Letter ID	Commenter Name	Commenter Org.
356	Ex. 6 Personal Privacy (PP)	Sicangu Lakota Treaty Council Rosebud Sioux Tribe
533		Oglala Sioux Tribe
538		Native Research Solutions
552		Santee Sioux Nation

Text
Dear Mrs/Ms Shea, I would like to submit the attached resolution for the Dewey Burdock Uranium Mine Injection Wells for the record the Sicangu Lakota Treaty Council is requesting that you deny the permits for the Injection Wells. [ATTACHMENT: "SLTC Resolution 2017-02.PDF"]
Please find attached comments from the Oglala Sioux Tribe regarding the Dewey-Burdock Class III and Class V UIC draft area permits. These comments includes a letter and addendum. Copies of OST Ordinance No. 07- 40 and Ordinance No. 11-10 are also included. There are several attachments to the addendum and referenced therein. These attachments are submitted in a separate email. Please let me know if you have any trouble opening the attached documents. [ATTACHMENT: "2017-06-19 OST Comment Letter re Dewey-Burdock with Addendum (final signed).pdf"; "OST Ordinance 11-10.pdf; OST Ordinance 07-40.pdf"]
Please find comments attached regarding the Dewey Burdock Uranium Mine in the Black Hills. We strongly urge you to deny the requested permits and the aquifer exemption. [ATTACHMENT: "NRS_ Comments for Dewey Burdock ISL Uranium Mine.pdf"]
RESOLUTION OF THE SANTEE SIOUX NATION TO OPPOSE THE "DEWEY BURDOCK URANIUM MINING PROJECT," IN SUPPORT OF ALL TRIBES THAT ALSO OPPOSE THIS PROJECT. Resolution Number: FY2017-35 WHEREAS, the Santee Sioux Nation is a federally-recognized Indian Tribe pursuant to Section 16 of the Act of June 18, 1934, (48 Stat. 984), codified at 25 U.S.C. 476, et seq., as amended by the Act of June 15, [935, (49 Stat. 378); and WHEREAS, the Santee Sioux Nation is governed by a Tribal Council made up of elected representatives who act in accordance with the powers granted to it by its Constitution and By-Laws, as amended on August 30, 2002 by Secretarial Election; and WHEREAS, the Santee Sioux Nation Tribal Constitution, with the inherent powers of self-governance, recognizes the Powers of Self Governance and authorizes the Tribal Council, under Article N, Section 1 to promulgate and enforce ordinances providing for the maintenance of law and order and general welfare of the Nation; and WHEREAS, the Tribal Council has RESPONSIBILITY OF MAINTAINING AND GUARANTEE THE HEALTH, SAFETY AND WELFARE OF IT'S PEOPLE OF THE SANTEE SIOUX NATION WHEREAS, THE URANIUM MINING PROJECT BY DEWEY BURDOCK OR ANY OTHER COMPANY OR URANIUM MINING ACTNITIES ARE DANGEROUS, UNCONSTITUTIONAL AND FURTHERMORE, DETRIMENTAL TO THE FUTURE OF OUR GENERATIONS TO COME. [...] WHEREAS, the Tribal Council determined that it is in the best interest of the Santee Sioux Nation AND FOR FUTURE GENERATIONS OF THE SANTEE SIOUX NATION AND OTHER NATIONS OF THE GREAT SIOUX NATION AND OPPOSE ANY URANIUM MINING IN, ON OR AROUND THE BLACK HILLS. WHEREAS, THE SANTEE SIOUX NATION TRIBAL COUNCIL, ELECTED BY THEIR PEOPLE, ALONG WITH TREATY COUNCIL REPRESENTATIVES OF THE ISANTI DAKOTA FURTHER OPPOSE URANIUM MINING AND THE DEWEY BURDOCK URANIUM MINING PROJECT. NOW THEREFORE BE IT RESOLVED, the Santee Sioux Nation, acting through its Tribal Council, hereby approves and adopts THIS RESOLUTION, OPPOSING URANIUM MINING IN, ON OUR AROUND THE BLACK HILLS AND FURHTER OPPOSES THE DEWEY BURDOCK URANIUM MINING PROJECT. BE IT FINALLY RESOLVED, THIS RESOLUTION WAS PASSED BY THE SANTEE SIOUX NATION TRIBAL COUNCIL IN A SPECIAL MEETING HELD AT THE TRIBAL HEADQUARTERS OF THE SANTEE SIOUX NATION ON APRIL 24th, 2017 AND PASSED BY MOTION NUMBER 10 (TEN) AND ENACTED IMMEDIATELY. CERTIFICATION This will certify that the foregoing resolution was considered at a meeting of the Santee Sioux Tribal Council of the Santee Sioux Nation, duly cal.1led and held on the 24 day of April, 2017, and was adopted by a vote of 7 FOR, 0 AGAINST and 1 NOT VOTING OR ABSENT. A quorum of 8 was present.

