

UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

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PUBLIC MEETING FOR PUBLIC
COMMENT ON THE DRAFT GENERIC
ENVIRONMENTAL IMPACT STATEMENT
FOR IN-SITU LEACH URANIUM
MILLING FACILITIES

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Wednesday, August 27, 2008

Ballroom, Student Center
Chadron State College
1000 Main Street
Chadron, Nebraska

The meeting convened at 7:00 p.m.

PANEL MEMBERS:

FRANCIS X. "CHIP" CAMERON, Facilitator
KEITH I. McCONNELL, Deputy Director, Division of
Waste Management and Environmental Protection
JOAN W. OLMSTEAD, Office of General Counsel
GREGORY F. SUBER, Chief, Environmental Review

Branch

ALAN BJORNSEN, Project Manager, Draft GEIS
BILL VON TILL, Branch Chief, Uranium Recovery

Licensing Branch

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P R O C E E D I N G S

MR. CAMERON: Good evening, everybody. My name is Chip Cameron, and I work for the executive director for operations at the Nuclear Regulatory Commission, and we're going to be referring to that as the NRC. We'll try not to use many acronyms tonight, but we will be using NRC.

And it's my pleasure to serve as your facilitator tonight, and in that role I'll try to help all of you to have a productive meeting tonight. And our subject is a draft generic environmental impact statement that the NRC has prepared on uranium milling, specifically on the technology called ISL, or in-situ leach. And that's what we're going to be talking to you about, and listening to you on tonight.

And I just wanted to say a few words about meeting process issues before we get started so that you'll know what to expect tonight. And I'd like to talk to you about the format for the meeting, some very simple ground rules that will allow us all to have a productive meeting, and to introduce the NRC staff that's going to be talking to you tonight.

In terms of the format, it's really a two-part

meeting. First of all, we want to give you some background information on the draft GEIS, what the preliminary findings are, how it's going to be used, how you can influence the final GEIS, and then we're going to go on to all of you for some questions before we get to the most important part of the meeting, which is an opportunity for us to listen to all of you, your advice, your concerns, your recommendations on this draft GEIS.

And you can also submit written comments. The NRC will be telling you about how to do that. But we wanted to be here with you tonight in person to talk to you about this document. And anything that you say tonight will have the same weight as a written document, or written comment. You may hear things tonight that will prompt you to submit a written comment. But we want to hear from you tonight.

And in terms of ground rules, I would just ask you to hold your questions until the NRC staff presentations are going to -- are done, so that we can get all the information out to you before we go for questions. And if there's time after we go the public comment part of the meeting to come back for more questions, we'll do that.

If you do have a question, just signal me and I'll bring you this cordless microphone, and if you could

just introduce yourself to us and ask your question, we'll try to do our best to answer it. And I would only ask -- I would ask that only one person speak at a time, first of all so that we could get a clean transcript. We have Brenda Thompson over here who is our stenographer who's taking down everything that's said. And by the way, there will be -- that transcript will be available to everybody to look at, and it's our record of the public comments.

But the one person at a time ground rule, the most important part of that is so that we can give our full attention to whomever has the microphone at the time. And I would ask you to try to be brief so that we can get to everybody who wants to talk tonight.

And, in fact, when we get to the public comment part of the meeting, I usually set a five-minute guideline for public comments. We don't have -- and if you want to comment, if you could fill out one of these yellow cards, then we'll know who wants to talk, but we don't have a whole lot of people who want to comment, so we have some flexibility on the five-minute guideline.

And usually five minutes is enough time for people to summarize what they want to say, and it alerts not only us, but also everybody else in the audience to what concerns are. And if you want to amplify on the

comments tonight, you can always submit a written comment.

And I guess a final ground rule, it probably doesn't need to be said, but if we could just extend courtesy to everybody. You may hear opinions tonight that differ from your own, and let's just please respect the person who's giving that opinion.

Let me introduce the NRC staff who are going to be speaking to you tonight. First of all, we have Keith McConnell -- can everybody see Keith through this podium?

Maybe you want to stand up.

That's Keith McConnell, and he's our senior agency official here tonight. He is the deputy division director of the Division of Waste Management and Environmental Protection at the NRC. And he's just going to take a few minutes to tell us all about the NRC and a little bit about the draft GEIS.

And then we're going to go to the substance of the GEIS and we're going to hear from Alan Bjornsen. And Alan is the project manager on the development of the GEIS, and he'll be telling you more about that.

Let me introduce others from the NRC who are here before we start. And this is Joan Olmstead. She's from our Office of General Counsel. And Gregory Suber.

Greg is the branch chief for the branch that is developing this draft GEIS. We have another project manager on the environmental side, Jim Park, right here. And this is Bill Von Till, and Bill is a branch chief on the licensing side for uranium milling and processing.

And hopefully we'll have enough people here to be able to answer any of your questions. And I would just thank you for coming out tonight to help us with this decision.

And, Keith, if you want to start us off?

And then we'll hear from Alan, and then we'll go on to all of you?

(Pause.)

MR. McCONNELL: All right. Thanks, Chip.

On behalf of the U.S. Nuclear Regulatory Commission, I want to welcome you here tonight to a meeting on the draft generic environmental impact statement for in-situ uranium recovery facilities.

We want to thank you for coming out tonight and participating in what we believe is a very important meeting, and it's important because it's public meetings like this where the public has an opportunity to have input into our licensing process, in this particular case for in-situ recovery facilities. So it's a very important meeting for us, and I think it's an important

meeting for you all too.

With that, there are two reasons we're here tonight. First, we want to describe to you what our current activities are basically in terms of developing the draft generic environmental impact statement, and what our results are to date in reviewing those environmental impacts. That takes the form of the draft generic environmental impact statement that's out on the table and is available at NRC's website.

The draft GEIS, as we'll call it, as well as all of our environmental reviews, are driven by the National Environmental Policy Act of 1969, which requires federal agencies like the NRC to do an environmental review associated with any major federal action, and the licensing of an in-situ recovery facility would be such an action.

NEPA, or National Environmental Policy Act, also lays out a process for public involvement, and that leads to the second purpose for tonight's meeting, and that's for us to run through our background information, hopefully in a relatively brief period of time, and then try to answer any questions you might have on the draft GEIS, and hear your comments and concerns about that draft GEIS.

One thing I'd note is that this meeting

tonight is one of a series of meetings we're holding on the draft GEIS, and is actually a second set of meetings that are complementary to some meetings we held last year. Last year in the August/September time frame we came out to Casper, Wyoming, Albuquerque, New Mexico, and we basically did the scoping document -- or scoping meetings for the draft GEIS -- and we had a third one in Gallup, New Mexico also.

This meeting tonight is one of three we're holding this week. We were up last night in --

VOICE: Spearfish.

MR. McCONNELL: -- Spearfish, sorry -- or Monday night in Spearfish, and we're up in Newcastle on Friday. There'll be then another set of three meetings in New Mexico two weeks from tonight, or two weeks from this week, in which we'll be at Albuquerque, Gallup and Grants, again discussing the draft generic environmental impact statement.

And then there'll be a third set of meetings, one in Casper and one in Gillette, Wyoming, I think it's the last week in September, again to discuss the draft GEIS. And the reason we're going around the west is that in GEIS you will notice that there are four major geographic areas where we've identified, we think, the most interest in in-situ uranium recovery production is

going to come. And so we're targeting those four geographic areas to have public meetings.

In terms of an agenda, or meeting topics, what we're going to do is basically three things. I'm going to try to provide you something of an introduction to the NRC and what our roles and responsibilities are. It may be familiar to most of you already, but some in the audience maybe may not know what we do and who we are, so I'll briefly describe that.

And then I'll turn it over to Alan, and Alan will get into the meat of the draft generic environmental impact statement, discussing the purpose and the scope, our findings to date, the next steps in terms of completing the GEIS, and then finally the schedule for that activity.

And we do then want to save an ample amount of time, and we're going to try to keep our presentations short, ample time to answer questions and listen to your comments and concerns.

Just a little background about the NRC, who we are and what we do. We're an independent federal agency. We were created by Congress in the mid 1970s. Our sole purpose was to the production of public health and safety and the environment in the commercial use of radioactive materials.

We're not like the Department of Energy, or the Department of Interior, or the Department of Transportation in the sense that we don't report up through the executive branch, we report directly to Congress. And Congress gave us the sole mission of protection of public health and safety and the environment.

In that regard we don't have a promotional role in the use of radioactive materials. We basically - - if someone has an interest in using radioactive material in a commercial sense, we license it to make sure it's safe. And that's our sole role.

As it indicates up there, we do have responsibility, along with some of our agreement states for the licensing of the commercial use of radioactive material that can extend from the licensing of a nuclear power plant for the generation of electricity, to the licensing of a gauge holder that uses radioactive material to log his bore hole. In this particular instance we're talking about the licensing of an in-situ uranium recovery facility.

And perhaps of most importance tonight, openness and transparency in our licensing process is one of our core values. And that -- what I mean by that is that I think it's imperative to us in order to gain

public confidence that our -- what we do, how we do it, why we do it, and when we do it has to be apparent to the public. And that's what we're attempting to do with this draft generic environmental impact statement and our licensing process.

There's really no excuse -- although you might disagree with things that we do, there's really no excuse for us if you aren't aware of what we're doing, why we're doing it, and how we're doing it and when we're doing it.

And just to bring the focus back to the meeting tonight, which is the environmental review aspects, I just wanted to note that our regulations that implement our NEPA, or National Environmental Policy Act responsibilities are found at 10 C.F.R. Part 51 -- or, C.F.R. is Code of Federal Regulations. And those regulations were developed with guidance from the Council on Environmental Quality.

One other background piece I wanted to provide was just the process that we use to license a uranium recovery facility, because then we can insert the draft generic environmental impact statement into that process to show you how we will use it. And Alan will get into that in more detail later.

