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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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Monday, August 25, 2008

Holiday Inn Convention Center  
305 N. 27th Street  
Spearfish, South Dakota

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
- JAMES R. PARK, Project Manager, Draft GEIS
- JOAN W. OLMSTEAD, Office of General Counsel
- GREGORY F. SUBER, Chief, Environmental Review Branch
- ALAN BJORNSEN, Project Manager, Draft GEIS

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1 BILL VON TILL, Branch Chief, Uranium Recovery  
2 Licensing Branch

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AGENDA

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P R O C E E D I N G S

1  
2 MR. CAMERON: Good evening, everybody.  
3 My name is Chip Cameron, and I work for the  
4 executive director for operations at the Nuclear  
5 Regulatory Commission. We're not going to use a lot  
6 of acronyms tonight, but we will be using NRC for  
7 Nuclear Regulatory Commission.

8 And it's my pleasure to serve as your  
9 facilitator for tonight's meeting, and in that role  
10 I'll try to help all of you to have a productive  
11 meeting tonight. And our subject for tonight's  
12 meeting is a draft generic environment impact  
13 statement that the NRC has prepared on uranium  
14 milling, and specifically on a technology called in-  
15 situ leach, or ISL.

16 And I just wanted to spend a few minutes  
17 with you to talk about some meeting process issues.

18 First of all, the format for the meeting, second of  
19 all, some simple ground rules to allow all of us to  
20 have a productive meeting, and third, to introduce  
21 the NRC staff who will be doing some brief  
22 presentations tonight.

23 In terms of the format for the meeting,  
24 it's a two-part meeting really. And the first part

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1 is to give you some background on the draft GEIS.  
2 And we're going to have two presentations on the  
3 draft GEIS, the preliminary findings in the draft  
4 GEIS, how the NRC might use it in terms of site-  
5 specific applications that we get, how you can  
6 participate to help us shape the final GEIS that is  
7 going to be prepared.

8 And we'll have some time after that for  
9 questions before we get to the most important part  
10 of the meeting, and that's an opportunity for the  
11 NRC to listen to your advice, your recommendations,  
12 your concerns on the draft GEIS. And we're also  
13 taking written comments on this, and the staff will  
14 give you more information on that.

15 But we wanted to be here tonight to meet  
16 with you personally, and anything that you say  
17 tonight will count just as much as a written  
18 comment, but also feel free to amplify on your  
19 comments here tonight in a written comment. And you  
20 may hear something here tonight that will prompt you  
21 to file a written comment with us.

22 And in terms of ground rules, first of  
23 all is just please wait for the NRC presentations to  
24 be over so that we can give you a comprehensive

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1 background before we go for questions. And there  
2 will be some time for questions before we get to the  
3 comment period in the meeting.

4 And the NRC staff will be here to talk  
5 with you as long as you want after the formal  
6 meeting is over. And if we get done with the formal  
7 comment part of the meeting and there's still time,  
8 then we can go out for a second round of questions.

9 If you want to ask a question, just  
10 signal me and I'll bring you this cordless  
11 microphone, and if you could just please introduce  
12 yourself to us and then we'll go to the staff to  
13 answer your question. And I would ask only one  
14 person at a time to speak, first of all so that our  
15 stenographer, Brenda Thompson, who's right here, can  
16 get a clean transcript so she'll know who is  
17 talking. And most importantly though, so that we  
18 can give our full attention to whomever has the  
19 microphone at the time.

20 Try to be brief so that we can give  
21 everybody an opportunity to participate. I don't  
22 think we're going to have any time problems tonight.

23 When we get to the public comment  
24 portion of the meeting, I'm going to ask everybody

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1 to follow a five minute guideline on their comments,  
2 and there's some flexibility there, but I just want  
3 to make sure that we have time for everybody  
4 tonight.

5 And if you want to speak during the  
6 public comment portion of the meeting, there are  
7 these yellow cards, and you can give me a yellow  
8 card any time during the meeting. It's not like you  
9 had to do it in advance of the meeting. But that  
10 allows us to keep track of who is speaking and to  
11 know how many are speaking.

12 And finally I would just ask that  
13 everybody just display courtesy to everyone else in  
14 the meeting. You may hear opinions that differ from  
15 your own opinion on these issues, but please respect  
16 the person who is giving the opinion.

17 Let me introduce the NRC speakers to  
18 you. First of all, we're going to go to Keith  
19 McConnell, and Keith is our senior management  
20 official here tonight with us, and he's the deputy  
21 director of the Division of Waste Management and  
22 Environmental Protection at the NRC. And he's going  
23 to tell you a little bit about what the NRC does and  
24 some introductory remarks on the draft GEIS.

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1           Then we're going to go to the substance  
2 of the draft GEIS and we're going to go to Jim Park,  
3 and Jim is the project manager on the development of  
4 this draft GEIS.

5           And then we'll go to you for questions.

6           And I would just thank all of you for coming out to  
7 help the NRC with this process.

8           And with that, Keith?

9           (Pause.)

10          MR. McCONNELL: All right. Can you hear  
11 me now? Verizon commercial.

12          I, too, on behalf of the NRC staff,  
13 would like to welcome you here tonight. We also  
14 thank you for coming and participating in what we  
15 think is a very important meeting because it's one  
16 of the ways that you can have input into our  
17 licensing process.

18          I think it's very important for us to  
19 hear your comments tonight, and we do look forward  
20 to hearing them and answer any questions that we can  
21 on the draft generic environment impact statement.  
22 And I will say one other acronym we do intend to use  
23 is GEIS, the shortened -- the terminology.

24          So if I could go on to the next slide,

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1 our purpose slide. Basically our purpose here  
2 tonight is to describe our activities to date, to  
3 assess the environmental impacts of in-situ uranium  
4 recovery activities.

5 This status report, or update, is  
6 basically in the form of our draft generic  
7 environment impact statement, of which copies are  
8 available outside, and are also available on our  
9 website.

10 The draft GEIS and all of our  
11 environmental reviews are mandated by the National  
12 Environmental Policy Act of 1969, which basically  
13 directs federal agencies to do environmental reviews  
14 of all it's major licensing actions. So licensing  
15 an in-situ recovery facility is considered a major  
16 federal action that we need to do an environmental  
17 review on.

18 NEPA, or National Environmental Policy  
19 Act, also allows for public input into that process.

20 And that's another reason why we're here,  
21 basically, again, to get your input on this draft  
22 generic environment impact statement. So we are  
23 here to listen and gain insight from you all, those  
24 of you that live in this area, on our draft generic

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1 EIS, and the impacts and other things that we've  
2 identified in that document.

3 I would note that this is a second set  
4 in a series of public meetings we're having. Last  
5 fall there were some public scoping meetings for the  
6 draft generic environment impact statement. One  
7 meeting was held in Casper, I think in August if I'm  
8 not mistaken.

9 Jim, is that right?

10 And then two separate meetings in New  
11 Mexico, one in Albuquerque and one in Gallup. That  
12 was for the scoping of the draft GEIS.

13 This particular set of public meetings  
14 is composed of eight meetings. There'll be three  
15 this week in this quarter from Nebraska, South  
16 Dakota, up in northeastern Wyoming.

17 Then in about two weeks we go down to  
18 New Mexico and have three more public meetings on  
19 the same topic, but basically aligning with the  
20 geographic areas that we've defined in the draft  
21 GEIS where uranium in-situ recovery operations are  
22 most likely to occur.

23 And then towards the end of September  
24 there'll be two more meetings in western Wyoming,

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1 western and central Wyoming, one in Casper and one  
2 in Gillette. So a number of opportunities for the  
3 public in all four of the geographic areas to have  
4 input into our process.

5 Just an agenda of sorts. What we'd like  
6 to do, at least tonight, is three things. Basically  
7 I'll provide a brief introduction to NRC's roles and  
8 responsibilities, and it'll be focused on our  
9 responsibilities under the National Environmental  
10 Policy Act.

11 Then I'll turn it over to Jim, he'll  
12 talk about some specifics in our draft GEIS, the  
13 purpose and scope, some preliminary findings that  
14 are identified in the draft GEIS, the next steps  
15 that we intend to take, and our schedule for the  
16 completion of the GEIS. And then as Chip indicated,  
17 we'll open it up for public comment.

18 Just -- some of you may be aware of  
19 this, but just some background for people who may  
20 not be aware of what NRC is and what it does. We're  
21 an independent federal agency. We were created by  
22 an act of Congress in the mid 1970s. Basically they  
23 created us to basically license the commercial use  
24 of radioactive materials.

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1           We're unlike the Department of State, or  
2           the Department of Energy, or the Department of  
3           Transportation in that we don't report up through  
4           the executive branch, we report directly to  
5           Congress. And our mission, as defined by Congress,  
6           was to protect public health and safety and the  
7           environment when radioactive materials are used.

8           So, in essence, what we have  
9           responsibility for is licensing the commercial use  
10          of radioactive materials. And that can extend from  
11          licensing a nuclear power plant to produce  
12          electricity to, on the other hand, licensing a gauge  
13          holder who uses radioactive materials to do well  
14          logging.

15          In this particular instance we also  
16          license in-situ uranium recovery facilities in those  
17          states where we have regulatory authority. In  
18          certain states like Texas and Colorado and Utah, our  
19          regulatory authority over in-situ recovery  
20          facilities is managed by the state. They've got an  
21          agreement with the NRC to manage those activities  
22          within that state.

23          One of our core values at the NRC is  
24          openness and transparency in what we do. It's

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1 fundamentally important to us that our licensing  
2 process is open and that it's transparent to the  
3 public. So we go to great strides to try to  
4 communicate what we do, how we do it, why we do it,  
5 and when we do it.

6 Although there might not be complete  
7 agreement in terms of what we do, certainly we want  
8 to make sure that everyone is informed and has the  
9 opportunity to comment on what we do and have input  
10 into the process.

11 In terms of our regulations, again,  
12 we're focusing tonight on our environmental reviews,  
13 our regulations for environmental reviews are  
14 defined in 10 C.F.R., which is Code of Federal  
15 Regulations, Part 51. Those are -- were based on --  
16 were guided by the regulations that the Council on  
17 Environmental Quality developed to implement NEPA,  
18 or the National Environmental Policy Act.

19 What we also wanted to do was to  
20 describe our licensing process for an in-situ  
21 uranium recovery facility, because that will provide  
22 context for how the generic environment impact  
23 statement will be used, and Jim will get into this a  
24 little bit more. But we just wanted to run through

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1 the process so that it would give you some idea of  
2 how we approach a review of an application from a  
3 company.

4 Basically it begins when a company  
5 decides if they want to get into the in-situ  
6 recovery business, uranium recovery business. They  
7 develop the background data necessary to prepare a  
8 license application. That license application is  
9 then submitted to the NRC. It's usually composed of  
10 two parts, a safety report and an environmental  
11 report. And usually it's paper about this high, or  
12 so.

13 Our expectation is that over the next  
14 three years we'll receive on the order of 28 to 30  
15 license applications from the industry. And it's  
16 that avalanche of work that was facing us that in  
17 part told us that we should look at ways to make our  
18 process more efficient and effective without  
19 limiting the possibilities of public input.

20 And that is one of the reasons why we've  
21 evolved to developing a draft environmental  
22 impact -- generic environment impact statement for  
23 the four geographic areas where we think most of  
24 those applications are going to come from.

