

**Official Transcript of Proceedings**  
**NUCLEAR REGULATORY COMMISSION**

Title: Powertech USA, Inc.: Dewey-Burdock  
in Situ Uranium Recovery Facility  
Limited-Appeal Hearing  
Morning Session

Docket Number: 40-9075-ML

ASLBP Number: 10-898-02-MLA-BD01

Location: Hot Springs, South Dakota

Date: Monday, August 18, 2014

Work Order No.: NRC-1007

Pages 1-117

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UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

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ATOMIC SAFETY AND LICENSING BOARD PANEL

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LIMITED APPEARANCE SESSION

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In the Matter of: : Docket No.  
POWERTECH USA, INC. : 40-9075-ML  
: ASLBP No.  
(Dewey-Burdock In Situ : 10-898-02-MLA-BD01  
Uranium Recovery Facility) :

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Monday, August 18, 2014  
10:30 a.m.  
Mueller Civic Center  
Theater  
801 South 6<sup>th</sup> Street  
Hot Springs, South Dakota

BEFORE:  
WILLIAM J. FROEHLICH, Chairman  
DR. RICHARD F. COLE, Administrative Judge  
DR. MARK O. BARNETT, Administrative Judge

## P R O C E E D I N G S

10:27 a.m.

CHAIRMAN FROEHLICH: Good morning, everyone. We'll convene this session of the limited appearance statements in the case of Powertech.

My name is William Froehlich, and I'm chairman of this Atomic Safety and Licensing Board, which has been designated to hear the case and decide the issues based on the application of Powertech and styles for an NRC plumbing source and side product material license to construct and operate a proposed in situ recovery operation called the Dewey-Burdock in situ leach recovery, or ISR project, in South Dakota. Post site 40 miles from here, I guess 40 miles west of Hot Springs. We're here today to conduct a limited appearance session in this proceeding. This matter has been formally docketed by the US Nuclear Regulatory Commission as docket number 40. All right? 075 MLA. That MLA stands for Materials License Application. The ASLBP number is 10-98-02-MLA. Today's proceeding is publically noticed by the board on July 30, and published in the federal register on July 10, 2014, 79 Federal Register.

I thank you all who responded to the order by appearing today, and by signing in I hope I can

1 manage to speak to you all today. For the record, it's  
2 Monday, just a little bit after 11 a.m., mountain  
3 daylight time, here at the Mueller Center, Hot  
4 Springs, South Dakota. First I'd like to introduce the  
5 Atomic Safety and Licensing Board assigned to this  
6 case. On my right, judge Richard Cole. Judge Cole is  
7 a full-time federal judge, and has been a member of  
8 the panel since 1973. He holds a bachelor of science  
9 from Drexel University, and a master's degree from  
10 MIT, and a PhD from the University of North Carolina.  
11 He's a diplomat in the American Academy of  
12 Environmental Engineers.

13 On my left is Judge Mark Barnett, Judge  
14 Barnett is a licensed professional engineer and holds  
15 a BS and MS from the University of Tennessee, and a  
16 PhD from the University of North Carolina. He is  
17 currently the Malcolm Pirnie Professor of Civil  
18 Engineering at Auburn University and he is a part-time  
19 judge for the path.

20 As I mentioned a moment ago, my name is  
21 William Froehlich, and I am designated chairman of the  
22 path. I am a lawyer by training. I have about 40 years  
23 of federal administrative and regulatory legal  
24 experience. Because I am a lawyer and want to sit with  
25 three judges, I serve as chairman of this board.

1 I'd also like to introduce a few other  
2 people who are here from licensing for registering you  
3 and organizing the order in which we are going to hear  
4 the speakers today, was our administrative and  
5 logistical support member, Twana Ellis, we all met her  
6 as we came in.

7 Our law clerk is here today. His name is  
8 Nicholas Sciretta. He provides legal advice to the  
9 poor and helps things run smoothly logistically.

10 The media and members of the public are  
11 welcome to this proceeding, and the director of the  
12 NRC's Office of Public Affairs, Eliot Brenner, has  
13 joined us. Thank you, Eliot. Has joined us. Feel free  
14 to contact him if you have any questions about  
15 proceedings today, about background information in  
16 returning the application or proceeding before the  
17 NRC, or anything related to the contentions that are  
18 brought before this board. I want to thank the Mueller  
19 Center folks and law enforcement of Hot Springs and  
20 the county who are with us today at the exits. I also  
21 have to acknowledge probably the most important person  
22 in the room, that's our court reporter Matt Miller.  
23 There will be a full electronic transcript made of all  
24 the comments heard today. Copies of that transcript  
25 will be available in about a week. These comments

1 become part of the administrative record for this  
2 proceeding, and will remain on file and available on  
3 the NRC public website for reference. So as you speak,  
4 be sure to speak slowly, distinctly, so the court  
5 reporter can get down everything you say accurately.  
6 Now, the counsel for the parties for this date are  
7 also here with us today, but their role is very, very  
8 limited. Their role is just to listen and hear the  
9 concerns of the public before we go to hearing  
10 tomorrow. I think I'll acknowledge them, and then they  
11 can raise their hands, or whatever.

12 From Powertech, we have Anthony Thompson.

13 From the NRC staff, Patricia Jehle and  
14 Michael Clark.

15 From the Oglala Sioux Tribe, Jeffrey  
16 Parsons and Travis Stills.

17 And from the Consolidated Intervenors,  
18 David Frankel, Bruce Ellison and Tom Ballanco.

19 They will not be speaking today. They get  
20 their turn starting tomorrow. Today this board wants  
21 to hear from members of the public, and people who  
22 live in the vicinity of the proposed project. Just a  
23 few words of housekeeping before we begin. First,  
24 please turn off your cell phones or set them to  
25 vibrate, and if you have a conversation you need to

1 state, please keep it outside this room.

2 Let me describe just briefly what a  
3 limited appearance statement session is. It's an  
4 opportunity for members of the public, who are not  
5 party to the case, to present their view, both  
6 generally, but more specifically, on the issues that  
7 are going to be heard tomorrow, beginning tomorrow, in  
8 the evidentiary hearing. The evidentiary hearing  
9 begins tomorrow at 9 a.m. in Rapid City and will  
10 continue through Thursday if necessary.

11 The evidentiary hearing is more like a  
12 traditional trial. There's a hearing with witnesses,  
13 considering evidence. The judges in this type of  
14 proceeding will be asking questions of the witnesses.  
15 At the hearing there will not be an opportunity for  
16 public participation. It's limited to the parties to  
17 the case. So the opportunities for the public to be  
18 heard on the issues that are in this case take place  
19 today in two sessions, a morning session and also an  
20 afternoon session. Before we begin hearing statements  
21 from the public, I thought it might be useful just to  
22 give a brief background on the organization and the  
23 roles of the Atomic Safety Advisory Board, and maybe  
24 a little bit of background on the Powertech  
25 proceeding.

1           In essence, when Congress passed the  
2 Atomic Energy Act, the Nuclear Regulatory Commission  
3 was created. The NRC is headed by five commissioners,  
4 who are appointed by the President. They have, for  
5 them, a staff, almost 4,000 people comprise the NRC  
6 staff, who do the licensing and oversight of their  
7 operations. The Atomic Safety and Licensing Board  
8 panel is a group of independent judges within the NRC.  
9 The board is made up of members of the panel, and is  
10 entirely separate from the NRC staff, and separate  
11 from the commissioners themselves.

12           Our responsibility is to hear cases that  
13 are brought before us by litigants who raise questions  
14 about the activities completed by the NRC staff, and  
15 our goal is to address those questions, and decide  
16 based upon the legal and factual issues that come  
17 before us. The only communications we have about this  
18 case with the staff are through the pleadings passed,  
19 filed by department. There's no communications the  
20 boards, the board, commissioners themselves, and  
21 members of the staff, or even the parties, other than  
22 the formal legal pleas.

23           The commission acts like the appellate  
24 body to this Board. It can overrule our decision, but  
25 they can't influence the way we draft it up. We will



1 write our decision, we will publish it, do the best we  
2 possibly can with it. If the parties are dissatisfied  
3 with our decision, they have the right to make an  
4 appeal to the commission, and if they are still  
5 dissatisfied with the ultimate conclusion, the  
6 ultimate conclusion of the commission, they have the  
7 right to file in federal court. The main point,  
8 though, for us to understand, is that there is the  
9 commission, the commissioner, the commission staff,  
10 the technical professionals who review the  
11 application, and then there is the board, which will  
12 preside, based on the record, on the matters that have  
13 been brought before, based on the work of the staff or  
14 the application filed by the applicant.

15 Now for just a very brief background of  
16 this particular case. This case dates back to 2009,  
17 when Powertech filed a license application with the  
18 agency. That application was noticed in the Federal  
19 Register on January 5<sup>th</sup>, 2010, and provided an  
20 opportunity for stakeholders and interested members of  
21 the public, the opportunity to request a hearing on  
22 issues, but certainly that application.

23 On August 5<sup>th</sup>, 2010, this board granted  
24 the hearing request to the Consolidated Intervenor and  
25 the Oglala Sioux Tribe, and admitted them as parties

1 to this proceeding. They had proposed at that time ten  
2 or so contentions. They had, there were a number of  
3 contentions that were accepted by the board, by the  
4 Consolidated Intervenor, as well as a number of  
5 contentions that were filed by the Oglala Sioux that  
6 over the next period of time, with the agency staff,  
7 the NRC staff, was preparing the environmental safety  
8 documents associated with the proposal, and on  
9 November 15<sup>th</sup>, 2012, the NRC staff notified the board  
10 of the public availability of its draft Environmental  
11 Impact Statement, the DEIS, prepared pursuant to the  
12 Environmental Policy Act and the agency's regulations.  
13 That environmental review contains analysis that  
14 consider the ways and environmental effects of the  
15 proposed action, the environmental effects of  
16 alternatives to that action, and mitigation measures  
17 either to reduce or avoid adverse events.

18 The Oglala Sioux and Consolidated  
19 Intervenors both filed proposed contentions relating  
20 to this, the draft environmental impact statement,  
21 with Powertech and the NRC staff built to code.

22 In addition to the original separate  
23 contentions that were admitted, three new contentions  
24 were admitted after the publication of the draft  
25 environmental statement. January 29, 2014, the staff

1 issues the final environmental impact statement in  
2 this case. The final review memorialized the staff's  
3 environmental impact analysis, and recommended that a  
4 lot of the issues with Powertech. After another round  
5 of proposal contentions by the Intervenors, the ten  
6 existing contentions were found to apply to the Final  
7 Environmental Impact Statement, and no new or  
8 additional contentions were added.

9 On April 8<sup>th</sup> of this year, the NRC staff  
10 issued NRC Source Materials License No. SUA-1600 to  
11 Powertech. This license allows Powertech to possess  
12 and use source and byproduct material in connection  
13 with the Dewey-Burdock Project.

14 At this point in time we have seven  
15 contentions that are active before the board. As you  
16 came in there was a handout that lists the seven  
17 contentions that will be the subject of the  
18 administrative hearing that is given tomorrow. But as  
19 of today, in terms of the order of speakers, I am  
20 going to start with, I guess, public officials who  
21 have registered to speak, and then in the order in  
22 which people arrived today. We're going to take the  
23 people who pre-registered, and we'll hear from them  
24 first, and then go to anyone else who moved that sign  
25 up, they'll speak, and the rest of the board in order.

1           When you do come to the podium, even  
2           though I will call your name, please say your name and  
3           spell it for the benefit of our court reporter. Again,  
4           this is not a question and answer session for the  
5           board. It's not appropriate for us to ask questions of  
6           you, nor for you to ask of us. We are going to hear  
7           your concerns, and take those concerns with us through  
8           the evidentiary hearing, and based on your concerns,  
9           along with our work in preparing for this hearing,  
10          we'll ask those questions, but on those topics, of the  
11          witnesses in the hearing that begins tomorrow.

12                 Also, please limit your times to five  
13          minutes. That way we'll be able to hear from everyone  
14          who wishes to speak. We'll try to have some kind of a  
15          signaling system as it gets close, like a two-minute  
16          warming, and then we'll stop. So please pay attention  
17          to those signs. We'll have a little bit of  
18          flexibility, obviously, but we would like to have some  
19          limited five minutes so that we can hear from everyone  
20          who can speak to the board.

21                 I also note that I checked the NRC's  
22          website this morning, and there are 20 or 30 limited  
23          appearance statements, written statements, that are  
24          part of the administrative record already, and these  
25          statements that we take today will be added to that

1 pot.

2 Again, if you have a cell phone please  
3 turn it off at this point. And I understand from Ms.  
4 Ellis that we have Joel Landeen, the city attorney,  
5 and as a courtesy, we'd like to hear from him first.  
6 Mr. Landeen?

7 MR. LANDEEN: I'd like to --

8 CHAIRMAN FROEHLICH: Make sure it's on.  
9 Thank you.

10 (Papers shuffling)

11 MR. LANDEEN: I'd like to thank the Panel  
12 for the opportunity to come address you today. As  
13 indicated, my name is Joel Landeen, J-O-E-L, L-A-N-D-  
14 E-E-N, and I am the city attorney for the city of  
15 Rapid City, South Dakota. The mayor asked me to come  
16 address you this morning, and let you know that in  
17 August of 2013, the city council had passed a  
18 resolution expressing grave concern with the proposed  
19 in situ mining of uranium by Powertech in Custer and  
20 Fall River Counties. This resolution was done in  
21 response to the hearings that were going to take place  
22 in front of the state Department of Environment and  
23 Natural Resources boards.

24 The basis for this resolution is that one  
25 of the aquifers that Powertech is requesting to draw

1 water from and use in its mining operations is the  
2 Madison aquifer. The Madison aquifer is the primary  
3 water source for the city of Rapid City, and although  
4 we are fairly far away from where the actual mining  
5 will occur, any threat to the Madison aquifer, or any  
6 potential contamination of the Madison aquifer is  
7 obviously of great concern to the city leaders of  
8 Rapid City.

9           Since you are probably not from the area,  
10 to put it in perspective, Rapid City is a city of  
11 approximately 70,000 people, which is the largest city  
12 in the Black Hills region. With that being our primary  
13 source of water, the council was asked to weigh in,  
14 and heard from both the opponents of the mining, and  
15 also from representatives of Powertech. After hearing  
16 these statements, and some of the concerns with  
17 operations that have occurred elsewhere in the country  
18 in contamination, and the fact that the water has not  
19 been able to, apparently, been put back, the council  
20 decided that it was prudent to express that they have  
21 concern with this operation moving forward involving  
22 the Madison aquifer. I know that we have provided you  
23 with a copy of the city council resolution, and it's  
24 my understanding that it is one of the written  
25 records, or one of the written submittals, that will

1 be part of the limited record. So I would just ask you  
2 to please review that and encourage you to be very  
3 cautious as you move forward, and really look at the  
4 issues involving the contamination. Tens of thousands  
5 of people rely on this aquifer for their water, and we  
6 are really concerned that it not be contaminated in  
7 any way and still be a viable drinking source for the  
8 city of Rapid City and the other communities and  
9 people living in the Black Hills region. Thank you.

10 CHAIRMAN FROEHLICH: Thank you, Mr.  
11 Landeen. I understand Mayor Carl Shaw is here,  
12 preparing to take a stand at the podium at this point.  
13 Mayor Shaw?

14 MR. SHAW: My name is Carl, C-A-R-L, Shaw,  
15 S-H-A-W. Mr. Chairman and members of the board --

16 CHAIRMAN FROEHLICH: Could you come closer  
17 to the mic?

18 MR. SHAW: Pardon me?

19 CHAIRMAN FROEHLICH: A little bit louder  
20 and closer to the mic?

21 MR. SHAW: Can you hear me now?

22 CHAIRMAN FROEHLICH: Yes, much better.  
23 Thank you, sir.

24 MR. SHAW: Mr. Chairman and members of the  
25 board, good day to each of you. I thank you for coming

1 and listening to our comments. I do want to say that  
2 I am disappointed that all regulatory agencies that  
3 have had hearings for this project have refused to  
4 hold them where the people will truly be affected, and  
5 that is Edgemont. Even though we have more than one  
6 ample facility to hold the hearings.

7 My name is Carl Shaw. I am proud to be the  
8 mayor of Edgemont, South Dakota, the host community  
9 for the Dewey-Burdock project. With few exceptions,  
10 this community is strongly in support of Powertech's  
11 proposed in situ uranium project. The Dewey-Burdock  
12 site is about 13 miles northwest of our community, and  
13 we expect that our schools, our infrastructure, and  
14 our businesses will see the benefits of this project.  
15 Powertech has been a good corporate citizen of  
16 Edgemont since they opened their offices here over  
17 seven years ago. They have been very open with us, and  
18 explained the project in detail. We look forward to  
19 the economic activity this will bring to our small  
20 community.

21 Over the years, we've had an awful lot of  
22 kids in our area earn engineering and science degrees,  
23 and then have gone, have to go elsewhere to find  
24 meaningful work. Others have gone to Wyoming or North  
25 Dakota to do work in technical and service-oriented



1 jobs. Personally, I look forward to having good jobs  
2 nearby so our young people can stay here, or return  
3 here to work and raise a family.