But just as an introduction we just want to run through what we do when we get an application. And

basically it starts when a company decides they want to get into the uranium recovery business, usually in-situ recovery type business. We -- they go out and collect data and they develop a license application.

That license application is composed of two major parts. One is a safety report, which documents how the process will operate and be restored in terms of our safety regulations which are at 10 C.F.R., Code of Federal Regulations, Part 40, Appendix A. The second part is an environmental report in which they'll document the environmental impacts that they've analyzed for in terms of their particular facility.

Now, with the rise in price in uranium in the last year or so, the expectation on NRC's part is we could -- and this is based on our interactions with the industry, the expectation is we could receive on the order of 28 to 30 license applications from the industry. And that's not just Nebraska, that's Wyoming, New Mexico principally.

And so with that surge in work load, it was, I think, mandated to us that we find efficiency in our process, such that we could accommodate that work load and not diminish the rigor of our review or the completeness of our review.

And that's where the genesis of the generic

environmental impact statement came about. Basically, we had to find a way to do our processes better and faster without compromising, and I want to emphasize this, without compromising the ability of the public to input into our process, because I go back to our core value of openness and transparency in our process.

So we've started out on the draft -- development of the draft generic environmental impact statement, and tonight we want to talk to you about that document.

Once an application is submitted to the NRC, we take our -- we start our review and do it in two steps. First we do a 90-day acceptance review, and that acceptance review does two things. First, it ensures the completeness of the application. It needs to have all the information necessary to demonstrate compliance with our regulations.

But also we do a fatal flaw review of that application. If there are fatal flaws in it, such as it not meeting -- demonstrating they can meet our regulations in a particular area, we basically give the company two alternatives. First, they can withdraw the application voluntarily, or if they choose not to withdraw it, then we would not accept it for detailed review, and we would basically send it back to them.

I can let you know that, in one instance over the last year that has occurred where a company has, after we've done our initial review, decided to withdraw the application. It was subsequently revised and resubmitted. But, again, this is part of our process.

But presuming that we did accept it, and it was complete, and there were no fatal flaws, then three things happen in terms of our process for licensing a facility. First of all, we -- we put it into the formal process and call it "docketed," which means we assign a formal tracking number to the license application. That tracking number and the docketing notice is published on our website.

The second thing that happens is we issue a Federal Register notice noting that we have accepted it for detailed review, and we offer the opportunity for a hearing on that application. And those of you who are familiar with the Crow Butte facility and their North Trend extension application request and their license renewal request, that's basically the process we followed.

We did our acceptance review, we decided to accept it for detailed review, we issued the Federal Register notice, and offered the opportunity for hearing. And those two applications, or amendments, are basically,

I think, in hearing now.

The third thing that happens is we start our detailed review, and that detailed review takes two forms. First, there is a safety -- a site-specific safety review in which we look at what the applicant, or the company, has proposed, and we focus largely, since it's an in-situ recovery facility, on ground water.

We also look at the part of the application that deals with ground water restoration after the company has completed producing uranium from that part of the aquifer. Within the application they're required to provide a ground water restoration plan, and a plan for financing the restoration, which would include an independent cost estimate for what it would cost to do that restoration. That's the safety side of the review.

There's also a site-specific environmental review that's done for each application. And what we would do in that -- with that site-specific environmental review is use our draft generic environmental impact statement as the foundation for that site-specific environmental review.

So, in essence, what the draft GEIS does is it allows us to avoid redundancy, or reproducing common information from common geographic areas 28 times, or 12 times, or 10 times, or whatever the number of

applications we would receive in that generic application.

What it doesn't -- what the GEIS does not do is avoid the issue of site-specific information because certainly for areas such as cultural impacts, ground water impacts and others like that, there's site-specific information that's key to defining the range of impacts that would be expected from this particular action. So, again, our site-specific review builds on our draft generic environmental impact statement.

And I would note that when we do complete the site-specific environmental review in draft form, that it also would be issued for public comment. So for any specific license application we get, there'll be an environmental review and it will be issued for public comment.

After we go through that process and it's complete, then the NRC would decide whether to grant or deny a license. If the license is granted, we don't stop there. We have a Region 4 office in Arlington, Texas which has our inspection component. They are the ones who would go out, at least annually, and inspect these facilities to make sure that they are complying with our regulations.

They also have, if there are violations of our

regulations, the ability to take enforcement action. And that enforcement action is based on the severity -- the level of enforcement is based on the severity of the violation and its potential impact on public health and safety. And the enforcement action can range to a number of things, including fining the company.

And just -- this is more lead in to Alan than anything else, but it's a reiteration again of our core value of openness and it's that we do value public input, we do want to hear your comments, we do want to respond to your questions. And there's going to be ample opportunity for that.

And it included the scoping meetings that we held last year, it includes this series of meetings that we're holding tonight, and later next month, and it will also include the site-specific environmental review that we will put out for public comment.

So with that I'll turn it over to Alan, but, again, we are interested in continuing the dialogue we started last year with the public on this draft generic environment impact statement, we're here to answer your questions, we can do it in the meeting, and we'll also be here after the meeting if you want to come up to us after the meeting and ask us questions more informally.

So with that I'll turn it over to Alan.

(Pause.)

MR. BJORNSEN: Thank you, Keith.

Good evening, ladies and gentlemen. My name is Alan Bjornsen. I'm an environmental project manager with the NRC, and for the next few minutes I would like to tell you about the generic environmental impact statement that the NRC has prepared for -- to aid in its environmental review of upcoming in-situ leach projects, or projects and applications.

My main purpose tonight is to talk about the GEIS, and in doing so, I want to present an overview of the ISL process, the in-situ leach process, why we're doing a generic or programmatic environmental impact statement, the purpose and scope of that document, and the approach we took in preparing it, to go over some of the conclusions that we found from that, and then lastly how you can submit comments on that particular document to aid us in finalizing the generic environmental impact statement.

Before I get into the generic environmental impact statement, I'd like to tell you a little bit about, very briefly about the ISL process. It's very different from conventional mining. You're not digging a deep pit into the ground, you're not sinking shafts and stopes, it doesn't involve any crushing of material or

grinding of material, and it doesn't leave large waste piles around as conventional mining does.

Instead, there's a three-fold process. You mobilize the uranium beneath the surface, you process the uranium after you bring it to the surface, and then restore the aquifer once all the uranium is depleted from the ore body.

This is -- this photo is a portion of a well site located in Wyoming. Basically this is what you see at an in-situ facility. I'll use the pointer here. The white canisters that you see here are covers for the tops of the wells that are drilled into the aquifer and ore body.

Each of these are connected underground by a series of pipes that have processed water flowing through them. The building that you see in the background is called a header house, and what that does is these pipes run into that house and are monitored and coordinated in that building.

These guys here are prong-horned antelope, and it's to give you an idea of the scale of the facility here.

One other thing, from the header house, pipes also lead to what they call a central processing facility where the uranium is dried and put into a powdered form.

That processing facility I'll show you later, it's not on this site -- not on this slide.

This is an important slide. It's very generalized, and allow me to explain what it is that you're looking at. Basically, from top to bottom, at least in this area where the Crow Butte site is located, you're looking at about 500 feet of depth here. The uranium is located in this U-shaped figure here. This feature is the aquifer that the uranium is located in.

Above and below in the green layers, or what we call confining layers, there may be water in these, but it moves at a much, much slower rate than in this area here. This is the aquifer that the uranium is being drawn from.

The top layer is basically your soil layer, the ground surface. The process is to mobilize the uranium that's located in this ore body. To do so wells are sunk into that aquifer. There are two types of wells. The well here that shows the blue arrows is the injection well, process water which is water that has been fortified with oxygen and carbon dioxide, sometimes bicarbonate of soda, you know, sodium bicarbonate is put into the water. It's injected into the aquifer.

The well over here shown with the red arrows is your recovery well that draws the water that was

pumped down into the aquifer through the aquifer and then up to the processing facility. Once the water that's loaded with uranium now, because the processed water dissolves the uranium, once that water gets up to the surface and goes through the process building, the uranium is extracted.

During that process most of the water is refortified with oxygen and carbon dioxide, some of the water, about -- anywhere from 1 to 3 percent goes to waste and then the process is repeated.

It takes a while to get from this well -- actually it's a series of wells, this is just one well here -- but it takes a while to get from here to there in orders of days and weeks.

Now I want -- for any particular recovery well there could be anywhere from four to six injection wells. So picture them surrounding a recovery well. Well, in addition to those wells, you also see other wells. These are monitoring wells. Basically they are an early warning system, and what they do is, if any of the processed water goes beyond either the injection wells or the recovery wells and gets into a different part of the aquifer, these monitoring wells will pick up that contamination.

There are also wells that are drilled above

the confining layer and, it's not shown here, but below the confining layer as well. These all act as, like I said, an early warning system to detect any contamination that has, you know, gone out of the area.

This is your process building. It's located on the same site in Wyoming as you saw the well field before. And this is where the uranium is taken out of solution and put into powdered form and oxide form. It's recovered there, it's concentrated, it's dried, it's packaged and then it's shipped out.

When it's no longer economical to recovery uranium from an ore body, then the restoration process begins. And much of the equipment that you see in this building is used in that restoration process. The restoration criteria for a particular well field is very site-specific, and I want to emphasize that. And those criteria are spelled out in the licensee's application, or in his license.

This is what the NRC license is. They license the construction at an ISL facility, which is your wells, your roads, any piping, any buildings, and other physical features on the site; operation, which includes your injection and your recovery and the processing; aquifer restoration, which is actually the clean up of the ground water; and then finally decommissioning, and

decommissioning is basically deconstructing the facility.

And once all the physical features have been taken down, then the reclamation of the land takes place as well. So it's reclamation on the surface, it's reclamation beneath the surface.