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1           Basically we think we're going to have  
2 multiple applications from the same geographic  
3 areas, and sometimes in the same geology, so there's  
4 some benefits to taking a generic look. But it  
5 doesn't mean that we would omit or somehow lessen  
6 the site-specific review that would be done on each  
7 individual license application.

8           Now once an application is submitted to  
9 the NRC, basically we approach it in two steps. We  
10 do first a very thorough 90-day acceptance review.  
11 That acceptance review looks at two things. First,  
12 we look to make sure that sufficient information is  
13 in the document for us to do a detailed review, and,  
14 second, we look for fatal flaws.

15           Now a fatal flaw -- if a fatal flaw is  
16 identified, it's usually because they haven't  
17 demonstrated they can meet one of our regulations.  
18 If that's the case, two things will happen, or one  
19 of two things will happen. Either the company will  
20 withdraw the application and improve it and resubmit  
21 it at a later time, or if they choose not to  
22 withdraw it voluntarily, the NRC staff will not  
23 accept the document for a detailed review, and  
24 basically return the document to the company.

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1           But assuming we do find the document  
2 sufficient in that it would meet all our regulatory  
3 requirements, we would accept it, and when we do  
4 accept it, three things happen. First, we do what  
5 we call as docketing, which is we assign it a formal  
6 tracking number, it starts to enter the formal  
7 adjudicatory process, and it's announced on our  
8 website that this license application has this  
9 docket number.

10           The second thing that happens is we  
11 issue a Federal Register notice that alerts the  
12 public that we have accepted this application for  
13 detailed review, and also offers the opportunity for  
14 a hearing. And there's usually 60 days -- there's a  
15 60 day window in which someone, a member of the  
16 public or other interested party, can request a  
17 hearing, and that request for hearing goes to a  
18 separate organization at the NRC from those of us  
19 that would be doing the review. It goes to what's  
20 called the Atomic Safety and Licensing Board. And  
21 there's a pamphlet out on the table that describes  
22 what they do.

23           The third thing that happens is we begin  
24 our detailed technical review of the application.

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1 Now within the detailed review there are two parts.

2 There's a site-specific safety review that we do,  
3 again, looking at how the application measures up to  
4 the requirements in our regulations which are at 10  
5 C.F.R. 40, Appendix A.

6 The second part is the site-specific  
7 environmental review, and that's the review that  
8 we're here to focus on tonight. And Jim will be  
9 talking more about how the site-specific review  
10 plays into the draft generic environment impact  
11 statement.

12 At the end of all that process the NRC  
13 would then -- after the review comes out, any  
14 hearing is held on the matter, then the NRC would  
15 make a decision on whether to grant or deny a  
16 license. Normally the process, if a hearing is not  
17 held, is somewhere in the order of a two-year  
18 process.

19 Just a little bit more about public  
20 involvement in the environmental part of the license  
21 review. Basically, as we've indicated, in the  
22 development of the GEIS we have public meetings for  
23 the scoping. We've had three of them. We intend to  
24 have eight public meetings to gain input in the

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1 draft generic environment impact statement, this  
2 being one of them. We'll take that information back  
3 and develop a final environmental -- generic  
4 environment impact statement.

5 And, again, just to reiterate, we will  
6 do a sit-specific review for each individual license  
7 application, and that environmental review will also  
8 be available, and it's available in draft form, and  
9 will be made available to the public, and there'll  
10 be a 30-day public comment period on those  
11 environmental reviews that are site-specific. So a  
12 number of opportunities for the public to become  
13 involved in our process.

14 So that's basically my introduction.  
15 I'm going to turn it over to Jim now. But, again,  
16 we're interested in continuing the dialogue on the  
17 draft generic environment impact statement, we're  
18 here to answer your questions and hear your concerns  
19 and comments on the draft GEIS. So thank you.

20 (Pause.)

21 MR. PARK: My name is Jim Park, and I am  
22 an environmental project manager at the NRC. And I  
23 was given the task of being the project manager for  
24 this generic environment impact statement.

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1           And the main purpose of my talk tonight  
2 is basically to go over several things with you.  
3 First, I'd like to give a short introduction to the  
4 in-situ leach process so you have a general  
5 understanding of what's involved with that process.

6       Then I'm going to talk about why did the NRC feel  
7 the need to develop this document.

8           After that I'll go into the purpose and  
9 the scope of the document, and also the approach we  
10 took in preparing it. And finally some conclusions  
11 that we came to and then the process that you can go  
12 through to submit comments to the NRC on this  
13 document.

14           The in-situ leach process is different  
15 dramatically from the conventional mining and  
16 milling process. Basically in-situ leach does not  
17 involve the production of open pits or underground  
18 mines and shafts, it does not involve the crushing  
19 and grinding of ore materials.

20           Instead, there are three basic  
21 components to it. And I'll go through each of these  
22 in turn. First there's the mobilization, which  
23 happens beneath the ground surface of the uranium,  
24 there's the processing that's involved to extract

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1 the uranium, and then there's the restoration of the  
2 ground water that's involved in this process.

3           So first the mobilization. This is a  
4 photograph taken from an NRC licensed facility in  
5 Wyoming, it's in Converse County, Wyoming. And what  
6 you're looking at is what they would call a well  
7 field. Now the white covers are the locations of  
8 the different wells. It's sort of well covers.  
9 They can also -- in this case they're very  
10 distinctive and white, but they can also be -- to  
11 make them sort of blend in with the background, they  
12 can also be low to the surface and brown in color.  
13 So you might see them in that shape as well.

14           In the middle distance you also see a  
15 small building, and that's known as a header house.

16           Now each of these different wells is connected  
17 beneath the surface with piping, and this piping is  
18 buried roughly four to six feet below ground  
19 because, you know, to protect against freezing. And  
20 it's -- usually this piping is PVC piping, and  
21 they're all directed back to this one building in  
22 the well field, which is known as a header house.

23           And what happens there is in that little  
24 building is where the flow to those wells and from

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1 those wells is organized and monitored in this whole  
2 process. And just in that picture, if we could go  
3 back one please, you'll notice the pronged horn  
4 antelope that are in the near foreground, to give  
5 you a sense of scale for these types of facilities.

6 This is a diagram, sort of idealized, of  
7 a cross-section. If you look below ground this is  
8 what you might see in an idealized shape. And  
9 you're looking at -- first I'd like to draw your  
10 attention to sort of the light yellow layer. Now  
11 that is a formation that basically contains the  
12 uranium deposit in it, and that's the gray sort of  
13 backwards C-shaped deposit that you see.

14 And this formation usually is sandstone  
15 in nature and it has water that flows through it.  
16 And that is basically how that uranium got there.  
17 It was moving with the ground water below ground,  
18 and it reached the condition where there wasn't much  
19 oxygen in that ground water, and the uranium  
20 precipitated out and it formed that shape.

21 And as you look from left to right, the  
22 reason it has that kind of curvature shape is  
23 because the flow of the water would have been left  
24 to right, and so it kind of gives you an indication

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1 of the direction of flow.

2 MALE VOICE: I think people are having  
3 trouble hearing you, so maybe use that -- I think  
4 you just need to keep it close.

5 (Pause.)

6 MR. PARK: So that's the layer -- that  
7 yellow layer, again, is where the uranium is found.  
8 The green colored layer is part of the confining  
9 units that tend to confine the water flow in that  
10 yellow layer. Usually they're tighter in there,  
11 it's a clay, so the water doesn't flow easily  
12 through it, and that's why it sort of contains it  
13 and confines it towards the sandstone yellow layer  
14 below.

15 Now in order to extract that uranium in  
16 this process you have to drill -- the company has to  
17 drill a number of wells. And we see three types of  
18 wells in this figure. In the center you see a well  
19 that has blue arrows coming down and red arrows.  
20 Now the one with the blue arrows are known as  
21 injection wells, and the red ones are known as  
22 production wells.

23 Basically, in this process the ground  
24 water itself is used in that yellow layer. That

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1 water is brought to the surface, oxygen is added to  
2 it, as well as sodium bicarbonate, so this baking  
3 soda, and then pumped back below ground, as you can  
4 see with the blue arrows.

5 And once it's down below ground, it re-  
6 oxidizes that situation. So it kind of reverses the  
7 situation that caused that uranium to stop there and  
8 kind of frees it from the sandstone so where it  
9 moves towards the red colored piping and it's sucked  
10 back to the surface, brought -- pumped back to the  
11 surface into a processing plant.

12 And in this process, in order for it to  
13 work, you have to pump more water out of the ground,  
14 slightly more than you inject into the ground. And  
15 that way, these red production wells will draw the  
16 water to them and pump it to the surface.

17 You can also -- the third type of wells  
18 that's involved are the monitor wells that you can  
19 see to the left and to the right. Now the purpose  
20 of these wells is to ensure that this process is  
21 working as it's supposed to. And there's regular  
22 monitoring that goes on both in the layer, as you  
23 can there, complete down in the yellow layer.

24 So they're monitoring actually at the

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1 depth where all this is occurring, as well as to the  
2 left in an upper layer to see if anything is moving  
3 vertically out of this area where they're conducting  
4 this process, or moving horizontally out of it. And  
5 there's early detection of that, and if the company  
6 notices that, then they have to take corrective  
7 actions associated with that.

8 This is, again, a picture from the same  
9 site in Wyoming, and in the larger of the two  
10 buildings is where all the processing that you  
11 remove the uranium from the water that they take in  
12 from underground.

13 So, again, they brought that to the  
14 surface and they pumped it to this building. And a  
15 series of processes go on there to extract the  
16 uranium out, to concentrate it together, to purify  
17 it, to dry it, and then they put it into 55 gallon  
18 drums where it's transported off-site to another  
19 facility in Illinois where it's processed further.

20 It's also in this building where, again,  
21 as I mentioned earlier, a bit more of the water is  
22 taken out than is pumped in. And this is known as  
23 production bleed in the parlance of the industry.  
24 And, again, this can amount to a relatively

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1 significant amount of water over a period of time  
2 that's going to have to be disposed of in one form  
3 or another by the company.

4 They might do that using evaporation  
5 ponds, they might use wells that are specially  
6 constructed that would go very deep in -- below  
7 ground to pump that back below ground. But they  
8 do -- the company does have to handle the water that  
9 they use. It's like 1 to 3 percent of the overall  
10 rate that they're pumping at.

11 And following that -- in the well  
12 fields, once they've reached a point where they  
13 don't think economically it's -- they can produce  
14 any more uranium, they stop that whole process, and  
15 now they start to work on what's known as  
16 restoration. They have to clean up, you know, the  
17 water that's down there that's been affected by this  
18 process.

19 And it's again using equipment that's in  
20 this central building. Reverse osmosis is an  
21 example of the process where they pull the water  
22 through special membranes to extract some of the  
23 things that they're trying to clean up.

24 So, again, it's a process of restoring

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1 that water, and when they're done with that, they  
2 have to get state and NRC approval that they've  
3 actually restored that well field, and then we would  
4 allow them to kind of move on from that.

5 The NRC license for such a facility  
6 basically involves four steps, four things that go  
7 on in the life cycle of such a facility. There's  
8 construction which would be those well fields, the  
9 piping, the header houses, the processing plant,  
10 basically the infrastructure to put this process in  
11 place.