4 As an elected official, I take my office  
5 and responsibilities very seriously. I think we as a  
6 city council have done that in passing a resolution of  
7 support for the Dewey-Burdock project. I have a copy  
8 here, and would like this to be part of the record of  
9 this hearing.

10 In conclusion, I want to emphasize that  
11 Edgemont, South Dakota, strongly supports the Dewey-  
12 Burdock project, and we hope you will dismiss this  
13 contentions and allow the project to proceed. More  
14 than seven years is more than enough time to get a  
15 project like this started. Thank you.

16 CHAIRMAN FROEHLICH: Thank you, Mayor Shaw.  
17 I will note that we'll take the statements, put it in  
18 the record of this limited hearing statement, together  
19 with the filing that you had made on behalf of the  
20 city, May 8th.

21 MR. SHAW: Thank you.

22 CHAIRMAN FROEHLICH: Councilman,  
23 councilwoman DeAnn McComb? Councilwoman McComb?

24 MS. MCCOMB: Good morning, everyone. Thank  
25 you for being here. I'm DeAnn McComb, D-E capital A-N-

1 N, McComb, M-C capital C-O-M-B. And I am a city  
2 councilperson for the city of Hot Springs. And I'm  
3 speaking on contention number 4, where the FSEIS fails  
4 to adequately analyze groundwater quality impacts. I  
5 believe it to be wrong --

6 CHAIRMAN FROEHLICH: A little bit louder  
7 and a little bit closer to the mic. Thank you!

8 MS. MCCOMB: I believe it to be wrong to  
9 disturb the ground with drilling at the Dewey and  
10 Burdock sites. The Dewey proposed site is located  
11 along the Dewey fault zone, and the Burdock site is  
12 located in the Long Mountain structural zone. Being  
13 that both planned locations proposed drilling in  
14 unstable earth, the results would be catastrophic.  
15 There are no guarantees that the wastewater would  
16 remain also in a formation suggested for injection.  
17 The Minnesula and Deadwood formations have been  
18 suggested. The Deadwood formation being located under  
19 the precious Madison drinking water. And considering  
20 the activities in Yellowstone Park, possibilities for  
21 disruptions along fault lines are extremely possible  
22 here.

23 This is our drinking water. Our bathing  
24 water. The water we enjoy swimming in. This is a  
25 vacation area, resort area. People from all over the

1 world come to enjoy our area.

2 Outsiders from foreign countries should  
3 not be able to destroy our way of life. Without water,  
4 there is no life.

5 Uranium mining could destroy the quality  
6 of the Madison aquifer. It simply could not be  
7 restored to pre-mining conditions.

8 I have to add, too, I grew up in Indiana  
9 where water was thoughtlessly dumped on, dumped in.  
10 Water that you couldn't swim in, particularly in Fort  
11 Wayne, where the confluence of the Madison, St.  
12 Joseph, and St. Mary's rivers are. The rivers were  
13 contaminated beyond belief. Previously, at the turn of  
14 the former century, flying fish were found there.  
15 Currently there's only catfish and carp, and nothing  
16 suitable to swim in.

17 We're about freedom in this country. This  
18 would be taking away one of our freedoms. The right to  
19 clean water. Yes, I'm originally from Indiana, but I  
20 call the Black Hills my home. I'm passionate about  
21 this area. Currently in Hot Springs, there are many of  
22 us who are putting the hot back in Hot Springs.  
23 Uranium mining, however, was not what we had in mind.

24 (Laughter, applause)

25 CHAIRMAN FROEHLICH: Donald Earl Matt,

1 please?

2 MR. MATT: Good morning. I'm thankful to be  
3 here. My name is Donald, D-O-N-A-L-D, Earl, E-A-R-L,  
4 Matt, M-A-T-T. I am a new resident of Edgemont, South  
5 Dakota. We moved there because we wanted to be close  
6 to our grandchildren, to spend our last days within  
7 reach of them. We have no alternative. We spent  
8 everything we have to be in Edgemont. We see other  
9 people from other places in the country: California,  
10 Washington, Colorado, moving to be there.

11 My concern, one of my concerns involves  
12 when I go to the Powertech website, I see "byproducts  
13 of ISR include selenium, molybdenum, vanadium,  
14 arsenic. In addition, some portion of the naturally  
15 occurring radioactive elements such as radon and  
16 radium can go into solution." And it says "These  
17 elements are precipitated in either tanks or a small,  
18 double-lined pond." Then you go on, I don't find that  
19 reference right here, but further on it says that they  
20 were, there will be a one to three percent, and if you  
21 take 9,000 gallons times three to six years, whatever  
22 the projected life is, that is a fair amount of water  
23 to be concentrated into something that I understand  
24 the nuclear regulations say need to be removed and put  
25 in a special dump site.

1           When I look at the USGS national seismic  
2 hazard map, I see the worst activity is right along  
3 the Wyoming-South Dakota border in southwest South  
4 Dakota. That is the area that we're talking about. I  
5 happen to experience a couple earthquakes in my life.  
6 One of them was about Thanksgiving in the Wheat  
7 Ridge-Denver area of Colorado, and in the 60s, and  
8 this was about a year after the arsenal there had  
9 started, stopped pumping chemical and radioactive  
10 waste underground. They stopped because people feared  
11 that it was causing earthquakes. My mom accused me of  
12 trying to blow up the house; she didn't know it was an  
13 earthquake!

14           The other earthquake I experienced was in  
15 Southeast Kansas, from the pumping that exists down  
16 there. I have here National Weather Service of Rapid  
17 City, National Weather Service forecast. They have 11  
18 pages of flood reports, and if you look, you'll find  
19 that from May through October, there was an average of  
20 one flood or flash flood every nine and a half days.  
21 Now, I'm concerned about ponds that can be flooded  
22 with this sort of activity. This is a personal issue  
23 to me because South Dakota water cost me the right to  
24 know my grandmother and my two uncles. Snake Creek is  
25 normally a dry creek, and during the 30s, the

1 Dustbowl, it was certainly a dry creek, but on Labor  
2 Day of 1938, a 20-foot wall of water came down and  
3 removed my mother's house along with her family. My  
4 mother woke up in a tree with a bull snake, and my  
5 grandfather washed up on a hill. These are real  
6 events. That's just one story. Rapid City lost 272  
7 people in 1972. These are real concerns.

8 CHAIRMAN FROEHLICH: Thank you,  
9 Mr. Matt. Could we hear please from Cheryl Rowe?

10 MS. ROWE. Good morning. Hello, my name is  
11 Cheryl Rowe, that's C-H-E-R-Y-L, R-O-W-E, and I'm  
12 speaking on behalf of many of my friends that cannot  
13 be here today, they just simply could not take off  
14 work. I will keep my testimony short and sweet. Here's  
15 my brief list of concerns.

16 Everyone in this room knows the pitfalls  
17 and danger to our water this project possesses. The  
18 amount of water asked by this foreign company, for  
19 free, is ridiculous. To give away so much water in a  
20 semi-arid region that suffers from drought more often  
21 than not is a disaster in the making. We rely heavily  
22 on our aquifers.

23 The chemicals used, and the waste issues  
24 after extraction, are distressful. The transportation  
25 and disposal of all related waste is an issue with

1 far-reaching compromises to the environment, and  
2 contains its own very long list of concerns. They have  
3 found radioactive fracking socks discarded in North  
4 Dakota illegally. Is there any wonder we are skeptical  
5 of another extractive business?

6 The trust issue. The fact that Powertech  
7 Azarga's lobbying wrote legislation and got it passed,  
8 whether by ignorance or corruption, has made this  
9 project a self-monitored operation. SB-158 was  
10 intentionally introduced to make it easier for them to  
11 self-monitor. This was an underhanded and arrogant  
12 thing to do to South Dakotans. How can we ever trust  
13 Powertech Azarga when they have this kind of dishonest  
14 intentions? Why, if the process is, to quote, "safe  
15 and benign", as Mr. Hallenbeck wants us to believe,  
16 would we need to change the rules to make it easier  
17 for a company to destroy an area and then walk away  
18 without paying the consequences.

19 They claim there is no connectivity  
20 between the aquifers, and their project is completely  
21 contained. Just recently, spelunkers thought they'd  
22 reached the end of the third largest cave in the  
23 world, Jewel Cave, which is just north of the project  
24 there. A ways, but it's north. The spelunkers were  
25 thrilled when they squeezed through that tight space

1 and found yet more huge caverns. We are not confident  
2 with Powertech Azarga's claims of knowing what lies  
3 beneath. Many people use the very same Inyan Kara  
4 aquifer that the mining will be done in, and are at  
5 lower elevations. The deep disposal of waste into  
6 lower aquifers, into the lower aquifer, is another  
7 example of dishonest operations. Out of site, out of  
8 mind, and too deep to be monitored. Will it flow into  
9 other aquifers? I don't think they care about that.  
10 What happens after they are finished and long gone?  
11 Who monitors it then? Who cleans up any leaks or  
12 excursions from waste disposal ponds? Who pays for it?

13           The market for uranium is at an all-time  
14 low. With new technology on the near horizon, why  
15 would we risk contamination of a large area for a  
16 resource that may not be at a shortage in the future?  
17 At this time it is not economical to extract in the  
18 first place. Once extracted and shipped to Canada for  
19 placement on the international market, where would  
20 this uranium end up? Perhaps Iran? We have so many  
21 scenarios of accidents going through our minds. What  
22 would happen if one of our vacationers had an accident  
23 with a truck filled with uranium heading to Canada?  
24 What if there was a fire at the accident? Who would  
25 respond? What if there was a fire at the operation?



1 Who would respond? Are the first responders equipped  
2 and trained to deal with such accidents? The trucks  
3 would have to be marked as radioactive. How does that  
4 look to people vacationing here? What would be their  
5 perception of the Black Hills then? Would that deter  
6 them from a return visit?

7 The company, when asked at the hearing  
8 prior to this, they were unclear on many safety  
9 issues.

10 The Black Hills enjoys a relatively sound  
11 economy. Agriculture and tourism supports the majority  
12 of businesses. We who live here have an opportunity to  
13 enjoy the attractions and the beauty as well. It's  
14 just a nice place to live. I hope you have a chance to  
15 enjoy some of the beauty here in the Black Hills while  
16 you're here. If you should visit the shrine of  
17 democracy, Mount Rushmore, think about the people, the  
18 water people drink from the fountains there. This is  
19 water from one of our aquifers. What statement does it  
20 make if we allow Powertech Azarga to use and  
21 contaminate that same water. Thank you, and I hope you  
22 reach the conclusion that you must not further this  
23 permit. Thank you.

24 (Applause)

25 CHAIRMAN FROEHLICH: Rodney Knudson, K-N-U-

1 D-S-O-N. Thank you.

2 MR. KNUDSON: Thank you, the Atomic Safety  
3 & Licensing board panel. My name is Rodney Knudson, K-  
4 N-U-D-S-O-N, Rodney is R-O-D-N-E-Y. My contention,  
5 number three, that's what I'm addressing, and my  
6 reasons for opposing Powertech's mining permit in this  
7 area are enumerated in about nine points, and although  
8 the mining process itself involves putting substances  
9 in solution, and this, the solvent is called an  
10 excipient solution containing sodium bicarbonate. Oh,  
11 by the way, my background was in chemistry and  
12 physics. Teacher in high school and such. My is  
13 entitled "Consideration of Geochemical Issues in  
14 Groundwater Restoration at Uranium In Situ Mining  
15 Facilities". This is the basis on which I'm listing  
16 these points, for the most part.

17 Although the excipient solution containing  
18 sodium bicarbonate, and it's an isotope, are  
19 relatively benign, the products in release are not.  
20 What we're referring to here are the radioactive  
21 element, uranium, thorium, and all their daughter  
22 nuclides and the decay series as well as arsenic,  
23 selenium, vanadium, molybdenum, and many others that  
24 if imbibed in the water supplies, will cause  
25 significant biological damage. Someone else made

1 reference to these.

2 Over the period of the mining process,  
3 much excipient is lost in the porous spaces of the  
4 rock strata in which the mining, mined aquifer exist,  
5 and cannot be recovered and sweated in multiple core  
6 volumed, swepted, conducted after the mining has  
7 ceased. The condition, coupled with upgraded recharge  
8 water, continues to oxidize, and put into solution the  
9 toxic and radioactive elements listed above, long  
10 after the mining operation has ceased attempts at  
11 restoration of complete.

12 Number three, the mining process  
13 eliminates a major barrier to the migration of these  
14 substances, through the oxidation of the iron pyrite  
15 that had formed, as it reduces behind the orebody.  
16 This will allow the elements in question to remain in  
17 the oxidized state and solution longer, and  
18 potentially further into the aquifer.

19 A restoration following the cessation of  
20 mining consumes an enormous amount of water, and in  
21 concert with the injection of hydrogen sulfide may  
22 take five, ten years to reduce the levels of elements  
23 to the lowest levels achievable, often not close to  
24 the baseline, examples set by the NRC at the  
25 Smith-Highland site near Douglas, Wyoming, in this

1 NUREG document saying left arsenic at 30 times,  
2 selenium 70 times, uranium at 70 times the baseline  
3 levels eight years after the cessation of the mining  
4 operation.

5 It is highly unlikely, or highly likely,  
6 that the 3,000 boreholes previously drilled while  
7 prospecting for uranium only have been tapped, not  
8 plugged. The 6-inch borehole, 600 feet deep, would  
9 take 4.4 cubic yards of material, and a 4 inch hole  
10 would take about two cubic yards. What has been  
11 observed is that in the distant past people were  
12 capping the wells with one cubic foot Bentonite bag,  
13 which expands, I suppose, five or so times. That's  
14 still not adequate, not to plug the holes. These are  
15 capped holes.

16 Abundant opportunities for excursion from  
17 the mining operation exist, because the boreholes from  
18 the previous exploration and the particular geologic  
19 conditions, including breccia pipes  
20 and set beds, exclusion would be both horizontal  
21 and vertical, and jeopardize drinking water, aquifers  
22 people use on a daily basis. Because the water tests  
23 detailing the elements in question are relatively  
24 expensive, results may only be known years later in  
25 the form of cancer clusters and birth abnormalities.

1 Corporations, yeah, without potable water, land values  
2 would plummet. And finally, corporations do not  
3 sufficiently share in the risks that residents  
4 surrounding the mine do, as most bonds cover little  
5 more than the land disturbance and non-threats to  
6 public health. The latter typically manifests  
7 themselves long after the bond has been released.  
8 Thank you.

9 (Applause)

10 CHAIRMAN FROEHLICH: Jerri Baker?

11 MS. BAKER: Hello. My name is Jerri Baker,  
12 J-E-R-R-I B-A-K-E-R. I live in this beautiful town. I  
13 have land here as well as two commercial properties  
14 and a business. Thank you for coming to South Dakota.  
15 I understand the NRC is located in Washington. Sorry.  
16 I'm winded. Thank you for securing this hearing, as  
17 one of the mine supporters brought a gun to one of the  
18 state hearings. I would also like to thank the  
19 Consolidated Petitioners and the Oglala Sioux tribe.

20 I worked on a Department of Energy Untra  
21 Rifle Colorado cleanup site as a radiological worker.  
22 Contention six. The FEIS fail to adequately describe  
23 or analyze proposed mitigation measures. This entire  
24 area has been mined, drilled, explored, and abandoned.  
25 This document purposely omits the gamma from the alpha

1 emitters that the public and the workers will be  
2 exposed to once drilling, spraying out waste, and  
3 operation of the processing plants begin, these  
4 numbers will rise. Not to mention the other airborne  
5 particulate emissions.

6 I was very disturbed by the methods used  
7 to describe impacts such as "Low", "Moderate". How can  
8 the public possibly look up as a hazard to their  
9 family that is listed as "Moderate"?

10 Mitigation means taking steps to control the  
11 contamination to human health. While presently the  
12 contamination freely runs down two tributaries, Beaver  
13 and Pass creeks, into the aquifers, the Cheyenne,  
14 Missouri, Mississippi, and finally the Gulf of Mexico,  
15 nowhere in the FEIS did I read of proper mitigation  
16 measures concerning climate change, actual potential  
17 of flooding, or SOPs which addresses the safety of the  
18 workers.

19 Contention 3, access potential impacts to  
20 water. Water resources reported of the USGS states  
21 "Many streams of western South Dakota originate in the  
22 Black Hills, and major bedrock aquifers are recharged  
23 along outcrop areas in the Black Hills." Ground and  
24 surface water interact extensively in the Black Hills.  
25 The Madison aquifer is the primary source of water for

1 warm artesian springs in the southern hills. All  
2 streams in South Dakota are designated for the  
3 beneficial uses of irrigation and of wildlife  
4 propagation and stock watering. Many artesian springs  
5 emerge through the Minnekahta limestone, thus  
6 hydraulic connection, with underlying Madison and  
7 Minnelusa aquifers are possible.