And Keith mentioned this before, you know, before any license is granted, site-specific reviews take place. The safety reviews, environmental reviews, I don't want to get into the detail of that because Keith has already mentioned that, but no license is granted unless those specific reviews pass the test for the NRC.

But there are other approvals besides the NRC. There are other federal and state agencies that get involved. For example, the EPA exempts an aquifer. What that basically means is the EPA has said that that aquifer, or that portion of that aquifer is not suitable for drinking water. It doesn't meet the standards of the Safe Drinking Water Act. The state -- the EPA does that with involvement from the particular state that the site is located in.

The EPA and/or state also license the injection wells. In addition, there are waste discharge permits that need to be granted. Those could come from the EPA, they could come from the state, they could involve storm water, they could involve solid liquid or

non-hazardous materials, involve solid waste.

And lastly, if the site is located on federal land, if it's on BLM land it will need BLM approval. If its on Forest Service land, it will need Forest Service approval, it's on state land, that particular state would have to grant approval to build and operate.

Now with that in mind I'd like to turn your attention to the actual GEIS, the generic environmental impact statement. And, again, why does the NRC need a generic environmental impact statement? Well, you heard earlier that a lot of interest has been in the ISL area. We've gotten a number of letters of intent from industry across all four states. Right now we have a potential for 14 new ISL facilities, another eight restarts or expansion of existing facilities.

And with this work load, and understanding that ISL, in-situ leach process, is relatively standardized, no matter where you have it. Whether it's in Wyoming or whether it's in New Mexico or South Dakota, it's very standardized. And the types of impacts that an ISL facility might have on a resource is also very similar.

So what we're trying to do is make a consistent approach in addressing applications as they come in. We want to focus specifically, when an

application comes in, on the truly unique aspects of a site.

Keith mentioned that the generic environmental impact statement looks at commonality of impacts. Well, when an application comes in for a specific site, we'll focus on those particular resources that are specific to that site. And by taking this approach we can be more rigorous, we can be more thorough in that evaluation. Our purpose -- as I said previously the ISL process is relatively standardized. There'll be some commonality in the types of impacts that are assessed.

The GEIS, the generic environmental impact statement will function as a first step in the environmental review. In a sense it's a first look at the potential impacts that that particular ISL facility will have in that area. I'll go into detail a little bit later as to how we're going to use it.

What does the GEIS include? It addresses the entire life cycle of an ISL facility. And I mentioned this before, construction, operation, aquifer restoration, decommissioning. All these activities are conducted by the NRC licensee, and under the conditions of the NRC license, under conditions of an EPA license if they have that, or an EPA permit, under the conditions of a state permit say for water, for example, water

discharge.

The draft GEIS provides an evaluation of the potential environmental impacts, and we did this in terms of specific resource areas. For example, for air resources, water resources, land use. In fact, 13 specific categories were assessed and evaluated.

The approach the NRC took in developing the generic EIS involved four-steps. Now let's take a look at each of these steps in more detail. First I want to talk about how the uranium milling districts were defined. And this is a term that is used throughout the generic environmental impact statement, throughout the document.

The first step was how to identify these regions. Well, to accomplish this we looked at a number of things: where does the NRC have ISL facilities, where do they license ISL facilities; where have uranium mining activities taken place in the past, where are they taking place now; and based on the letters of intent, where does industry think that uranium ISL facilities will be located. And then we also looked at historic uranium deposits.

From all this, four regions were identified. And these are the four regions. The first one we call Wyoming West. It's located in central Wyoming. Wyoming

East is here, that's also entirely within the state of Wyoming. The green box up there covers four -- three states rather, northeastern Wyoming, southwestern South Dakota and northwestern Nebraska. And then finally the purple is in northwestern New Mexico.

This is an enlargement of the Nebraska/South Dakota/Wyoming region, and the region we're here discussing tonight. It comprises about 9,000 square miles, is very rural as everybody knows, and it stretches from the Wyoming/Montana border, again, all the way down into northwestern Nebraska.

The second step that the NRC took in describing -- was in describing the in-situ leach process. I gave you a brief overview before. There's quite a detailed review in the generic environmental impact statement, and that's found in Chapter 2 of that document.

This description, again, like I said, is in Chapter 2. It goes through the construction, the operation, the aquifer restoration, and the decommissioning of a facility. It also discussed radiological health and safety programs associated with ISL facilities. And the handling of various wastes. Again, it could be solid waste, it could be liquid waste, it could be radiological waste. That's all discussed in

Chapter 2.

It discusses the different transportation aspects in each phase of the ISL process. We talk a little bit about the financial assurance Keith mentioned before that financial surety is an important part of granting a license, to make sure that the company has set aside enough money to reclaim the site once the uranium is mined out.

And finally the chapter summarizes particular aspects of uranium mining, and particularly ISL mining in the United States.

Okay. After we've identified the milling regions and the ISL process, we describe the environment of each of the regions. And Chapter 3 of the generic environmental impact statement presents a description of the environment within each of these regions.

This is done in accordance to NUREG-1748. NUREG-1748 is the environmental review guidance document that the NRC uses for environmental review of ISL facilities. There's a copy of it on the table outside in the hall; you can look at it. It's also available on the website if you care to download it.

A description of each of the categories essentially represents the baseline condition, what's out there right now in each of the particular regions.

Okay. Now let's take a look at the resource categories. As I mentioned, there are 13 of them. They were assessed in the generic environmental impact statement. They were taken from the NUREG-1748. And I'm not going to read them all, but you can see that they represent a thorough and wide-ranging description of the environment for each milling region.

The fourth step in the NRC's approach was assessing the potential environmental impacts. And what we did was we evaluated the potential impacts in each of the four regions for each phase of the ISL process for each of the 13 resource categories. They are described, identified and categorized according to their significance. And finally, the document presents ways and means that a licensee can either avoid, reduce, minimize, or mitigate the potential adverse impacts.

These are the significance categories. While these terms: small, moderate, and large appear to be simplistic and subjective, I want you to know that they represent the result of a rigorous and lengthy analysis. In fact, subject matter experts recognized by their peers in their various respective fields, collectively having over hundreds of hours of experience -- hundreds of years of experience, they spent literally thousands of hours doing this research to analyze the impacts and come up

with these categories.

How are we going to use the generic environmental impact statement? Well, the ultimate function is to use it in individual license applications. It's not the only resource, by the way, that's going to be used. It may be the initial step. We're going to rely on the applicant's environmental report and the NRC is going to have -- we're going out reviewing the site, reviewing background history of the site, of the area, and they'll be multiple sources of information that go into the site-specific environmental report. And in the site-specific review of the document, again, the public is going to have opportunity to comment.

I'm going to transition now from the general aspects of the generic environmental impact statement and going into the more specific. In particular I want to talk about this particular region, the Nebraska/South Dakota/Wyoming region. And the following slides summarize what we found with regard to potential impacts of an ISL facility in this region.

This is the same slide as you saw before, and I'm showing it here just so that you get a picture of what I am going to be talking about. The GEIS found four resource areas that are shown here that would have least -- or that would be least affected by an in-situ leach

facility.

Notice that I included this definition of small impact at the bottom the slide. A small impact really is either something that's not detectible, or it's so minor that it doesn't alter the normal functioning of that resource. So these were the four that were found to have the least impact from an ISL facility.

The generic environmental impact statement also found that resources shown here would be minimally impacted. However, on occasion there could be a potential for a moderate impact in this area. And, again, a moderate impact is one that doesn't really alter the character of a resource.

Here we have six resource areas. Most of them are going to minimally impacted. However, under certain situations there could be a potential for a large impact. Again, this is site-specific. A large impact, something that is clearly noticeable, and something that will alter the important characteristics of that resource.

For example -- let me give you an example of a large impact. Take threatened and endangered species. If there's either a threatened or endangered species located on the site of an ISL facility, then you could have a potentially large impact.

If there are no threatened or endangered

species on the site, or anywhere near the site, well, then you could have -- it would only be a small impact. Small being negligible.

Okay. What does this mean to the NRC? Basically two things. It means that we have to pay particular attention to these resources, and this can only be done on a site-specific basis. We could not do this in generic form.

Okay. Having said all that, I now want to go over the schedule of the generic environmental impact statement, where we have been, where we are now, where we're going to go in the future. And finally I want to tell you how you can be a part of the review, you know, how you can comment and where you can submit your comments.

We started back in July of 2007, that was 13 months ago. Since that time, Keith mentioned we had three public meetings. The public meetings were to define the scope of the generic environmental impact statement. Since that time we've received over 1400 comments from individuals. In July of this year we submitted the draft generic environmental impact statement.

I want to note here that even though it says draft, it doesn't mean that it's incomplete. The

document is complete. The only reason it's draft is because we're waiting for you, as the general public, to comment on it. But basically it is complete.

From August 25, this past Monday, to September 25, we're going to be holding eight public meetings in all four of the regions that you saw. On July -- on August -- let me see, on October 7 the comment period will close. And we -- by June of 2009 we will have the final environmental impact statement, incorporating all the comments that you folks have.

Written comments on the draft generic environmental impact statement can be submitted by regular mail, they could be submitted by e-mail. Your comments tonight that are presented orally are being transcribed. They will be made available. One is not preferred over the other. They'll all be treated equally, and all the comments will be available on NRC's website.

And by the way, you don't have to write any of this down because this is on a paper that can be taken from the information table out in the hall. So you don't have to write it all down.

These are the names of the two individuals that are available to answer specific questions, should you leave here tonight and say, Ah, you know, I should

have asked that particular question. You can contact these individuals. James Park is the project manager for the generic environmental impact statement and Steve Cohen is the team leader that can answer questions with regard to safety and license. Again, you don't have to copy this down, it's available for you as you leave on the table out in the hall.