12 Then there's the operation, and that's  
13 where they actually do the circulation of the water  
14 and the extraction of the uranium. Following that  
15 there's the restoration that I referred to earlier.

16  
17 And finally, decommissioning, or it's in  
18 a sense deconstruction. It's taking everything  
19 down, it's taking it apart, it's moving that  
20 material off site, and it's reclaiming that site  
21 back to what it was before they started. That's all  
22 encompassed in an NRC license.

23 But in addition to those licenses there  
24 are other permits and approvals that these companies

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1 need before they can actually run this process. The  
2 first is known as an aquifer exemption.

3 Basically, in order for the company to  
4 use this process -- as you notice, the uranium is  
5 concentrated in a particular portion of that  
6 aquifer, that -- I'm referring back to that yellow  
7 layer, okay. And it's that portion of that aquifer  
8 that is not useable as a drinking water source, in  
9 part because of that uranium being there.

10 So the company gets an approval from the  
11 Environmental Protection Agency with the help of the  
12 state that's involved to say that, yes, this is not  
13 an underground source of drinking water. And so  
14 therefore it is okay to use this process within this  
15 defined area that's been exempted.

16 It's not this entire aquifer, for  
17 however far it extends, it is only this one  
18 localized area where the company wants to employ  
19 this process. They need that approval first.

20 They also get permits from the state to  
21 construct and operate the wells that are going to be  
22 involved in the process. They also need permits  
23 with regard to the waste waters that they're going  
24 to be dealing with, with storm waters that they're

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1 going to have to discharge off site.

2 And finally, if there's federal lands  
3 involved that might be managed, for example, by the  
4 BLM or the Park Service or the Forest Service, there  
5 might be permits that those agencies also require.  
6 So it's not just NRC that's involved, it's all these  
7 other agencies, both state and federal that have a  
8 hand in this in ensuring the public's health and  
9 safety of the process.

10 Okay. With that background let's get  
11 into the document itself. Why did we even need to  
12 write this? Well, as Keith referred to earlier,  
13 we're facing potentially 28 to 30 applications in  
14 the west to employ this process.

15 And what we noticed was the industry  
16 is -- the uranium industry that uses the in-situ  
17 leach process, it's a relatively standardized  
18 process in how they use it and how they employ it.  
19 So there's a commonality in the type of  
20 environmental impacts that you might see, no matter  
21 where it is employed.

22 So this document would allow us -- this  
23 is our goal, it'll allow us to focus the reviews  
24 that we have on the site-specific application. If

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1 we look sort of programmatically, we look at the  
2 type of impacts that this could cause at any  
3 particular location. That can inform us when we get  
4 a specific application for a specific site on which  
5 we do a specific environmental review.

6 It makes it a very thorough review, it  
7 makes it a very consistent review from one review to  
8 another, to another, if we had to do this 28 times,  
9 we have that consistency, and that foundation  
10 working off this generic environment impact  
11 statement. So as I indicated, we're looking at  
12 environmental issues that are common to this  
13 process, no matter where it might be employed.

14 And this is not the end. We cannot use  
15 this document by itself to license -- to grant a  
16 license to any particular site. Every site, as  
17 Keith indicated earlier, involves a specific review  
18 for that site. So this is the first step in that  
19 process. It helps to focus us and ensure that  
20 thorough review when we actually get an application.

21 So what does the generic EIS include?  
22 As I indicated earlier, because our licenses address  
23 construction and operation and restoration and  
24 decommissioning, well, that's what this document

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1 does. It looks at all those aspects of the life  
2 cycle of such a facility.

3 And it looks at the potential impacts to  
4 various what we call resource categories, like air  
5 quality, water quality, transportation, land use.  
6 There's -- as I'll show a little later, I'll have  
7 list of them, there are 13 different areas that we  
8 looked at for a comprehensive review.

9 So the approach that we took was  
10 basically a four-step approach. And this slide  
11 summarizes the approach. And in the next few slides  
12 I'll go through each of these steps in turn.

13 The first step is to identify what the  
14 NRC termed uranium milling regions. This was based  
15 on, in part, several considerations. As Keith  
16 indicated earlier, there are certain states, like  
17 Colorado and Texas and Utah, which have agreements  
18 with the NRC that in those states, the state will  
19 take care of licensing these types of facilities.

20 So our first consideration is where are  
21 the states that NRC is the licensing authority?  
22 Where have we seen uranium milling in the past? And  
23 as Keith indicated earlier, we have currently two  
24 operating facilities under NRC license, one in

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1 Nebraska near Crow Butte. It's called Crow Butte  
2 and it's near Chadron, and the other is in Wyoming,  
3 and that's the pictures that I had given you --  
4 shown you earlier.

5 We've also learned from the industry  
6 where they are looking. They've come to the NRC and  
7 they've identified certain locations that they have  
8 begun exploration at. And that helped to inform us.

9 And finally, we looked historically,  
10 where have uranium -- where has uranium been found?

11 In Wyoming, Nebraska, South Dakota, and New Mexico.

12 And from that we identified four regions that we  
13 pursued further. And the next picture shows this.

14 As you can see in the colors, these are  
15 the four regions. Two are found completely within  
16 the State of Wyoming. We just labeled them Wyoming  
17 West and Wyoming East, those are in yellow and blue.

18 The green one we entitled, because it covered three  
19 states, it's Nebraska, South Dakota and Wyoming  
20 milling region, and that's this meeting tonight is  
21 about and we're going to be holding a meeting in  
22 Chadron, Nebraska on Wednesday, and in Newcastle in  
23 Wyoming on Friday. And that's all within the green  
24 region.

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1           And finally down in purple is what we  
2           termed the Northwestern New Mexico milling region.  
3           And we looked at these four regions individually and  
4           separately.

5           So this is an enlargement of the  
6           Nebraska/South Dakota/Wyoming region. It's  
7           basically about 9,000 square miles. It's mostly  
8           rural, as you all know. The triangle is that -- we  
9           have a better picture, if you see outside you can  
10          walk up a lot closer to it, but the triangles that  
11          are on the figure indicate either an existing  
12          facility, or where companies have indicated their  
13          plans to possibly send us an application in the  
14          future.

15          The second step was to describe the in-  
16          situ leach process in some detail. And we did that  
17          in terms, again, of during the life cycle, what are  
18          we going to see? Construction, operation, aquifer  
19          restoration, and decommissioning. We looked at  
20          health and safety, the radiological health and  
21          safety of the workers who use this and the people  
22          who live around them, what they might see.

23          How are the wastes that are associated  
24          with this process managed? Transportation issues of

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1 materials moving on-site and off-site, construction  
2 materials, workers.

3 And also financial assurance, and this  
4 deals with an issue that each company that gets a  
5 license from the NRC has to put up a bond, a certain  
6 amount of money that if a third party had to clean  
7 up their site, to decommission it, that money would  
8 be used for that purpose. It's not the company  
9 saying, We'll do it ourselves. No. This has to be  
10 an independent third party estimation of the cost  
11 associated with it.

12 And finally what helped to inform our  
13 analysis and description of the process is NRC has  
14 licensed these types of facilities for 30 years.

15 The third step was looking at each of  
16 these four regions separately and describing the  
17 environment that we find there. We describe them in  
18 terms of these resource categories found in a  
19 document known as NUREG- 1748.

20 Now that NUREG refers to, when NRC  
21 produces a particular type of document for public  
22 distribution, it's known as a NUREG. That's just a  
23 short term for it. And every one of those documents  
24 gets a particular number.

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1           This one, 1748, deals with how does the  
2 NRC do its environmental reviews. It's a guidance  
3 to the NRC staff on how it's going to conduct its  
4 review, for example, of an in-situ leach license  
5 application, what environmentally does it need to  
6 do. And we have copies of that, I believe, outside  
7 that you might be able to look at, and it's also  
8 available through our public website at [www.nrc.gov](http://www.nrc.gov).

9           So in NUREG-1748 we have these 13  
10 resource areas. And as you can see, it represents a  
11 rather thorough and wide-ranging description of the  
12 environment as we find it. And so for each region  
13 separately, we examine and describe the environment  
14 in terms of these resources.

15           The fourth step was, let's evaluate the  
16 potential environmental impacts in each region. And  
17 basically that means we took the description of a  
18 facility we had in step two, and we applied that,  
19 it's almost like placing such a facility in the  
20 environment we described in step three, to look at  
21 the environmental impacts associated with that  
22 process in that region.

23           So as I said, we evaluated the impacts  
24 region by region. We looked at each phase in the

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1 life cycle of the ISL process, construction,  
2 operation, restoration, decommissioning. And we  
3 looked at it for each of those 13 resource areas.  
4 And we characterize those impacts in terms of what  
5 is known as significance, and that's a term used in  
6 environmental reviews.

7 The significance of the impacts helps to  
8 decide whether there's an environmental impact  
9 statement prepared for a site-specific analysis  
10 because there are significant impacts, or an  
11 environmental assessment is produced because there  
12 is a finding of no significant impact. So  
13 significance is a term I'll go into just a bit more  
14 in another slide.

15 And finally we describe some of the  
16 possible measures a company can take to mitigate,  
17 reduce, minimize some of the impacts that are  
18 associated with this process.

19 These are the three categories that NRC  
20 uses to sort of categorize significance, and they  
21 fall into small, moderate or large. Now what's  
22 interesting to notice in this is it may look very  
23 subjective, what's small, what's moderate, what's  
24 large?

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1 But in order to come to such a  
2 determination, it takes subject matter experts  
3 hundreds of hours with analysis and their own  
4 evaluations in order to come to some determination.

5 And so under small, the impacts that you would see  
6 would be either not detectible, or so minor that  
7 there's no impact on the important attributes of a  
8 resource.

9 For example, let's take transportation.

10 What are some important aspects of transportation?

11 The number of cars on the road, accident rates,  
12 ease in people moving cars along that road, what's  
13 the carrying capacity of the road, are you over-  
14 loading it. Okay.

15 If this process has a small impact,  
16 you're not going to see important attributes of  
17 transportation be affected. On the other hand, you  
18 might see it moderately affect it if you can  
19 definitely notice there's a change, but it doesn't,  
20 destabilize is the term we use here, important  
21 attributes of that resource. And finally large  
22 impacts are those that are clearly noticeable and  
23 sufficient to destabilize those important  
24 attributes.

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1           How will we use the GEIS? Well, this  
2 gives sort of a flow diagram. The GEIS is going to  
3 contain background information on each of the  
4 regions separately, and also potential environmental  
5 impact conclusions.

6           In terms of the site-specific review,  
7 we're also going to rely on what the applicant gives  
8 to us as their own assessment of what they think  
9 environmentally is going to happen. That's  
10 basically a foundational point from which we jump  
11 off of to obtain that other relevant information and  
12 data.

13           NRC goes out on its own to confirm what  
14 that company gives to us, to do independent  
15 research, to consult with other parties, federal,  
16 state, tribal. It collects its own information, and  
17 together with the conclusions that are in the GEIS,  
18 as much as we can draw on them, on the background  
19 information in the GEIS, it will help with the  
20 informing what's our final site-specific  
21 environmental review.

22           Now whether this final environmental  
23 review is an environmental impact statement for that  
24 site, or an environmental assessment, you, as

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1 members of the public, will have an opportunity to  
2 comment on those, in the draft stages of them, not  
3 in their final stage.