8 The groundwater and surface water sources,  
9 resources, in the Black Hills, are highly  
10 interconnected. The Madison and Minnelusa are known to  
11 be hydraulically connected in the vicinity of many of  
12 the artesian springs and several wells, and may be  
13 connected in other locations. Here in Hot Springs, the  
14 Madison is our river, and drinking water, and it runs  
15 at 87 degrees year round. I am not sure you can find  
16 that anywhere else in the USA.

17 I am not a hydrologist or a geologist, but  
18 the USGS is, and in this report alone gives me great  
19 concern, not only for the quality, but the quantity of  
20 the water that will be affected by this project. I  
21 have a Minnelusa well, where they propose to inject  
22 contaminated waste water. I know there is no such  
23 thing as a confined aquifer. That's common sense. Man  
24 cannot contain water underground. I also know it is  
25 against the law for any government agency to allow or

1 do harm to the poor, executive order 12898, entitled  
2 "Federal Actions to Address Environmental Justice in  
3 Minority Populations and Low-Income Populations." I  
4 mailed a copy of two articles to the NRC from the  
5 Edgemont paper, the Herald Tribune. 126, 1961 reveals  
6 130-foot walls of the Triangle full of huge  
7 waterfalls. Clearly this shows shallow aquifers that  
8 probably feed the many wetlands in the area. The  
9 other, July 8<sup>th</sup>, 2013, is of a flood, where 37 cars  
10 were derailed, 13 overturned, and a rancher in the  
11 area claims he saw 12 feet of water in his hayfield.  
12 This occurred just above the proposed site.

13           Contention four. The Christensen Ranch ISL  
14 mine, started in 1978. Prior to the mine, Gillette,  
15 Wyoming never used the Madison aquifer, and just four  
16 years later, 41 percent of their drinking water was  
17 being pumped out of the Madison. Today I believe the  
18 number is around 93 percent. It's on their website,  
19 and they supply both Crook and Campbell Counties with  
20 Madison drinking water. Their aquifers were of better  
21 quality, but are now depleted, or not potable. So if  
22 we are all on the Madison, how long will it last?

23           The NRC continues to allow Wyoming to use  
24 their water for uranium mining that this country does  
25 not need. I am personally against giving away water



1 and other resources from this country to foreign  
2 corporations for free. Our government should be  
3 protecting its water sources. I wonder how many people  
4 in states like California, Nevada, Oregon, Washington,  
5 Arizona, or Texas, would agree.

6 I copied parts of what I mailed to Mr.  
7 Burris of the NRC, and I gave them to the lady up  
8 there. And also I included a copy of the baseline  
9 count rates that ERG provided for Powertech, and a  
10 local map. I thank you for your time, and I would like  
11 to encourage you to drive around before going to  
12 Rapid. Thank you.

13 CHAIRMAN FROEHLICH: Thank you for your  
14 comments.

15 (Applause.)

16 CHAIRMAN FROEHLICH: Thank you for your  
17 comments, and I note that your comments today will be  
18 added to the two filings that you made, in February  
19 and in April, in the official file. Thank you. Sabrina  
20 King, please?

21 MS. KING: Good morning. My name is Sabrina  
22 King, that is S-A-B-R-I-N-A, last name K-I-N-G. I  
23 first just wanted to thank you for allowing public  
24 testimony. I appreciate the time.

25 I am a resident of Rapid City. I've lived

1 in South Dakota for about two years, and since moving  
2 here I have spent a great deal of time research this  
3 project and its impacts. My greatest concern regards  
4 the quantity of water this project would require. The  
5 company proposing the Dewey-Burdock project is asking  
6 for the rights to 14,000 acre-feet of water. That  
7 water will no longer be available for use for other  
8 purposes, and the fact that the company states they  
9 will only be bleeding out one to three percent, or  
10 losing one to three percent of that water, is  
11 irrelevant. That 14,000 acre-feet of water, our water,  
12 will belong to them. You've heard some today about  
13 South Dakota's state level regulations. Once those  
14 water rights are granted, South Dakota no longer has  
15 any say in what happens to that water. Our state level  
16 rules and regulations have been told. So it is  
17 imperative that this board fully consider the impacts  
18 to ground water quantity. How Dewey-Burdock project,  
19 how its use of that water, will impact both the Inyan  
20 Kara and the Madison aquifers, and how we could  
21 possibly deal with the negative impacts of the  
22 proposed projects.

23 I would argue, and I believe you will  
24 hear, a great deal of evidence to this effect, that  
25 those negative impacts cannot be mitigated. Not in an

1 area where the aquifer recharge rates are lower than  
2 what is proposed to be taken out. Not in an area where  
3 every single industry depends nearly one hundred  
4 percent on groundwater. And not in a state where we  
5 lack enforcement ability. We as citizens are being  
6 asked to take on a great deal of risk. Risk to our  
7 water, to our air, to our cultural resources, and as  
8 taxpayers, to our pocketbooks. Because we will pay,  
9 when and not if, when, something goes wrong. And that  
10 risk, at the expense of 14,00 acre-feet plus of water,  
11 is simply unacceptable to me, and to the people of  
12 South Dakota. I strongly urge that you not let this  
13 project move forward, and you listen very carefully to  
14 the impacts to our groundwater, and how that will  
15 affect those of use who live here, work here, and love  
16 this hills. Thank you.

17 (Applause.)

18 CHAIRMAN FROEHLICH: David Miller?

19

20 MR. MILLER. My name is David Miller,  
21 that's D-A-V-I-D M-I-L-L-E-R. I appreciate the time  
22 and the opportunity; I'm glad I don't have your job.  
23 Contention six, the FSEIS fails to adequately describe  
24 or analyze proposed mitigation measures. I look at  
25 this in the long term, I'm not real concerned about

1 immediate short-term impacts. I don't even know what  
2 they might be. I don't believe that we're capable of  
3 mitigating long term damage of the kind that  
4 Powertech, the kind of mining they're proposing. The  
5 drilling, the mobilization of uranium within the Inyan  
6 Kara, I think, will increase toxicity, and the  
7 likelihood of more rapid groundwater movement out of  
8 that formation. If it does happen, the problem is, in  
9 the long term, if it does, you won't be containing it.  
10 There isn't any way. Burl Mining Company poisoned a  
11 groundwater system. They put other aquifers at risk in  
12 the northern Black Hills some years ago. They  
13 abandoned the site. The EPA stepped in to this  
14 emergency, and it contained poisons. By the end of  
15 2012, containment efforts had cost federal taxpayers  
16 109 million dollars. But containment is not  
17 mitigation, and the EPA cannot stop the ongoing  
18 formation of poisoned water at the site. We're stuck  
19 with it. Our technology will not mitigate it.

20 I'm aware of the difference between these  
21 two projects. A Powertech disaster would be worse,  
22 because there would be no way to contain the movement  
23 of contaminated groundwater in the great subterranean  
24 aquifers. Drilling in and between aquifers along with  
25 mobilizing the uranium will significantly increase the

1 risk. The poisoned waters will sooner or later migrate  
2 into the major aquifers. I think it's misleading for  
3 us to suggest that we can mitigate impacts of this  
4 kind. I believe we presume to know more than we really  
5 know about the understructure in this region. I don't  
6 undersell our scientific community for a moment.  
7 They're top of the line. Our aquifers in our region,  
8 though, are intricately complex. They formed over eons  
9 of time as marine deposits and a great layer of  
10 windblown sand became the cliffs of our canyons and  
11 the complex formations that form our underground  
12 aquifers. As vast layers of stream and river sediments  
13 deposited over the eons build up the western plains,  
14 these layers have been uplifted, folded, broken,  
15 eroded, reshaped into labyrinthian maze of underground  
16 formations. We know a lot about these formations, but  
17 we cannot predict with any accuracy what will happen  
18 if we trigger the seep of poison into them. We are not  
19 the lords of creation. We're talking about impacts  
20 that are geologic in magnitude, impacts that reach  
21 beyond the boundaries of historic time. And that's  
22 what I'm really speaking to here. We cannot escape  
23 responsibility for decisions we make now to the people  
24 who would be affected by the long-term impacts of this  
25 mining. The people in our future. People who do no

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1 more than follow regional and national news know that  
2 advances in mining technology have outpaced our  
3 ability to mitigate environmental damage. And when all  
4 the arguments are in and weighed, the decision to  
5 permit or not permit this mine will be a value  
6 judgement on which technical data are important, and  
7 not necessarily the most important. Our most important  
8 decisions always are our value judgements. So I finish  
9 by speaking to this issue, and the only way I can  
10 really do justice to it, and that's in terms of the  
11 responsibilities it imposes on the issue. This is at  
12 the core of the issue, that I think it raised under  
13 mitigation. You and I belong to a great public body.  
14 The Founding Fathers referred to it as The People.  
15 They were placing the sovereign power to govern,  
16 placing it in a people when they used those words.  
17 They used them in the preamble to constitution. What  
18 to catch here is they had a distinctly different  
19 concept of the people than you and I do, and that  
20 takes us to the heart of the issue. When they talked  
21 about the people, they meant all of us, from the time  
22 of the origin of this republic into the, that is, its  
23 origin in the Revolutionary era, into the unknown  
24 future. All of us here today, all of us who have been  
25 here in the past, all of us who will be here in the

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1 future. They meant all of us in the most profound  
2 sense of the word.

3 We might not like this concept, because  
4 we're pretty caught up in our self-centered ways these  
5 days. We don't like it because it shrinks our  
6 importance. It makes it clear that we are a segment of  
7 the stream of history, we are not the stream. It makes  
8 our obligations to the future unmistakably clear. What  
9 we choose is what they get. Yet how could it be  
10 otherwise in a republic like this? We belong to, by  
11 this concept of the Fathers', we belong to the same  
12 people that the Revolutionary generation belongs to.  
13 We sit in the audience that Lincoln spoke to at  
14 Gettysburg. We are connected to the past and to future  
15 Americans by, I use an old Irish statesman's words  
16 here. He says "By ties that are as light as air, yet  
17 bind us like iron." Those ties. Those obligations to  
18 our future. They are woven into the fabric of our  
19 democracy. That's why elders plant trees, knowing  
20 they'll never sit in the shade. Stripped to  
21 essentials, this issue isn't complex after all.  
22 Powertech's mining plans threaten the groundwater  
23 that's sustained the civilization and the society of  
24 the northern plains. We have an obligation to do what  
25 we can to prevent that from happening.

1 (Applause.)

2 CHAIRMAN FROEHLICH: Dr. Liliias Jarding,  
3 please.

4 DR. JARDING: Hello, my name is Liliias,  
5 it's L-I-L-I-A-S, Jarding, J-A-R-D-I-N-G. I want to  
6 thank you for being here. I live in Rapid City. My PhD  
7 is in Political Science, with a focus on environmental  
8 policy. I started doing research on the uranium  
9 industry 35 years ago. My comments involve all the  
10 contentions at issue in this proceeding.

11 I look at the licensing process from a  
12 policy standpoint, and I was taught to analyze  
13 policies using a number of criteria. One of these is  
14 that a good policy is fairer, that is, that it impacts  
15 all stakeholders in a relatively equal manner. Another  
16 is that a good policy is transparent. That is, that  
17 members of the public and decision-makers have easy  
18 access the information they need to make a quality  
19 analysis of the situation. A third is that a good  
20 policy is economically sound. That is, that most  
21 stakeholders have a reasonable expectation of not  
22 being negatively financially impacted. You are the  
23 policy-makers this week. I ask you to make a decision  
24 that is, among other things, fair, transparent, and  
25 economically sound.



1 I will discuss the second policy criterion  
2 first, that a good policy is transparent. Key  
3 information that goes particularly to contentions  
4 three and six has become available since the license  
5 was issued in April. This information belongs to the  
6 Applicant, and the Applicant has so far refused to  
7 turn it over to you or to the public. It provides  
8 geological information that goes directly to the heart  
9 of the decisions you are making in contention three,  
10 is it safe to mine here, and in contention six, can  
11 water impacts be mitigated. Until these very basic  
12 questions are answered, the board should not make a  
13 decision, because it cannot make good policy through  
14 no fault of its own.

15 As for the first criterion, fairness,  
16 there are a number of issues. I will focus on  
17 contentions 1A and 1B. Failure to consult all  
18 interested tribes within a government-to-government  
19 relationship under existing treaty, tribal, and  
20 federal law, and failure to meet the requirement  
21 regarding protection of cultural resources would place  
22 an unfair burden on indigenous nations. This would  
23 violate the criterion of fairness. It would also  
24 violate the principle of equal protection under law.

25 The third criterion is economic soundness.

1 This policy consideration is linked to contentions 2,  
2 3, 4, 6, and 9. The application soft-pedaled the  
3 impact under contention four in its application,  
4 saying it would use 4,000 gallons of water per minute,  
5 when its state applications are for 9,000 gallons per  
6 minute. If the project proceeds, this is the amount of  
7 water that it would control understate permits. The  
8 board should not be fooled. The applicant wants to use  
9 substantially more groundwater than is used by Rapid  
10 City, the largest city in western South Dakota, with  
11 only one company directly benefitting.

12 To focus on contentions two and three, if  
13 the good water quality that immediately surrounds the  
14 area to be mined is not maintained, the least that  
15 will happen is that nearby ranchers will have to spend  
16 hundreds of thousands of dollars digging new, deeper  
17 wells. This cost to these local businesses would  
18 benefit a foreign company. This is not economically  
19 sound.

20 Contentions six and nine look at the long  
21 term. If you do not look at all connected actions over  
22 the long term, you will not consider the full impacts  
23 of the proposed mine, or the full costs of mitigation.  
24 I've been familiar with the uranium industry for many  
25 years. I know its history. And its history is one of

1 leaving a large amount of contamination that is  
2 difficult or impossible to clean up, and of the  
3 companies who earned money off the mines going  
4 bankrupt or using corporate maneuvers to avoid  
5 responsibility. Clearing up uranium mill tailings has  
6 already cost taxpayers well over two billion dollars,  
7 and there is not full mitigation. While the  
8 application will tell you that this would be a new,  
9 modern mine, the new modern in situ mines also have  
10 problems. Long term impacts are poorly understood, and  
11 scientists differ about them, because in situ leach  
12 mining is only a few decades old. It is not  
13 economically sound to license a project when the costs  
14 of mitigation are poorly understood, and one company  
15 would benefit to the detriment of the majority.

16 For the reasons I ask you to support the  
17 Oglala Sioux tribes and the Consolidated Intervenors  
18 contentions, and to strike down the license for this  
19 proposed project. Thank you.

20 (Applause.)

21 CHAIRMAN FROEHLICH: Nancy Gregory.

22 MS. GREGORY: I'm going to adjust the  
23 microphone. Is that okay? It's easier.

24 Hi. My name is Nancy Gregory, N-A-N-C-Y G-  
25 R-E-G-O-R-Y, and I welcome you to the Black Hills, and

1 I would urge you with all my heart to go out to the  
2 mining site. It's a beautiful area. I've been spending  
3 a lot of time there recently, and I'm just begging you  
4 to go there.

5 I have a masters degree in secondary  
6 education, and I'm a retired international educator.  
7 I've been here for the last two and a half years. The  
8 ten years previous to that, I was married to an  
9 exploration geologist, and we lived on three  
10 continents. While we were living on various mine  
11 sites, I became quite concerned at how mining  
12 wastewater contaminates birds and animals. I have seen  
13 arsenic poisoning from liquid waste up close and  
14 personal as I waded into a pond to rescue a fish eagle  
15 and cormorant who both later died. My friend, a  
16 biochemist, made me swear that I would never put  
17 myself at such risk from poisoning ever again.

18 I did do it again, as I pulled a baboon  
19 carcass out of a stream that we thought was not  
20 contaminated. The bodies began to pile up.

21 The National Audubon Society just released  
22 the hideous figures on how many migrating birds could  
23 be contaminated from one waste pond. 1600 ducks in one  
24 night in a oil sands pond in Alberta.

25 Mitigation contention six. I do not want

1 to find birds dead or unable to reproduce due to  
2 increased selenium. Selenium is a known byproduct of  
3 ISL mining. According to the US Fish and Wildlife  
4 Service report, from an ISL mine in Wyoming in  
5 September 2000, and it bioaccumulates in grasshoppers.  
6 We had, and may still have, greater  
7 sage grouse in that area, and their babies feed on  
8 grasshoppers feed along with all the other upland game  
9 birds. It's also more than possible that a whooping  
10 crane could fly over the area and stop in one of the  
11 ponds already there. We were on their migration path.  
12 They often mix with sand hill cranes, who fly over us  
13 two time a year.

14 On a recent site visit, we witnesses  
15 several ducks and other shore birds at a pond off  
16 Elbow Canyon Road, directly in the middle of the  
17 orebodies, very near the proposed plant site.