And that ends the formal part of the presentation. Now you have an opportunity to ask questions, and then it'll be your turn to present your comments on the draft generic environmental impact statement. Thank you for your attention, and now I will turn the meeting back over to Chip.

MR. CAMERON: Okay. Thank you, Alan.

Thank you, Keith.

You heard an overview of this entire process, and we have time for some questions before we go out to you for comments. Does anybody have a question?

Yes, sir. And, please, introduce yourself to us.

MR. LEDBETTER: My name is George Ledbetter from the Cheyenne Record, a local newspaper. Who makes the decision on the GEIS, who'll be making that decision?

MR. CAMERON: Okay. And it's -- maybe we could explain to George too about in what context -- the

term decision is probably not the right context for that GEIS, and can you explain that to George, Alan?

MR. BJORNSEN: The generic environmental impact statement is part of the NEPA process. It's a process. What is done is a draft document is prepared, it goes out for public review a period of time, meetings are held, public is involved to -- is invited for comment. The comments are received, then they're categorized and they're addressed in the final document.

That final document is approved by the NRC because we are the lead agency. It's published, it's announced by -- in the Federal Register by the EPA and that's the final decision. I mean it's a document that helps the decision maker, in this case the NRC, make a good decision. It's a tool.

MR. Ledbetter: Do I understand then that you have determined you will be using a GEIS, it's just a question of taking public comment and what is included in the GEIS? Is that what you're saying?

MR. CAMERON: And let's go to -- let's -- we'll answer that question, but, Greg, do you want to --

MR. SUBER: Okay.

MR. CAMERON: -- add a --

MR. SUBER: If I go back --

MR. CAMERON: -- few words?

MR. SUBER: -- I'd like -- my name is Gregory Suber. I'd like to back up just a little bit and put some stuff into context. The agency made a decision to start with a GEIS. That is one part of our licensing process. The licensing process is in two phases. There's a safety review that looks at the safety of the radiological aspects of any proposal that's going to be submitted to the NRC, and then there's the environmental review that looks at the environmental aspect.

What the GEIS is, is the first step of that environmental review. That environmental review will actually be done in two steps. It's the GEIS, which is the generic environmental impact statement, and followed by that will be a site-specific environmental review where we will look at the particular site. Both those documents, the GEIS and the site-specific environmental assessment, will constitute a portion of the licensing decision that we -- that allow us to comply with NEPA.

The other document that will be prepared is a safety review, that's going to constitute, as Keith explained earlier, the other portion of our decision basis. And those documents put together, which is the safety review that will handle the radiological effects of the licensing action, and the GEIS, in addition to the site-specific review, which will cover the environmental

portions of the review, will be put together to make the licensing decision as to whether a particular site will actually receive a license from the Nuclear Regulatory Commission.

MR. CAMERON: And to -- just to distill that a little bit in terms of your question is, the NRC has made a decision to prepare a GEIS. The more important, perhaps, issues are, as you stated, what is going to be in that GEIS and how is that GEIS going to be used in the site-specific process.

Other questions?

Yes, David?

MR. FRANKEL: Thank you. I have a question. My name is David Frankel, and I'm an attorney for some of the petitioners in some of these cases with Crow Butte. So I'll be speaking later.

But this is just a question. I've heard of environmental impact statement, and I've heard of environmental assessment, and these terms comes out of NEPA, I believe. But where in NEPA is there any authority for this concept of, if you patch together a generic environmental impact statement plus an environmental review, that equals something that is the same as a hard look which courts say are required by NEPA?

MR. CAMERON: Okay. Thank you, David.

And can we talk about what the Council on Environmental Quality might say about these, or where they have been used before, Joan?

MS. OLMSTEAD: Yes. Basically -- oh, I'm Joan Olmstead. I'm with the Office of the General Counsel and I provide legal support for the GEIS.

Most other federal agencies would call this a programmatic environmental impact statement. Only NRC uses the term "generic." But it's looking at, like in this case, a technology. The ISLs are pretty standardized how they operate, so we're looking at it more programmatically. And then looking at regions where NRC's a regulatory authority and applying it there to help with a site-specific environmental review.

So we're looking at the technology in general, and at these regional areas and we're going to incorporate it by reference, these sections that are relevant, into the site-specific environmental review. And that's all -- you can look at the CEQ regulations, and also our regulations talk about tiering -- this is called tiering -- and incorporation by reference. So that's where we're getting this process from.

Does that answer your question?

MR. FRANKEL: I'm not sure.

MS. OLMSTEAD: Okay. We can talk more afterwards if you want.

MR. CAMERON: And is there -- does the CEQ regulations talk about the use of programmatic?

MS. OLMSTEAD: Right. Yes, you can -- they use the term programmatic.

MR. CAMERON: Okay. And any examples from other agencies who have prepared a programmatic --

MS. OLMSTEAD: You see it a lot with BLM, and that's probably what you see out here a lot. With that, or Federal Highway Administration, they do a lot of programmatic environmental reviews.

MR. CAMERON: Okay. Thanks, Joan.

David, follow up?

MR. FRANKEL: Thank you. So since we live in a computer world, why can't you just cut and paste the relevant text out of this huge well-prepared reference document that could then be updated really easily, and then do proper environmental impact statements? Why the need for this genericized version?

MR. CAMERON: Greg Suber.

MR. SUBER: Okay. Yes, this Gregory Suber again. In essence that's exactly what we're doing. The licensing basis for these documents with respect to the environmental review will be both of those documents.

You'll have the GEIS, which gives a summary of conclusions that will be adopted by the site-specific reviews.

The advantage to using this approach is that there are some things in a site-specific basis that would not -- that may not be adequately covered by the GEIS, and that would allow the staff to spend their time and resources in areas that are different, which means if we're looking at a license application and air quality is covered pretty well by the GEIS, and water resources are covered pretty well by the GEIS, but transportation and public health isn't, then what we will do is -- you say cut and paste, and it's similar process, what we'll do is adopt what the GEIS says for those areas, but for areas like ground water and areas like transportation, we will do an additional, more focused review with the information that we collect from that particular spot so that the effort then will be concentrated and focused so that we can improve, you know, that particular section and not have to look at the whole document again.

So it is -- and you can call it cut and paste, we call it tiering and adopting. But it's the same concept.

MR. CAMERON: Okay. Thank you.

Sir, did you have a question?

MR. COPELAND: Just in your presentation you talked about the process, but you didn't talk really in depth about restoring the water table, and who oversees that, and how it's bonded, and all that, and maybe this isn't the place to ask, but I'm curious about that.

MR. CAMERON: And your name?

MR. COPELAND: Bob Copeland.

MR. CAMERON: Okay. Thank you. Thank you, Bob.

I think whoever wants to answer that, because it is an important question.

This is Bill Von Till.

MR. VON TILL: Yes, that's a good question. This is mainly talking about the NEPA part of the reviews, but in my branch we deal with the licensing process where we set up -- we do specific reviews on ground water protection, do they have adequate monitoring, do they have an adequate system for restoring ground water, and that's all set in the license itself, or the document.

And then we come up with a surety that has enough financial mechanism to cover a third-party coming in and cleaning up the site. And that's all handled in the licensing part, the safety technical review part of the process.

MR. CAMERON: Thanks, Bill.

Keith?

MR. McCONNELL: Just to add, those sureties are updated annually too. The licensees submit an annual update so that if the operation expands or it changes, the sureties are changed to match that change in operations.

MR. CAMERON: Bob, does that give you somewhat better of an idea, or do you have some more --

MR. COPELAND: I just wondered, has any site ever been restored, and how long a process is that, and how does that go into your, you know, your GEIS?

MR. CAMERON: Okay. Keith?

MR. McCONNELL: Yes, the process starts when they complete -- when they stop injecting what we call lixiviant, which is the oxidizing fluid, into the aquifer zone there in that particular well field. Then they're obligated under our regulations to start restoration.

But then it can take a matter of years, multiple years, to finish that restoration process. They have to demonstrate that the aquifer is stable before it's complete. And like I said, it could take a matter of years for that to occur.

MR. CAMERON: Okay. Thanks.

And if we have time for more questions

afterwards, we may want to explore that a little bit more.

But does anybody have another question now?

Yes, ma'am?

MS. KOSKY: Hi. My name is Carol Kosky, and I'm a property owner outside of Chadron. What are my assurances that the ground water is not going to be contaminated, and what processes do you have in place that the water will constantly be monitored so that it will not eventually become contaminated?

MR. CAMERON: Okay.

MR. McCONNELL: I can answer that.

MR. CAMERON: Go ahead. That's good.

MR. McCONNELL: Just to stand up, because I can't see you.

What we tried to convey is there's an overlapping regulatory framework that looks at ground water. And the issue of whether it makes it outside the exempted area where EPA has basically said that that part of the aquifer is not now a source of drinking water, and will never be in the future. So that's that exempted area.

So then there's an overlapping framework of regulation that includes our licensing process which looks at ground water and how it flows, and requires the

monitoring wells that Alan showed in that cross-section, that requires them to monitor those wells to make sure that the material doesn't make it off site.

There's also the state program, or the Safe Drinking Water Act, where they permit the injection wells at the site. So they also are involved in assuring that the wells maintain their integrity and that there's not excursions. You know, it can occur vertically as well as horizontally in that diagram.

And then there's, again, the EPA exempting that part of the aquifer. So there -- I think there's three agencies involved, state and federal, that look to protecting ground water outside that zone that's been exempted as not being a source of drinking water.

Does that answer your question?

MS. KOSKY: Yes. Does the water flow?

MR. McCONNELL: Yes, the water flows, but what they do is keep -- in the well field they keep negative pressure, which basically means the water is being drawn into the well field instead of allowing it to go out. And they have to demonstrate that they can do that so that the water doesn't move out, it moves in towards the pumping wells.

MS. KOSKY: Is that process monitored?