Letter ID	Commenter Name	Text
5	Ex. 6 Personal Privacy (PP)	Subject: Uranium Mine Waste Disposal - No Valois Shea EPA asks public for permission to allow Uranium mining waste disposal in SD aquifer: No. Must abide by regulations, and ideally common sense. Thank you
12		Subject: Dewey Burdock Uranium Aquifer Mining Dear Ms. Shea, I write with grave concern after reading various possible scenarios regarding uranium and the Black Hills https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemptionuranium-mining-project. [...] The Black Hills are a precious land that has caused much strife for over 100 years. We need to show respect to the land and to the peoples who reside there and say no to the corporate greed and yes to environmental safety. Future generations will thank you for saying NO to this mining. Best,
16		Subject: Exemptions for Uranium Mining Dear Lisa, This proposal is simply obscene. Please do everything you can do to stop it.
17		Dear Shea, I am a member of the public who would like to comment on the proposed permits for injecting uranium into the ground near a SD aquifer. This is an extremely and astonishingly bad idea. I understand that the uranium would be ostensibly treated to be made safe before injection. Still: no. Really, adamantly, no. [...] I understand that you are an actual person showing up for work every day, just like me, and I appreciate that at times like this, it is probably a mostly thankless job. I can only hope that opposing opinions to this idea, like mine, are genuinely counted and can have an impact in stopping this harebrained proposal. You would indeed be thanked for advocating for the public who is contacting you with our concerns. All best,
26		Subject: Uranium mining/aquifer S. D. [...] Once again we run the risk of standards for treating the waste not being stringent enough and residents enduring dangerous consequences over time. And once again, big business seeks to make tons of money off the backs of the little guy, we common folks, who do not have the money to buy the power to stop them. When will we return to the concept of the common good? The EPA can embrace that concept and apply it to this situation. Please oppose this project of uranium mining. Thank you for your time.
29		Subject: Uranium mining disposal in the black hills I can't even begin to express how vehemently I oppose allowing uranium mining waste to go into an aquifer in the black hills. Obviously, no aquifer should be abused in this manner, but having grown up in spearfish, SD, the idea sickens me that much more. Please don't let this happen!
40		Subject: Dewey-Burdock I, Ex. 6 Personal Privacy (PP) would like to say "NO" to the Dewey Burdock Uranium Aquifer Mining.
43		Subject: Uranium in SD I absolutely oppose allowing Uranium mining waste disposal in SD aquifer. We must protect our environment.
48		Subject: Powertech and SD and WY drilling Please do not let them contaminate our water by doing this! I am a Wyoming native and this is wrong! Please don't let this happen. As an enrolled member of the Oglala Lakota nation, I'm asking you to please stop letting big business destroy our resources.
58		Subject: Oppose allowing injection of hazardous mining waste into Black Hills The Hong Kong/China based uranium mining company, Powertech/Azarga that has been pursuing ISL (in situ leach recovery) mining permits in the Dewey-Burdock, Edgemont area of the Black Hills, is currently requesting permits from the EPA for waivers from the Clean Water Act for the Inyan Kara aquifer in order to implement UIC injection wells for mining, and for hazardous waste permanent deposition from mining activity in the Minnelusa aquifer. Please DON'T
74		I oppose both permits related to the proposed uranium recovery project in the southern Black Hills region in Custer and Fall River.
78		Subject: re aquifer exemption for uranium mining project Hi, No. Just, no. Thanks,
86		Subject: Uranium mining in Edgemont South Dakota I am totally against uranium mining is Edgemont, South Dakota. I live in Hot Springs, Sd and have a well that services my house, my livestock, and my business which is a campground.
105		Subject: Do not support Dewey Burdock uranium aquifer mining

		Ms Valois, I am writing to express my concern about the effects on the environment and very real health risks of the proposed uranium aquifer mining at Dewey Burdock location in the black hills. I do NOT support this and demand that such be denied to go forward. Given that the current administration is also cutting back on health care coverage it is even more imperative that uranium mining be stopped as it will be a health hazard and most will not be able to cover cancer costs and lose life. This is not good for people of the black hills areas. Thank you for your voting against this initiative.
107		Absolutely no! This is completely insane!
113		Uranium tailings, as you are well aware, are no joke. According to Robert Pole, physics professor at Cornell University, the estimated deaths as a result of uranium mining may be grossly underestimated. I, on some level, can understand why some people, in this day and age, might be fighting for crude oil pipelines, but uranium mines?!? - who, except for the numbered people who will directly profit from this venture, could possible be in support of this project? White moms in Rapid City, native grandmothers on the reservation, ranchers who's cattle depend on ground water, republicans, democrats, independents, all say no to radioactive waste. [...] Thank you so much for hearing me out and the work that you do as a public servant.
121		14). Some polls indicate that upwards of 80% of South Dakotans are against this mining and their opinions should hold sway. There is more of course but maybe this email will support denying any permits in this regard. After all, would you feel comfortable with this business in your back yard? If I can be of any further support please let me know.
123		To: The Environmental Protection Agency From: Ex. 6 Personal Privacy (PP) Re: Azarga plan for deep well injection Please include the following to your comments about the Deep Well Injection. Thank you. There are many reasons why the EPA should deny Azarga any permit to mine uranium and/or inject toxic fluids into currently used aquifers in the Dewey Burdock area of South Dakota.
124	Ex. 6 Personal Privacy (PP)	My name is Ex. 6 Personal Privacy (PP) and my wife and I live on a small ranch south of Pringle and have been there for 26 years. Thank you for this opportunity to comment on Deep Well injection and uranium mining. My comments here were given at an earlier public meeting opposing the mining. injection I am not a scientist nor an engineer nor do I receive payment of any kind for being opposed to the permits in question.. I am not a for profit corporation. I have no loyalties or any responsibilities to show a profit to any stockholders. I am free to do the right thing. When commissioned as an officer many years ago, I swore an oath to uphold and defend the Constitution. The Constitution and the Bill of Rights of course support a prime directive: Clarify the responsibilities of the government and the rights of the people. Not businesses nor corporations' rights but citizen's rights. Our governments' responsibility is to the health and welfare of those citizens. Every civil servant, every citizen's board, every governor is accountable to the citizens who have allowed them to serve and if they do not protect the health and welfare and the rights of the people then they have abrogated their prime directive. My references for this talk are the Power Tech/AZARGA permit application available from the South Dakota DENR most of which I have read, as well as the website of the NRC and the state laws regarding water and mining. I hope to bring your attention to what I believe are discrepancies and contradictions which should provide reasons for the denial of this permit application. Despite P/T's repeated assertions that this operation would be safe, that is simply untrue. Nor is it true that radiation is actually good for you, nor that one can destroy radiation contamination by washing it off. PT spokespersons have been willing to freely state that scientific truths are nonsense apparently comfortable in saying anything that will support their cause regardless of it's falseness. This alone should force a denial of the permit.
124		**refer to the Letter of opposition from the FR Conservation District as one example and the "grave concern" of the RC Council** I also ask the Board to consider and recognize the hundreds of signatures of people who have signed their names in opposition to this permit. As you know, these signatures represent upwards of 10 to 20 times those who are opposed. Please deny this permit. Thank for your attention. If time allows, I would like to read this at the May meeting in Hot Springs and will provide a hard copy if requested.
126		Subject: Fw: REPORT ON EPA PUBLIC COMMENT HEARINGS Dear Ms. Shea: I forward this to make sure you realize the size of the opposition. The voices of the proponents are few (7%)in comparison to the opponents (93%). This has been true of every hearing I have attended going back to 2010 or so. In fact, unofficial polls have indicated that this ration holds steady across the state. [...] Show original message On Friday, May 12, 2017 8:26 PM, "nobhuranium@gmail.com" <nobhuranium@gmail.com> wrote: Greetings, 212 people spoke out at the public comment hearings held by the EPA to gather input on the plan to mine uranium and dispose of mining waste in our aquifers. 197 of those people spoke against mining and waste disposal (93%). Now if only the EPA will do what people want and DENY the permits!