4           Before they're finalized you'll have an  
5 opportunity to comment, as Keith indicated. And  
6 also we may be holding public meetings on each of  
7 those. So, again, another opportunity like this to  
8 provide us that input and that public involvement.

9           Now with all that background, with your  
10 permission, I'll just move on to describing for this  
11 particular region, the Nebraska/South Dakota/Wyoming  
12 region, some of the findings that we have, and I'll  
13 summarize them.

14           This, again, sort of orients us as to  
15 the region in terms of the categories where we  
16 believe you're likely to find small potential impact  
17 against small or not detectable or very minor, and  
18 in terms of the categories of aquatic ecology, air  
19 quality, visual and scenic resources and the  
20 management of the waste materials.

21           In terms of, in some cases, where you  
22 might have a range of significant impacts, small to  
23 moderate in this case, and, again, moderate -- the  
24 definition of moderate is there.

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1           Now we can notice the impacts, but,  
2           again, they have not destabilized important  
3           attributes of the resource. So this -- in this  
4           category we found transportation, surface water,  
5           terrestrial ecology, noise and public and worker  
6           health, occupational is the workers on the site who  
7           are dealing with these materials in this process.

8           And finally, in some cases, for these  
9           resources and certain conditions, you might see a  
10          large impact. And these would be for land use,  
11          geology and soils, ground water, threatened and  
12          endangered species, historic and cultural resources,  
13          and socio-economics.

14          Again, it's -- depending on the  
15          conditions at the site, you could have anywhere from  
16          a small to a moderate to a large impact, and it's a  
17          very site-specific issue, and it's aspects of those  
18          sites that will determine which level of  
19          significance that it will end up with.

20          Now taking each of those six areas for  
21          this region, I'll go phase by phase. First I'll  
22          talk about construction. During construction you  
23          would tend to see the largest impacts involved with  
24          land use, and associated with that, threatened and

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1 endangered species and historic and cultural  
2 resources.

3 Now those are all sort of inter-related  
4 because construction involves sort of a lot of  
5 digging and movement of earth materials, and you  
6 might be affecting habitats for species, you might  
7 be uncovering cultural resources and artifacts that  
8 were not previously located by the company in their  
9 initial surveys for the site. So there's a  
10 potential for that, a large impact, from those  
11 activities.

12 In terms of socio-economics, where are  
13 the workers going to come from? What kind of  
14 housing market is there? And so if this facility is  
15 in a certain location, it may be drawing a lot of  
16 workers for construction and for the operation of  
17 the facility from a small community, in a sense  
18 overwhelming that community and changing that  
19 community's dynamics. And that's why there's the  
20 potential for a large impact in socio-economics  
21 during the construction period.

22 In terms of operations, you'll notice  
23 that the potential for large impacts moves, or  
24 changes from land use in the others to geology and

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1 soils and ground water. Now geology and soils, what  
2 is -- the issue here is, with all that piping that's  
3 around and moving these waters, the process waters  
4 from the process plant and underground and back, is  
5 the likelihood of spills, breaks in these pipes.  
6 And spills are those fluids on the ground affecting  
7 a region around the piping.

8 Now from the history that we've seen,  
9 spills do happen. And land is affected by it, soils  
10 are affected by it. Now companies are required to  
11 take spill response actions, when they find a spill  
12 they take specific actions, they report to the NRC,  
13 they report to the state their findings. At the end  
14 of the whole process, during decommissioning, they  
15 actually have to clean up that affected soil.

16 In terms of ground water, we're looking  
17 at the potential to affect the waters outside of  
18 where they're mining. Again, that's why they have  
19 those monitor wells in place, to kind of give early  
20 detection for any of the process fluids moving  
21 outside of the areas that they were running this  
22 process.

23 But, again, there's the potential for a  
24 large impact in certain situations. If local users

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1 are using that water, if the water kind of escapes  
2 vertically out there to another -- you know,  
3 remember there were wells that monitored at the  
4 level of the processing and above the level of the  
5 processing. If it moved vertically out, maybe there  
6 were water users up at -- using that upper water  
7 that could be impacted. Again, it's a very site-  
8 specific issue.

9 In terms of aquifer restoration, again,  
10 it's the soils in the water, ground water that has  
11 the potential for small to moderate, or even large  
12 impacts. It's the same processes, the same wells,  
13 the same pipelines being used, the same potential  
14 for impacts.

15 And finally, decommissioning, again, is  
16 basically taking everything down and moving it off-  
17 site, and we're back to disturbing the ground  
18 surface and we're back to a lot of jobs coming back  
19 in to take things apart. Again, it could involve a  
20 number of workers from a local community, having  
21 that impact very locally found.

22 With all that, let's look at the  
23 schedule and then how you can comment on the draft  
24 GEIS. This basically takes us from the start to the

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1 finish. Back in July of last year we began the  
2 process for the GEIS as Keith indicated. In August  
3 and September we held scoping meetings. That  
4 scoping period ended the 30th of November of last  
5 year.

6 And on July 28 we issued this draft  
7 generic environment impact statement for public  
8 comment. The comment period closes on the 7th of  
9 October, and during that time we plan to hold the  
10 eight public meetings that Keith previously  
11 indicated. And on our current schedule, we plan to  
12 issue the final GEIS in June of 2009.

13 To comment on the draft GEIS, you can do  
14 either by regular mail or by e-mail. And there's a  
15 handout outside that provides these, so there's no  
16 need -- if you're not able to write it down, don't  
17 worry, there's a handout outside. And these are the  
18 addresses to send those comments. And certainly  
19 tonight you'll have an opportunity to make some oral  
20 comments.

21 If you have questions either about this  
22 document or about the in-situ leach process, here is  
23 my name up top, and a member of Keith's group, Mr.  
24 Steve Cohen, who can answer the in-situ leach

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1 process, and that's also on the same handout as with  
2 the -- where to send comments to.

3 And with that, that ends our  
4 presentation by the NRC, and I'll turn it back over  
5 to Chip.

6 MR. CAMERON: Okay. Thank you very  
7 much, gentlemen. Thank you, Keith, and thank all of  
8 you for your patience.

9 Before we go out for questions, just let  
10 me introduce the rest of the NRC staff that's here.

11 This is Gregory Suber, he's the chief of the branch  
12 where the environmental work is done, including the  
13 GEIS. This is Joan Olmstead with our Office of  
14 General Counsel. And we have Alan Bjornsen here,  
15 who's another project manager on this draft GEIS.  
16 And this Bill Von Till, who's the branch chief of  
17 the licensing branch, the people who do the  
18 licensing.

19 And with that then, any questions that  
20 we can answer on all this before we go to comments?

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

23 MR. CLARENCE: I'm Bill Clarence.  
24 Exactly what will a GEIS contain when it's

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1 published? Will it have rules and regulations for  
2 the operation?

3 MR. PARK: It contains a summary of the  
4 environmental impacts that you might see. It's not  
5 making rules, it's not making regulations, it's  
6 simply that the staff will eventually use this  
7 document as part of its site-specific reviews for  
8 environmental work.

9 MR. CAMERON: Does that answer your  
10 question, sir? All right.

11 Yes?

12 MR. OSMUND: I'm Marshall Osmund. I  
13 just was wondering how you define potential here, is  
14 it, you know, you got damage to your ground water,  
15 that sort of indicates, you know, if there's severe  
16 potential that this -- like one in a thousand, you  
17 know, can you kind of maybe put that more in numbers  
18 of what constitutes potential?

19 MR. PARK: I think in many ways  
20 potential refers to what we've actually seen in  
21 practice. We've seen that spills do occur, we've  
22 seen that the solutions that are used escape from  
23 where the company intends it to be. But for each  
24 site, each site has to be looked at on its own

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1 merits, and we can't make that determination that  
2 that's always going to happen everywhere. So that's  
3 why we say, we've seen this elsewhere, we know it  
4 happens.

5 In terms of socio-economics, we know  
6 that workers are going to be needed for this site,  
7 here are the local communities that might serve to  
8 supply those workers. We don't know exactly which  
9 communities are going to take the bulk of it, so,  
10 again, it's a potential that we see, that we know  
11 there's possibilities of happening.

12 And for each site, each site's going to  
13 be looked on it's own merits. So it's not a strict  
14 numerical one in one hundred that determines a  
15 potential.

16 MR. CAMERON: So the term potential in  
17 the draft GEIS is used because it really is a  
18 generic environmental impact statement, but when you  
19 get to the site-specific environmental review you'll  
20 be -- we'll be trying to say with more certainty  
21 what the potential impacts are. Is that --

22 MR. PARK: That is correct. And  
23 obviously because this is at a site-specific level,  
24 we're reviewing this before the company even does

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1 any of these things. They're obviously still  
2 potential at that point, and that's how we always  
3 describe them in terms of our documents.

4 MR. CAMERON: Okay. Thanks for that  
5 question.

6 Other questions at this point?

7 Yes, sir, we'll go right here, and --  
8 over here, and back up. Yes, sir?

9 MR. TOPE: Jay Tope, Aladdin, Wyoming.  
10 Have any of the companies ever restored water back  
11 to its original state, or did it have to be  
12 reclassified?

13 MR. McCONNELL: In terms of NRC's  
14 experience, an entire license hasn't been restored,  
15 but individual well fields have been restored. Now  
16 they're required to make an initial attempt to  
17 restore that ground water back to what's called  
18 baseline where the maximum contaminant levels -- if  
19 they get close, they can also -- but, you know,  
20 continuous pumping won't get them any further, they  
21 can make an argument to the NRC as allowed by EPA  
22 regulations to develop what's called alternate  
23 concentration limits.

24 To get those alternate concentration

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1 limits approved they have to demonstrate that it's  
2 protective of public health and safety, and also  
3 that it's as low as reasonably achievable.

4 MR. CAMERON: Did that answer your  
5 question, or do you want to follow-up on that?

6 MR. TOPE: Yes. Could I get the names  
7 of the well fields that were restored?

8 MR. McCONNELL: Bill, do you have  
9 specific -- Bill Von Till?

10 MR. VON TILL: Yes.

11 MR. CAMERON: This is Bill Von Till.

12 MR. VON TILL: The NRC has approved  
13 Monument One, the Crow Butte facility in Nebraska.  
14 We've also approved Well Field A at the Smith Ranch  
15 facility in -- near Douglas, Wyoming. The State of  
16 Texas has approved restoration as well. But as  
17 Keith said, that's an agreement state. But there's  
18 some we're in the process right now of getting  
19 restored.

20 MR. CAMERON: Okay. Thank you.

21 Okay. I'm back, let's go on over here.

22 Sir, did you have something --

23 MR. MULL: I'm Nick Mull. I just didn't  
24 understand the term -- he said small, moderate or

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1 large impact on the resource, not uranium resources,  
2 everything around them that could be impacted.

3 MR. PARK: That's correct. The  
4 resources, what we meant there was the environmental  
5 resource category, like air quality or  
6 transportation or water quality. It's not the  
7 uranium as the resource. You were correct.

8 MS. HAWKINS: Mary Hawkins from Devils  
9 Tower, Wyoming. Could you go into more specifics  
10 about the sampling sites and the ranges for each  
11 area? Is it based only on permitted area, and what  
12 the range is in mileage, and how it may vary from  
13 site to site based on geological formations,  
14 aquifers, et cetera, in reference to what you're  
15 describing as small, medium and large impact?