18 Contentions 14a and b. No one knows what  
19 the birds, black-footed ferrets, and the about to be  
20 listed by US Fish and Wildlife Service northern  
21 long-eared bat, might do. The bats, we know, are  
22 already resident at Jewel Cave National Park, quite  
23 close as the crow flies. We do not know where they  
24 might go by chance. We know that they love forests,  
25 and they also like to drink from ponds and hunt

1 insects while flying over the same. We definitely need  
2 a further search of the area, focusing on the search  
3 for greater sage grouse, black-footed ferrets,  
4 northern long-eared bats, and whooping cranes in  
5 migration. We need more details about how selenium,  
6 the ISL byproduct from other uranium mines, affects  
7 all creatures. I would like at this time to entered  
8 the northern long-eared bat, soon to be listed as an  
9 endangered species, October 2014, status into the  
10 formal record, listing from US Fish and Wildlife  
11 attached. I would like to further address an  
12 additional topic, contention three, that you are  
13 allowing us to speak about. The movement of  
14 underground water through aquifers, a vitally  
15 important resource for humans and wildlife alike. When  
16 I was living in the West African country of Mali, at  
17 a very remote gold mining site, we became interested  
18 in reports of diamonds found in breccia pipes some  
19 kilometers from us. We organized a crew of exploration  
20 geologists along with a prominent  
21 Malian geologist who had mapped this very area of  
22 breccia pipes.

23 We took a very long and dangerous trip to  
24 see the diamonds, kept in Bic pen lids by the  
25 villagers. And the pipes from which they had come when

1 our Land Rovers became severely stuck.

2 I learned a lot about breccia pipes on the  
3 ground and in theory. Lo and behold they showed up  
4 again as a topic of interest in geology of the Black  
5 Hills by Lufkin, Redden and Loomis, et al. I'm  
6 quoting:

7 "The breccia pipes permitted the transfer  
8 of water from deeper aquifers to shallow aquifers when  
9 erosion produced topography similar to the present.  
10 This upward transfer of water occurs at Cascade  
11 Springs, a few miles south of Hot Springs, where large  
12 springs emerge in the Opeche formation. However, the  
13 chemistry of the water and included sediment indicate  
14 that the water is also moving through the Minnelusa  
15 formation, but comes from the deeper Papasapa aquifer  
16 (Hayes 99) so the leaking process is still taking  
17 place." End quote.

18 It has been documented that there are  
19 breccia pipes within the proposed mining site. These  
20 reach from the Minnelusa aquifer up into the Inyan  
21 Kara aquifer, even through otherwise impermeable rock  
22 layers.

23 I want you to understand that we do not  
24 know what will happen with the injection of wastewater  
25 into in situ wells in this process. The

1 Rapid City Council even voted to contest the mine.  
2 This is our drinking water. It is our life, the blood  
3 of our communities, both animal and human.

4 (Applause.)

5 CHAIRMAN FROEHLICH: Cathy Sotherland.

6 MS. SOTHERLAND: Hi, I'm Cathy Sotherland,  
7 and that's spelled C-A-T-H-Y, Sotherland is S-O-T-H-E-  
8 R-L-A-N-D. And I thank you for taking the time to hear  
9 our concerns, and we are concerned. We're talking  
10 about our water. One of my biggest concerns with all  
11 of this is it seems like there are no new baselines  
12 for the water tests, in theory they're planning to  
13 mine, and there are neighboring wells. We routinely do  
14 not test for these byproducts of mining, so it would  
15 be important, before you take them seriously, to have  
16 them provide baselines. We will never know if we're  
17 being contaminated if we don't have that basic  
18 information. And then they should be obligated to  
19 provide ongoing tests throughout their time mining,  
20 and long after. I don't think anyone can do that, but  
21 that is the only way we will know.

22 They have, Powertech has taken the time to  
23 make sure that we will not have state oversight. They  
24 have very carefully made sure that they're covered. In  
25 2011 we had Senate Bill 100-45, and that pretty much



1 took out any state oversight. They claim it's doubling  
2 up on what you and the EPA will be overseeing. The  
3 truth is, when in situ mines have produced violations,  
4 it was only the local level and the local monitoring  
5 that observed and called them on it. So they're  
6 covering themselves.

7 They're also covering themselves this  
8 spring. SD House Agricultural Resources Committee  
9 decided to put even the most minimal restoration  
10 standards in place for in situ mining operations by  
11 rejecting the house bill, 1193. They claim they're not  
12 going to cause problems. Actually, I read a quote from  
13 Mr. Clement who, when asked by the county  
14 commissioners or one of the ranchers how he could  
15 assure them that they would not have problems, his  
16 response was that he signed something with the country  
17 commissioners guaranteeing that they will restore the  
18 quality and quantity of water. Please, if you have a  
19 chance to find out how that would happen, please get  
20 that information for us, because I have a hunch we  
21 might need that.

22 The other contention I have is in this  
23 area we have got some petroglyphs and pictographs that  
24 go back to 12,000 years ago. And some of those were  
25 being nominated for the National Register several

1 years ago. So I please ask you, we have a unique  
2 situation. That area alone has some of the most  
3 concentrated aboriginal art in North America. It's  
4 right in the sandstone area where much of this  
5 activity will go on. So please, we will be people  
6 without a voice, no way to really monitor it, and we  
7 hope that you will take that into consideration when  
8 you hear their plans for our future. Thank you again  
9 for your time.

10 (Applause.)

11 CHAIRMAN FROEHLICH: Suzan Nolan, please.

12 DR. NOLAN: Hello. My name is Suzan Nolan.  
13 It's spelled S-U-Z-A-N -O-L-A-N, and I feel like I'm  
14 a football field away from you. I'm not used to  
15 addressing a group at such a distance, so I hope we  
16 can create some kind of communication between us here.

17 I bow to your expertise. You clearly are  
18 the scientists who have come from afar to hear  
19 testimony from these brilliant people who have come to  
20 tell you what they think about this uranium mining  
21 issue. I am not a geologist. I am not a hydrologist.  
22 And I know very little about extractive industries.  
23 What qualifies me to stand here before you is I was  
24 born in this town. I grew up in this area. And my  
25 background is working with children. I have a

1       doctorate degree from the University of South Dakota,  
2       where I have worked in the public schools with  
3       children from pre-kindergarten to graduate school, and  
4       that's the context about which my comments will deal.  
5       I learned some things from these little people and  
6       these big people as a person who was hired by the  
7       school to work with them, many of them having behavior  
8       issues, many of them feeling totally disconnected from  
9       themselves, and one of the things I learned from  
10      children was that if we allow them the opportunity to  
11      develop an interim compass, a conscience, a center  
12      from which they make decisions that's based internally  
13      rather than looking outside themselves, they do over  
14      the long term tend to be solid, well-grounded, well-  
15      thought people.

16                 And with that internal kind of compass,  
17      that children can develop in our schools from the  
18      support of communities and their parents, it naturally  
19      follows that what happens is that children begin to  
20      care about one another. They begin to care about their  
21      community. They begin to feel a sense of connection to  
22      themselves, to their community, and to their earth. To  
23      this earth, this planet that supports us all.

24                 You have heard from people much more  
25      articulate and more knowledgeable about science than

1 I will ever be, about the interconnection of all  
2 things, that people who come to our community, and you  
3 are experts because the expert, the definition is, you  
4 know, somebody who comes from 50 miles out of town,  
5 people who come to our community to say "Let's mine!  
6 Wow, what a great idea! We can make a lot of money!  
7 It'll be great for our communities. It'll be good for  
8 everybody. Ah ha!"

9 (Applause.)

10 They got us. Let me get my train of  
11 thought, I was kind of on a roll there. Let me reboot  
12 here.

13 So those people who come from, first it  
14 was Canada, now Powertech is owned by China, to say  
15 "Let's do this in this community, let's create this  
16 big economic boon," haven't lived here. They haven't  
17 loved here. They haven't raised children here. They  
18 are not us. And what I have come here today to talk to  
19 you about is Lindsey and Sheridan Browning, my  
20 grandchildren. They love to play in the outdoors, they  
21 love to look under rocks, they love to swim in the  
22 waters, they love to look in the trees and hear the  
23 meadowlarks in the morning.

24 All that happens over on the  
25 Dewey-Burdock. I drove by that yesterday. The grass is

1 high. It's starting to get that fall color that  
2 grasses do. It's a beautiful area. I want my  
3 grandchildren to be able to enjoy that area. And the  
4 Native Americans taught us, when we make decisions,  
5 make them with seven generations ahead, how this will  
6 affect. Lindsey and Sheridan will inherit the decision  
7 you make. I say to you today that when you make this  
8 decision about something that my grandchildren and my  
9 great-grandchildren will have to deal with, look at  
10 the science, look at what Powertech tells you, but  
11 above all, look at the values and the spirit and the  
12 people who will continue to live in this area.

13           And I saw the number come up that I have  
14 just a moment left. I want to say, too, thank you for  
15 coming. It is not lost on me nor is it lost on other  
16 women in this audience, that you have no women on your  
17 board. I am a delegate to the United Nations  
18 Commission on the Status of Women. Do you think that  
19 we would go there and make decisions with all men? I  
20 think not. So I would like you to think about that  
21 too, that when you make decisions, when you make  
22 boards, that you also include the women in this  
23 decision-making. Thank you very much for being here.

24           (Applause.)

25           CHAIRMAN FROEHLICH: Cindy Turner, please.

1 MS. TURNER: Can we have a potty break?

2 CHAIRMAN FROEHLICH: In about five minutes.

3 MS. TURNER: Before or after me?

4 CHAIRMAN FROEHLICH: Ms. Turner, please.

5 MS. TURNER: Just checking. Mr. Chairman  
6 and members of the board, I am Cindy Turner, that is  
7 C-I-N-D-Y T-U-R-N-E-R. My family has owned property,  
8 and has been a part of the southern Black Hills since  
9 1926, and I have been a resident of Edgemont for 11  
10 years. I am a member of numerous organizations, and  
11 sit on boards of many who promote good, conscientious  
12 economic development within the Black Hills. One of  
13 those organizations is the Southern Hills Economic  
14 Development Corporation known as SHEDCO, which serves  
15 all of the Fall River County. SHEDCO has members from  
16 the Southern Black Hills, which, and communities, and  
17 works very hard to promote a business-friendly  
18 atmosphere and economic development for this beautiful  
19 part of the southern Black Hills.

20 While doing their due diligence around the  
21 Dewey-Burdock project, SHEDCO invited USGS  
22 representatives, a South Dakota DNR representative, as  
23 well as an economic development expert to Hot Springs,  
24 to present their findings surrounding this project.  
25 This meeting was held in a public setting to allow

1 anyone interested in them to come and attend, and to  
2 speak with them afterwards after their presentation.

3 After listening to the presentations of  
4 those who are extremely familiar with this project,  
5 SHEDCO heard nothing detrimental. At that time they  
6 chose to adopt a resolution supporting the Dewey-  
7 Burdock project. After consideration of the  
8 contentions in this upcoming hearing, I hope you will  
9 dismiss them and let this project move forward. It  
10 will be good for our community, and for the entire  
11 Southern Hills. Thank you very much.

12 CHAIRMAN FROEHLICH: Thank you. We will  
13 take a 10 minute potty break, and please come back  
14 promptly. We would like to hear from as many folks as  
15 we possibly can today. Take ten minutes.

16 (Whereupon, the above-entitled matter went  
17 off the record at 11:53 p.m. and resumed at 12:07  
18 p.m.)

19 MS. PETERSON: I am Sarah Peterson, good  
20 morning, good morning to the NRC justices and welcome  
21 to our beautiful home.

22 (Off-mic comments)

23 MS. PETERSON: Thanks. Good morning, NRC  
24 judges. I think it's afternoon right now, and welcome  
25 to our beautiful home. My name is Sarah Peterson,

1 that's S-A-R-A-H P-E-T-E-R-S-O-N. I moved to Hot  
2 Springs 12 years ago from the Denver area because of  
3 the abundant and pristine artesian spring water. Our  
4 water is our greatest natural resource, as it supports  
5 all life in this part of the state. I am speaking to  
6 contentions two and three this morning.

7 The second contention states the FSEIS  
8 fails to include necessary information for adequate  
9 determination of baseline groundwater quality. My  
10 concern is that with no recent baseline water studies  
11 on record, how will there be a baseline data to be  
12 used to compare to post-ISL mining to determine  
13 contamination levels? The FSEIS only speaks about the  
14 water in the Dewey-Burdock area as already being  
15 contaminated by uranium mining from the 60s and 70s  
16 which has not been mitigated. How can the water be  
17 returned to baseline if there is no recent baseline?  
18 For the ranchers in the Dewey-Burdock area who have  
19 groundwater wells, the only way to get baseline, a  
20 baseline of their water, is to pay for the testing  
21 themselves. This is a relatively poor part of our  
22 state, and coming up with the money to get well water  
23 tested is not reasonable for most people living in  
24 Fall River and Custer counties.

25 The EPA reports water has never been



1 returned to baseline after ISL mining. The third  
2 contention states that the FSEIS fails to include  
3 adequate hydrogeological information to determine a --  
4 I just went out.

5 (Off-mic comment)

6 MS. TURNER: This third contention is the  
7 FSEIS fails to include adequate hydrogeological  
8 information to determine ability to contain fluid  
9 migration and assess potential impact on the  
10 groundwater. This is our water. The water -- this  
11 keeps going out.

12 (Off-mic comment)

13 MS. TURNER: The water, particularly in  
14 this part of the country, is life. We do not have any  
15 high mountain runoff annually to collect, nor we do  
16 have any large natural lakes. Our only sources of  
17 water are aquifer, our only sources of water are  
18 aquifers, groundwater, and surface water. The latter  
19 two dry up during drought years, which has been all  
20 but the last two years since 2002. Hot Springs has 168  
21 pristine artesian springs in the valley, and that is  
22 the only constant water --

23 (Off-mic comment)

24 MS. TURNER: Okay, can I start again? Sir,  
25 can I start again?

1 (Off-mic comment)

2 MS. TURNER: Our only sources of water are  
3 aquifer, our only sources of water are aquifers,  
4 groundwater, and surface water. The last two, the  
5 latter two dry up during drought years, which has been  
6 all but the last two years since 2002. Hot Springs has  
7 168 pristine artesian springs in the valley, and that  
8 is the only constant water source we have. This is our  
9 town's drinking water, and it is what makes this town  
10 so lush. The river never freezes in the winter, due to  
11 the warm springs. Watercress only grows in pristine  
12 water, and it grows year-round here. We have been  
13 designated by the National Tourism Council as a  
14 distinct destination, because of our artesian springs  
15 and sandstone architecture.

16 Dewey-Burdock is a high desert, which has  
17 been, which has some wetlands, but not the constant  
18 river running through it. I hope you take some time  
19 to do an independent visit to the proposed ISL site  
20 while you are here and so close. I would like to  
21 present these petitions, signed by 1627 citizens. This  
22 petition expresses the concerns of the people who  
23 would be directly affected by the radioactivity and  
24 heavy metal contamination of our water, our life's  
25 blood.

1           You are in the position to protect us.  
2           United Nations declared a few weeks ago that clean  
3           water is a basic human right, in the case of the  
4           Detroit citizens getting their water turned off by the  
5           city of Detroit for non-payment. Please protect our  
6           human right to clean water. Thank you, and taste our  
7           pristine and healing water while you are here. Thank  
8           you for your time and consideration.

9                           (Applause.)

10           CHAIRMAN FROEHLICH: Thank you. This will  
11           be added to your remarks in our record. Juli  
12           Ames-Curtis, please. Yes, thank you.

13           MS. AMES-CURTIS: I don't have to put the  
14           microphone up! Hi, my name is Juli Ames-Curtis, J-U-L-  
15           I A-M-E-S hyphen C-U-R-T-I-S. First of all, thank you  
16           for coming here. My husband and I worked for the  
17           National Park Service for many years, and we lived all  
18           over the west, all over the country. He started his  
19           career in Washington DC. And we saw firsthand how what  
20           we call "the heads" from Washington DC would make a  
21           lot of decisions without coming out in the field, and  
22           not knowing how we out in the field, especially in the  
23           west, live. It's a totally different lifestyle. So  
24           thank you for coming and listening to us.

25                           I live in Custer, South Dakota, and I also

1 own a business there. I hold a Bachelor of Science  
2 degree in Resource Management and Biology. As a South  
3 Dakota citizen who will be directly and indirectly  
4 impacted by the Dewey-Burdock mine, one of my many  
5 concerns is our water quality, and how Powertech  
6 Incorporated may not be providing complete data that  
7 may be relevant to your decision to grant permission  
8 for that mine to operate. And what I'm referring to is  
9 that Powertech has not provided the Atomic Safety and  
10 Licensing Board, the ASLB, the Oglala Sioux tribe, the  
11 Consolidated Intervenors, nor the public, with newly  
12 required geological data that would impact the NRC's  
13 licensing of the proposed Dewey-Burdock uranium  
14 project.