		Wopila to native people who braved a bad situation in Edgemont last night, especially the children. And to all who worked to get public input, fed people, set up and took down tables, raised awareness, raised money, had good conversations with new allies, and all that goes into a project like this -- GOOD JOB! More discussion on how things went and a chance for your input at the CWA meeting tomorrow (Saturday) morning at 9 am at the Rapid City Public Library upstairs.
128		Subject: Fw: Fwd: Featured in Sunday's Paper - It's Now or Never! I hope I am not over-loading you. Thanks for for your attention. [ATTACHMENT: "Featured in Sunday's Paper - It's Now or Never!" (email)]
129		Subject: PowerTech Dear Ms. Shea: I have sent this reference information for you interest. It is a very long packet of information describing the types of serious mistakes those who are opposed to the mining and abuse of water supplies are concerned about. Thanks you for your interest. [NOTE: This comment suggests that there is an attachment, but none is present]
143		Subject: UIC Please do not permit injection of uranium recovery waste.
144		Subject: Proposed Dewey-Burdock Uranium In-Situ Recovery Site near Edgemont, SD I am opposed to this project.
00151, 07440		Subject: No Uranium Mining in Black Hills Pls stop. Thanks [ATTACHMENT: "NO URANIUM IN TREATY TERRITORY" (image)]
156		Subject: Nuclear waste Why not just force feed that waste to the people. Cut out the middle man as it were.
161		Subject: PUBLIC HEARINGS – Protect Water for Future Generations. https://bhcleanwateralliance.org/public-hearings/ Proposed
162		5. Because of the rural nature of this project, you will not receive thousands of protests but please consider the percentage of people from the area who are against this. If this were to take place outside of Denver, you would receive thousands of emails but 50 people from the area could be 90% of the area population!
165		Subject: No to Dewey Burdock Uranium acquirer mining I oppose the Dewey Burdock Uranium acquirer mining. I do not want Uranium mining in treaty territory acquirers in the Black Hills. I do not want class 5 or class 3 wells in the Black Hills. I say no to any permits for uranium mining in the Black Hills.
174	**Ex. 6 Personal Privacy (PP)**	Subject: Opposition to Dewey Burdock Uranium Aquifer Mining The proposal to exempt the project from the Safe Drinking Water Act is unacceptable
184		Subject: uranium please stop with these bad ideas, that only harm us all.
193		Subject: UIC Area Permits to Powertech (USA)Inc Dear Ms. Shea, Please deny the permits for injection activities related to the proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. Please do not allow uranium mining waste disposal in the South Dakota aquifer. Thank you, Ex. 6 Personal Privacy (PP)
195		Subject: No Uranium in Treaty Territory Hello, I just wanted to submit a comment to say that I urge you to say no to the Dewey Burdock Uranium Aquifer Mining. Our future generations are depending on us. I urge you to stand up for those who can't stand up for themselves, folks without access to a computer, car, or phone to submit comments, especially children.
212		Subject: Please reject the Powertech permits Dear Shea, I've read about the draft Powertech permits, and urge you to stop both. Water safety must beer one of three EPA's highest priorities. Reject these permits, please.
216		Subject: Uranium mining disposal in the Black Hills I do not know a word that properly expresses how strongly I oppose to this act. Of course, this act should not be considered okay anywhere but, having relatives in multiple places near the Black Hills the idea of putting radioactive waste in the ground and therefore ruining the beautiful, wild Black Hills is sickening. I beg you, please do not let this happen!
222		Subject: uranium mining must stop Stop destroying the world. NO uranium mining needed or wanted. You are supposed to protect, not rape, the Earth.
224		Subject: Comment on black hills I am sending an email about my concern over the potential uranium mining in the black hills and to say that this is harmful and I am against it. There should be no mining of this or any kind on native territory where is can harm the environment and pollute natural resources. I hope that this will be taken into consideration and that the right decision is made. Thank you.
255		Subject: Uranium Mining in Black Hills

		Hello, I am emailing to say that I do not support the Dewey Burdock Uranium Aquifer Mining being planned in the Black Hills of South Dakota. This land should be kept pristine and not harmed as mining a radioactive material would do.
278		Subject: No to uranium mining in SD! Dear EPA, I wish to protest the proposal for uranium mining in the Black Hills of SD. Period.
279		I am against any mining permits or aquifer exemptions for uranium mining in the Black Hills or anywhere.
280		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes
283		Subject: Drilling Please do not give permission to drill in nation parks
308		No, no, no, to allowing this company to dump its uranium, regardless of what supposed cleanup they will do to it or supposed monitoring testing that will make it "safe."
323		Subject: Black Hills mining Please do all within your power to keep mining of the Black Hills from going any further.
324		Subject: Public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota I would like to voice my concern for the allowing permits on this project. It is only common sense that if you allow any of these activities, they will eventually have an effect on the environment around them. I say NO, resoundly to allowing any type of injection minning any where in our country. We need to invest time, money and efforts into renewable energy sources and stop all dirty fuel mining now and in the future. If we don't stop now, it will soon be to late. Again I say No to allowing these permits.
340		Subject: No!!
342		Subject: No to uranium dumping
344		Subject: Dewey Burdock Uranium Aquifer Mining I wish to submit a public comment requesting NO to Dewey Burdock Uranium Aquifer Mining I [Ex. 6 Personal Privacy (PP)] Arcata California, 95521.... Formally request that you do not grant this.
350	Ex. 6 Personal Privacy (PP)	Subject: Our generations to come What is this office doing to us? Would you want your children living near there? I wouldn't allow my children to live anywhere near there.
353		Subject: Re: Public comment period extended through Monday, June 19 for the proposed EPA actions at the Dewey-Burdock site HI Valois, Thanks so much for accepting my full comments at the hearing in Hot Springs. Although I wasn't able to air my full statement, I am sure you will consider the additional comments concerning the containment layers and their questionable conditions. This project is utterly unnecessary and knowingly dangerous. If common sense is considered, there can be no other decision but to disallow this project. Thanks again.
356		Dear Mrs/Ms Shea, I would like to submit the attached resolution for the Dewey Burdock Uranium Mine Injection Wells for the record the Sicangu Lakota Treaty Council is requesting that you deny the permits for the Injection Wells. [ATTACHMENT: "SLTC Resolution 2017-02.PDF"]
359		Subject: Re: NO - thank you for your comments Whoops. I think I replied too abruptly. Instead I would rather say: Please, please, please deny this exemption. It's an emotional issue for me and emotions interfere with my cold reading.
360		Subject: Re: NO - thank you for your comments One more thing: Perhaps you would be interested in reading a letter to the editor I wrote that was published in our local paper yesterday: http://www2.ljworld.com/news/2017/mar/13/letter-editor-what-aboutchildren/?opinion
366		Subject: Re: Powertech in situ leach mining Statement to oppose the project. Just read the latest newspaper article about the above proposed project, And saw to my amazement that the EPA will be "thoughtful" when the decision is made. That statement is as much an approval from your agency as it is an insult. I am speaking of the BLACK AND WHITE PROOF why this permit should be denied. 1) document from the USGS of a survey of the Black Hills and the surrounding area.
373		As a former elected official living in a sensitive U.S. watershed, I have learned that fresh water resources are scarce to begin with, and becoming even scarcer, especially West of the 100th Meridian (I was born in Eastern Many Branstetter and frequently pass through the Black Hills on my way "home". Other resources, including public confidence, are also scarce these days, which makes your decisions regarding uranium mining in the Black Hills even more sensitive. As you know better than I, any activity that may potentially jeopardize these resources needs to be prioritized against potential and actual gains realized by that activity. Uranium mining in the Black Hills is an obvious loser in this equation