MR. McCONNELL: That process is monitored and

then NRC goes out at least annually and inspects to make sure that's the case. The licensee is also required that if something happens, they have to report that to us and let us know that that occurs and demonstrate how they're going to fix it.

MS. KOSKY: I mean what can you do -- I mean if that should happen, what would you do about it?

MR. McCONNELL: They would need to clean up that facility. If there was excursions off site, and now, again, the whole process is designed to not allow excursions off site and to monitor and make sure that doesn't occur. But if there are excursions off site, then that material in that excursion is the licensee's responsibility to restore.

MR. CAMERON: Okay. And maybe we can also talk to her in more detail after the meeting. But it guess that, from what you said, if there is a situation at a particular site where there may be a potential where this would go off site, then that would get factored into the licensing decision and the NRC may not approve that license. Is that correct?

MR. McCONNELL: Yes.

MR. CAMERON: Okay. Thank you.

Why don't we go for comments and then go back out for questions. And the first speaker is Thomas Cook,

who is a -- on the -- a commissioner on the Nebraska Commission on Indian Affairs.

Thomas Cook? Oh, hi. Great. Do you want to come up here and talk to us? Why don't you use the podium, Commissioner.

MR. COOK: Thank you, sir, gentlemen, ladies, and public. My name is Thomas K. Cook. I'm the president of the Chadron Native American Center, the organization in this city that represents the 1600 Native Americans living in the border towns along the Lakota reservations north of us.

I'm a member of the Nebraska Commission on Indian Affairs, and as such have responsibility to both the governor and the populace we serve. Additionally, I am the executive director of Aligning for Responsible Mining, the organization that has set forth to adopt and promote the international precautionary principle to mining.

Along with me are several people you're going to hear from in opposition to the ISL mining, particularly in this area where we have legal action before the NRC on two fronts, two issues which you mentioned earlier. And I add my support to the comments concerning proposed GEIS for ISL uranium mining, a four-page statement I'd prefer to have one of the others

summarize.

And I'd just ask you to note the importance of our concerns having to do with water and the future of all life, as well as our life in northwestern Nebraska, to listen to the issues and to understand the decisions being made by the licensing board, and so that the safety of the people and the environment will be assured. Thank you.

MR. CAMERON: Thank you, sir. And we're also going to attach your statement to the transcript too, and we'll consider it as a formal comment. Thank you.

We're going to go to -- next to Debra White Plume, and then we'll go to David Frankel.

And, Debra, do you want to come up? Okay. Yes.

MS. WHITE PLUME: My name is Debra White Plume. I'm from the Oglala band of the Lakota Council Fire, descendant from Chief Red Cloud and the northern Cheyenne.

I work with a grassroots NGO Owe Aku to protect our sacred water on a commitment that we call Crying Earth Raise Up!. To Owe Aku, tonight is about water. Our Lakota world view is that Mni is sacred. Our first home is water, our first medicine is water. Without Mni, there is no life.

The United States government recognizes that the NRC is out of the framework of business as usual. And so you are removed from normal bureaucracy and report directly to Congress. This is because the NRC deal with the most dangerous and deadly substance on Mother Earth, uranium.

By mining uranium the industry you regulate has created something that cannot be destroyed, nuclear waste. From the extraction to the storage of waste the entire process is lethal. It forever contaminates our sacred water in the in-situ leach mining process. We understand that.

The corporation here, Cameco, has a dirty record, spills and leaks everywhere at mines. More than 25 spills and leaks just a few minutes from where we stand. The NRC environmental impact process must become more stringent, more technical, more investigative, more of a problem preventer.

It appears that, to the NRC mind, we are a region. I feel this is a simplified approach to a very complicated situation, and it's dangerous. The NRC should require the applicant to do current research on ground water faults, connections underground, and other pertinent information in the mine's proposed area. We know that Cameco connects to our drinking water aquifer

on Pine Ridge. That's why we're fighting them.

There's an executive order by the President of the United States which concerns indigenous people and environmental racism. In looking in all your literature, environmental justice language is absent. My people suffer from the fastest growing rate of diabetes in America. This, we believe, is connected to arsenic which is above the MCL all over Pine Ridge, as are the rads in our drinking water.

Our cancer rate is so high the federal government is funding cancer studies of our people. We know that ISL mining doesn't just disturb uranium, it disturbs arsenic too. I bring this up because I didn't see health as a category listed in your materials or your PowerPoint presentation.

We want more controls put on the process governing these foreign-owned corporations mining and milling uranium in this country. That's who owns and profits. All uranium mines here, all are foreign-owned companies. The dollars leave here for Canada, or Korea, or wherever. So what jurisdiction do you really have over Cameco and other companies?

Cameco has a \$20 million bond out here. That ain't going to clean it up if they walk away tomorrow. They just have to pay major fines in Wyoming and double

their bond over there because they were so dirty.

Your decision as the NRC will impact our Oglala band as a nation. You all have a voice in the policies created in this country. You all have that voice. You can give the nod to genocidal practice of drinking water contamination, or you can make it impossible by the way you put your paperwork together.

When our people are gone, we're gone forever. There's no island or home country where we can get more Oglalas. That's why this is life and death for us. We don't consider it merely a programmatic issue. We live here, our future generations will always live here.

We couldn't find an ISL mine anywhere that had ground water clean when the company left. The states just lower their levels. The NRC should require the applicant to prove they have cleaned up an ISL mine as part of the licensing criteria. Can you do this?

I'm forever opposed to uranium mining as it creates destruction. And I urge the NRC to be visionary to the future generations and human rights of all people when you're putting your paperwork together. They're human beings, just like we are. You answer to Congress, you have a spirit just like we do. And we want to live. Your decisions have a role in our future.

So I asked you some questions when I read

this. And if you can answer them, I would appreciate it. Chip said NRC staff is around here a lot for Crow Butte. Why are the staff here? For what part of the license review process? Maybe you could answer that as we move along through the evening. I would appreciate that.

MR. CAMERON: Okay.

MS. WHITE PLUME: Thank you.

MR. CAMERON: Thank you, Debra. And we'll come back to that --

MS. WHITE PLUME: Okay.

MR. CAMERON: -- question. And I may ask you to repeat it again to make sure that we get the exact flavor so that we can answer. Thank you, Debra.

David?

MR. FRANKEL: Thank you. My name is David Frankel, and I'm an attorney for Aligning for Responsible Mining and Western Nebraska Resources Council. And I want to thank the NRC for meeting with us and taking hard comments and questions.

And the one thing that I've learned in these last year and a half or so working on this issue is that we may not agree, but what we do all agree on is the importance of protecting our people from getting poisoned from this kind of activity. We might disagree on approaches, but that's what it says in the Atomic Energy

Act that the NRC gets its power from, says Congress said that the NRC, the government, "has to regulate source uranium materials in the U.S. national interest for the common defense and security and to protect public health and safety."

So when I think about this process, you know, it's made to look real simple, but we have to remember, it deals with a really dangerous thing. I toured the mine. They have great, great technology. And I said to some of the NRC staff. If they were making soda pop over there, I would be very happy for them. But they're dealing with one, if not the most dangerous substance on the earth.

And it reminds me, is this more like scuba diving, or more like driving a car, because I have a license to do both. And when I get in my car, I don't inspect every tire, the transmission, the steering, all the linkages. I look, see the tires are good, no bad sounds, I hop in, drive around, because I know if I break down, AAA or someone will come and help me.

But when I'm scuba diving, I check equipment every time. I don't care how many hours have gone into designing that, how many people handled it along the way, because my life depends on it. Because if I'm underwater and I can't access the air, I could die.

And that's our situation. I think we're more like in the scuba diving situation than in a driving the car situation, because if things go wrong, and there was a statement about, if excursions happen, excursions happen. When you pump 13,500 gallons a minute through any system 24 hours a day, seven days a week, for 20 years, and even though they have great people working on it, it's human beings who manage these pressures, and sometimes the pressures change and there's an excursion. And the monitoring wells are supposed to pick that up. But those don't help if there's a surface problem.

So what I want to say is that I echo what Debra White Plume said. You know, it's important enough to look at it specifically each and every time.

So this is the first time I held this big document in my hands. I only had a chance to look at it really, really quickly and I wanted to look at the parts that really interested me, and I found that, you know, if you want to look up what they think about the cultural resources, you go to Appendix D, and you read the end of D(1) and it ends without continuing, because there's no D(2). It ends in the middle of a sentence.

So my point is not to criticize the secretarial staff at the NRC, but just to say, people make mistakes. The book that they want approved doesn't

even have all the pages in it. Okay.

Let's take another example. Again, this is the first time looking at, what, there must be 3,000 pages here. But let's look at this. Page 3.4-64 talks about tribal consultations. And what it says is that none of these tribes have a tribal historic preservation officer. "To date", on line 34, "no tribes in South Dakota have applied for status as a THPO as provided by the NHPA." But the Oglala Sioux tribe has. Her name is Joyce Whiting. You can reach her at the Pine Ridge office.

So I want to know how this gets updated. At what point do the conclusions in here get subject to further challenges, because I feel like if the government puts this into stone, they'll be cut and pasting from an antiquated document very quickly, and that bothers me.

And, yes, there's a lot of problems and a lot of regulation. There's self-reporting commitments. You might be interested to know that on May 23, 2008, Nebraska Department of Environmental Quality and the Crow Butte mine had a consent decree because they failed to do their self-reporting, they illegally used radioactive water for drilling in violation of their permit. Why? Why did they do that? And why did it take so long to report it once they figured it out?

But they want to be trusted, to have a streamlined process, more check the box, because it's so standard. And this restoration down in Wyoming went from \$40 million to \$80 million. Let me ask you something. If something costs \$80 million to clean up, why wouldn't you do a new environmental impact statement for it every time? Okay?