15 The ASLB recently ordered Powertech to  
16 disclose this newly acquired geological data to the  
17 tribes, the Intervenors, and the NRC staff, stating  
18 that the data is relevant to the tribes' contention  
19 that Powertech has not provided adequate information  
20 to demonstrate the ability to contain mitigation, I'm  
21 sorry, contain migration of mining fluids. And the  
22 contention that is in question here is number three,  
23 and it's the final environmental impact statement that  
24 fails to include adequate hydrological information to  
25 demonstrate ability to contain fluid migration and

1 assess potential impacts to the groundwater.

2 The data consists of drill hole logs and  
3 maps provided by the Tennessee Valley Authority, the  
4 TVA, a Federal agency which controlled the Dewey-  
5 Burdock area in the 70s and 80s, and drilled  
6 approximately 4000 exploratory boreholes.  
7 Unfortunately, the location of a lot of these  
8 boreholes is not known.

9 The TVA also conducted three aquifer pump  
10 tests, in 1979 and 1982. This data has been disclosed.  
11 According to a 1980 report by the TVA, looked into two  
12 1979 aquifer pump tests in the Burdock area and  
13 stated, this is in quotes, the rest of this paragraph,  
14 "The aquifer test results indicate that the Fluson  
15 member of the Lakota formation is a leaky aquifer  
16 separating the Fall River and Lakota Chilson aquifers.  
17 The hydraulic communication between the two aquifers  
18 observed during the test is believed to be the result  
19 of, one, general leakage through the primary pore  
20 space and naturally occurring joints and fractures in  
21 the Fluson shale. And two, direct connection of the  
22 aquifers via numerous old, unplugged, exploratory  
23 boreholes. Whereas the former leakage mechanism is a  
24 regional characteristic of the Fluson, leakage caused  
25 by the borehole short-circuiting, is probably limited

1 to the intensive uranium exploration in the Burdock  
2 vicinity."

3 Powertech, on the other hand, in their  
4 revised 2013 technical report, states that the two  
5 formations are physically and hydraulically separated  
6 from each other by the Fluson shale. Each separation  
7 is critical to be able to effectively contain mining  
8 fluids and take corrective actions and stop  
9 excursions.

10 We're getting a little bit of decisions  
11 and reports that are opposed to each other. And which  
12 one do we look at? What is the question is whether all  
13 the pertinent historic and current geological data is  
14 being made available to all the parties who have  
15 vested interest in this project. It seems to me that  
16 the question has not been answered in a positive way.  
17 It appears contention three is still being unresolved.  
18 If Powertech cannot be up-front from the start of this  
19 project, how can we as concerned citizens be  
20 comfortable with the future of our water quality in  
21 the Black Hills? Thank you.

22 (Applause.)

23 CHAIRMAN FROEHLICH: Thank you. Roland Paul  
24 Nabholz?

25 MR. NABHOLZ: Good afternoon. My name is

1 Paul Nabholz, the name is P-A-U-L- -N-A-B-H-O-L-Z. My  
2 family and I have lived in Fall River County for 20  
3 years. I've been a profession engineer for 25 years,  
4 and I've built fracture flow models at Los Alamos  
5 while working on the hot dry rock geothermal project,  
6 and worked in the offshore oil extraction and  
7 exploration industry in the 80s and 90s. I was the  
8 drilling engineer in the National Science Foundation  
9 drill ship the JOIDES Enterprise, or the JOIDES  
10 Resolution, doing geologic research worldwide, and I  
11 have designed various fluid and piping systems. I  
12 drilled my own water well into the Inyan Kara, and  
13 have installed residential solar, electric, and  
14 heating systems.

15 In recent years I've presented at  
16 professional conferences on water pollution risks and  
17 renewable energy. I support the Powertech project for  
18 three reasons. First, largely thanks to the watchful  
19 eye of the environmentalists, Powertech will mine in  
20 a far safer manner than companies do in third world  
21 countries. Second, because we import 80 to 90 percent  
22 of our uranium, mining here supports our energy  
23 independence, and third, we need industries to provide  
24 good jobs for young men and women.

25 There's been a great deal of

1 misinformation in the attack on this in situ project.  
2 It simply isn't true that billions of gallons of pure  
3 water will be destroyed or shipped out of state. Water  
4 at the mining location is generally not fit to drink  
5 today, and in the mining process the water will be  
6 repeatedly recycled and finally injected into another  
7 aquifer or surface supply. Much of the surface supply  
8 water will evaporate, and like that from our lakes or  
9 fields of corn, will fall as rain.

10           Baseline values are held up as something  
11 that must not be allowed to change after mining. But  
12 why? Baseline values are a useful reference, but water  
13 in the mining area is already contaminated with  
14 uranium and daughter products, while downdip of the  
15 mining area it is again fit to drink. After mining,  
16 the water up and downdip will still be fit to drink,  
17 and unless you remove every speck of uranium from the  
18 mining area, it will still not be fit to drink, just  
19 as it is not fit to drink today. Baseline values are  
20 a rough guideline. Numbers can change based on  
21 location, sampling methods, laboratory methods, and  
22 over time. It is more important to know whether the  
23 water is suitable for consumption than whether a  
24 particular compound or element is 50 percent or 200  
25 percent of baseline.



1           Finally, the proposition that mining near  
2 Edgemont will result in uranium pollution in Hot  
3 Springs or Rapid City is absurd. Long-established  
4 potential metric lines show that the water in the  
5 Inyan Kara travels downhill, to the southwest, away  
6 from both cities. Until the law of gravity is  
7 repealed, we won't have that problem. Uranium will be  
8 mined on this planet. I believe America is the safest  
9 place to mine it. The environmentalist movement has  
10 helped ensure that this is the case. The United States  
11 is at the forefront of knowledge and innovation, but  
12 to stay there, our children must be educated, and must  
13 be allowed to innovate. In situ mining is an example  
14 of just the sort of innovation we need. If we banned  
15 every potential innovation that might have some  
16 element of risk, we would have no airbags, no  
17 vaccines, or no solar electric panels, and if we ban  
18 every innovation today, we will lose those future  
19 generations of engineers, innovative minds we need to  
20 meet the needs of society while safeguarding the  
21 environment. Thank you for your time.

22           CHAIRMAN FROEHLICH: Keith Andersen,  
23 please.

24           MR. ANDERSEN: My name is Keith Andersen,  
25 it's K-E-I-T-H A-N-D-E-R-S-E-N. Thank you for the

1 opportunity to visit with you this morning. I'll be  
2 speaking in support of the Powertech Dewy-Burdock  
3 project. You have heard from quite a few others, and  
4 you'll hear form more, that are offering comments that  
5 I believe are in the most sincere, in some cases  
6 emotional, and from your perspective where you're  
7 sitting today, you'll be evaluating those folks who  
8 speak before you to get a sense of their perspective  
9 that they bring to this issue, their personal interest  
10 in the issue, and any specific knowledge they may  
11 have. I'd like to share with you just a bit of my  
12 perspective on this issue.

13 I presently ranch two miles southwest of  
14 Burdock, with my wife and family. If you're familiar  
15 with the hydrogeology at all, you know that we are  
16 directly downgradient of the Dewey-Burdock orebody.  
17 This ranch was established by my grandmother's uncle  
18 in 1913. Presently we have six Inyan Kara wells on our  
19 ranch that we rely on for drinking water and for stock  
20 water. Personally, I have been drinking water from the  
21 Inyan Kara well at the ranch since 1952. We raised  
22 four kids drinking that water, and today my grandkids  
23 enjoy the time the spend out there playing in the  
24 water as well.

25 Another perspective I bring to this issue

1 is I am a professional engineer licenced in South  
2 Dakota, Wyoming, and Nebraska. It was of some interest  
3 to hear the previous speaker talking about the  
4 Tennessee Valley Authority project. In 1976 I was  
5 hired as the hydrologist on that project. I worked  
6 there form 1976 until 1989. I started as hydrologist,  
7 became the chief engineer, and ultimately was the  
8 assistant project manager. While at the Dewey-Burdock  
9 project for the Tennessee Valley Authority we  
10 conducted extensive hydrogeologic investigations to  
11 make a determination as to the characteristics of the  
12 Inyan Kara as an aquifer, how the groundwater moved in  
13 that formation, and how we could model and predict the  
14 effects of mining in that formation. We actually  
15 conducted four aquifer tests in the Inyan Kara during  
16 my time there. We constructed 28 piezometer wells to  
17 monitor the response of the aquifer to pumping, and I  
18 was involved in and responsible for the analysis of  
19 the data from those aquifer tests. In addition, part  
20 of what we did to characterize the existing use of the  
21 Inyan Kara in that area, we created a database of all  
22 existing Inyan Kara wells within 25 miles of the  
23 Burdock orebody. We monitored those wells on a  
24 quarterly basis, measuring flow rates, depth to water,  
25 and the use of the water.

1           For about 80 of those wells, we also  
2 conducted quarterly analysis for groundwater quality.  
3 All of this data has been provided to South Dakota  
4 DENR at that time. It's the most extensive database on  
5 the use of the Inyan Kara that I believe exists.

6           I guess you may wonder why did I take the  
7 time from my day to speak before you, and I guess I  
8 would just say, we enjoy the fact that the room is air  
9 conditioned, we enjoy the lights, all that is the  
10 result of either burning hydrocarbons, damming rivers,  
11 or nuclear power. Those that think that we can supply  
12 that electric need today with the use of solar or wind  
13 are unfortunately living in dreamland. I guess if I  
14 could just paraphrase a quote from Edmund Burke, maybe  
15 to explain why I'm hear today, is all that's required  
16 for fear and misunderstanding to prevail in the world,  
17 is for people of knowledge to remain silent. Thank  
18 you.

19                   CHAIRMAN FROEHLICH: James Petersen,  
20 please.                   MR. PETERSEN: Good morning, and  
21 welcome to the beautiful Black Hills of South Dakota.  
22 My name is James Petersen, P-E-T-E-R-S-E-N. It's our  
23 hope here that you'll take some time and the  
24 opportunity to tour the Black Hills and understand  
25 firsthand why we stand here before you today to

1 protect our land and our water from encroachment by a  
2 Chinese based company hell-bent on cashing in on our  
3 natural resources regardless o the possibility of  
4 devastating effects to our environment and our  
5 livelihoods.

6 I'm a retired military officer, Marine  
7 Corps, so I've lived many places around the world, but  
8 I've called Rapid City home for 25 years. And since  
9 retiring 12 years ago, I've normally spent 3 or 4  
10 months a year overseas, working pro bono on  
11 environmental impact projects.

12 For example, last year I was in India for  
13 5 months leading a project to provide safe drinking  
14 water to Tibetan refugees in the lower Himalaya. But  
15 no matter where I find myself, the problems I confront  
16 always seem to involve water in some way. Its misuse,  
17 its shortage, or the lack of foresight to take care of  
18 it before a crisis arises. There are so many aspects  
19 to the Powertech proposal, or Zera, or whatever  
20 they're calling themselves this morning, that give me  
21 grave concern, but in the interests of time, I will  
22 only speak to two closely related contentions before  
23 you.

24 Contention number three, that the final  
25 supplemental environmental impact statement fails to

1 include adequate hydrogeological information to  
2 determine the ability to contain the fluid migration  
3 and assess potential impacts to groundwater, and the  
4 obvious segue, contention number four, that the FSEIS  
5 fails to adequately analyze groundwater quality  
6 impacts. I will very briefly address why we can't  
7 agree with the agency's FSEIS analysis, that the  
8 projected impact on our water and our ecosystem  
9 surrounding the proposed mining site are correct.

10 First, let me re-emphasize, as so many  
11 people have, that in situ mines have been unable to  
12 reclaim their sites to baseline post-mining period, no  
13 exceptions. And this doesn't even consider, and this  
14 is most important, the downgradient migration of the  
15 toxic plume underground, a process which has been  
16 grossly under-investigated as I see it, considering  
17 the possible catastrophic effects on local environment  
18 and economies.

19 The operators always, always, no  
20 exception, petition to relax the benchmarks agreed to  
21 in the original permitting process. For example, in  
22 Wyoming, Cameco recently applied, as you know, for  
23 greater, relaxed groundwater restoration standards at  
24 Mine Unit B of Smith Ranch-Highland. COGEMA, also in  
25 Wyoming, also recently sought approval for reduced

1 groundwater restoration numbers of the Christensen  
2 Ranch in situ leach site, and this, with uranium  
3 levels still at 27 times the target restoration value  
4 and up to 128 times drinking water standards.

5 An examination of 32 permits for close  
6 South Texas in situ mine sites show that in every  
7 case, every case, companies were permitted minerals  
8 such as uranium, molybdenum, and selenium at levels  
9 much higher in groundwater than they listed in their  
10 original permits. In some cases, companies were able  
11 to restore targets to one or two minerals, but then we  
12 quoted ten and 20 times, 20-fold increases in others.  
13 Very common.

14 These are not abstract concepts. These  
15 decisions that boards like you make have direct  
16 influence on real people. I've got relatives down in  
17 South Texas who have been living through a drought for  
18 years, at the same time that the company at the  
19 Kingville Dome in situ reclamation site are using  
20 hundred of millions of gallons of precious water for  
21 the same dilution-is-the-solution restoration process  
22 proposed at Dewey-Burdock. And to no avail, I might  
23 add, because the bad numbers seem to be increasing  
24 year after year instead of decreasing at the  
25 restoration process continues.

1           But then, what do you do? Drought or no  
2 drought, the mining company was granted the water  
3 rights, just as Powertech is requesting rights to  
4 9,000 gallons of water per minute, more than all the  
5 80,000 people and all the businesses in the Rapid City  
6 Service Area use combined.

7           The history of in situ uranium mining  
8 makes a mockery of the very permitting process we are  
9 engaged in, because not once, not once has a mining  
10 company lived up to the restoration promises that they  
11 made at the outset. And once again, this speaks only  
12 to what we know. The baseline values in the immediate  
13 mining area, and not the long-term effects  
14 downgradient as the toxic plume migrates in the  
15 aquifer in an unknown and unmonitored fashion.

16           I want to call your attention to an annual  
17 event here in the Black Hills, the Western South  
18 Dakota hydrology conference, organized every year by  
19 the USGS, attempts to showcase the latest scientific  
20 research in the earth sciences. It has long been the  
21 venue where research from our best and brightest from  
22 the School of Mines in Rapid City, South Dakota, could  
23 be presented. However, in April this year, the  
24 conference was dominated, as it has been for the last  
25 couple of years, by Powertech. Their lawyers, their



1 lobbyists, their project managers, their paid  
2 consultants. They had a huge cake to celebrate the  
3 operating permit that the NRC had just issued to them  
4 the week before. They had expensive giveaways: hats,  
5 coffee mugs. But what they didn't have to offer was  
6 unbiased science.

7 My friend Dr. Perry Rahn, who has taught  
8 geology and geological engineering at the School of  
9 Mines for 35 years, and whose list of published works  
10 and research runs for 16 pages on his resume, gave a  
11 short but compelling talk at the conference. As you on  
12 the board well know, nearly all aquifer modeling test  
13 methods are based on the Thea solution, which in turn  
14 is built upon very simplified assumptions. Other  
15 methods relaxed one or more of these assumptions, and  
16 that makes for many different choices of models,  
17 depending on what factors are deemed important. And  
18 therefore, one can get a more flexible result. Dr.  
19 Rahn used this method, and data from two pumping  
20 tests, at the proposed in situ uranium site at Dewey  
21 Burdock to provide hydrology, excuse me, hydraulic  
22 conductivity data. This data, along with the  
23 prevailing gradient, were used to estimate the  
24 groundwater velocity in the aquifer. This math model  
25 indicated the range from approximately 12 feet per

1 year in the Fall River formation, and 140 feet per  
2 year in the Chisholm formation below. Thus, the median  
3 groundwater velocity for these two sandstone  
4 formations in the Inyan Kara aquifer group, would be  
5 approximately 66 feet per year. That's what the math  
6 model says. However, Dr. Rahn also pointed out in his  
7 lecture that literature review showed an actual  
8 groundwater velocity determination of not 66 feet per  
9 year, but 5,480 feet per year in the Inyan Kara group  
10 near the Dewey-Burdock site, which is based on a 1963  
11 tritium data and the research of Gott et al. He  
12 concluded, Dr. Rahn concluded, that this actual field-  
13 tested value, 90 times, 90 times the theoretical  
14 computer modeling value, must surely indicate that  
15 fast groundwater movement moves through very permeable  
16 units or through fractures.

17 Powertech's paid consultant at the  
18 conference totally discounted the actual hard data,  
19 and even dismissed Dr. Rahn's modeling numbers as too  
20 high, insisting that his math modeling had produced  
21 the correct data for Powertech. Maybe for their PR  
22 needs, I would say, but the science is questionable to  
23 say the least.

24 So the question is, why is this important?  
25 Because a critical environmental consideration

1 following the abandonment of this proposed uranium  
2 mine is that the groundwater plume created will  
3 migrate downgrade and most likely will contain a high  
4 concentration of dissolved uranium with daughter  
5 elements, radium, radon, as well as selenium and other  
6 heavy metals, while the rate of movement of these  
7 metals would obviously be somewhat less than  
8 groundwater velocity, because the retardation effects  
9 associated with geochemical reactions and oxygen  
10 reduction, still, a rate of over a mile a year, which  
11 the direct empirical evidence indicates, speaks to a  
12 real problem for our potable water.