		Several factors make it clear that these trade offs for uranium mining in the Black Hills would be a very poor investment in our future as a society, as well as regional residents. First, uranium mining has known, statistically certain risks (contamination of land and fresh water from mining and waste disposal), as well as potential risks (mining accidents, nuclear accidents with catastrophic consequences such as those seen at Chernobyl and Fukushima, loss of community confidence with its many attendant costs) that are not worth the additional energy produced for anyone, either regionally or nationally. Second, the increased availability of other, less risky and generally cheaper energy resources make the more risky choice of uranium extraction a poor investment, strictly from a community investment perspective. At worst, brief energy shortages may have the effect of reducing public reliance on these energy sources--something which some think would be a desirable for heavy societal consumption of energy. Third, while I believe that the jobs created by mining enterprises have value, they do not outweigh even other potential sources of energy sector jobs, much less the enormous interests of the public and of other enterprises in clean water and communities confident in the decisions made by their representatives and other leadership (such as yours). Once this confidence is lost through either initial decisions or their eventual consequences, regaining public confidence and encouraging investment may take generations. Risky uranium mining is almost certain to have such effects on segments of society already troubled by past public decisions.
391		Subject: under ground injection control I'm against this. please help save our country. thank-you
409		Subject: Draft permits and aquifer exemption for uranium mining in southwestern SD Dear EPA, I oppose the draft permits and aquifer exemption for uranium mining in southwestern South Dakota. These are our public lands and uranium mining should not sully our national treasures. I wholeheartedly oppose any such mining on our public lands.
411		Subject: No No to uranium mining waste disposal in SD aquifer.
427		Subject: Aquifer Exemption for Powertech (USA) Inc. Hello, OBVIOUSLY, there should be no aquifer exemption for Powertech (USA) Inc.'s uranium recovery project. NO. Again... NO. Thank you, [...] P.S. I'm sorry you have to work for Scott Pruitt.
432		Subject: Region 8 comment It is my understanding that you are the contact person for public comments regarding Powertech's application for a permit to mine in the Wind Cave area of western South Dakota. I am opposed to mining of any kind in this particular area due to the radioactive waste and other weaponry already buried in the Dewey Burdock area.
437		We do not need anymore mining in our beautiful Black Hills. Our lands have been abused and have suffered enough. Your time would be better well spent trying to change the 1872 mining laws that are no longer reasonable and should be brought up to date for the 21st century!
470		There are protestors outside trying to save their land. It is not your land it is our land.
470		Just because there are not many people out here – does that mean we have to be a dumping spot for hazardous waste?
470	Ex. 6 Personal Privacy (PP)	Am adamantly opposed to any uranium mining in SD.
470		I am an old guy and I am tired of "experts" saying don't worry we know what we are doing and them 5 – 10 – 15 – 20 – 25 years later woops, this is a problem, what now?
470		One of my favorite pass times was exploring the Black Hill with my family & children, until I discovered just out of sight from Hwy 385, several abandoned mine sites, old tools & equipment & very odd looking dirt, like they just walked away, when the market price of whatever (uranium/gold – etc.) they were mining fell below profitability. This was all after the last E.P.A. promises to not harm the sacred Black Hills. I have recent tests of water flowing from the Black Hills is still contaminated/radiated/ All of a sudden it's supposed to be all good/credible! I don't believe it. Leave the Hills alone. NO approval
470		I am opposed to the UIC Draft Area Permits and the one associated proposed aquifer exemption decision for the Edgemont site. I am also opposed to wells to dispose of waste fluids into the Minnelusa Formation after treatment. I am opposed to any aquifer exemption approval related to the Class III permit application. I oppose the injection of lixiviant into the Inyan Kara aquifers. I want these to continue to be protected against contamination provided under the Safe Drinking Water Act.
470		100% against uranium mining in the Black Hills. Not worth it! No amount of $ is!
470		As a father & teacher that lives near the Black Hills I am strongly opposed to uranium mining here. I remain unconvinced as to the safety of this project.
470		If permits are granted we will stop it what ever means necessary. We will fight...P.S. FUCK YOU
470		I am a mother of three and a farmer in Allen, SD on the Pine Ridge Indian Reservation. I am standing in opposition to the proposed Dewey-Burdock uranium mining project. It has been proven through history that uranium mining has disastrous consequences to human health.
470		Do not drill for uranium in SD. It is harmful to the people.
470		I am here in opposition of the uranium mine & waste disposal wells. My letter with detailed position is coming in the mail.
470		There haven't been any speakers who support the proposed mining. So why should it be done? If it is approved, it is for money only at the expense of all life? Cleanup is impossible. No mining please/