16 MR. CAMERON: Jim, do you get the drift  
17 of Mary's question in terms of the sampling that  
18 she's talking about?

19 MR. PARK: I'll take a stab at it.

20 Obviously each resource area has a  
21 different sort of region of influence. It depends  
22 on, for example, socio-economics. Even though we  
23 strictly defined -- you know, it would look like  
24 boundaries for our region are strictly defined. We

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1 know that's not the case. Workers can drive, you  
2 know, quite a distance if there's a job that they  
3 think they can get and have and hold.

4 So, for example, that region of  
5 influence for a particular site could be quite  
6 large. It could extend for 50 miles, 70 miles, 80  
7 miles depending on kind of the communities that we  
8 see and the potential that they could attract  
9 workers to that site.

10 Ground water is going to be a much more  
11 localized thing because, again, the exemption area  
12 that's granted to a company is only for that portion  
13 of the aquifer where that company plans to do the --  
14 or would like to do the in-situ leach process. So  
15 it's -- the impacts that you would see, or that  
16 could be seen, would be localized impacts to water  
17 users in that area, to -- so it's not going to  
18 extend the same distance as sort of socio-economics  
19 or transportation issue.

20 Does that begin to answer it?

21 MS. HAWKINS: When you have findings  
22 that may indicate that there could be a high risk of  
23 impact, for instance to ground water, the  
24 surrounding areas that are not contained, or

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1 confined by the parameters of the bond for each  
2 permitted area, if there is leakage into surrounding  
3 soil or low water service areas, and yet the bond --  
4 according to what we were told at the last meeting,  
5 the bond is limited only to the site.

6 So if you were a land owner who's water  
7 levels or qualities are impacted, there's no remedy  
8 for those persons, and do you have any  
9 recommendations or comments about that sort of  
10 impact?

11 MR. CAMERON: Okay. Thank you, Mary.

12 This is an important question about  
13 whether the bond or the surety that the licensee has  
14 to put up, what damages or clean up costs are  
15 covered by that bond, I mean how far does that go?

16 Keith?

17 MR. McCONNELL: I believe the bond does  
18 cover just the area where the facility is located,  
19 but that doesn't absolve the -- and if it -- in our  
20 case it would be a licensee, from the responsibility  
21 of cleaning that up.

22 If a spill occurred, or if an off-site  
23 migration occurred, then in their annual update to  
24 their bond, they would have to provide additional

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1 funds to cover the clean up of that off-site  
2 exposure, so it doesn't absolve them of  
3 responsibility for that material and cleaning that  
4 material up.

5 MR. CAMERON: And that they would have  
6 to provide a surety to clean that up?

7 MR. McCONNELL: Well, they'd either have  
8 to clean it up or provide the money to ensure that  
9 it's restored.

10 MR. CAMERON: Someone else. Okay.  
11 Thank you.

12 Yes, sir? And then we'll go to the  
13 back.

14 MALE VOICE: Rod Clemenson from Hewlett.  
15 I've been reading something about Smith Ranch.  
16 They posted a bond of \$38 million, I guess, and  
17 they're projecting it's going to cost 150 million to  
18 clean up the mess there. They were supposed to be  
19 there for three years, and they've been there for 10  
20 years. It seems they've over-stayed their welcome a  
21 little bit.

22 I just wondered what -- how are they  
23 going to spend \$150 million?

24 MR. CAMERON: I guess if we could

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1 confirm that those facts are correct, and then maybe  
2 just on a general point, if we could tell people --  
3 how do you decide how much of a bond they should put  
4 up in the beginning? How do we estimate how much  
5 money should be there?

6 Keith?

7 MR. McCONNELL: What's done is the  
8 licensees have to develop what's called an  
9 independent cost estimate for how much financial  
10 assurance they need. They have to calculate what it  
11 would cost under current conditions for an  
12 independent contractor to restore the site to the  
13 baseline conditions.

14 So that's basically how the surety, or  
15 the bond, is calculated. So it has to be an  
16 independent estimate, it has to be done by someone  
17 other than the licensee.

18 MR. CAMERON: And are those -- can we  
19 say anything at all about the Smith Ranch facts?

20 MR. McCONNELL: Yes, I don't know the  
21 specifics about the -- maybe Bill does, yes.

22 MR. CAMERON: Bill Von Till.

23 MR. VON TILL: The Smith Ranch facility  
24 does have a \$38 million surety at this time. We're

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1 currently reviewing the surety estimate, as well as  
2 the State of Wyoming. And that could rack it up or  
3 rack it down, dependent upon what's necessary.

4 Ground water restoration costs are  
5 actually a large portion of that surety. We do want  
6 to make sure the company has the right funds to  
7 clean up the ground water. \$150 million cost, I'm  
8 not aware of that figure.

9 MALE VOICE: Well, I've seen that --

10 MR. VON TILL: Yes. But we are  
11 recommending the company to make sure that they're  
12 timely with the restoration of the ground water, and  
13 make sure that there is adequate surety. Right now  
14 it's 38 million. That could go up; it could be  
15 adjusted dependent upon what they're doing. That  
16 facility is a large facility; it's about 30,000  
17 acres, where most of these facilities are 1,000 or  
18 2,000 acres.

19 MR. CAMERON: Thank you, Bill.

20 Yes, sir?

21 MR. LANNING: Yes, I'm Danny Lanning  
22 from Montana. I guess on your restoration comments  
23 about restoring the water to its original state, the  
24 baseline, it was not answered. You beat around the

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1 bush basically.

2 In the United States, or anywhere in the  
3 world, has any of the mining companies ever restored  
4 the ground water to its baseline condition? They  
5 may be working on it, but have they ever restored  
6 the water?

7 MR. CAMERON: Okay. Stories of  
8 successful restoration to baseline at this point,  
9 and if we don't have those stories, do we know why,  
10 because they're still doing it, or whatever.

11 Keith?

12 MR. McCONNELL: Yes, I think to be --  
13 and I apologize if I didn't answer the question  
14 directly, I think in our experience, probably no  
15 licensee has cleaned it up to baseline conditions  
16 for every single element that's required in our  
17 regulations. For most of them they have, but for  
18 certain elements they're not able to get it to  
19 baseline conditions, and basically they've come in  
20 with a request for alternate concentration limits.

21 But, again, it's within the zone that's  
22 an exempted aquifer, which EPA, when they grant that  
23 exemption, basically says that that water is not a  
24 drinking water source at this time, and will not be

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1 in the future. And that's the zone that we're  
2 talking about is this is an exempted aquifer zone.

3 MR. CAMERON: And when you say  
4 element --

5 And maybe, Jim, you can explain.

6 -- when you say element, you mean a  
7 particular -- could you just explain that?

8 MR. McCONNELL: Yes, like uranium and  
9 radium could be restored to a particular -- to  
10 baseline conditions, but selenium might not be able  
11 to be returned to what was the original baseline  
12 condition.

13 MR. CAMERON: Okay. And, Jim, did you  
14 want to add something?

15 MR. PARK: Only that in this draft  
16 generic environment impact statement, in the second  
17 chapter, we have a section on the very question that  
18 you asked. For instance, licensed facilities, what  
19 has been the experience in terms of restoration, and  
20 we've given -- sort of detailed some of the studies  
21 and -- that people have done to look at that very  
22 issue. And we have some information in our document  
23 about that.

24 MR. CAMERON: Okay. Thank you.

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1           Why don't we go for public comments at  
2 this point, and then if we have time after that,  
3 we'll go back for any more questions that you might  
4 have.

5           And I was going to ask Charmaine  
6 Whiteface to come, up and then we're going to go to  
7 Michael Pourier.

8           And, Charmaine, I'm sorry that we don't  
9 have a standing mike up here, so you're going to  
10 have to use this, and if we can hold anything for  
11 you, please let us help.

12           This is Charmaine.

13           MS. WHITEFACE: Thank you very much.

14           My comment first is that -- and I want  
15 to thank the NRC for giving me this. This is --  
16 these books I'm holding here, these are the volumes  
17 of the generic environment impact statement for in-  
18 situ leach uranium milling facilities. This is it.

19           And I'm not a nuclear physicist, and I'm  
20 not a mining engineer. I do happen to be a  
21 scientist and a biologist.

22           But what -- my main comment is I really  
23 would like for the NRC to extend the comment period,  
24 rather than cut it off at October 7. I would like

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1 to request an extension for at least 180 days. It  
2 might take me that long to read this. And I don't  
3 know if I'll still understand it.

4 But the public I think -- I've glanced  
5 through it, it is, of course, not public-friendly,  
6 so ordinary people who don't have mining degrees, or  
7 are not nuclear physicists would not -- you know,  
8 there's a lot of things in here that we're going to  
9 have to look up. We're going to have find experts  
10 to explain things to us so that we really know  
11 what's going on.

12 The reason why we want -- we want a  
13 really, really good document here because we have --  
14 here in this region we experience nuclear  
15 radioactive contamination constantly and have been  
16 for the last 40 years. We have more than 1,000  
17 abandoned open pit uranium mines in this region,  
18 this region that you have on this map here.

19 We have more than 10,000 uranium  
20 exploratory wells, and we also have the  
21 documentation dating back to 1983 where a lot of  
22 those exploratory wells, which were not closed, were  
23 not marked, have cross-contaminated aquifers already  
24 with uranium and radiation.

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1           And so any new kind of mining coming in,  
2 we're very, very concerned. The cancer rate in this  
3 region is very high, which shouldn't be with the  
4 population we have. But it is very, very high. The  
5 cancer rate among Native Americans here is probably  
6 the highest in the country. We know that it's the  
7 highest in the State of South Dakota.

8           And that's also secondly why we have  
9 asked the NRC to also hold these same kind of  
10 meetings, and this would be a basis for my request  
11 for an extension, is that we ask that you would hold  
12 these same kind of meetings at least on two of the  
13 four largest reservations in South Dakota.

14           One would be at Pine Ridge, and I'm  
15 already working with Mr. Park and you, Mr. Cameron,  
16 to get a meeting set up there at Pine Ridge. And  
17 another one in the northern part of South Dakota at  
18 Standing Rock Reservation.

19           We already have -- know how underground  
20 aquifers that have been disturbed for uranium, how  
21 they also affect the surface water. We've done the  
22 water tests on the Grand River, and it's showing up  
23 in villages at Standing Rock Reservation. People  
24 still drink that water. It's showing up in the

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1 Cheyenne River, and people swim in that water. It  
2 has a high alpha.

3 You know, when you go swimming and you  
4 get that in your mouth, then maybe you're going to  
5 get cancer, and maybe not. But that potential  
6 should never be there. People should be able to  
7 know that the water is safe.

8 And so those are my basic comments is  
9 that I really would ask for an extension, at least a  
10 180 day extension to give us all time. The other  
11 thing is that many people in our area, in South  
12 Dakota, Wyoming, Montana, do not have access to  
13 computers, do not have access to internet.

14 If I were to try to run this off on my  
15 computer, you know, how long would it take me with  
16 my -- I know I'd have to buy more ink cartridges,  
17 but how long would it take me. And I thank you for  
18 giving this to me. We're going to study it and  
19 changes that people ask for, we will be giving it.