13 That Powertech glosses over such data does  
14 not speak well for their scientific impartiality.

15 The most compelling presentation made at  
16 that conference was made by Dr. James Stone, who is  
17 currently involved in a major, 350,000 dollar study,  
18 funding, excuse me, funded by the state of Wyoming at  
19 the Smith Ranch-Highland in situ site in Wyoming. He  
20 is investigating in situ recovery uranium mining  
21 restoration challenges and specifically addresses the  
22 post-mining plume and its impact on public health and  
23 resources. This is perhaps the most comprehensive  
24 research on this issue to date, and its preliminary  
25 conclusion is that regulatory bodies would be foolish,

1 not my word, his word, foolish to issue operating  
2 permits for in situ operation without demanding a  
3 comprehensive and scientifically supportable  
4 resolution to the post-mining plume problem, rather  
5 than, as in the Powertech case, some wishful thinking  
6 that oxygen reduction zones would solve the problem  
7 naturally, a conclusion promoted by Powertech, but  
8 totally unsupported by current demonstratable science.

9 We care very much about what becomes of  
10 that witch's brew in that plume, because some of our  
11 children and our grandchildren will live downgradient  
12 of that site, of the mining operation, that this  
13 Chinese-funded company proposes, a company that has  
14 zero, zero concern for their well-being, for their  
15 future, and that won't be around to mitigate any long  
16 term problems. This is why we stand before you today,  
17 respectfully requesting you to find that the unbiased  
18 science currently available indicates that this in  
19 situ operation cannot guarantee our children's safety  
20 and well-being, and therefore, that the proposal  
21 should be denied. I'd like to thank you once again for  
22 your patience, and your willingness to listen to the  
23 people whose lives will be intimately affected by your  
24 decisions over the coming days.

25 CHAIRMAN FROEHLICH: Thank you, Mr.

1 Petersen. Kevin Lockhart, please?

2 MR. LOCKHART: Good afternoon. Kevin  
3 Lockhart, spelled K-E-V-I-N L-O-C-K-H-A-R-T. I want to  
4 thank you gentlemen for coming and listening to us  
5 today, and most of all I want to extend my gratitude  
6 to the Oglala Sioux Tribe and its representatives here  
7 today, as well as the rest of you concerned for common  
8 sense measures, and the safety of the people near this  
9 mine and downgradient of this mine, and extending  
10 across South Dakota. My heritage spans centuries in  
11 this area. As a member of the Rosebud Sioux Tribe,  
12 Oglala's neighbors, as well as other side of my family  
13 homesteading for over a century across the Black Hills  
14 area, the southern hills area.

15 Many of you have presented here today with  
16 scientific and factual, very factual information, and  
17 I just want to thank you for that, as well as from a  
18 human perspective, from trying to protect life itself,  
19 because that life is in that water. I have particular  
20 concerns with this mining process, as any  
21 repercussions from it, the consequences from it, are  
22 lethal. And I do not believe that there are measures  
23 available to mitigate these processes as they are  
24 underground, unavailable to get your hands on it, it's  
25 all projected theories of mitigating, mitigation

1 efforts.

2 I also live downgradient, so this concerns  
3 me greatly. It's also my understanding that  
4 Powertech's parent company is a Chinese company and a  
5 foreign power, and that the products that are coming  
6 out of this mine in conflict with what one of the  
7 other speakers said, addressing energy sources. It's  
8 my understanding that this will be shipped out of the  
9 country. Once it's out of the country, whether it  
10 becomes a weapon to then come after us later, or  
11 whether it becomes energy for some other country, that  
12 is completely unavailable to us and unregulatable to  
13 us. So I strongly suggest and request that you look at  
14 it from that perspective, that we have powers in this  
15 world that oppose us, and I would not want to be  
16 responsible for feeding into that hand.

17 Also, the previous speaker was speaking to  
18 Dr. Stone from the School of Mines' research. And my  
19 son was involved in some of that research as a  
20 graduate environmental engineer, and I can concur with  
21 what he said, in Dr. Stone's statements, that the  
22 permeability and the constant that was used in the  
23 environmental impact study for the hydraulic migration  
24 is not accurate. The strata out there is highly  
25 variable. So you cannot apply a constant throughout

1 that whole area for that hydraulic migration.

2 For the people of Edgemont represented  
3 here today, I would highly implore upon you to  
4 reconsider this action. I think it was in 1977 when I  
5 was working in Edgemont, right in downtown Edgemont  
6 for the railroad, I ran into areas that were fenced  
7 off, right in their own homes, areas, with radioactive  
8 signs saying "Do not enter. Radioactive material." So  
9 this is 20 to 30 years beyond a mining process that  
10 had previously been there, and now we're talking about  
11 a different type of mining process that is all done  
12 out of your sight. Don't let the pull of the money be  
13 the thing that finds your acceptance of this process.

14 There isn't any amount of money that will  
15 be able to pay for consequences of something like  
16 that, you know, happening. There are some very, very,  
17 the most intelligent people on the planet, involved in  
18 this, as was the people that were engineering, that  
19 were the engineers behind the catastrophic failure on  
20 a space shuttle reentering Earth's atmosphere. The  
21 consequences were lethal for those people, and for  
22 their relatives, their grandchildren, their great-  
23 grandchildren. Over just one little, minute detail  
24 that got missed, and miscalculated.

25 CHAIRMAN FROEHLICH: Thank you, Mr.

1 Lockhart.

2 MR. LOCKHART: Thank you.

3 (Applause)

4 CHAIRMAN FROEHLICH: I'd like to hear from  
5 Helen Pederson, please? Ms. Pederson? Andy Johnson?

6 (Cross-talk)

7 MS. PEDERSON: Thank you for coming. My  
8 name is Mary Helen Pederson, and it's spelled M-A-R-Y  
9 H-E-L-E-N P-E-D-E-R-S-O-N. I've been sitting here  
10 observing that there has been, I'll be the 23<sup>rd</sup>  
11 speaker, there has been only four people for this  
12 mining so far that have spoken. I did not write up  
13 anything or want to give you any statistics, because  
14 has been proved here today, they have theirs, and we  
15 have ours. I'm just going to talk to you from my  
16 heart. I am extremely worried about our water, and the  
17 situation that this will bring, again, to this area.

18 I was raised on the Rosebud Indian  
19 Reservation. I left the state when I was 18 years old,  
20 and adopted Montana and did not want to leave there,  
21 until my childhood sweetheart came and asked me to  
22 marry him, and that necessitated me to move to Hot  
23 Springs, South Dakota. I also went to school, for one  
24 semester, in Edgemont, South Dakota, when I was  
25 growing up, and I always said that was the dirtiest



1 town I was ever around.

2 I didn't know why. I heard them talking  
3 about uranium, so I paid attention to anything to  
4 related to uranium the rest of my life. I was in  
5 Colorado when the arsenal decided to pump down all  
6 those chemicals in there. That was even dirtier than  
7 Edgemont, and then it started earthquakes. They proved  
8 that that's what caused them, because when they  
9 stopped it, they quit!

10 I was also there with Rocky Mountain  
11 Arsenal, that they were storing uranium and radon and  
12 all this stuff that comes with it, they almost blew  
13 the town of Denver off the map on Mother's Day in  
14 1969, because they couldn't control what they were  
15 working with. They left that a contaminated area that  
16 they can never clean up, and if they would ever keep  
17 statistics on it, they would prove that most of the  
18 people in Edgemont are still carrying uranium. I had  
19 the occasion of meeting a man last night that only  
20 spent two years living in Edgemont, and he has uranium  
21 in his hair samplings. Now don't tell me that this is  
22 not going to be good for that country, and besides  
23 that, all the jobs they announce that's going to be  
24 there, where are they? They won't be for the people in  
25 Edgemont. They will be for people coming out of the

1 parent company now in China, and whoever they decide  
2 to hire will definitely be for them, but they don't  
3 tell them what happens to them when they're working  
4 around there. Jerri Baker testified earlier today, and  
5 she told you about working on a Superfund in Colorado.  
6 She didn't tell you she's full of uranium poisoning  
7 right now, so she has to deal with this all the time.

8 I am just telling you that we have got to  
9 stop this trashing of the earth, because the earth  
10 might survive, but the people not going to. Thank you.

11 CHAIRMAN FROEHLICH: Thank you. Ms.  
12 Pederson. Andy Johnson, please?

13 MR. JOHNSON: Thank you. I'm Andy Johnson,  
14 A-N-D-Y J-O-H-N-S-O-N. I live in Spearfish, South  
15 Dakota, which is on the north side of the Black Hills,  
16 and I am here, I actually am a physics professor, I  
17 teach physics, and I am here representing my  
18 children's children, who don't have a voice yet, and  
19 they need one. I need to specifically say I am not  
20 representing the view of my employer, who didn't ask  
21 me to come here and doesn't know I'm here. I'm  
22 representing somebody else. So I'd like to welcome you  
23 here, and I don't know where you're from, but I know  
24 the NRC is based in Washington, DC, so I'd like to  
25 welcome you to the west, where whiskey is for drinking

1 and water is for fighting over.

2 (Laughter)

3 And the Black Hills are these, I don't  
4 know if you've noticed this, the Black Hills is a  
5 giant dome sticking out of the Great Plains,  
6 basically. They rake water out of the storms that go  
7 by, and there are recharge zones all around the Black  
8 Hills, because they're on this uplift. And so the  
9 water goes in pretty close to where I live, up in  
10 Spearfish. It goes underground, in fact. Part of my  
11 neighbor's driveway is going underground also. So I'm  
12 concerned about contention number there, which is can  
13 heavy metals that are liberated by this mining process  
14 be contained, and I wanted to just remind you that  
15 other speakers have already told you that no in situ  
16 leach mine has ever returned water level to its  
17 original quality, it's always worse. And so I just  
18 wondered, why is Powertech reluctant to share well log  
19 data from DVA? That's crucial to finding out whether  
20 they can actually contain contaminated water. I would  
21 recommend you ask them that question. Now, my  
22 background is actually, I've got a masters in physics  
23 but my PhD is in education, and so I've studied a lot  
24 of cognitive science and I understand a little bit  
25 more about how people think and about how minds work,

1 and I understand the relationship between science and  
2 world. And science is extremely powerful, because it  
3 has a value which is not necessarily truth value, but  
4 a viability value, which is different from truth.  
5 Nobody every can have in their head exactly what's  
6 happening in the world outside. Instead, we make  
7 mental models in our heads and we strive to make our  
8 mental models as accurate as possible. However,  
9 they're nothing but models. And you can hear a couple  
10 of different speakers here with different mental  
11 models about what's going on or what will happen. One  
12 speaker said that the water downslope from the mine  
13 will not be contaminated, another speaker said "Look,  
14 the water is going way faster than the scientific  
15 models say." So science is not the same thing as the  
16 real world, and you have to make a decision about  
17 protecting th world, not just basing on the wishes of  
18 the company. And I just would like to remind you that,  
19 for example, people don't always get the right idea in  
20 their heads. We don't always understand things the way  
21 we need to. For example, at Three Mile Island, that  
22 accident was as bad as it was because the operators  
23 had the wrong mental model of what was going on in the  
24 reactor when it was failing. They thought a valve was  
25 either open or closed when in fact it was closed or

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1 open, and they didn't realize that, and they couldn't  
2 tell because it was outside of the range of their  
3 experience. They did not have the necessary expertise.

4 It's impossible for people to develop  
5 sufficient expertise to know for certain what is going  
6 to happen in a highly technical, high-risk activity  
7 like mining toxic metals. We don't know what's going  
8 to happen. Do we really want to do that? And what are  
9 my children going to say about it? And their children?  
10 Thank you very much.

11 (Applause.)

12 CHAIRMAN FROEHLICH: Thank you. Kim Kraft.

13 MR. KRAFT: I thank you members of the  
14 board for coming here this afternoon. My name is Kim  
15 Craft, K-I-M K-R-A-F-T. I have a masters degree in  
16 anatomy from the University of North Dakota, and I  
17 worked on the Anatomy on the Range Science Department  
18 at NDSU for 24 years, which was also affiliated with  
19 land reclamation and natural resources in North  
20 Dakota. I want to address my concern about the effect  
21 in situ mining practices would have on the major  
22 aquifers of the Southern Black Hills relating to  
23 contention number three. Contrary to what the  
24 Powertech Azarga hydrologists have reported, several  
25 review papers published by the US Department of

1 Interior, and US Geological Surveys, show several  
2 inconsistencies. Of these, I would like to address the  
3 interactions between the Madison and Minnelusa  
4 aquifers as discussed by D. Driscoll, et al., in the  
5 water resources report 02-4094. The report emphasizes  
6 that geological conditions of the Black Hills  
7 facilitate hydraulic connections between the Madison  
8 and Minnelusa aquifers. The caverns, sinkholes,  
9 extensive fracturing, and solution activity of the  
10 confining layers contribute to the communication  
11 between the aquifers. Depending upon location,  
12 potential exists for upward or downward leakage of the  
13 Minnelusa to the Madison. Hydraulic connections  
14 probably also are to occur at many artesian springs,  
15 according to Whelan in 1995, Klimp in 1995, and Hayes  
16 in a study in 1999.

17 Noss and others, 2001, evaluated potential  
18 for interaction using analysis of dual wells and  
19 artesian springs. Hayes 1999 studied breccia pipes and  
20 their presence at artesian springs supporting the  
21 concept of communication or porosity between the  
22 Madison and Minnelusa aquifers. It includes the area  
23 of the Cascade Springs, which is only a few miles from  
24 the Dewey-Burdock mining area. The spring there has  
25 flows of upward of 27 gallons per second.

1           In reports by Davies and others, 1994, and  
2 Putnam 2000, it was discussed that the Madison and the  
3 Minnelusa aquifers are among the most sensitive  
4 relative to contamination, albeit at the recharge  
5 areas or in stream loss zones. What all this means is  
6 that the vast amounts of water used that are  
7 contaminated by in situ mining practices would not be  
8 confined to one aquifer or area. Contaminate one  
9 aquifer, and the other has a huge potential to become  
10 contaminated also. The ground flows in these aquifers,  
11 which is highly variable from one area to the next,  
12 has the potential to quickly spread and spread  
13 contaminates downgrade for miles, polluting extensive  
14 areas of groundwater. Contaminated groundwater can  
15 then exit at artesian springs, which act as relief  
16 valves for the aquifers, and contaminate surface  
17 waters. These include cascade springs, springs along  
18 the Fall Rivers, Hot Brook Springs, Evans Plunge  
19 Springs, etcetera. Once contaminated, the groundwater  
20 would be almost impossible to clean up, and efforts  
21 would last for years, if not permanently polluted. In  
22 summary, the hydrology of the Black Hills is very  
23 dynamic and complex system. It is sensitive to climate  
24 conditions and manmade assault. Presently these  
25 aquifers supply the area with abundant supply of clean

1 water, with a few localized exceptions. At a time when  
2 there is a shortage of water because of extended  
3 drought in the western states, we cannot afford to  
4 potentially contaminate these vast water reservoirs  
5 with uranium mining waste.

6 With hydrological connections between all  
7 these aquifers, and the extent they reach through the  
8 entire southwest region of the state, it would  
9 seriously damage the ecosystem and economy if  
10 contaminated by in situ mining waste. Please, do not  
11 allow the in situ mining permit to pass. It would be  
12 too disastrous for too many and benefit too few if it  
13 continues. Thank you.

14 (Applause.)

15 CHAIRMAN FROEHLICH: Thank you, Mr. Kraft.  
16 Deborah White Plume? Deborah White Plume?

17 >> I do understand that she has been ill. She  
18 was here this morning. I would simply ask leave of the  
19 floor that should she be able to return for the  
20 afternoon session, she be able to speak.

21 CHAIRMAN FROEHLICH: Certainly. Certainly.  
22 Clint Andersen?

23 MR. ANDERSEN: Good afternoon. My name is  
24 Clint Andersen, C-L-I-N-T A-N-D-E-R-S-E-N. Thank you  
25 for the opportunity to say something in support of the



1 Dewey-Burdock project. I grew up on a ranch around  
2 Burdock. I currently live with my family in Hot  
3 Springs. I moved here to work with my father as a  
4 civil engineer and surveyor. In my previous  
5 appointment, I was a professional engineer for a  
6 consulting firm that dealt heavily in mining industry  
7 permitting, and actually was involved in the writing  
8 of this permit.

9 I understand the process that goes into  
10 this, and as an engineer, I prefer to look at the  
11 numbers and the facts than anything else, and I take  
12 my job seriously, and I took my job seriously in my  
13 involvement in this permit, and I trust that the  
14 scientists and engineers at the state and federal  
15 levels that reviewed that this permit take their job  
16 seriously. They review facts, and make determinations  
17 based on those facts.