So there's some major problems. I think that the NRC should hire more people and make the mining companies pay for it. At three million pounds of yellowcake that gets exported between this mine and the one in Wyoming own Cameco at 60 bucks a pound, that's roughly \$180 million gross leaving this area of the country every year going over to Canada to fuel their nuclear industry. Does anyone feel like we're part of a raw materials colony for Canada's nuclear power industry?

Because when it's all said and done, they get their power, or they profit, and what we get is generations of pollution. And the people that make the decisions about this are mostly in foreign countries; it's not Jim Stokey over at the mine. Those people at the mine are good hard-working people. I believe that. They want their grandchildren to play with the grandchildren of everyone around here.

But those are not the people who make ultimate

decisions. So I would urge you to start thinking about having this community take more active control over what's going on right here in your own backyard, because the people who control that mine don't live here. They don't really care what goes on here if you ask me. I think they're acting with reckless disregard for your, and our, health and safety.

So the permanent, irreversible commitment of precious water resources must not be done lightly or generically. Any such commitment must be done with the full informed consent of the community after full disclosure. This GEIS discourages full disclosure, and accordingly it should not be used in any ISL uranium mining in the United States. Thank you.

MR. CAMERON: Okay. Thank you, David.

We're next going to hear from Mike Griffin, and then Diana Covington.

Mike Griffin.

MR. GRIFFIN: I'm Mike Griffin with Uranium One Americas, and I thank you for taking my comments.

First of all, we would like to let NRC know that we do support your preparation of the GEIS, and we believe it will be a valuable tool to a complete review of all the upcoming license applications. Over the past 30 years NRC has gained valuable experience with ISL

operations, and we believe that that shows in the GEIS that was produced.

It's also very clear that the GEIS will not preclude site-specific consideration of environmental impacts, and the public will still have an opportunity to comment on specific licensing actions, even if they're tiered off the GEIS. Whether that's through an environment assessment or an environmental impact statement as the site-specific conditions warrant.

Every license application has to have robust baseline characterization. These license applications are generally six volumes of studies that take one to two years at a minimum to complete, and they include everything -- I'm not going to go through the whole list because it actually was on one of the slides, but wildlife, cultural resource evaluations.

Perhaps the reason that there are blank pages on cultural resource evaluations is those are always site-specific. They cannot be done generically. It has to be for the specific site, so you won't see those covered in the GEIS. So there's always going to be site-specific reviews and the GEIS will allow NRC staff to concentrate on completing those.

The draft GEIS also confirms that ISR is a low-risk method of recovering uranium. The GEIS had

concluded that there have been no impacts to adjacent sources of drinking water over the past 30 years of ISR operations. This is an excellent example of the low-risk nature of ISR. There are also -- many of the other impacts are minor.

One is the footprint of an ISR operation. It's generally a small area in a given aquifer. Baseline water qualities in these aquifers are not suitable for drinking water use, or any other use before or after mining. Restoration is simply intended to return that ground water back to the condition before mining; you still can't use it, and you still don't want to use it.

The ISR process pretty much just reverses the natural oxidation process it began with. We basically inject oxygen and carbon dioxide to release the uranium. When we're done, the natural processes come back. So you have active ground water restoration. There are also natural restoration processes that keep that water from leaving that site.

Ground water consumption is low. If you'd like to compare it to an irrigation pivot, a 6,000 gallon a minute central plant uses roughly as much water as it takes to irrigate 166 acres in South Dakota. A 3,000 gallon a minute satellite plant uses the water it would take to irrigate 83 acres.

And restoration is required after operations are complete. Current restoration techniques have demonstrated successful restoration for numerous ISR well fields in Texas. There have been 79 in Texas, 15 in Wyoming, and one in Nebraska since 1974. And this is highly regulated by the NRC and the state UIC programs.

And finally, we'd like to encourage you to meet your schedule for completion of the GEIS. We know there are four applications currently pending, two of them are ours. We know that there are many more out there just waiting to come in the door. So this will alleviate some of the pressure on getting these licenses issued. Thanks.

MR. CAMERON: Okay. Thank you, Mike.

Diana?

Diana Covington.

MS. COVINGTON: Distinguished panel, my -- I came actually -- I didn't really understand about what was going to come on here, but my questions really dealt with -- we're talking about uranium. It has an extremely, extremely long half life. I've been a nurse for 27 years. You didn't truly answer the gentleman's question back there about how long it takes to restore that area once that mining is done.

And so having been a nurse, worked with

uranium, I worked with radiation type things, I understand that there's a lot of protections, but I also know -- I've lived in Wyoming, Nebraska, I visited South Dakota, there's some very, very rural areas and I'm not real sure -- I've worked in the hospital industry a long time and self-reporting is not always ideal, and so once a year self-reporting -- I mean self-reporting daily and once a year inspection, I don't know is really ideal in situations that are this rural.

And so I beg you to really, really look at this. There's a lot of people that are impacted. I have grandchildren. I want my grandchildren to be able to come to the beautiful areas that I've lived in in this area. So please, gentlemen, be really cognitive about what this has for future generations.

If we're talking about the amount of half life that radioactive materials has, we're not impacting my generation, my son's generation, my grandchildren's generation, we're impacting probably three to four generations beyond that. So please, please look at what it's going to do to the environment before you make a decision. And I think that people have a tendency to overlook and skew their reporting.

MR. CAMERON: Okay. Thank you, Diana.

Diana is the last person that we had signed up

to comment. And we do have time left to go for some more questions from everybody. And I just wondered does anybody have any more questions?

Yes, sir. And please introduce yourself to us.

MR. YELLOW HAIR: Thank you very much. My name is Meelo Yellow Hair; I'm a member of the Oglala band of the Great Sioux Nation of Indians, as it's called. And the reason that I'm more than interested in your processes here is that 100 percent of your green area is within land that was promised for perpetual use of the said Indian, in this case it's the Oglala Lakota people.

The United States government and the Great Sioux Nation went to the Supreme Court in 1980, and this particular lawsuit was called 74A and 74B. One dealt with the hunting and fishing areas that were ceded to the newly formed states of South Dakota, Nebraska, Montana, Wyoming and North Dakota.

The other dealt with what was called the Western half of the State of South Dakota. And at the very center of this is called the Black Hills, He Sapa Lakotas call it. It's the heart of everything that is.

It gave rise to us and even in -- back in 1876 -- in 1875 when the Custer expedition said that the Black

Hills -- the geologists on there, Mr. -- Colonel Dodge wrote in his memoir that it's the only place in the northern plains where there was no evidence of fossil life on top of these mountains in the Black Hills, which basically means that since time immemorial, this particular area has been above the water. It has been the home to our people for that time to now.

As the drainage occurs throughout the centuries and throughout the millenniums, it gave rise to us, all of the different indigenous groups that are located in the northern plains. We understand this land. Crow Butte. Do you even know why it's called Crow Butte, or do you even care?

You see, these waters that we talk about is the blood that runs through our life. The water that's always there, as my grandfather and grandmother said, It's not because the white man drafted a piece of paper, it's what he said during the draft, because we know these commissions; there have been many that come to our areas here in this part of the world.

Now the Nuclear Regulatory Commission is here, and it proposes a very, very big work, protecting people and the environment. So when it says that, it supposes that there is an enemy out there that we need protecting from. And what is the face of that? Who is this enemy

that I can't see on this battlefield for the future of my children and the children that follow them?

Who is this? Has he been kind to my children? Is he in my classroom at the school? Is he a resource in our area? Does he live here? Does he understand our history and our language and our common being on this land that we call Mother Earth?

You see, our relationship to the federal government predates the State of South Dakota, North Dakota, Montana, Wyoming, and Nebraska. You see, that has to be respected because back there the Commission pledges their honor. Pledged the honor of whom? By the people, for the people. It's called the Constitution of the United States of America. So whose honor are we talking about? And who are we being protected from?

Our fears are great, as people that walk on this earth each and every day, whether it's a car or maybe there's going to be a war, maybe our grandchild is over there in Afghanistan, in Iraq, because we went there to protect this land, in spite of everything that it has done to us.

The Supreme Court in 1980 called it a more -- "Never a more rank and dishonorable dealing to ever be found in the annals of this country." Well, now we are faced with that again. But this time it's total. Now I

appreciate the comments about the half life of the nuclear waste. Even low level disturbance of that particular proton, neutron is deadly.

When I listen to small, moderate, and large, it reminded me of T-shirts. But it's a little bit like saying, Are you a little bit pregnant? Because it's an interesting situation because they said the work load is now going to be increasing so now we need to streamline. Because this is actually the one of only two companies that are really doing this.

So we want to take a look at the historical, the cultural aspects of this particular idea, and also the socio-economic realities that our people are living today. Eighty-eight percent of our people are not working. They live below the poverty line as a neglected group of people that exists in the underbelly of America.

And why? Because -- it's maybe because the Black Hills is the richest 100 square miles of minerals. We know that. They've been taking gold out of there for years. They've been taking coal out of there for years. They've been timber out of there for years. And now they want to pollute it for years. And then they tell us, Go make a farmer of yourself, Mr. Indian, in the middle of the Badlands.

Well, you know, America has many, many

skeletons in the closet that needs to be addressed. And we want that protecting part to be applied to the first citizens of this country. Because we love this country, not for us, but for those future generations that are going to follow behind us. And all the technical issues, all of these issues, who is going to benefit?

And who is capitalizing on a fear that somehow or another this uranium might be used for the deadliest application, ends up in nuclear bomb? And we know what happens there, but we also know what happens because of the uranium mining that's been ongoing; 60 to 70 percent of uranium mining is on or near Indian reservations in this country. Why? Because we are indefensible.

These are things my mind flashes every time I think about this thing, protecting people and the environment. When we know that they're not and, but they're indivisible. It's indivisible between environment and the people that gave rise to it.