20 I don't know if it's addressed in here,  
21 but say a county declared itself to be a nuclear-  
22 free area. Is there a section in here for places  
23 like that where -- because -- the reason I'm saying  
24 this because the 17 chairmen for -- the Great Plains

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1 tribal chairmen for 17 reservations in this region  
2 have already declared the reservation as a nuclear-  
3 free area. All of them, Pine Ridge, Cheyenne River,  
4 Rosebud, Standing Rock, Crow Creek, Lower Brule, and  
5 there's more.

6 So is that addressed in here? If so,  
7 how are you going to stop ground water contamination  
8 from flowing into a nuclear-free area? If a county  
9 wanted to do that, or a city wanted to do that, how  
10 is that going to be addressed in here, or is it  
11 addressed, because I haven't had time to read this  
12 whole thing.

13 So, and I want to thank you for coming,  
14 and I want to thank you for working with us and --  
15 but I really ask for an extension of the comment  
16 period. Thank you.

17 MR. CAMERON: Okay. Thank you,  
18 Charmaine. Yes, we too are taking a transcript so  
19 that request is formally made and the additional  
20 comment is on recommendation that the draft GEIS  
21 should include discussion of where political  
22 subdivisions, tribal governments or county  
23 governments have enacted ordinances or policies that  
24 would prohibit uranium mining.

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1 MS. OLMSTEAD: There is a section in the  
2 GEIS talking about the Navajo Nation ban and we  
3 would treat it the same as any other state ban for  
4 uranium recovery.

5 MR. CAMERON: Okay. Keith?

6 MR. McCONNELL: I'd just like to ask a  
7 clarifying question. Was that 180 days total, or  
8 180 days beyond the original 70 days?

9 MS. WHITEFACE: Beyond the first 70.

10 MR. CAMERON: Beyond.

11 MS. WHITEFACE: Yes.

12 MR. CAMERON: 180 days beyond the  
13 original date.

14 MR. McCONNELL: Thank you.

15 MR. CAMERON: All right.

16 Okay. Michael, do you want to -- just  
17 stay there, that's fine.

18 (Pause.)

19 MR. POURIER: My name is Michael  
20 Pourier, and I come from the Oglala Lakota Nation,  
21 in the area in which I reside, and my family have  
22 resided for the past 200 years. You talk about the  
23 contamination of water. What about the uranium --  
24 or the exploratory wells that are being dug out, are

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1 they regulated in any way, or are they just going to  
2 go down there and contaminate the aquifer?

3 The reason why I came is because I have  
4 a personal issue with this because of the fact that  
5 I'm dying with a brain tumor, cancerous brain tumor,  
6 rare, that nobody ever heard of -- well, maybe 5  
7 percent of the rare cancer.

8 And my father has cancer in his  
9 intestines. My sister died three months ago of  
10 cancer in her colon. My other sister also died of  
11 cancer two years ago. My grandfather died of  
12 cancer, and my uncle died of cancer. Two of my  
13 neighbors both died of cancer. And we live in the  
14 same area.

15 And that water was -- is contaminated.  
16 That water -- this is proof of what we're talking  
17 about, this causing contamination.

18 And this is -- like this is very high.  
19 There's a lot of it. My nephew, 28, has stomach  
20 cancer. That's something I'm taking personal,  
21 that's why I came today. It's already happening.  
22 Whatever it is you guys are planning, or whatever,  
23 it is happening now. So that's what I wanted to  
24 come here and say. And that's my concerns and my --

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1 those wells, or abandoned wells, you know, what  
2 about them?

3 MR. CAMERON: Thank you, Michael, for  
4 being here.

5 I could -- on exploratory wells, what  
6 can we say about the regulation of exploratory wells  
7 and are those exploratory wells in and of  
8 themselves, can they cause something hazardous to  
9 happen?

10 MR. McCONNELL: Well, I think on the  
11 question -- NRC doesn't have authority over  
12 exploratory wells. That's usually either the Bureau  
13 of Land Management or the state. The state through  
14 their underground injection control program. I  
15 think a lot would depend on where the wells are.

16 I think we're all, you know, saddened by  
17 the tragedy that you and your family has faced.

18 I'm sorry, was there another part?

19 MR. CAMERON: No, I think that that --  
20 well, I guess the one thing is, even though we don't  
21 regulate exploratory wells, is there usually a  
22 hazard associated with -- do they turn anything, in  
23 the exploratory wells, that could cause the release  
24 of radioactive materials?

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1 MR. McCONNELL: I don't know. Again,  
2 it's a good question.

3 MR. CAMERON: Bill, do you -- could you  
4 address that for me, please, and for Michael?

5 MR. VON TILL: Sure, when you put holes  
6 in the ground, you know, you're concerned with the  
7 cross-contamination of contaminated fluids from one  
8 aquifer to another. Some of the drill cuttings that  
9 come out of the ground. A lot of time, when we're  
10 looking at these projects, we're looking at  
11 cumulative impacts of some of the previous drilling  
12 activities, those waste activities, along with the  
13 new proposed activities in our environmental  
14 assessment.

15 As he said, the assessment of the  
16 hazards of exploratory wells is normally done at the  
17 state level or the BLM level. We get involved once  
18 there's an application for a milling operation. But  
19 there are hazardous factors.

20 MR. CAMERON: And I guess one other  
21 point. Is there parts of the GEIS, the draft GEIS,  
22 that -- do we address issues of radiological  
23 protection, or epidemiology?

24 MR. PARK: No, not really epidemiology.

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1 But to get back to the potential for cross-  
2 contamination of wells, we recognize that as a  
3 possibility and, you know, but we've seen -- again,  
4 that comes in the discussion in part of what we've  
5 seen historically at sites that we've licensed, as  
6 well as the concern of, if wells are improperly  
7 constructed or improperly abandoned, even past wells  
8 that -- from years past that were not abandoned  
9 appropriately.

10 As part of the company's responsibility,  
11 before they come to the NRC, is they have to do the  
12 review of their property to find those wells, and as  
13 much as possible, in sort of the testing that they  
14 go -- before they come to us, as part of the testing  
15 that they do of the aquifer, they're looking at, is  
16 it -- is there that cross-contamination that's  
17 occurring because of wells that they haven't found  
18 that were -- that are providing those conduits.

19 So in different aspects, in different  
20 ways, in the GEIS we are addressing those issues.

21 MR. CAMERON: Okay. Thank you.

22 Thank you, Michael.

23 John Cash and then John Winter.

24 MR. CASH: Hi. I'm John Cash with UR-

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1 Energy, USA, Inc. in Wyoming, and we're a member  
2 company of the National Mining Association, and I'm  
3 reading a statement on behalf of the National Mining  
4 Association.

5 The National Mining Association, NMA,  
6 appreciates the NRC's holding this public meeting to  
7 encourage stakeholders involvement in the  
8 development of the GEIS to be used in assessing the  
9 potential environmental impacts at in-situ uranium  
10 recovery facilities.

11 NMA is a national trade association of  
12 mining companies, including most domestic uranium  
13 recovery companies. NMA's members consist of  
14 current conventional uranium recovery and/or ISR  
15 licensees as well as potential future conventional  
16 and/or ISR license applicants.

17 NMA has been involved since the late  
18 1970s in uranium recovery issues to ensure that the  
19 federal government uranium recovery regulations are  
20 effective in regulating uranium recovery in a manner  
21 that is fully protective of public health, safety,  
22 and the environment.

23 NMA strongly supports the preparation  
24 and finalization of the ISR GEIS. It is

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1 increasingly clear that NRC and its agreement states  
2 will be receiving many new license applications for  
3 uranium recovery projects, the vast majority of  
4 which will be for ISR projects. Given NRC's  
5 resource constraints, expeditious review of these  
6 applications can only be achieved through an  
7 efficient licensing process.

8 Since the advent and development of  
9 NRC's statutory and regulatory program for  
10 management of uranium recovery facilities, ISR  
11 methods of recovering uranium have become the most  
12 prevalent form of uranium recovery in the U.S. As  
13 ISR methods evolve, the ISR uranium recovery  
14 industry and the NRC began to accumulate more data  
15 and to conduct further analysis of ISR methods and  
16 controls, it's application to deposits of uranium in  
17 the United States, and it's potential impacts on  
18 public health and safety and the environment.

19 Over time these data and analyses have  
20 led to the creation of a robust repository of  
21 knowledge and experience. All of this information  
22 gathered over the last 30 years shows that the  
23 development of a common feature -- I'm sorry -- that  
24 the development of a GEIS is particularly suitable

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1 for ISR uranium recovery since ISR projects have  
2 many common features, as both the subsurface and  
3 surface operations at each individual ISR project  
4 are substantially similar.

5 This knowledge and experience base  
6 culminated in the preparation and submission of  
7 NMA's generic environmental review, GER, in November  
8 of 2007, as part of the NRC's scoping process for  
9 preparation of the ISR GEIS. The GER was intended  
10 to provide all interested stakeholders, including  
11 NRC, agreement states, and members of the public  
12 with the benefit of this knowledge and experience  
13 base.

14 Using a GEIS approach to a particular  
15 process operations is nothing new in the context of  
16 environmental impact assessments conducted pursuant  
17 to the National Environmental Policy Act, NEPA. The  
18 Council on Environmental Quality, the nation's  
19 interpretive body regarding compliance with NEPA  
20 requirements, has specifically recognized the  
21 appropriateness of the programmatic generic EIS  
22 approach for environmental impact reviews.

23 By following the CEQ approved approach,  
24 NRC can focus its environmental review on the site-

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1 specific aspects of a proposed ISR project without  
2 expending unnecessary time and resources to reinvent  
3 the wheel by assessing issues that have already been  
4 assessed.

5 It is equally clear, however, that even  
6 with the ISR GEIS, a very important aspect of each  
7 license application will be an evaluation of site-  
8 specific environmental impacts that were not  
9 considered in the ISR GEIS. Indeed, as stated in  
10 NMA's GER, NRC's regulations and guidance prohibit  
11 the issuance of ISR uranium recovery licenses for  
12 new projects without site-specific technical and  
13 environmental assessment to address any issues not  
14 addressed adequately in the ISR GEIS.

15 The public will have opportunities to be  
16 involved in site-specific analysis. The point of a  
17 generic or programmatic assessment is to promote the  
18 efficient use of time and resources by focusing  
19 detailed attention on the site-specific  
20 circumstances and potential impacts that differ  
21 significantly from the ISR GEIS evaluations and  
22 conclusion regarding such issues. The ISR GEIS in  
23 no way hinders the ability of the public to provide  
24 input related to specific licensing actions.

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1           The draft ISR GEIS confirms that ISR  
2 uranium recovery is one of the lowest risk  
3 activities in the nuclear fuel cycle. Chapter 4 of  
4 the draft ISR GEIS provides NRC's preliminary  
5 evaluation of the potential environmental impacts of  
6 the construction, operation, aquifer restoration and  
7 decommissioning at an ISR site. NRC characterizes  
8 the majority of potential impacts as small, and only  
9 identifies potential large impacts in the area of  
10 ground water, endangered species and cultural  
11 resources.

12           The conclusion that the majority of  
13 potential ISR impacts are generally small is borne  
14 out by the 30 years of data compiled on ISR  
15 activities in the U.S., and provided in the GER.  
16 The current regulatory track record for the ISR  
17 industry is well established. In over three decades  
18 of ISR operations, there have been no significant  
19 adverse impacts to adjacent, non-exempt sources of  
20 drinking water outside the recovery zone and into  
21 the related area of review from ISR operations in  
22 the U.S.