470			I believe there are plenty of other uranium rich places that would not harm a place as beautiful as the Black Hills.
470			They keep saying this is for economic good, jobs etc. Back in the 40s & 50s they said electricity would be so cheap they wouldn't bother to meter it, that hasn't happened and they have made a mess. Around the world a [illegible] is dying.
470			I am strongly opposed to this.
470			NO URANIUM MINING AT DEWEY BURDOCK IN THE BLACK HILLS OF S.D! NOT NOW, NOT EVER.
489			Dewey-Burdock is a bad deal.
489			Please take into close consideration Hannan LaGarry and Linsey McLean's expert scientific testimony. Job consideration & moneys to be made for such a small populations should never be allowed to outweigh the possibly devastating effects to millions. Thank you.
489			This project must be stopped. Please stop this mining.
489			I do not want <u>any</u> mining or dumping of uranium waste in South Dakota – period.
489			No, not here, we do not want your stink.
489			Please pay attention to our request.
489			Benefits of the project are not worth the risk to life and water.
489			This project should be stopped.
489			NO! NO! NO! Absolutely NO!
489			Therefore, stop the mining. It must not be allowed.
489			The prospect of this mining is insane.
489			No uranium mining here.
489			Not Here!
489			This is not good for the citizens of South Dakota!
489			Stop drilling – stop Trump
489			Water is life; uranium is death.
489			This is our children's legacy!! It is NOT OK to mine uranium! This project should be stopped.
492			Don't let Cameco bring its poisonous waste up here. KEEP IT IN THE GROUND! NO AQUIFER EXEMPTIONS!!
493			NO MORE EXEMPTIONS. MNI WICONI!!
495	Ex. 6 Personal Privacy (PP)		No uranium mining in the black Hills! Do not allow permits for SD lands to become a solution-mining facility. We don't need to be a nuclear waste dump either! Thanks
509			Regardless of who owns uranium properties in the Black Hills, I oppose uranium mining in the area.
527			The citizens of the area that would be most impacted by this project spoke loudly and clearly at the hearings in April and May. As many as 700 people attended the hearings. 212 people spoke (omitting duplicates in Valentine and Rapid City, but counting duplicates in Hot Springs and Edgemont). Of those 212 people, only 15 (7%) supported the proposal to mine uranium in the Black Hills and in our water supplies. The vast majority – 93% -- opposed the project. In a democracy, the will of the people counts. The EPA should act consistently with the voices of the vast majority of the people at the hearings, rather than approving a project that is poorly considered, ill-advised, full of gaps, and dangerous to the health, the economy, the cultural resources, and the environment of the Black Hills. Clean Water Alliance respectfully requests that the EPA halt the permitting processes for the proposed Dewey-Burdock project by denying the permits and the exemption.
533			Please find attached comments from the Oglala Sioux Tribe regarding the Dewey-Burdock Class III and Class V UIC draft area permits. These comments includes a letter and addendum. Copies of OST Ordinance No. 07- 40 and Ordinance No. 11-10 are also included. There are several attachments to the addendum and referenced therein. These attachments are submitted in a separate email. Please let me know if you have any trouble opening the attached documents. [ATTACHMENT: "2017-06-19 OST Comment Letter re Dewey-Burdock with Addendum (final signed).pdf"; "OST Ordinance 11-10.pdf; OST Ordinance 07-40.pdf"]
538			Please find comments attached regarding the Dewey Burdock Uranium Mine in the Black Hills. We strongly urge you to deny the requested permits and the aquifer exemption. [ATTACHMENT: "NRS_ Comments for Dewey Burdock ISL Uranium Mine.pdf"]
552		d	RESOLUTION OF THE SANTEE SIOUX NATION TO OPPOSE THE "DEWEY BURDOCK URANIUM MINING PROJECT," IN SUPPORT OF ALL TRIBES THAT ALSO OPPOSE THIS PROJECT. Resolution Number: FY2017-35 WHEREAS, the Santee Sioux Nation is a federally-recognized Indian Tribe pursuant to Section 16 of the Act of June 18, 1934, (48 Stat. 984), codified at 25 U.S.C. 476, et seq., as amended by the Act of June 15, [935, (49 Stat. 378); and WHEREAS, the Santee Sioux Nation is governed by a Tribal Council made up of elected representatives who act in accordance with the powers granted to it by its Constitution and By-Laws, as amended on August 30, 2002 by Secretarial Election; and WHEREAS, the Santee Sioux Nation Tribal Constitution, with the inherent powers of self-governance, recognizes the Powers of Self Governance and authorizes the Tribal Council, under Article N, Section 1 to promulgate and enforce ordinances providing for the maintenance of law and order and general welfare of the Nation; and WHEREAS, the Tribal Council has RESPONSIBILITY OF MAINTAINING AND GUARANTEE THE HEALTH, SAFETY AND WELFARE OF IT'S PEOPLE OF THE SANTEE SIOUX NATION