So I want to say thanks to each and every one of you. Your presentation was very well thought out, professionally made. But it misses the whole point, because we cannot have a future in America with nuclear weapons and nuclear power in it. There is no way.

Why contaminate the land that we love?
Anyhow, thank you very much.

MR. CAMERON: Thank you. Thank you, sir.
Great orator.

Debra, let's follow up on that question you asked when you finished where I had mentioned to you earlier this evening that the NRC staff is often in this area, particularly connected to the licensing proceeding on Crow Butte.

But what can we explain, or what can do more around that particular topic?

MS. WHITE PLUME: Well, I asked why they're here, what part of the review process are they here for?

MR. CAMERON: And I guess it's why they're here is to serve as witnesses perhaps in the proceeding.

Bill -- could any of you answer --

MS. WHITE PLUME: For the renewal application, or the expansion application?

MR. CAMERON: It's -- let me go to Bill Von Till on this, Debra.

MR. VON TILL: Thank you, Debra. I think your question is when we're out here and why we're out here. For example, we were just -- I just sent some staff out about a month ago for one of our inspections. We sent out geologists, a project manager, two health physicists, and some of our regional inspectors to oversee and make sure the operation is run in a safe manner.

We look at ground water restoration, ground water protection, radiation safety, air emissions type monitoring, and we also work with the state of Nebraska, Dave Carlson, who lives out in this area, and those folks and coordinate with them so that we make sure that the operation is run in a safe manner.

And so we do devote a lot of staff time to the facility, and we come out sometimes here in support of licensing reviews as well, and the North Trend is one of those reviews. But the inspection is really our front line towards the protecting the public and the environment from these facilities. We come out and check the records, we go out in the field, look at the monitoring, look at the mechanical integrity testing, we make sure that they're restoring the ground water in a timely way.

So I hope that answers some of your question about what our staff does to oversee the facility.

MR. CAMERON: Thank you. Thank you very much, Bill.

Other questions?

MS. WHITE PLUME: I was asking also about since they're foreign-owned companies --

MR. CAMERON: Let me get you on the record, Debra. Just -- here you are.

MS. WHITE PLUME: I asked since these are foreign-owned companies, what jurisdiction do you have over them?

MR. CAMERON: Okay. Joan that's perhaps a question for you. If a company is a foreign company and they're operating in the United States.

MS. OLMSTEAD: Well, for this type of license, we treat this foreign company the same as any other company. They have to meet the same requirements to get a license. They also -- if they're importing or exporting material, they would have to meet the same requirements as any other company. There's no prohibition against a foreign company for this type of license, or we don't treat them any differently.

Does that answer your question? Or your --

MR. CAMERON: Oh, and, Bill --

MR. VON TILL: And let me just back up a second too. The source material license that we have for this Crow Butte facility is an American company. It's an American license. And I understand your concern. It is a foreign, a Canadian parent company. The authority that we have to oversee the facility comes under the Atomic Energy Act.

And the license that we have with the facility gives us the jurisdiction to assure that this facility is

run in a safe manner. And it's an American company on the license and the jurisdiction is through the Atomic Energy Act. So I just wanted to be clear on that too.

MR. CAMERON: Did you want to add something? Anybody else has questions that we might answer?

Yes, sir.

And then we'll come back down to you.

MR. SWALLOW: My name is Brian Swallow. I really haven't been coming to the meetings but I've been thinking about this issue for a long time. I'm also the vice president of the Native American Center here at Chadron.

I guess my comment is, first of all, I don't think it's a matter of what we will do, what they will do if something happens. I think it's a question of when will it happen. All of us have been -- I'm pretty sure all of us have been in a geology class of some sort. There was a comment made about water moves. Well, water does move. The way the -- and the ground moves also.

So I guess my question is, how do you contain this? What's the -- you basically opened up the ground. And so when things move, how do you contain this? And when it does, if something does happen, or when it does happen, you talk about sureties. How are you getting

these numbers? Are you going to give people money? Are you going to take care of them? Or what kind of impact is it going to have on people's lives? Are we contaminated with radioactivity, or are we getting cancer, or what impact does it have on us?

You put on there, on your statement here, you put in that it will impact -- well, there's a place on here that you put in endangered species. Well, that's great, but I can stand here as a Native American and say that you're going to impact the Native Americans. But each and every one of you, as a human being, you're going to be impacted if anything happens. That just goes across the whole board.

So my issue is, what are we going to do when it does happen? We have tremors here, we feel them all the time. Well, not as much as California, but they still happen. So going back to the sureties, how do you address that issue when it does happen, because we can't say if it happens, because it will happen.

MR. CAMERON: Okay. Thank you.

There's a lot to the question, including what gives us assurance that the contaminated water is not going to escape the aquifer. That's one question. And this gentleman is assuming that it will.

Okay. So I think we need to talk about what

gives us the assurance that it isn't, and in terms of the surety that a company has to post, is it just based on the assumption that there will not be any release to another water body, in other words, it's money to basically return the aquifer to its baseline condition. How do we deal with issues if there is a release? And I think maybe if we could talk to those that will give some information to him.

Keith?

MR. McCONNELL: I'm going to start, but I think Bill will need to weigh in on this too.

Just to address the issue of faulting, or earth movements, when the applicant submits a license, they have to do a thorough evaluation of the geology and the hydrology in the area. We have a team of experts, hydrologists, geologists, and health physicists that look at that application, do our own independent assessment of what's out there and what can happen.

We also have contractors who work in San Antonio, Texas who also help us. If we don't have the expertise, we go outside and get that expertise. So we do a very rigorous review of what's there and what can happen.

In determining the surety, the surety is determined by what it would cost by a third-party, not

just the licensee, but by the third-party to do it, and they have to provide sufficient money for that facility to be cleaned up and restored to baseline conditions.

I mean, does that even go to a start to answer any of your questions?

MR. CAMERON: And, Bill, I don't know if we want to -- here, let me give this to you, and I don't know if we want to go to any of our other hydrogeology experts. I'll let you be the judge of that.

MR. VON TILL: There's a figure -- I wanted to get up just to explain one thing, and to answer your -- one of your questions more directly too.

If there is an excursion, a major excursion that would cost a lot of money to correct, we would expect that the company, if we have a surety review, we would want to make sure that the money is there to clean that excursion up.

Well, it was actually -- yes, this one here. Do you have a -- one thing I just want to explain, this wasn't used before, but a lot of questions kind of lead into what is protecting your water supply from these facilities. And I just wanted to show this diagram, which is a good diagram.

This is the operation here. These are the production wells, and the five spot patterns of the

injection wells. And so this is a typical well field. Now because ground water is our major concern here, we have a lot of monitoring. And each one of these well fields has a perimeter monitoring well ring to detect any excursion from the operation on a horizontal standpoint. If it starts to migrate out this way, it'll hit this monitoring well. We'll pick it up and then the company will be required, you know, to clean that up.

Also, we have monitoring wells from a vertical standpoint on the aquifers above and the aquifers below to handle any kind of clean up -- to handle any kind of excursion that would occur. If an excursion does occur, then the company's required to clean that up. And that happens sometimes and the company is to clean that up.

MR. SWALLOW: I do understand that you have monitors in place for all of this. You are monitoring every one of it, everything. My question isn't that. My question is, it's going to impact human life. What is it going to impact -- when an excursion happens, what is it going to impact, in what area is it going to impact?

And if you're going to pay -- you're saying costs. These companies are going to give -- have all these costs that are associated with it. That's great. Some of these companies are making millions and billions of dollars. That's great. That's just a drop in the

bucket to them. That's nothing to many companies out there. That goes across the field in anything that you do. There are EPA standards for everything. That's great for all these costs.

But we are looking at our lives. What are we -- what is it going to impact us when an excursion happens? It's great that it's going to be contained in that one area. How about the future? I think we're all looking at the future here. You know, what is it going to impact, how are we going to -- or what are we going to do for that, what are they going to do for that? Just give us money? Some people, that might be great. Other people actually value their lives. So how is that going to impact? What are you going to do about it?

MR. CAMERON: Not that this is any predictor of what would happen in the future, but I think the gentleman is -- one concern is that when there have been excursions, what types of human health affects have there been.

And I think that sort of the million dollar question though is, the surety for cleaning it up, does any part of that surety go for -- and I think I see Keith shaking his head -- the surety does not deal with any damages to human health that might occur. Is that -- that's --

Save that, but let me go to Bill first in terms of these excursions that have happened. What types of impacts have there been on human health?

MR. VON TILL: With the in-situ leach operations that we currently have, we haven't had an excursion that's actually resulted in the contaminant going to a water supply well and having somebody actually ingest that water. We haven't had that kind of a situation because of the monitoring that we have.

Now some of our legacy sites that we have out in New Mexico, for example, that, you know, started off in the '50s and '60s and contaminant plumes migrated out to some people's wells, there have been some situations there, and there's been class action lawsuits with some of those operations where the company compensated folks in that situation there. Those are conventional mill tailing sites that are being cleaned up as we speak today, out in the Grants regions of New Mexico.

But these operations, the in-situ leach, because they are governed by modern regulation and monitoring, we haven't had a situation where the contaminant plume has actually gotten into a well where people use water for drinking water purposes and then ingested it, and then some kind of a health affect. We haven't had that yet.

MR. COHTSA: Can I just --

MR. CAMERON: Thank you.

MR. COHTSA: -- back to my question earlier on that --

MR. CAMERON: And, sir, we need to -- I'm sorry to bother you with this, but we need to get you on the record. Okay?

MR. COHTSA: Bob Cohtsa. Back to that question, when you do that, I mean we're talking about human health, but if you have an excursion in these upper wells, how many gallons of water are we talking about to clean that up?

You're talking about negative pressure, so how much negative -- negative pressure means you're pumping water out of the ground, so that's I guess my question: How do you keep an excursion from moving on, and what's the cost in gallons of water?