23           Well field balance, including the  
24 process bleed, detailed monitoring, and pump tests

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1 at ISR sites have been highly successful in ensuring  
2 that recovery solutions are contained within the ore  
3 recovery zone.

4 Before monitoring ceases, ground water  
5 restoration is completed to minimize or eliminate  
6 the potential risk of post-operation excursions that  
7 potentially could result in the migration of  
8 contaminants from the exempted recovery zone portion  
9 of the aquifer to adjacent, non-exempt portions of  
10 the aquifer. Ground water restoration assists in  
11 restoring the pre-operational reductant conditions  
12 in the recovery zones.

13 The draft ISR GEIS does generally  
14 explain the various operations and decommissioning  
15 and decontamination control processes, including  
16 restoration and how these are made mandatory license  
17 conditions. NMA does not believe, however, that the  
18 ISR GEIS adequately accentuates the manner in which  
19 such practices compliment natural hydrologic and  
20 geochemical conditions to minimize adverse impacts  
21 on public health and safety and the environment as  
22 detailed in Chapter 5 of NMA's GER.

23 A complete understanding of this  
24 critical relationship is important for the NRC, its

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1 agreement states, and the general public to truly  
2 understand the limited potential risks posed by ISR  
3 projects.

4 Finally, the ISR GEIS will help promote  
5 the availability of domestic sources of uranium to  
6 fuel our nation's expanding fleet of nuclear power  
7 reactors and the increasing demand for domestic  
8 electricity sources. Uranium is an excellent  
9 example of the United States' increasing reliance on  
10 foreign sources of metals and minerals to meet our  
11 country's strategic and critical metals and minerals  
12 requirements, even for metals and minerals with  
13 adequate domestic resources.

14 This increased import dependency is not  
15 in our national interest, particularly for  
16 commodities such as uranium that are critical  
17 pending strategic programs, such as reducing  
18 greenhouse gas emissions, or undertaking energy  
19 efficiency efforts.

20 The U.S. currently consumes about 56  
21 million pounds of uranium each year, yet we only  
22 produce 4-1/2 million pounds. We have the world's  
23 largest fleet of reactors which operation at the  
24 world's highest average capacity factors, and

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1 produce approximately 20 percent of our country's  
2 electricity.

3 The price for uranium has climbed --  
4 recently climbed to an historic high, and yet now  
5 new domestic production is still lagging, at least  
6 in part because of uncertainty over the regulatory  
7 environment for new production here.

8 At a time when energy costs are rising,  
9 and all available sources of energy must be utilized  
10 to meet increased demand, making the licensing  
11 process for uranium recovery more efficient, while  
12 at the same time protecting public health, safety  
13 and the environment, is simply good public policy.

14 NMA urges NRC to act as expeditiously as  
15 practical to complete the ISR GEIS. NRC's resources  
16 will be well-spent on this effort, given the  
17 impending license applications that will be  
18 submitted over the next three years and beyond, and  
19 will serve as a useful tool for licensees, NCR,  
20 agreement states, and the public at large in  
21 evaluating the potential impacts from ISR projects.

22 Thank you.

23 MR. CAMERON: Thank you.

24 John Winter?

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1 (Pause.)

2 MR. WINTER: My name is John Winter. I  
3 am the senior environmental specialist with Uranium  
4 One. And like a lot of the comments that John Cash  
5 just spoke about, Uranium One would like to  
6 appreciate -- would like to -- appreciates the  
7 opportunity to provide comments at this public  
8 meeting, and appreciates the efforts the NRC has  
9 done in developing this generic environment impact  
10 statement for the in-situ recovery ISR facilities.

11 Uranium One strongly supports the  
12 development of the GEIS and believes it will be a  
13 valuable tool in providing a complete review of  
14 potential impacts at ISR operations, while providing  
15 an expeditious review of incoming license  
16 applications, which Mr. Park talked about earlier,  
17 and the number of license applications that they  
18 anticipate.

19 Over the past 30 years, the NRC has  
20 gained a valuable experience and knowledge of the  
21 general potential impacts of ISL or ISR technology,  
22 along with the best practices from monitoring and  
23 mitigating these impacts. These experiences now can  
24 be streamlined using this GEIS approach for review

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1 of license applications.

2 It is also important that we make clear  
3 that the GEIS is not a prelude to consideration of  
4 site-specific analysis of environmental impacts in  
5 the form of either an environmental assessment or  
6 EISs for site-specific conditions as we've heard  
7 many a time already.

8 The public will also be provided an  
9 opportunity to be involved in the site-specific  
10 analysis. The level of site-specific environmental  
11 characterization conducted by applicants will not be  
12 reduced as a result of this GEIS.

13 Robust baseline environmental  
14 characterization will continue to provide the NRC  
15 with the information needed to conduct site-specific  
16 analysis of environmental impacts. These would  
17 include the wildlife analyses, soil surveys mapping  
18 analysis, vegetation surveys, wetland surveys  
19 mapping, detailed geologic mapping, and  
20 characterization of the mining zones and surrounding  
21 areas, extensive ground water baseline  
22 characterization, including the water quality  
23 monitoring and comprehensive hydrologic testing of  
24 aquifer properties, surface water quality, watershed

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1 delineation, estimated peak flows, socio-economic,  
2 as was discussed earlier, and environmental justice,  
3 cultural resource evaluations, visual resources,  
4 noise, radiological characterization of  
5 soils/vegetation, surface water, ground water, and  
6 air, including model of estimates of those public --  
7 to the public at site boundaries, including land and  
8 water use.

9           These are the same basic components that  
10 were identified in the NUREG-1748, as every  
11 applicant must provide those detailed information,  
12 whether there was a GEIS here or to.

13           The draft GEIS confirms that ISR is a  
14 low-risk method of recovering uranium for the  
15 nuclear fuel cycle. As mentioned before, the  
16 conclusions of the draft GEIS that there's no  
17 impacts that have occurred to any adjacent source of  
18 drinking water during the past 30 years of ISR  
19 operations in the U.S. This is an excellent example  
20 of the low risk nature of ISR.

21           Also, impacts are minimized by the  
22 following factors, mitigations as you might think  
23 of, the footprint of the ISR operation is typical  
24 small, representing an extremely small portion of a

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1 given aquifer. Baseline water quality in the  
2 portions of the aquifer are minimum.

3 Where uranium mineralization occurs  
4 typically exceeds drinking water standards in some  
5 cases by several orders of magnitude, for some  
6 radiological consistent -- constituents rendering  
7 the water not suitable for human consumption and/or  
8 beneficial uses. Therefore, exemption of aquifers  
9 for ISR does not result in a decrease of water  
10 availability for use by humans.

11 The ISR process is simply a reverse of  
12 the natural process that put the uranium there in  
13 the first place. Its oxidation reduction use the  
14 same constituents such as oxygen, carbon dioxide, or  
15 sodium bicarbonate, the primary constituents  
16 utilized to put the uranium there in the first  
17 place. No hazardous chemicals are injected into the  
18 recovery -- into the ISR or the in-situ recovery  
19 process.

20 Finally, Uranium One urges that the NRC  
21 act expeditiously to complete the GEIS within the  
22 current schedule. Four ISR applications have been  
23 submitted to the NRC and are currently under review,  
24 including applications for two ISR operations for

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1 Uranium One.

2 Further delay in the issuance of the  
3 final GEIS would result in significant delays in  
4 licenses, reviews and approvals. These delays would  
5 incur significant financial burden to the  
6 applicant -- to the current applicants, and damage  
7 investor confidence in the companies and the  
8 industry as a whole. Therefore, it is imperative  
9 that the GEIS be completed on schedule and to avoid  
10 these negative financial impacts to the industry.

11 Thank you for that opportunity.

12 MR. CAMERON: Okay. Thank you, John.

13 We're going to go to Wilma Tope and then  
14 Jay Tope, and then to Rodney Knudson.

15 Wilma? Yes.

16 MS. TOPE: Wilma Tope, Aladdin, Wyoming.

17 I'd like to thank the NRC for being here and giving  
18 us this opportunity. The concerns that I have  
19 are -- they seem rather small after hearing Michael  
20 speak about his, but they are still concerns.

21 There's certain things that this  
22 document does not address, plus other issues; First  
23 off, the failure of the GEIS to consider the  
24 compliance history of the company and the likelihood

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1 of license violations. As we saw at the Smith-  
2 Highland site, things do happen.

3 I read in the Casper Star-Tribune that  
4 some of the NRC people and politicians recently  
5 toured the site. The article states, "Cameco  
6 officials and regulators alike insist the violations  
7 at the Smith-Highland uranium ranch did not involve  
8 any excursions or threats to the environment and  
9 human health. It was mostly a matter of  
10 documentation and dealing with restoration of ground  
11 water."

12 I have with me a copy of the report of  
13 investigation done by the Land Quality Division  
14 supervisor that prompted the notice of violation and  
15 the subsequent million-dollar fine on this company.

16 The report clearly says, on number 3,  
17 "Over the years there have been an inordinate number  
18 of spills, leaks and other releases at this  
19 operation. Some 80 spills have been reported in  
20 addition to numerous pond leaks, well casing  
21 failures and excursions. Unfortunately, it appears  
22 that such occurrences have become routine. The LQD  
23 currently has two large three-ring binders full of  
24 spill reports from the Smith Ranch-Highland

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1 operation."

2 In every article that I read about this,  
3 the violations are downplayed. The problems at this  
4 leaching facility are larger and more serious than  
5 just reporting or paper problems. Other people need  
6 to know the truth.

7 Secondly, I think is disingenuous for  
8 industry and others to say that the uranium produced  
9 from these two mines is used for domestic power. We  
10 believe that uranium from Wyoming is sold in Canada  
11 and France, and we know that just recently  
12 scientists from France toured some of Wyoming's  
13 uranium region sites. This is an international  
14 commodity and the leaching of it from our water  
15 possibly will never benefit us in the U.S. at all.

16 Now there's the issue of water. With  
17 possible contamination of our aquifer, or the  
18 leaching of our aquifer, we are greatly concerned.  
19 I beg to differ that the amount of water used by the  
20 process of leaching and reclamation could be a small  
21 impact.

22 This is a large, huge amount of water  
23 and it needs to be known by the public just how much  
24 water is consumed with this, even though we have

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1 been told repeatedly by the industry that this is an  
2 non-consumptive process.

3           Number four, never once does anyone  
4 mention what will happen to our property value if a  
5 uranium mine goes in next door. Many people in our  
6 area don't have a 401(k) or a big savings plan.  
7 They have invested everything they have into a piece  
8 of land and its potential for production. This is  
9 what many of us planned to hand to our children so  
10 they can continue to make a living on it, or stay  
11 here, if they wish, sell it and go on to do  
12 something different.

13           Now I ask, who would pay top dollar for  
14 a piece of land surrounded by uranium mining? No  
15 one in their right mind. This is never addressed in  
16 any fashion, now with our life-long investment that  
17 has been tremendously decreased in value with no  
18 recourse. Also it's been said by members of the  
19 Wyoming LQD that exploratory activities did in the  
20 past decrease people's artesian well outputs, and  
21 some wells even went dry.