			WHEREAS, THE URANIUM MINING PROJECT BY DEWEY BURDOCK OR ANY OTHER COMPANY OR URANIUM MINING ACTNITIES ARE DANGEROUS, UNCONSTITUTIONAL AND FURTHERMORE, DETRIMENTAL TO THE FUTURE OF OUR GENERATIONS TO COME. [...] WHEREAS, the Tribal Council determined that it is in the best interest of the Santee Sioux Nation AND FOR FUTURE GENERATIONS OF THE SANTEE SIOUX NATION AND OTHER NATIONS OF THE GREAT SIOUX NATION AND OPPOSE ANY URANIUM MINING IN, ON OR AROUND THE BLACK HILLS. WHEREAS, THE SANTEE SIOUX NATION TRIBAL COUNCIL, ELECTED BY THEIR PEOPLE, ALONG WITH TREATY COUNCIL REPRESENTATIVES OF THE ISANTI DAKOTA FURTHER OPPOSE URANIUM MINING AND THE DEWEY BURDOCK URANIUM MINING PROJECT. NOW THEREFORE BE IT RESOLVED, the Santee Sioux Nation, acting through its Tribal Council, hereby approves and adopts THIS RESOLUTION, OPPOSING URANIUM MINING IN, ON OUR AROUND THE BLACK HILLS AND FURHTER OPPOSES THE DEWEY BURDOCK URANIUM MINING PROJECT. BE IT FINALLY RESOLVED, THIS RESOLUTION WAS PASSED BY THE SANTEE SIOUX NATION TRIBAL COUNCIL IN A SPECIAL MEETING HELD AT THE TRIBAL HEADQUARTERS OF THE SANTEE SIOUX NATION ON APRIL 24th, 2017 AND PASSED BY MOTION NUMBER 10 (TEN) AND ENACTED IMMEDIATELY. CERTIFICATION This will certify that the foregoing resolution was considered at a meeting of the Santee Sioux Tribal Council of the Santee Sioux Nation, duly cal.1led and held on the 24 day of April, 2017, and was adopted by a vote of 7 FOR, 0 AGAINST and 1 NOT VOTING OR ABSENT. A quorum of 8 was present.
554	Ex. 6 Personal Privacy (PP)	dical	District 9 Medical Society Opposition to in-situ and open pit Uranium Mining in the Black Hills of South Dakota South Dakota State Medical Association 1. WHEREAS, the value of Uranium has increased due to the current number and projected increase in Nuclear Power Plants in the world (436 currently and 90 projected for the next 15 years), and 2. WHEREAS, the Black Hills of South Dakota geology shows a rich source of Uranium and
7450			Subject: NO to uranium mining! Thank you for the oportunity, once again, to say NO to uranium works, test hole, exploration, WHATEVER it is the companies want to do. It is WRONG, it is insane the propaganda about job creation and the fantasy the process is safe. Please, NO MORE!
7458			There should be NO deficiencies where OUR WATER is concerned. Regardless of who owns uranium properties in the Black Hills, I oppose uranium mining in the area.
07459 (Valentine hearing)			No more exemptions. Mni Wiconi. Water is life.
7460 (5/8 Rapid City hearing)			The radioactivity that could possibly be released, you know. Say it's an all clean mine and there's no accident, in an ideal world, maybe. But the fact that there's a chance, that's never going to get cleaned up. I love this state. I love the people in this state. And just like the speaker prior to me, when this is one place where we're all coming together and saying, No, thank you. So I don't really have any more to say. Just thanks for listening, and you'll be in my prayers, too.
7460 (5/8 Rapid City hearing)			CHRISTINE SANDVIK: Hi. My name is Christie Sandvik, and I'm coming to you as a local resident, a scientist, a conservationist, and an American. I -- and I urge you guys to stand up against the uranium mining in the Black Hills. I was born and raised in South Dakota, and I hold a bachelor's in science in global environmental science and a master's in atmospheric and environmental science, and I worked in the -- at South Dakota School of Mines and Technology in the Biogeochemistry Core -- lab for three years. I feel lucky growing up in South Dakota that I've had access to the Black Hills. Because of trespass rights, we have been allowed to have responsible and respectful use of the Black Hills, and I think that's very important. I think it's important for us to remember that one person or group can really spoil the whole thing forever, and we shouldn't be allowing foreign companies to do this. [...] And I'm going to conclude by just saying the national parks, we always -- because we have trespass rights to them, it feels like as an American they're ours. They belong to you and me, we have access to them, and they are ours to enjoy, and I can't imagine taking that away from us or making it so that we're unsafe in those areas. So please stand up against uranium mining in the Black Hills. That's all. Thank you so much.
7460 (5/8 Rapid City hearing)			Therefore, Dakota Rural Action has resolved that it calls for a moratorium, a complete moratorium on uranium mining in our -- in our area.
7460 (5/8 Rapid City hearing)			Regardless of who owns uranium properties in the Black Hills, I oppose uranium mining in the area.
7460 (5/8 Rapid City hearing)			CHLOE OLSON: Hi. My name is Chloe Olson, and I am an environmental engineering student at the School of Mines. First, I'd like to say I am a proponent of nuclear energy because I think it's a clean alternative to fossil fuels, but I do not support the mining of
7460 (5/8 Rapid City hearing)			CHRISTIN SJOMELING: Thank you, everyone. Thank you for doing this, and I want to thank all the speakers. I just got here about an hour ago, and I hope I don't cry here, but -- you did say my name pretty close. Sjomeling is how you say it. No, I guess, in one word is what we beg that this doesn't happen. I talked to my dad this morning. He had -- he came with the national security side of it to me. I said, Dad, I don't know. It's kind of like Ms. Henderson said, we get one chance.
7460 (5/8 Rapid City hearing)			And I stand here entirely in opposition of uranium mining in the Black Hills. (Speaking in indigenous language.)

7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	CHERYL ANNE RUEBNER-MALROY: Hello. So when I walked into this room, I found a whole bunch of papers with some semi-laymen's terms, scientific information about what is planned to be done with this uranium mining project. But I very soon realized, after sitting down to read them, that I don't have to read them and nobody else has to read them because there's no reason for any of this to be happening in the first place. And, yeah, we could -- we could all come up here and advocate for the rights of the people that have lived on this land, and we should. But when it comes down to it, whoever is making these unilateral decisions should take into account their own survival. Because when you're dealing with bullies, ethics doesn't come into play. You can't convince bullies to care about anything except for themselves. [...] So the last thing I'm going to say here is that the only heavy metal we need is the heavy metal that has a bass guitar, drums, a guitar, and a lead singer. Thank you.
7462 (Hot Springs hearing)		You are on this list if you allow this malicious insult to our beautiful homeland, our beautiful Black Hills, our beautiful lives to continue. We have heard all the promises and assurances of the corporate hierarchy. You should know by now they cannot be trusted. I pray for your well-being. I pray you -- I pray you have the courage to handle the immense pressure this question is asking.
07463 (Edgemont hearing)		ABREY FLUTE: (Speaking in indigenous language.) My name is Abrey Flute. My traditional name is Hiha Sila, Owl Boy. And I think out of all the Native Americans here, I'm probably the most colonized maybe. But you know, we had a voice from the future come up here, and it was that young man right there, you know. He showed us that he's fighting for his future in this, you know, county, in this town. You know, he's a warrior, an akicita, in my book. For him to come up here and say the things he said, you know, it moved me, you know. And it showed me that, you know, this is a right fight to fight for. And I would like to also say that I'm pretty sure, you know, you guys aren't bad people, you know. We're all human. We all bleed, and we all, you know, need essential things, like water, food, and certain things. I'm pretty sure that this is a tough job to come up here and do, but I would like to say that, you know, I answered the call to Standing Rock and stood with my people there. I answered the call here and stood with everybody here. And I just wanted to say that oil and uranium should not be coming out of the ground. Mother Earth did not ask for this. You know, you can come up with any scientific thing. You can come up here with papers and say, you know, the facts, you know, things that have come up. But the future is created by those that are searching for the uncertain and that are discovering the unknown. And go ahead and put down, you know, this uranium project, but who's to say that, you know, the people who are willing to govern it and oversee it will be here in 15 years, 20 years when young men like him have to fight for decisions that adults chose for them and that they didn't choose themselves. So, you know, I just want to say, just wanted to say that and hau.
07463 (Edgemont hearing)		JANIE STEIN: The science in the 1950s told us that uranium mining, the way they did it then was safe. Let's talk to the Dine people about that. Let's talk to the original people of the land about justice and environmental justice. Let's see what they have to say about it. We've been hearing testimony the last few days. I've sure learned a lot. And we've heard from many experts, the facts and figures and statistics about why this is a bad idea to continue this project, the Dewey-Burdock uranium project.
07463 (Edgemont hearing)		MIENGUN PAMP: Hi. My name is Miengun Pamp. I spoke two times so far. Obviously I'm here in opposition to the whole project. You know, there's just a lot to say about it, so I don't think I'll sit here all day and spew big, huge emotional speeches at you or anything. I don't have one today. It's just common sense honestly at this point. Like, no matter how foolproof something is, there's always going to be a problem, and when you're dealing with something to this extent, you know, the dangers of it, it's a little ridiculous to take that chance. Like a hiccup, you know, a little bump in the road, that's millions of people. That's, you know, hundreds of lives that would be gone so fast. It's a generational problem. Like genetically, you would be affected, your kids are affected, anything that survived after that would be affected. It's, you know, just a little idiotic to let it go, you know, oh, it'll be fine. But if it's not, there's nowhere to go. There's no out. You wouldn't even know it was happening until it was too late. Just figured I'd say how I felt one last time, and everybody have a nice day.
07463 (Edgemont hearing)		Keep it in the ground. No aquifer exemptions.
07463 (Edgemont hearing)		No uranium. We don't want it. We didn't want it then. We didn't want it in the '50s, '70s, the 2000s, and we sure the hell don't want it now. We didn't want it when you showed up here on your boats. We don't want it. We didn't need it then, we don't need it now.
7642 (Hot Springs hearing)		I want to now speak on a comment that Mr. Hollenbeck did -- had made: Uranium mining has already been proven safe in other areas. I'm not exactly sure what other areas Mr. Hollenbeck has been referring to, but in my research, it has not at all been proven safe. In fact, uranium mining and processing is both water- and energy-intensive. By-products are considered hazardous and highly radioactive. Although uranium is natural if left in the ground, when mined, it no longer remains in its natural state. As toxic radioactive material is mobilized, once removed from the ground, humans and wildlife face a greater likelihood of exposure to uranium and its by-products by inhaling contaminated dust in the air or by ingesting contaminated water and food.