MR. CAMERON: Okay. Thanks, Bob.

Bill, do you understand Bob's question?

MR. VON TILL: First, let me explain that excursions can occur in a number of different ways. The one that you're kind of talking about is more your horizontal type excursion where it would get away from you and get into the monitoring well ring. That doesn't happen very often. When it does, the company is normally

able to quickly bring that back in.

Now, another type of excursion that occurs is there's a lot of wells out there, and sometimes the injection wells will break; they'll have a mechanical integrity break, and then you have some contamination that occurs in maybe an overlying aquifer. And then that's quickly diagnosed and assessed and then cleaned up.

It really -- it depends upon the volume of contaminant as to how long it may take and how much cost it may take. We've had, you know, mainly minor type excursions that have occurred at these facilities. I wouldn't really call any that we've seen major type excursions where you would have a huge contaminant plume, you know, move way outside that monitoring well ring.

Normally it's breaks in these wells and then it's cleaned up. And because that is a fear, we require, and the state requires, that these wells be mechanically integrity-tested on a frequency to make sure that the wells are going to hold and we're not going to have those types of excursions.

But I mean to answer your question, there's a number of types of excursions that have occurred, mainly minor. Sometimes they take two months to restore; some have taken a couple of years, but none have resulted in a

risk to human health at this point.

MR. COHTSA: It takes all that time and pumping hundreds of thousands of gallons of water --

MR. VON TILL: Yes, and it depends on the particular excursion as to how much volume of water is pumped out, but it is pumped out. And our inspectors follow up on that and make sure that that is overseen and it is a timely process.

MR. CAMERON: Okay. Thank you. And maybe if Bob is here in a few minutes, you can talk a little bit more about that. But I believe this gentleman had a question.

Yes, sir.

MR. WESS: My name is Roger Wess, and I'm a local county commissioner. And I guess I look at it from two different ways. From one way the mining industry is a very good support for our tax base. But the other side of it also is that I live here, most of my children live here, and several of my grandchildren.

And I guess my main question is, who does the monitoring? Is that a third-party, is it the company?

MR. CAMERON: Okay. Let me -- let's get an answer to that. And that ties into some concerns that we've heard about the fact that the NRC comes up here. We might only do an annual inspection.

But the monitoring is a daily -- can we describe the -- what the monitoring process is, and when a company has to report -- the reporting process for -- if there is an excursion, when do we get -- when does the company have to notify us, the whole deal.

MR. VON TILL: Yes, I think most of your question was who does the monitoring. Well, the company does the monitoring for the most part. We come out, we look at the records, we look at the quality control, the duplicate samples, we look at the laboratories they use, and we make sure that it is a valid process.

In addition to that, sometimes the state inspectors will come out and take split samples and check the quality and make sure that their samples are coming out the same way as the company samples.

But the frequency, I'm not sure what it is here in Nebraska, if it's every -- twice a month or monthly. I think it's a twice a month that they sample these monitoring wells. Normally there's one to two staff people out every day collecting water samples from one of these monitoring wells.

It's an ongoing process, and the company does do that, we check the company's records, and then sometimes the state will take duplicate samples. I hope that answers that part of your question.

MR. WESS: Actually, it kind of leads to about three more questions, part of which you've answered already. How far out are the monitoring wells that circle a field, roughly?

MR. VON TILL: How far? Well, the monitoring well, the red triangles there, are basically about -- normally about 400 feet apart. It really depends upon the permeability of any, you know, given situation as to what the spacing would be. But it's normally about 400 feet, the spacing, and I think it's about 100 feet or so from the --

Mike, what is it about --

MALE VOICE: Usually it's 4- to 500 feet out.

MR. VON TILL: Yes, 4- to 500 feet from the well field area to the monitoring well ring. And that's more -- when the license application came in, that was a function of the hydrogeology, the permeability of the formation itself to determine the appropriate spacing of the monitoring, and that can vary.

MR. WESS: And I guess, as I'm listening to the conversation this evening, we're talking about wells that are quite -- miles away from this. Is there any monitoring over periods of time of any changes of wells, let's say 50-60 miles away. And I think that's kind of one of your main concerns tonight is what's happening

there.

MR. VON TILL: And I know that the Crow Butte facility here, for example, in addition to the monitoring wells that I'm showing up on the screen, they do also sampling of some of the water supply wells in the area. Most of the water supply wells in that area are in a different formation. The Chadron is the formation that they're recovering the uranium out of, and the Brule is the formation that's higher where most people get their drinking water.

And so the company, in addition to these monitoring wells, also does periodic monitoring of people's water supply wells in that area as well.

MR. CAMERON: Okay. Thank you.

Yes, sir.

MR. WESS: Have you noted any changes, then, over the number of years that that mine has been there, farther out?

MR. CAMERON: Okay. And is that reported to us?

MR. VON TILL: Yes, that's in -- I believe that's in the semi-annual or annual type monitoring reports. No, we haven't really noticed -- we haven't seen any impact to those water supply wells. The only impacts that we've seen are sometimes to the monitoring

well, monitoring wells ring itself, an excursion, or as I said before, a break in one of the wells vertically, and then sometimes they even put in additional monitoring wells to map out an excursion.

So we haven't seen any changes to -- something that would be a precursor to, you know, affecting the actual drinking water, no.

MR. CAMERON: Okay. Thank you, Commissioner.
Thank you, Bill.

Anybody else before we close up tonight? And we will be here after the formal close to talk to you about any concerns you have, or any questions. Let me --

Yes, sir.

MALE VOICE: You had given some numbers on the 79 in Texas, 15 in Wyoming, and one in Nebraska. What were those?

MR. GRIFFIN: Those were ISL wells that have been restored.

MALE VOICE: Restored as to what?

MR. GRIFFIN: Ground water restored back to their --

MR. CAMERON: You got to have --

MALE VOICE: What is the limit?

MR. GRIFFIN: We can talk about that after.

MR. CAMERON: Okay. Let's do that.

MALE VOICE: I have one more question.

MR. CAMERON: Okay. Can I just get you to come right over here to just -- and we're going to keep this short and sweet. Okay? All right.

MALE VOICE: I guess my question is, what constitutes bringing it back into restoration?

MR. GRIFFIN: Usually the requirements are that the primary goal is to return it to baseline, so that's a list of 30 parameters, you've got to clean it back to whatever the baseline was before you started. That usually isn't realistically achievable. You know, you've made geochemical changes to the formation, you've added oxygen so you've liberated stuff.

Usually you can get at least half or more of those back to baseline. The secondary goal is class of use standards. Class of use standards that are set by the state. And generally that water, since it's not usable beforehand, it will be -- you know, in the State of Wyoming it's, I think it's called an industrial use water. But you have to clean it back to those standards.

If you can't achieve those, then you've got to go to the state and the NRC and you've got to say, Okay, we've treated this many pore volumes of water, we've spent this many years on it; we've got it to a point where there's diminishing returns and it's not cleaning

up any more.

And you have to show them it's not going to migrate off site, whether that's modeling, which is what had to be done in Wyoming, they had to show that it was going to stay there, they had put down-gradient monitor wells to check the model to make sure that it was accurate. So that's the long answer.

MR. CAMERON: Thank you, Mike.

And I just want to go to Bill to provide an NRC confirmation or anything else he wants to add on that information that we got from Mike.

MR. VON TILL: And that is more or less the process. The primary goal is to return the ground water to the way it was before, the baseline conditions. The ones that the NRC has approved are some well fields at the PRI facility in -- near Douglas, Wyoming. And then for the facility here we've approved Mine Unit One, which is a large area that consists of a number of well fields.

A lot of the parameters were returned to baseline. And some of the parameters that were not returned to baseline were returned to its class of use, which were basically a classification from the state DEQ.

MALE VOICE: Could you give us some idea of what parameters you're talking about that were not returned to baseline? Were those --

MR. CAMERON: Sir, we need to get you on the record.

And this is going to be the last question. We're going to close up now.

Bill?

MR. LEDBETTER: My name is George Ledbetter again. Could you give me an idea -- the gentleman before said that most cases it's not possible to return all the parameters. You just indicated that many times that is also the case, that parameters cannot be returned to baseline.

Could you give us an example of what type of parameters are not returned to baseline? What would those be, would those be chemical composition, mineral composition, pH of the water, and would they be radioactive content of the water?

MR. CAMERON: Bill, any examples on parameters that -- and do you mean elements or -- explain that.

MR. VON TILL: Yes, I should explain that. The parameters are constituents. There's a number of constituents that we monitor at these sites that range from radionuclides to metals to pH to total dissolved solids, chloride, nickel, you know, things like that.

Some of the parameters that they've had a little bit of difficulty, you know, returning to baseline

have been parameters like uranium and radium, for example, because when they come in and use oxygen and bicarbonate to loosen that uranium up, that's a more difficult parameter to return to baseline. So they've done a good job of getting it down to a certain point where it's not as mobile, but some of those parameters have been a sticking point, as an example.

MR. CAMERON: Thank you.

And thank you all. I'm going to ask Keith McConnell to close the meeting for us.

And I guess just before that we should thank the college for the use of the facility great room, and Lori, who is the head of the center, and thank Tuffy and his colleagues for the audiovisual, and Brenda, thank you.

Keith?

MR. McCONNELL: Yes, I would like to thank you. I think there have been a lot of -- there's been a lot of good dialogue, a lot of good questions, and we do appreciate that sort of input into our licensing process. It makes us think through things, I think.

So, again, we do appreciate you coming out. I know it takes an effort to come to these meetings, so we do appreciate you coming out. We do appreciate you making the comments, asking the questions, and we will be

here after we close to answer any other questions you might have to the extent we can.

So, again, thank you very much.

(Whereupon, at 9:20 p.m., the meeting was concluded.)