22           Now with decreased property values and  
23 no water, what do we have? We've had our retirement  
24 stolen from us; we've had our children's future on

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1 the ranch stolen from them; and essentially our  
2 ranch has been stolen. Try addressing that issue in  
3 an impact statement. Thank you.

4 MR. CAMERON: Thank you.

5 And, Jay?

6 MR. TOPE: Jay Tope, Aladdin, Wyoming.  
7 I'd like to address all the old drill holes.  
8 There's thousands of them in northeast Wyoming, and,  
9 of course, lots of them in South Dakota. I don't  
10 think any mining permit should be issued until that  
11 issue is addressed. And let's clean up the old  
12 mines before we start a new mess.

13 So -- and the other thing about the  
14 nuclear power being such a clean power, when you  
15 take in all of the millions of taxpayers who footed  
16 the bill on this clean up, and then the storage of  
17 the waste, it's about \$100 billion. Just think of  
18 how much renewable energy we could have produced for  
19 that. And nuclear power is not renewable.

20 MR. CAMERON: Okay. Thank you. Thank  
21 you very much, Jay.

22 Rodney?

23 MR. KNUDSON: Well, I think it's all  
24 been covered fairly -- pretty well.

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1 MR. CAMERON: Do you think that you want  
2 to say anything?

3 MR. KNUDSON: Well, I totally agree that  
4 I don't think nuclear energy is the answer to  
5 anybody's energy problem, because it costs about as  
6 much to process the -- separate the uranium 235 from  
7 the uranium 238 as electrical energy. It's just --  
8 the whole thing is a disaster.

9 MR. CAMERON: Okay. Thank you.

10 I guess I just want to emphasize, in  
11 addition to other things that Wilma Tope said, is  
12 that the need for generic environment impact  
13 statement to look at effects on property values.

14 Is there anybody else that wants to make  
15 a statement tonight?

16 (No response.)

17 MR. CAMERON: Is there other things, any  
18 other questions that we can answer for you before we  
19 adjourn? As I said before, the NRC staff is going  
20 to be here to talk to anybody about any of these  
21 issues.

22 Yes, sir?

23 MALE VOICE: Throughout the  
24 environmental impact statement, it repeatedly states

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1 that various impacts will be small due to  
2 regulations that will limit the impact. Who's going  
3 to enforce this, because we haven't seen that in  
4 Wyoming?

5 MR. CAMERON: Okay. Thank you.

6 And can we talk about the NRC's  
7 enforcement, inspection and enforcement framework?  
8 I don't know who wants to do that.

9 MR. McCONNELL: I guess I could --

10 MR. CAMERON: I mean obviously --

11 Go ahead, Keith.

12 MR. McCONNELL: Just some I guess  
13 background information. We have a Region 4 office  
14 in Arlington, Texas and that office is responsible  
15 for inspecting all uranium recovery facilities that  
16 NRC has authority over. And they perform the  
17 inspections, they identify any potential violations  
18 to NRC regulations, and then if there's -- depending  
19 on their severity, there is a process of enforcement  
20 that NRC does practice, and I think to get in -- too  
21 far into enforcement is beyond my capability.

22 But there is a mechanism, again, to  
23 inspect and enforce regulations on our licensees.  
24 And I know, as others have indicated, the state,

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1 separately through its underground injection control  
2 permit program, also does inspections and  
3 enforcement actions against uranium recovery  
4 licensees.

5 MR. CAMERON: Okay. Thanks, Keith.

6 And this may be more than you want to  
7 know about this, but on the NRC website at  
8 www.nrc.gov, if you go to the office of enforcement,  
9 it sets out the NRC's enforcement policy, but  
10 it also lists significant enforcement actions, and  
11 it's divided up into reactors, and materials, and --  
12 I don't know, but it's on there in terms of any  
13 enforcement actions or fines that have been taken  
14 against licensees in terms of ISL or whatever.

15 But there is that -- that's all pretty  
16 open.

17 Yes, sir?

18 MALE VOICE: First of all, because I was  
19 just wondering, you have one office in Texas. Is  
20 that what it is? How many people do you have in the  
21 enforcement field if you're going to do thousands of  
22 permits, how many people do you actually have in the  
23 field to inspect and to enforce?

24 MR. McCONNELL: Sorry, could -- sir,

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1 could you repeat the question? I didn't get it all.

2 MR. CAMERON: The question is, how many  
3 resources are there in the NRC regional office in  
4 terms of finding out whether there's violations and  
5 taking enforcement action against these types of  
6 licensees if something's going wrong?

7 MR. McCONNELL: Yes, right now we have a  
8 limited number of licensees and our Region 4 office  
9 has two full-time inspectors that are devoted to  
10 uranium recovery activities. It's the expectation  
11 that as we get more licensees, those resources would  
12 increase to accommodate the increase.

13 So right now two in the region, they're  
14 some -- commonly supplemented from headquarters,  
15 they're commonly supplemented by the NRC staff from  
16 headquarters. When we go out -- again, this may be  
17 more information than you want to know -- when we go  
18 out for an inspection it's usually done with the one  
19 regional inspector accompanied by three or four  
20 headquarters staff.

21 MR. CAMERON: Okay. And also on the NRC  
22 enforcement website you can find information on  
23 other NRC processes that can raise issues about  
24 particular licensees, like there's the 2.206 process

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1 where any member of the public can request that the  
2 NRC take action against an NRC licensee, to modify  
3 the license, revoke the license, and there's also an  
4 allegation program where if a company employee or a  
5 member of the public thinks that something unsafe is  
6 going on, they can raise that with the NRC, and  
7 that's usually a confidential process.

8 Yes, ma'am?

9 MS. PELTON: My name is Brandy Pelton.  
10 I ranch with my family in northeast Wyoming. I  
11 agree with the lady that spoke earlier. I think our  
12 community and our state, in this area, needs more  
13 time to assess what's going to happen in our  
14 community.

15 And so I'd like to also ask for an  
16 extension on the public comment period so we can get  
17 more information out to other people and collect  
18 ourselves and see if this is something that -- you  
19 know, what we need to take action to do to help  
20 ensure that we don't have negative impacts. So I'd  
21 like to ask for an extension as well.

22 MR. CAMERON: Thank you very much.

23 Let's go down here to someone that we  
24 haven't heard from.

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1                   Yes, sir. Please introduce yourself to  
2 us.

3                   MR. HOLLENBACK: I'm Mark Hollenback  
4 from Edgemont. I'm a rancher and father of four  
5 young children, and I'm also the College Aircraft  
6 project manager down there.

7                   It's interesting we've got a little  
8 different experience down there. Our land values  
9 have went up two to four times in the last two  
10 years, anywhere close to where there might be  
11 uranium. And our problem now is, if you want to  
12 expand your ranch, you can't afford to because the  
13 land value is too high. But it certainly could take  
14 it the other direction.

15                  The one comment I would like to make is,  
16 I fully support the GEIS. I think it's imperative  
17 that all of us use our resources wisely, which  
18 includes not spending a lot of time on things that  
19 are common to all projects, and spend our time on  
20 the things that are unique to each project.

21                  And I think that that then impacts not  
22 only the companies that are gathering the  
23 information, the regulators that are analyzing, but  
24 also the opponents. There is no reason for

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1 everybody to be looking at stuff that is common --  
2 you know, a piece of equipment that's common across  
3 the United States. It's ridiculous for anybody to  
4 waste their time on.

5 But I really like the idea of taking the  
6 things that are common, putting them in a document,  
7 and then let's spend some real quality time  
8 discussing the issues of each individual project,  
9 the geology, the hydrology, and what's the impacts  
10 they're going to have. And those are the issues we  
11 need to spend time on.

12 And I really believe that you're headed  
13 in the right direction. I encourage an expeditious  
14 review of that, and proceeding with it, because I  
15 think that will help everybody that has a dog in  
16 this fight so to speak going forward. And if we can  
17 have -- if we bring projects online, they'll be  
18 good, responsible projects.

19 MR. CAMERON: Thank you very much.

20 Is there anybody that we haven't heard  
21 from that has a question?

22 (No response.)

23 MR. CAMERON: We're going to go back  
24 over here, and then I think we'll break into an

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1 informal session and I'll ask Keith to close the  
2 meeting for us before then.

3 Yes, sir?

4 MALE VOICE: I would agree with what the  
5 individual just said about streamlining, you know,  
6 the process so that you're not reinventing the  
7 wheel. That makes sense.

8 What I would be kind of curious about  
9 though is with this GEIS, if this is in place with  
10 your limited resources, does that put you people in  
11 a position of really doing the site-specific  
12 investigation needed to make a dramatic improvement  
13 on, you know, that type of mistakes and things that  
14 have happened?

15 Or is this just kind of a band-aid  
16 that's really not going to deal with the real issue,  
17 and that is, you don't have near enough staff or  
18 enforcement available to actually deal with it  
19 anyway. And this is -- it's good, but if it makes  
20 you more efficient, but on the other hand it could  
21 bury you deeper if you're going to have to have more  
22 staff to investigate all the future problems since  
23 you've got so many licensees coming in.

24 MR. CAMERON: And, Keith, do you want to

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1 talk about that and maybe talk generally about the  
2 NRC's philosophy that I've heard of about if we  
3 don't have the -- comparing the amount of resources  
4 we have to the amount of work, if we don't have the  
5 resources to do a thorough job, then we push things  
6 back in a queue.

7 And I'm saying that very inarticulately.

8 But if you could just talk about that, and answer  
9 the gentleman's question too.

10 Do you want to use this?

11 MR. McCONNELL: Yes, again, we view the  
12 GEIS as a way to make our process more efficient and  
13 effective. It's not something that we're going to  
14 use to compromise the thoroughness or the adequacy  
15 of a review.

16 What we've indicated to the industry is  
17 that basically the first application in that's  
18 accepted would be the first review, and we would  
19 review it and we would continue down the line of  
20 applications received until we hit the limit of our  
21 resources. And after that, any application we  
22 receive would be deferred in terms of our review.

23 So, again, it's -- the draft -- the GEIS  
24 in general is to make our process more efficient and

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1 effective. I think we try to do that in all of our  
2 activities, to be as efficient and effective because  
3 we're generally spending other people's money when  
4 we do our reviews, and we want to be efficient and  
5 effective.

6 But we also do a thorough comprehensive  
7 review. And certainly a limit on resources is not  
8 going to affect the thoroughness or the adequacy of  
9 that review.

10 MR. CAMERON: Okay. Good.

11 Do you want to maybe just close the  
12 meeting in terms of thanking everybody and whatever  
13 as the senior official?

14 MR. McCONNELL: Yes.

15 MR. CAMERON: And then you'll be here --

16 MR. McCONNELL: Right.

17 MR. CAMERON: -- to answer --

18 MR. McCONNELL: Yes, we do appreciate,  
19 again, you all taking the time to come out tonight.

20 It does take effort to come out. And we do value  
21 the input, it helps us to write a better document in  
22 terms of what we do in a generic environment impact  
23 statement. As we've indicated, we do have other  
24 meetings planned this week, so we would encourage

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1 you, if you can, to come down and attend those  
2 meetings also. So, again, thank you, and thanks for  
3 your participation.

4 (Whereupon, at 9:00 p.m., the meeting  
5 was concluded.)  
6  
7  
8  
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