		The product from uranium mining is a powder that, when stored in drums, emits radiation as the uranium breaks down. Waste products left behind remain hazardous and radioactive for 100,000 years. Substances and tailings include thorium-234, radium, radon, lead, bismuth, polonium. For every ton of radioactivity that is stored in tailings, there are additional tons of toxic chemicals. These toxic chemicals are dangerous to the human health and increase the risk of cancer and genetic defects. This has been proven by the National Academy of Science of the United States. They further state that it has not been proven that uranium mining is safe and that the unknown risks are just too great to compensate for unknown anticipated rewards. Banning uranium and mining and milling should be enforced.
7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Look into their eyes and please, please for their future and your children's and their children's future, stand up for what is right and protect our water, protect our children, and stop uranium mining, period. And don't mine in the Black Hills. And clean up the existing mines that are currently left unattended and uncared for and were not disposed of properly before you even think of mining again anywhere else.

###Comments from Tribes

###EPAProcess

###Comments from Tribes

###Comments from Tribes

###Comments from Tribes

Letter ID	Commenter Name	Text
1		I grew up in Gallup, NM which is surrounded by reservation and Native American sites. My home was on w66, west of town. We moved out there in 83 but my mom had lived on the property as a young child. We are not Native but have respect and love for the different Native cultures. I watched Twin Buttes, year by year become a hill of rubble. When I see pictures from the 50's and 60's of how beautiful it was I am sad, angry and frustrated. I implore you to do the honorable and environmentally responsible thing and refuse to allow more Native American sites, land that we all love and need, to be destroyed for capitalism and greed [ATTACHMENT: "text_1492848510940.txt"]
7		Subject: No uranium mining Dewey Burdock! To whom this may concern, I am writing to support native Americans in there opposition to the Dewey Burdock uranium mining of the black hills territory !
8		Subject: South Dakota Uranium Mining I oppose the allowance of these mining permits, as they endanger the drinking water in nearby areas, as well as intrudes on Indigenous-owned spaces.
19		Subject: Valois Shea , permits to mine uranium This is unacceptable. permits to mine uranium in the southern Black Hill should be denied! Putting poison water in to the ground should never be permitted .....The Black Hills, the heart of everything that is. The 1868 Fort Laramie Treaty was ratified by Congress and was never amended. Under international law it is Native land. "The laws of the United States, the NRC regulations, and the individuals who sit behind those desks can honor treaty law, the life way of the Lakota, environmental laws, and demonstrate respect for Mother Earth by denying application to mine uranium."
25		Subject: Powertech permits I understand in March of this year the EPA issued two draft permits to Powertech, a multinational corporation and division of Azarga Uranium Corporation of Canada. Together these permits would allow the drilling of thousands of wells within 14 different fields. These wells would bore hundreds of feet into the ground and pierce the Inyan Kara system of underground aquifers. The second of the two permits is to allow the disposal of hazardous waste materials resulting from uranium mining. Both permits would needlessly expose the Lakota Oyate to the devastation of uranium mining and continue america's war against Red Nations' peoples [...]
26		Subject: Uranium mining/aquifer S. D. I am writing to oppose the plan to dump wastes from uranium mining under the aquifer in S. D. This is not wise from many standpoints. Once again our Native American tribes are threatened with a real risk to their drinking water.
38		Subject: Black Hills No dumping uranium on Indian Land!
51	Ex. 6 Personal Privacy (PP)	Subject: Re: Uranium Mining in the Black Hills Please do not allow uranium mining in our sacred Black Hills!!
99		Why would anyone think that it should be allowed to issue permits that would needlessly expose the Lakota Oyate to the devastation of uranium mining and continue America's war against Red Nations' peoples.
113		As the wife, and mother, of enrolled members of the Oglala Sioux Tribe, I am even more concerned what impact this project will have on the well being of my native brothers and sisters. It is clear, if history is any indicator, that this proposed project will leave them most vulnerable.
137		Not to mention, the Black Hills are sacred ground to the Lakota people. After everything that happened at Standing Rock, the brutality and the suppression of our fellow people, please help our country learn from past mistakes. These short-term risks our country is taking with the environment are not worth the detrimental effects they will have for decades. I know you pursued your career to make a change for the greater good. You have the chance to take a stand against environmental catastrophe. Please deny the Dewey-Burdock permit.
137		Subject: Save Sacred Black Hills - NO Uranium Mining in Treaty Territory Dear Ms Valois, I am writing as a concerned citizen to urge you to deny any and all permits relating to in-situ recovery of uranium within the southern Black Hills region of Custer and Fall River counties.
139		Hello Valois, My name is Ex. 6 Personal Privacy (PP) and I am writing you to convince you to search for a better more sustainable solution to this problem. Since white men began colonizing the US, proud Native Americans have been treated like second rate humans, killed, rapped, butchered, and drove from their lands. This seems to still be the case. We should be coexisting with Native Americans not ruling over them.
141		Subject: In Regards to the Dewey-Burdock Uranium Project Dear Shea, Thank you for the opportunity to exercise my freedom of speech. Please take into consideration my concerns regarding the Dewey-Burdock Uranium Project that is currently under question in Black Hills (South Dakota). It has come to my attention that this project will entail drilling into locations that are sacred to the Sioux people. Since 2015, the Sioux people have been voicing their concerns about the Uranium Project and for good reason! Azarga Uranium states multiple times throughout their official report that "potential impacts" are "small". It took thousands of years for these natural landmarks to form and their structural integrity will be compromised by these intrusive drilling methods. Although the structures will still exist and there is a high chance that everything will work out as "planned" it doesn't necessarily mean that we should go through with the project. Just because one can doesn't mean that one should.
146		Subject: No uranium waste storage on Lakota land Dear Valois Shea,

