areas of concern.

Communication and coordination with the regulatory agencies really allowed us to focus the efforts. The State of New Mexico and the EPA were tremendous in coordinating with us in their requirements and their comments to this document and in the progression of that activity.

Just really quickly, just because there was kind of an issue before, I just want to put up the map -- all these maps exist within the RI/FS.

As you can see right here, we basically went around and sampled drainages throughout the installation, all around the installation. I know -- I think the area you were talking about, here along Bread Springs Wash -- I believe that's what you called the Zuni watershed. I apologize. This is the first time I have heard that term.

Basically down along Bread Springs Wash, we basically sampled sediment and, if surface water was existing, we sampled the surface water both on and, actually, a little bit off the installation boundary, at various locations.

We also sampled and we tried -- just for organizational purposes, we kind of made categories

out of these. We also looked at the western drainage areas. We looked at areas along the Puerco River. We looked at areas within the central drainage area of the installation itself.

We also looked -- because your concern was over here at the Fort -- I believe the Fort Wingate School is right here -- we also looked at the Santa Fe Spring area. We also looked at the Puerco River areas along in here.

MS. BECK: Mary Jane Beck, AMCCOM. I have several questions. One is, how does this study relate to the EBS? I mean, would this be incorporated into the EBS? Has the EBS been done already? How would this study relate to an EBS?

MR. EGNACZYK: I think what you have there is a myriad of environmental requirements with different environmental acts. I know, one thing I kind of identified right up front in our discussion, the term closure in our work is going to be different from the term closure that Larry or Malcolm were identifying.

Each of those requirements has certain documents or procedural reports that are required, so, really, it's separate. The work might, in fact, cover the same areas. Might, in fact, cover the same work.

In fact, we try to coordinate that as much as possible.

MR. FISHER: If I may, Steve. Mary, we did take in writing -- I have individuals writing up the Environmental Baseline Survey. Most of the information is taken out of the RI/FS.

MS. BECK: If the EBS is incorporated into that, how does it relate to NEPA? If you were going to do an EA, would that EBS be the effective environment part of it?

MR. FISHER: Yes.

MS. BECK: The other question I had was, to what level is the cleanup being done and who made the decision? Because, as I understand it, right now we don't really know what the proposed undertakings are going to be.

MR. EGNACZYK: If I could just expand, how the feasibility study is set together, all we do is offer a range of options and then a recommended option.

That then goes forth to the Army for acceptance, and then it is presented to both the public and the regulatory agencies through the proposed plan and then, if accepted, to the Record of Decision.

So really all we have done right now is say, Here are the problems. Here is the range of alternatives. And that range, as required by the NCP, goes everywhere from no action, leave it as it is, and what would be the impact; to, totally clean it up or clean it up using this approach, to this cleanup level, with this risk associated to it; to this approach with this risk, with this associated cost to this cleanup level.

So really, the ranges of options have all been identified for those five areas now. We have made a recommendation based on the NCP process --

MR. ALEXANDER: Let me be more specific about that. There are really nine criteria to look at to do a feasibility study. The first two are what's called threshold criteria. You have to meet these requirements.

The first is that your remedy has to be protective of human health and the environment. The second one is that you are in compliance with other applicable, relevant, appropriate regulations or requirements.

Then the rest of them become what they call -- there are balancing criteria, which includes things like cost, implementability, et cetera. And then

there's another group which involves community involvement, state input and -- you know, that's another set of criteria, all those factors.

MS. BECK: From a who-has-to-pay-for-it point of view, you want to know, first, what is the proposed use, because that has a great bearing on the level --

MR. ALEXANDER: Again, the National Contingency Plan tells us that the threshold criteria must be met. The rest of them are what they call balancing criteria. Cost is a member of the balancing criteria.

MS. BECK: Are there cleanup activities going on right now?

MR. ALEXANDER: No. We have a draft document right now. We are trying to finalize some type of approach to cleanup of the TNT lagoons, so we are trying to finish the feasibility study so we can put that out for State, EPA, public review -- for review -- and actually, this board will review it.

Then we will modify the document and then go back and actually submit it for public comment. That is the way it will work.

MR. EGNACZYK: Remember the CERCLA process. You remember that is the Super Fund, the

public fund of money for cleaning up sites.

That process was really meant for a whole other objective than what the Army is now using it for, so the Army will probably have to then take that process and really adjust it at the tail end for these actual base closures.

MS. BECK: We have a lot of areas where, you know, if you want to just sell the property, I know GSA won't take it if it is not cleaned up to unrestricted use.

We were talking about an industrial park, and we are working on an initiative where we would be able to clean it up for -- there's an acceptable level of cleanup for an industrial type of use.

MR. EGNACZYK: Right.

MS. BECK: So that is why I am so concerned about it.

MR. EGNACZYK: We can't prejudice our evaluation. That's where you-all come into play. All we can do is lay out the facts: Folks, here it is, from all the different angles. Then --

MR. HAASBEEK: In terms of the land use, I'll try to give you a more direct answer.

We looked at the property in sections, looked at the administrative areas in sections. You

know, various parts. Some parts of it are not suitable for residential use.

For each area on the facility we picked what would be the most protective and most conservative use. So, for instance, the TNT washout lagoon area; that area could, with irrigation, be used for farming.

So we included in that area all the exposures associated with farming, residing in the area, recreation in the area, et cetera, et cetera.

MS. BECK: So to some degree you said, This is where we are now, and this is the most feasible potential use, rather than just saying we ought to clean it up to the level that kids could eat the dirt everywhere.

MR. EGNACZYK: We try to bring in some reality. Like I say, the CERCLA process somewhat dictates how you have to go through that.

MR. HAASBEEK: They are all basically unrestricted land use.

MR. EGNACZYK: For example, the demolition/burning ground area. The Army is going to have to maintain the property in perpetuity, because the unexploded ordnance issue. Obviously, we are not going to have a residential use scenario in that area. We are going to try to look at more industrial-user

types of scenarios that would have more of a restricted reality to that area -- along with the concurrence of the regulatory agencies and the public.

MR. FISHER: Thank you, Steve. Appreciate it very much.

Are there any other additional questions or any other questions?

MR. PFEIL: Do you have some sort of feeling for the next meeting, Larry?

MR. FISHER: No, I haven't -- I don't, I should say.

MR. PFEIL: Did we decide at the last meeting about something resembling quarterly meetings?

MR. FISHER: Quarterly meetings is what we decided.

MR. PFEIL: Approximately.

MR. FISHER: We will try to coordinate it with when they have reuse meetings so everybody can attend.

Is there anything else? We appreciate everybody's attendance and appreciate the presentations. I think they were very good. This has been a lot longer than I thought, but a lot of good information was presented.

I will get together with Steve here and we will try to determine the next meeting time and then we will send a letter out to everybody represented.

MS. NOE: Just before Christmas. This is just before Ceremonial.

MR. FISHER: This will probably be toward the end of November, maybe during Thankgiving.

Thank you very much. If there isn't anything else, the meeting is over.

(The proceedings were adjourned at 4:40 p.m.)

C E R T I F I C A T E

I, Nan Greenberg, a Certified Court Reporter, do hereby certify that the Proceedings of the above-entitled cause were reported by me stenographically on August 9, 1994, and that the within transcript is a true and accurate transcription of my shorthand notes.

I further certify that I am neither an attorney nor counsel for, nor related to or employed by any of the parties to the action, and that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in the action.

Nan Greenberg, CCR, RPR
Notary Public

My Commission expires:
1-18-96