18 Some of the fact expressed here today  
19 don't support opposition. And something else I believe  
20 that is lost in these discussion is the time and  
21 effort that is expended into this permit, and what it  
22 took to get it put together and studied and reviewed,  
23 and that amount of time should not be taken lightly.  
24 It took a lot of effort, and everyone involved took it  
25 very seriously to make sure the information provided

1 was correct, and, sorry, I guess the point I'm trying  
2 to make is that no one involved in the process to  
3 their job lightly, and no one reviewing the job took  
4 their job lightly. So I would ask that you would hold  
5 their opinions with greater weight. Thank you.

6 CHAIRMAN FROEHLICH: Thank you, Mr.  
7 Andersen. Jerald Davidson?

8 MR. DAVIDSON: Good afternoon. Jerald  
9 Davidson, J-E-R-A-L-D D-A-V-I-D-S-O-N. I have nothing  
10 technical or even original to add, but I would like to  
11 quote from an article in Sunday's Rapid City Journal,  
12 by David Ruchs, and this is regarding the Bakken oil  
13 field, but I think it's relevant to this discussion,  
14 and he wrote "In the past including the various gold  
15 and silver rushes a century or so ago, the head over  
16 heels dash to get it all and get it fast has left  
17 fairly significant environment scars. In the Black  
18 Hills, a similar surge, with blessing from Pierre, may  
19 take place vis-a-vis uranium mining. What strikes one  
20 most about development in the Bakken, both its  
21 observable and non-observable effects, is the cold  
22 realization, especially after interviews with local  
23 officials, that what's in charge here at every level  
24 of organization is the drive for wealth. It is  
25 acknowledged that corporations' only responsibility is

1 to their shareholders. They have no fiduciary  
2 responsibility to the environment, to the community,  
3 and has been repeatedly demonstrated, even to their  
4 own employees. If you look at a balance sheet, you'll  
5 see nothing regarding the environment or the  
6 community, only the profits. Thank you."

7 (Applause.)

8 CHAIRMAN FROEHLICH: Stephanie Anise? A-N-  
9 I-S-E? Yes, thank you.

10 MS. ANISE: My name is Stephanie Anise, S-  
11 T-E-P-H-A-N-I-E, last name A-N-I-S-E. I am  
12 scientifically illiterate, and I certainly have  
13 nothing to add to anything with respect to the  
14 scientific veracity of the testimony that we've heard  
15 so far. I'm from California. So I know about the risks  
16 of earthquakes. I remember Loma Prietta. So now I'm  
17 here, over ten years, and find that I have moved into  
18 what has the strong potential of becoming the next  
19 sacrifice zone in our land. Sacrifice zones, going  
20 back to nuclear testing, happen in areas, typically  
21 the West, where the land is worth less. The people are  
22 worth less. From there it's a short hop to worthless  
23 land, worthless people.

24 From the San Francisco peninsula, I  
25 remember when power lines were not permitted to cross

1 the sacred land of the moneyed people of Woodside,  
2 California. Last I recall, this is a closed system for  
3 our water and everything. Nothing's coming in or going  
4 out to any other place in the solar system. This is  
5 it, folks. And for the worthless people on the  
6 worthless land, I have heard nothing about any plan to  
7 pick up the tab for the horrific public health problem  
8 that we have in the making. It simply hasn't hit the  
9 fan yet. Thank you for coming.

10 (Applause)

11 CHAIRMAN FROEHLICH: Mary Goulet?

12 MS. GOULET: Good afternoon. My  
13 professional is Mary, M-A-R-Y, Ellen, E-L-L-E-N,  
14 Goulet, G-O-U-L-E-T. I am addressing contention number  
15 three, but before I do that, I want to make a comment  
16 on the previous comment. We are enjoying electricity  
17 and air conditioning, which could come from  
18 alternative energies, at least in time, but something  
19 we could not do without you have right before you.  
20 Your bottles of water. Think of that.

21 I'm addressing contention number three,  
22 the FEIS fails to include adequate hydrogeological  
23 information to demonstrate ability to contain fluid  
24 migration and assess potential impacts to groundwater.  
25 This has been addressed quite a bit before, but I have

1 something personal regarding it. I live in Hot  
2 Springs, South Dakota, but for almost 40 years I  
3 worked as an educator and a counselor in the Twin  
4 Cities of Minnesota. After retirement, like many other  
5 retirees that I feel I represent, my husband and I  
6 bought property in the southern hills. It was in 1992,  
7 although we didn't move out here until 1998. We chose  
8 our land near Cascade Springs, within walking  
9 distance. We chose it very carefully. The water was  
10 important to us in making our choice. We needed the  
11 water from Cascade Springs for cooking, drinking, and  
12 cleaning while we were building our home right across  
13 the street, and our grandchildren played in the spring  
14 water in cascade Falls, Cascade Springs, and presently  
15 in Fall River in Hot Springs, and we continue to use  
16 the water from the Evans Plunge regularly, and that  
17 could be affected.

18           During the time we lived near Cascade  
19 Springs we observed the water. It turned blood-red on  
20 several occasions. We were concerned. My husband  
21 observed it more than I did, but I believe he said it  
22 came several times with some red in, and there were  
23 several times where it was blood-red.

24           So we began to do some research. These  
25 quotations are from the USGS Atlas of Water Resources

1 in the Black Hills area, South Dakota. Quote: "Cascade  
2 Springs is a group of artesian springs originating  
3 primarily from the Madison aquifer. Water from Cascade  
4 Springs is normally quite clear. However, periodic  
5 discharges of red suspended sediment have occurred."

6 Another quote. "The red suspended sediment  
7 discharged at Cascade Springs probably results from  
8 episodic collapsed brecciation in the upper Minnelusa  
9 formation. This collapsed brecciation is caused by the  
10 subsurface dissolution of anhydrite beds and sediments  
11 in the Minnelusa. Several breccia pipes are located  
12 upgradient from Cascade Springs, and were hypothesized  
13 by Hayes to be throats of abandoned spring vents. This  
14 observations provides evidence that an outward  
15 migration of artesian springs over geological time in  
16 response to declining water levels in the Madison and  
17 Minnelusa aquifers."

18 Another quotation. "Interactions between  
19 the Madison and the Minnelusa aquifers have been  
20 identified as a possible factor in the development of  
21 artesian springs." Hayes 1999, Noss and others 2001.

22 Two of my concerns in observing Cascade  
23 Springs for many years are realizing the connection  
24 between our aquifers and also the aquifers in our  
25 springs, plus the declines of the water levels in the

1 Madison over the years. I ask you, do you want to take  
2 any chance of our aquifers losing more water levels or  
3 cross-contamination from one aquifer to another? Do  
4 you want to oppose the majority of the aware and  
5 concerned public who do not want to take that chance?

6 And this morning I have something brief I  
7 read in the Rapid City Journal. Many of you are aware  
8 of the author, Louise Erdrich, who has won many  
9 awards, and at this present time she was the winner of  
10 the Dayton Literary Peace Prize Distinguished  
11 Achievement Award. And in the article, it says  
12 "Erdrich says peace depends on clean water, and clean  
13 energy for everyone. By allowing fossil fuel  
14 corporations to control earth's climate and toxify  
15 pure water, we are visiting wars of scarcity on our  
16 children and our generations," she said in a  
17 statement. Then she goes on. "Indigenous people are in  
18 the front lines, because our lands are remote,  
19 vulnerable, and often energy-rich." Thank you for you  
20 time.

21 (Applause)

22 CHAIRMAN FROEHLICH: John Putnam? Thank  
23 you.

24 MR. PUTNAM: Good afternoon. My name is  
25 John Putnam, that's J-O-H-N P-U-T-N-A-M. Thank you for

1 the opportunity to make a statement today. I am here  
2 to present a resolution of support for the Dewey-  
3 Burdock project from Argentine Township. Very few  
4 people in this room have ever heard of Argentine  
5 Township, but I can tell you it is the most important  
6 place you will hear of this week. Much of the proposed  
7 Dewey-Burdock uranium project is located on and below  
8 Argentine Township. It is also where we live and  
9 ranch. We have lived here for generations. In my case,  
10 my family has lived where I currently live for 115  
11 years. We didn't just retire here a couple years ago  
12 or just move here from out of state. We were raised  
13 here, as were our parents and grandparents. Our  
14 children and grandchildren now reside on these ranches  
15 that are five generations in the making. We and our  
16 families depend on the groundwater for our livelihood  
17 and everyday life. I worked at the decommissioning of  
18 the old uranium mill in Edgemont, and I am very aware  
19 of the risk associated with uranium. I also know that  
20 handled correctly, it is very safe.

21 The amount of misinformation that some  
22 have spread about this project is beyond belief. If  
23 anyone's livelihood or quality of life were at risk  
24 with this project, it would be us. There is not a  
25 single person in this room who has more at stake than



1 we do, and we support the licensing, construction, and  
2 operation of the Dewey-Burdock Project. Thank you.

3 CHAIRMAN FROEHLICH: Thank you. Evert de  
4 Kruijf, I apologize for the pronunciation. Last name  
5 D-E K-I-U-I-J-F.

6 MR. DE KRUIJF: That's correct. Well, thank  
7 you. Today I should be here as a driver for my friend  
8 and chief of the Oglala Lakota Sioux, Nell Long Hill,  
9 and he should speak here today about his concern about  
10 the pollution.

11 CHAIRMAN FROEHLICH: Can you speak into the  
12 microphone? Move it a little closer. Thank you.

13 MR. DE KRUIJF: He should be here, and then  
14 he would speak his voice about his concern about the  
15 pollution and the reservation of it. But he couldn't  
16 come because he's a little bit ill. Now I'm a visitor,  
17 and I come from Holland, the Netherlands, and I stay  
18 here already for three weeks to enjoy this beautiful  
19 country, and especially Black Hills. They were, what  
20 I see, the heart of everything, and I think it should  
21 be very necessary to think about that. What I see here  
22 is the shadow of food for all things, for people, for  
23 animals, for plants, for the system.

24 Not so long ago, a man from Holland died.  
25 He passed away, and his name was Wubbo Ockels. He was

1 on the space program. He was out of here, he was in  
2 the space, and he looked at us from another vision.  
3 And what he saw was something special, he said. And  
4 it's not so long ago that he gave us a message, just  
5 before he died. And what he said was there is no  
6 choice people on earth now, for five minutes, that you  
7 look at it in time. And the way it goes, at this  
8 moment, it goes that quick that there is no choice to  
9 wait too long. And that's the message that he gives to  
10 all people. And that's what I want to tell you, from  
11 the Netherlands. Thank you.

12 (Applause.)

13 CHAIRMAN FROEHLICH: Thank you. Don Holz?

14 MR. HOLZ: Good afternoon, and I am happy  
15 and proud to be here, and invite everyone to enjoy the  
16 good life here with the rest of us. I guess I'm the  
17 guy that lived in Edgemont for tow years, but actually  
18 I lived there about three years, and I guess I have a  
19 lot of empathy for the town of Edgemont, because it is  
20 an impoverished area, and having taught there for a  
21 couple years, I can see how the people of Edgemont  
22 need the economy to get a boost, and I empathize with  
23 that, and also I empathize with the other side of the  
24 claim where we have to protect everyone in this  
25 situation.

1           Anyway, my story is kind of where I'm  
2 probably going with number nine, there are some  
3 failures to consider the connected actions and  
4 reactions of present and future possibilities, and  
5 these are based on human error. I'm human, and I make  
6 a lot of mistakes, and I'm sure that these are made by  
7 other people in the world, so I guess I want to say  
8 that the Three Mile Island, I believe it was this one,  
9 it was somewhere in this country. Someone spilled a  
10 soft drink on a sensor that closed a valve, and that  
11 was the whole reason for the shutdown of the Three  
12 Mile Island, or whichever one it was. And so that was  
13 a human error factor.

14           My situation in Edgemont was I went to  
15 teach there in 1983, in the fall, and within six to  
16 eight months, my health had failed completely. I had  
17 gone there with perfect health, best shape of my life,  
18 and all of a sudden about eight months later I had  
19 allergies so bad I couldn't function, I could barely  
20 get out of bed. And I didn't know, I had had allergies  
21 as a child, but they were never that bad, I could  
22 always control them. And so all of a sudden I had to  
23 start giving myself shots twice a week, to, just to  
24 survive and get out of bed, and so I still take those  
25 shots, I don't know the cause of them, but I know that

1 my immunity system was compromised somewhere along the  
2 way, and it wasn't because of bad habits, although I  
3 have a few of those too.

4 But I just feel that if I'm going to err,  
5 I would like to err on the side of safety and for  
6 people and animals and plants, and I have a relative  
7 that had a chance, a chemical engineer, to produce  
8 approximately a 12 by 16 room full of plutonium,  
9 weapons-grade, and they reclaimed, they said they  
10 didn't want the responsibility. And I guess I have a  
11 lot of respect for that relative, because they didn't  
12 feel like they were going to make a mark on the world  
13 by filling this room with plutonium, weapons-grade. So  
14 I guess, I just, I feel like we should really be  
15 cautious, and study this, and be careful about giving  
16 humanity a chance to make a large error. Thank you.

17 (Applause.)

18 CHAIRMAN FROEHLICH: Pam Borglum?

19 MS. BORGLUM: Good afternoon, my  
20 name is Pam Borglum, B-O-R-G-L-U-M, I'm in a very  
21 strange and unique situation because I own significant  
22 rights to a uranium mine in South Texas, the Nustania  
23 corporation, and I have significant experience with  
24 the permitting process that we went through for that  
25 mine in South Texas. The main difference between that

1 mine and this mine is that that mine does not sit over  
2 or have access to the Minnelusa or the Madison  
3 aquifer. I have grave concerns that we do not fully  
4 understand, nor have we had elucidated in the most  
5 recent, we don't have the most recent data to know the  
6 interplay between those two formations. The city of  
7 Rapid City derives, as you know, a significant portion  
8 of its water from the Madison aquifer, along with the  
9 rest of Southwest Iowa, or Southwest South Dakota. I  
10 would urge this panel to please consider the fact  
11 that, I feel like Princess Leia, you know, when she  
12 comes out and she says "Obi-Wan Kenobi, you're our  
13 only hope!" I'm not anti-nuclear, unlike a lot of  
14 people in this room. This is not the right place for  
15 this mine. If that company is correct, a few ranchers  
16 stand to make a significant amount of money by selling  
17 their rights. If they're wrong, the entire western  
18 state, western half of South Dakota has their drinking  
19 water harmed. Please, consider the fact that South  
20 Dakota has basically gutted, unlike Texas, which has  
21 been doing mining a long time and has their ducks in  
22 a row, South Dakota gutted their laws for the sake of  
23 this corporation and this mine. You are truly, truly,  
24 the only chance that we have as South Dakota citizens  
25 to protect our water. You're it. I would urge you to

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1 consider that. Thank you very much.

2 (Applause.)

3 CHAIRMAN FROEHLICH: We're doing quite well  
4 on time for the morning session. Is there anyone else  
5 in the audience who has signed up, or cares to speak,  
6 before we take our break and resume at five this  
7 afternoon?

8 MS. JEWETT: I had signed up before, I  
9 don't know why you didn't call me!

10 CHAIRMAN FROEHLICH: Oh, I'm sorry.

11 MS. JEWETT: That's okay. I had done the  
12 email as well. My name is Chastity, C-H-A-S-T-I-T-Y,  
13 Jewett, J-E-W-E-T-T.

14 CHAIRMAN FROEHLICH: I apologize for any  
15 lack of your name. She obviously, please, spell your  
16 name?

17 MS. JEWETT: I signed my name right next to  
18 my written name, so it's there on that sheet you have.  
19 Irregardless. So hello, my name is Chas Jewett, I live  
20 in Rapid City, and I thank you all for the opportunity  
21 to give testimony today, and I'd like to also thank  
22 all the citizens here today. It says a lot about a  
23 society that's informed and engaged, and you have a  
24 lot of citizens who are informed and engaged about  
25 this project! My family has been ranching along the

1 Moreau River in north central South Dakota since 1832.  
2 My sister's kids will be the seventh generation of  
3 ranchers along the Moreau river, actually along a  
4 creek called Jewett Creek named after my grandfather.  
5 And about ten years ago, along the Moreau river, the  
6 Fish and Wildlife folks told us to not eat the fish.  
7 Pregnant women and children should not eat the fish  
8 along the Moreau river. And if you follow the Moreau  
9 river, up to where it's sourced, it's up near the  
10 cave, the North Cave Hills area, which is a part of  
11 the Forest Service national grasslands, all of which  
12 is aboriginal treaty lands in the treaty of 1868, and  
13 up there in the North Cave Hills is a uranium mine  
14 that a company, a foreign company from Canada, did in  
15 the 70s and never reclaimed a bit. There's radiation  
16 signs all up in that area. The Moreau river and the  
17 Grand River, you cannot eat the fish out of it.  
18 They're wasted waters up there. You guys are  
19 responsible for making that decision for these folks  
20 down here. It's too late for the Moreau river, but  
21 it's not too late for down here. So I hope that you  
22 guys make the right decision and reject this project.  
23 Because any kind of money that's going to come from  
24 this is not going to be worth the war that's going to  
25 come for the water in the future. Thank you.

1 (Applause.)

2 CHAIRMAN FROEHLICH: Were there any others  
3 whose name did not come forward? Please, come to the  
4 mic.

5 MS. PARKHURST: I guess it's ladies first.  
6 All right, thank you, Honorable Judge Froehlich and  
7 members of the panel for being here today. My name is  
8 Gena Parkhurst, that's spelled G like George, E-N-A,  
9 Parkhurst is P like Peter, A-R-K-H-U-R-S-T. I've been  
10 a homeowner in Rapid City for the past 8 years, and  
11 I'm involved with various local groups who are  
12 fighting this proposal.

13 My comments today address contention  
14 number three, the FSEIS fails to include adequate  
15 hydrogeological information to demonstrate ability to  
16 contain fluid migration and assess potential impacts  
17 to groundwater. I'm concerned about the high  
18 likelihood that this proposed ISL uranium mine could  
19 cause permanent water contamination. My understanding  
20 is that no ISL uranium mining operation has been able  
21 to return water quality to pre-mining cleanliness, as  
22 we've heard from other people today.

23 Even more concerning is Powertech's  
24 failure to submit geological data requested by this  
25 board or a related board. I am not opposed to mining



1 of any sort, if it can be proved to be harmless to our  
2 water supply, yet with uranium mining we need to keep  
3 in mind the fact that the half-life of uranium is 4.5  
4 billion years. That is billion with a B as in boy.

5 None of us would outlive contamination that may  
6 occur. Untold numbers of the unborn could be affected.  
7 As you are probably aware, in the 2011 legislature  
8 here in South Dakota, the legislature, or the state of  
9 South Dakota, gave up its statutory authority to  
10 oversee wastewater aquifer injection in ISL uranium  
11 mines at the urging of Powertech, which, by the way,  
12 has never mined anything.

13 Other types of mining in South Dakota,  
14 such as gold, oil, and gas, are regulated much more  
15 heavily than ISL uranium mining.

16 What's more, Powertech's pond design  
17 report shows 70 acres of waste ponds just upstream  
18 from the Cheyenne River and Angostura Reservoir. Does  
19 anyone use that water for agricultural irrigation,  
20 fishing, boating, or swimming? Angostura Reservoir was  
21 created for irrigation of local agricultural  
22 enterprises. Guess what the largest industry is in  
23 South Dakota? That's right, agriculture is the largest  
24 industry in this state. Any guesses on the second  
25 largest industry? Tourism.

1           Could there be a fluid migration problem  
2 with the waste ponds? Let's look back in history to  
3 see how other waste ponds have fared. As you know, the  
4 largest release of radioactive material in US history  
5 happened in New Mexico in 1979, when another uranium  
6 company's mill tailings disposal pond breached its  
7 dam, releasing more radiation than three mile island,  
8 rendering local water unusable to this day. And I want  
9 to reiterate this important point: these waste ponds  
10 Powertech proposes building are just upstream from the  
11 Cheyenne river and Angostura reservoir. Think about  
12 the consequences if any of these ponds develop a leak,  
13 or heavy rain causes them to spill over. As you've  
14 heard today from others, the terrain near the project  
15 area is prone to flash flooding.

16           As a person with birth defects caused by  
17 exposure to toxic water while I was in my mother's  
18 womb at Camp Lejeune, North Carolina, while my father  
19 served in the marines, I had no choice about what kind  
20 of water I was exposed to. In my case, the brew of  
21 toxins resulted in birth defects that will forever  
22 affect my quality of life in significant ways, and I  
23 apologize, it's a very emotional issue for me.

24           So I ask, is it fair to the unborn to  
25 allow or ISL uranium mining to start when we know that

1 the USGS has found that water quality has never been  
2 returned to baseline after ISL uranium? Who will  
3 protect the unborn if we adults fail to do so?

4 I read in the press about the acceptance  
5 by the US Nuclear Regulatory Commission that the  
6 restoration of an ISL lined aquifer to pre-mining  
7 water quality is an impossibility.

8 I am not alone in my concerns. Almost a  
9 year ago, the South Dakota State Medical Association  
10 came out in opposition of uranium mining in the Black  
11 Hills, in direct response to Powertech's proposed ISL  
12 uranium mine, making it the second statewide medical  
13 association to publically oppose uranium mining in  
14 response to a Powertech ISL uranium mining proposal in  
15 the past six years. The South Dakota State Medical  
16 Association's 78-member council of physicians  
17 unanimously voted to support a petition not only  
18 Powertech's proposed mining project, but uranium  
19 mining of any type in the Black Hills area.

20 Last year, the Rapid City Council passed  
21 a resolution expressing grave concern, as you heard  
22 from the city attorney Joel Landeen this morning. In  
23 addition, local conservation districts have recently  
24 expressed concern.

25 In closing, isn't the reward of a few

1 dozen short term uranium mining jobs worth the risk of  
2 4.5 billion years of water contamination in this  
3 drought-prone part of South Dakota, especially when we  
4 do not have all the available geological data? I would  
5 thank you for your time.

6 (Applause.)

7 MR. GRAY: My gratitude for you gentlemen  
8 to be here, we appreciate it. At the risk of repeating  
9 some of the things that have been said before--

10  
11 CHAIRMAN FROEHLICH: Would you state your  
12 name, please?

13 MR. GRAY: Oh, I'm sorry. Gardner Gray. G-A-R-D-  
14 N-E-R G-R-A-Y. I'm reminded of, as I listen to this,  
15 I'm reminded of an interview years ago that I heard,  
16 with a very successful CEO on an East Coast radio  
17 station. And he was asked how he blended ethics,  
18 business ethics, with the management of his company,  
19 and he said "I'm as ethical as survival permits."

20 And I think that's been referenced before,  
21 in terms of companies being responsible to their  
22 shareholders as opposed to the citizens.

23 This is not an economic question. It's not  
24 a jobs question. It's a water question, it's a water  
25 issue. That's the primary concern. If Powertech could,

1 Powertech Azarga, could guarantee as they were asked  
2 to do in Colorado, that they could clean up the  
3 contamination that they will absolutely create, we  
4 wouldn't be here. But they were to able to produce  
5 that kind of information to Colorado. They sued the  
6 state, because they felt it was unfair of the state to  
7 require them to guarantee that. They lost that suit,  
8 and they came there.

9           Only recently, we learned that Powertech  
10 Azarga purchased additional information about the  
11 geology of the mine site that might actually provide  
12 needed information. The recent NRC permit approval  
13 appears to have been premature due to the incomplete  
14 geological info, and indeed Powertech, as you know,  
15 refused to provide this new data to the NRC.

16           This alone, it seems to me, is reason  
17 enough for the NRC to deny the permit. Powertech  
18 Azarga states that the mining areas is not underlain  
19 by caves, fissures, or breccias, despite the fact that  
20 the rest of the Black Hills are. This is not only  
21 unreasonable, but unsubstantiated by independent  
22 geological study by the USGS, School of Mines,  
23 individual active and retired hydrologists,  
24 geologists, chemists, etc. Indeed, the actual,  
25 reliable scientific information clearly demonstrated

1 that there is a definite and unstoppable  
2 transmissibility between aquifers that underlay the  
3 mining area, and that's been referred to several times  
4 today.

5 As a result of this migration and the  
6 intention of Powertech Azarga to inject contaminated  
7 radioactive bled, that one to three percent, under  
8 pressure, into the Deadwood aquifer and the Minnelusa  
9 aquifer, based on the fact that they think these two  
10 aquifers are unusable, and as you've heard, there are  
11 people who are using, now, water from the Minnelusa.  
12 The waters of those two aquifers will be placed out of  
13 use forever by this injection. The risk of  
14 contamination to the Madison aquifer, the main source  
15 of water for the Black Hills, as has been referenced,  
16 is frightfully real. This is in direct violation of  
17 the NRC's own regulations, 10CFR, part 40, and the UIC  
18 regulations, 40-CFR 144.12, which state that the water  
19 must be returned to certain standards, that  
20 contaminants must not exceed stated maximums, and the  
21 NRC will not approved the permit if it will affect any  
22 adjacent underground source of drinking water, which  
23 supplied any public drinking water, or contains a  
24 sufficient amount to supply a public water system, and  
25 currently supplies drinking water, further stating

1 that the NRC will prohibit the movement of any  
2 contaminant into the underground source of drinking  
3 water located outside the aquifer exemption boundary.  
4 A contaminant is any physical, chemical, biological,  
5 or hydrological substance or matter in the water, that  
6 being from the NRC 2012, and CFR 40, excuse me, 40CFR  
7 144.3. The BLM has acknowledged that the ISL mining of  
8 uranium from the Inyan Kara aquifer would contaminate  
9 that water source by releasing into solution vanadium,  
10 radon, cadmium, thorium, arsenic, selenium, and a host  
11 of other poison and intoxicants.

12 Well, no, not intoxicants, you won't get  
13 drunk on them!

14 It will be spilled, leaked, injected under  
15 pressure into existing aquifers, sprayed under  
16 thousands of acres of the mining surface. That will  
17 make the ground, and the aquifers, polluted with  
18 radioactivity. This is a radioactive process. This is  
19 obviously not in the public interest, as it will  
20 create radioactive uncleanable damage. Astoundingly,  
21 Powertech Azarga will state, and apparently believes,  
22 that radioactive water is safe to drink.

23 That was told to me directly. It is safe  
24 to drink. I could have a glass of radioactive water,  
25 drink it, and not be negatively affected whatsoever.

1           They also say that radioactivity is  
2 actually good for you! We've also been told, for  
3 example, that nuclear power is the cleanest and the  
4 safest form of energy. Well, tell that to Fukushima.  
5 These kind of statements indicate all too clearly the  
6 disregard that Powertech Azarga has for the truth, and  
7 should indicate even to the casual observer that this  
8 company cannot be trusted to safeguard the public  
9 interest. Indeed, these kind of intentional  
10 misstatement should serve as a warning flag, and  
11 support the denial of any permit. Thank you for your  
12 time.

13                           (Applause)

14           CHAIRMAN FROEHLICH: Dan Sharp?

15                           (Off-mic comment)

16           CHAIRMAN FROEHLICH: I'm sorry. Are there  
17 any other people who have either signed up, or haven't  
18 signed up, or wish to speak with us before we adjourn  
19 this morning session to resume at five to seven? Yes,  
20 sir.

21           MR. KAMMERER: Good afternoon. My name is  
22 Marvin Kammerer, M-A-R-V-I-N K-A-M-M-E-R-E-R.

23           CHAIRMAN FROEHLICH: Mr. Kammerer, I know  
24 that you have filed testimony in the evidentiary  
25 hearing that begins tomorrow.



1 MR. KAMMERER: Yes.

2 CHAIRMAN FROEHLICH: As a result, this  
3 session is for people who are not party or witnesses  
4 in the case. Is it your intention to appear and  
5 testify at the hearing that begins tomorrow?

6 MR. KAMMERER: If I would be allowed to or  
7 guaranteed so, I probably would.

8 CHAIRMAN FROEHLICH: I'd prefer to hear  
9 your testimony tomorrow, your pre-filed testimony and  
10 any questions for you at the evidentiary hearing  
11 rather than the public session, the public limited  
12 appearance session that we're having today.

13 MR. KAMMERER: So I have a chance tomorrow?

14 CHAIRMAN FROEHLICH: You are guaranteed a  
15 chance. You will be called and your sworn testimony  
16 will be taken and made part of the evidentiary record.

17 MR. KAMMERER: Thank you.

18 (Applause)

19 (Off-mic comment)

20 MS. NOVOTNY: Good morning. My name is  
21 Catherine Novotny, C-A-T-H-E-R-I-N-E N-O-V-O-T-N-Y.  
22 I don't have a prepared statement. I hadn't planned to  
23 come today, but I view this as so important that I had  
24 to be here. I'm a fifth generation agricultural family  
25 from South Dakota. Mostly my family is in the Eastern

1 part of the state. We are unanimously opposed to this.  
2 I went to college in San Francisco, and every time I  
3 hear about the horrible drought in California, and the  
4 water shortage there, I think about our situation here  
5 and how we must preserve clear air and clean water at  
6 all costs. I'm a retired mental health professional.  
7 There are so many mental health crises in our society  
8 today, from autism to attention deficit hyperactivity  
9 disorder, and theoretically many of these can be  
10 traced to toxicity in our environment. It is very,  
11 very important that we start dealing with these mental  
12 health crises, and avoid things like toxic water,  
13 toxic air, and get a handle on some of these problems  
14 before they're more out of control than they already  
15 are. I thank you for being here. I think that South  
16 Dakota has not stepped up to the plate like they need  
17 to in dealing with this. I hope the federal government  
18 assumes the responsibility. Thank you very much.

19 (Applause)

20 CHAIRMAN FROEHLICH: I see that we have at  
21 least one more speaker for the morning session.

22 MR. YELLOWHAIR: Thank you for your  
23 indulgence. My name is Robert Yellowhair. I'm the  
24 onetime, in 1996, 1997, and a part of 1998 I was the  
25 vice chairman of the Oglala Sioux Tribe. And also

1 after that, from the year 1998 to the year 1999, I was  
2 its land director, serving in the Salway  
3 administration. I was the elected official of the  
4 Pine Ridge Indian Reservation.

5 I was very interested in their contention  
6 number one and number two, in terms of meaningful  
7 consultation. Meaningful consultation has many  
8 different faces, and one of them is just a letter of  
9 notification, and the other is a full-blown hearing,  
10 that I would consider this particular public hearing  
11 a meaningful consultation. It allows citizens to go  
12 out and express what is in their hearts and minds, and  
13 how such efforts like this is going to impact us, not  
14 only as individual, but a collective idea. Because the  
15 Black Hills is a very, very special place, and I  
16 applaud all the scientists, and I applaud all the  
17 chemists, the physiologists and the geologists and all  
18 of this, but I'm also reminded all the time, of the  
19 report of Colonel Dodge, back in the Custer days when  
20 he came here in 1874 under a force of arms, in which  
21 he, in his report, that the Black Hills could become  
22 the Vermont of the middle part of the world, of this  
23 country. But also he mentioned something lese that I  
24 find most interesting and that is the question of non-  
25 marine fossils occurring in the Black Hills. Non-

1 marine fossils don't occur here in this part of world  
2 means that it has never been under water. So the Black  
3 Hills is a very, very special place. For the Lakota  
4 people, it's been a forbidden place, because what was  
5 taken under the force of arms was maintained by a  
6 force of arms. These are the troubling questions that  
7 we have for the American society or the proponents of  
8 the manifest destiny idea. Because when a society  
9 states a high moral ground, such as rested in the  
10 Bible, ten commandments come to play.

11 So I look at this particular question and  
12 say a society that stakes the higher moral conditions  
13 on itself and on its citizenry, you have not lived up  
14 to those moral standards. Thou shalt not steal.

15 So these are the kind of questions that we  
16 have, because the United States staked its honor when  
17 it made the treaties of 1851, 1868. Now isn't that  
18 what the constitution of the United States says? By  
19 the people, for the people? So does that mean that the  
20 individual citizens of this country have some  
21 responsibility in the conduct of its country, and its  
22 agencies such as the NRC?

23 This is a question that we always have.  
24 It's a moral one. But it does not mean, it was not me,  
25 we placed our honor, we kept the treaty, we kept the

1 peace. And yet, we are treated like criminals in our  
2 holy lands. So these are the things that we need to  
3 consider. I applaud all of this effort that goes on,  
4 but I am really, really looking at the intents and  
5 purposes of a society that is to be just and guided by  
6 the principals of Christianity. A self-examination  
7 must occur. Meaningful dialogue must occur. The idea  
8 that somehow another could guarantee a future for our  
9 future generations is paramount, and we can only do it  
10 with clean water, and we can only do it with a clear  
11 conscience. This are the questions that we have. There  
12 was never any meaningful consultation by Powertech to  
13 the Oglala Sioux Tribe.

14           There has never been a notice,  
15 notification of any time, of effort that goes on, but  
16 rather Powertech and the state of South Dakota decided  
17 to get in bed together, and let the impacted people,  
18 in particular its citizenry, but more importantly,  
19 consulting the tribes on a meaningful basis. That's  
20 what I want to say today, and I will be bringing our  
21 chiefs in this evening to talk about this particular  
22 point. And I want to thank you for coming here and  
23 listening to me. I know this is not my first time  
24 before you. I've been coming a long time.

25           So thank you very much.

1 (Applause.)

2 CHAIRMAN FROEHLICH: Thank you, Mr.  
3 Yellowhair. I believe this will be the last speaker  
4 that we'll have in the morning session. We will  
5 continue this limited appearance statement opportunity  
6 this afternoon at five o'clock, same place. In the  
7 meantime, I'll try to speak with the building  
8 officials to make sure that the sounds system works as  
9 it should. Maybe they can run the air conditioning to  
10 cool it off a little bit before we start again at  
11 five. Thank you all for your comments.

12 (Whereupon, the above-entitled matter was  
13 concluded at 1:53 p.m)

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