		I'm writing to ask that the EPA deny the permits for the proposed Dewey-Burdock Uranium Mine project.
148		The proponents of this action love nowhere around such toxins & frankly do not care who is affected... especially since the residents are Indians, poor, & sorely disenfranchised, & poorly educated for the most part. This proposal is a disgrace to the country& evidences a deep disregard for the citizens in general, not just the Black Hills residents.
160		Native Americans have been consistently exploited in our nation and have had sacred lands taken from them to allow for the extraction of resources too many times. The Dewey-Burdock project would continue and encourage this trend, whether it is intentional or not. Uranium mining and the technologies associated with this process also create a danger and risks for an accident or mistake to be made along the way. A lot can go wrong, particularly when injecting wastewater from uranium mining back down into aquifers. There are preventative measures put into place to avoid and deal with accidents, but when it comes down to it, there is no way to guarantee safety. [...] When considering the wellbeing and interests of Native American tribes, the Dewey-Burdock project oversteps onto the rights and important lands that these tribes cherish. There are still plenty of agreements that must, but may not be reached with these tribes and as the Nuclear Regulatory Commission states, "The NRC identified 23 Native American tribes that attach historical, cultural, and religious significance to sites within the Dewey-Burdock ISR Project area" (NRC, 2014). Twenty-three is a very large number and they should all have a voice that is heard and acknowledged by our democratic system to prevent this project from occurring. The value of historic land and loss of culture cannot be made up with money.
160		Significant Native American lands should be respected and left alone especially when the degradation of it is a certain consequence. Lastly, accidents happen all the time and there is no precaution that can exempt this project from failures and the detrimental consequences that would be afflicted. The cons discreetly but surely arise in regards to this project, and it seems like an obvious decision to abandon this project and not allow the permits & exemptions that are needed to progress.
173		Subject: COMMENT: NO Uranium Mining in the Black Hills Good afternoon, I am writing this email as a US citizen and tax payer who is against the Dewey Burdock mining project in The Black Hills. I continue to be disgusted by the EPA's leadership and decision making concerning the environment. The Black Hills are scared to the Lakota people and they should not be subjected to the sickening greed that has harmed these First Americans in unimaginable ways. Please respond to this email confirming that no mining will take place. I thank you for your time.
174	Ex. 6 Personal Privacy (PP)	er Subject: Opposition to Dewey Burdock Uranium Aquifer Mining [...] Crazy Horse told his people he wanted them to remember him whenever they saw the Black Hills. This is sacred land. Visitors to this area come for contemplation, rejuvenation, and inspiration. I believe strongly in the value of our natural environment. These treasures must be protected as unique and important to our history, the people who live in the Black Hills, travelers to the area, the larger environment, and the people of the world
175		Subject: Uranium mining in the Black Hills- public comment Please do not... erode the spiritual foundation of native peoples by mining in the sacred Black Hills
175		Subject: Uranium mining in the Black Hills- public comment To: Valois Shea Please do not further destroy the environment... by mining in the sacred Black Hills.
179		Subject: Black Hills Hello Shea, Please refrain from proceeding with the plans outlined for permits and exemptions for the Black Hills uranium project. I believe that the integrity of the sacred grounds and the safety of the surrounding area are in jeopardy and believe that preservation of the Black Hills is a priority for South Dakota. I appreciate your consideration and concern to this matter.
194		Subject: STOP URANIUM MINING IN THE BLACK HILLS As a 7th generation Oglala Lakota born and raised on the Pine Ridge Indian Reservation, I grew up spending whole summers in the black hills, it is my home. Although I currently live in so called Denver, CO I consider the He Sapa and all over South West South Dakota as well as the North Eastern Parr of Wyoming my Ancestral Home. Stop Mining our Sacred Hills, leave the Uranium in the Ground.
209		Subject: Black Hills mining Hello. I would like to express my strong opinion that the Black Hills should not be used for mining or mining waste disposal. This place is a very important cultural site, sacred to many in South Dakota and throughout the U.S. (not just Lakota people). And it is one of our most beautiful natural resources. Please keep in mind those of us who would be harmed by this proposal.
233		Subject: Azarga Uranium We are begging you please do not allow Azarga to mine or dump uranium in the Hills or anywhere in SD. The Hills are sacred to the indigenous people here and to us too
236		This is court sanctioned murder of the native people in Black hills. You have stolen their children, taken their land and now you are polluting their water. I am strongly against this measure. It violates everything the EPA stands for. I can only assume you are doing this because of the current president. Stand up and have a spine.
239		Subject: Proposed uranium mining and storage on Lakota Lands

		As a concerned citizen I write to you to persuade you to deny this toxic trespass, the Lakota do not want this in their lives on their land.
245		Subject: Dewey-Burdock NO Dear Ms. Shea, I testified at one of the hearings that were held at the Ramkota in Rapid City. I would like to reiterate my comments here. I am 100 percent against the dewey-burdock plan to "mine" for uranium and to dump waste in our aquifers. 1.Environmental in...justice: Native American Tribes have put up with a multitude of ways in which their lands have been stolen. Now the plan seems to be to strip them of clean safe water.
255		This is also sacred land to many Native tribes and mining it is a horrible thing to do. Please do not approve this project. Best, Ex. 6 Personal Privacy (PP)
268		Subject: Black Hills Public Comment Here is my public Comment for the Black Hills Uranium and waste water disposal. Ex. 6 Personal Privacy (PP) 19-Jun-17 South Dakota Environmental Protection Agency RE: Uranium Mining and Waste Disposal in Black Hills Dear SD EPA: My name is Ex. 6 Personal Privacy (PP) I am an enrolled member of Mandan, Hidatsa, and Arikara Nation and President of Fort Berthold Protectors of Water and Earth Rights. We oppose the uranium mining and waste disposal in Black Hills underground water tables. This opposition are the result of a Hong Kong-headquartered company named Azarga Uranium Corp. requesting EPA permits for the expressed purpose of uranium mining, milling, and wastewater disposal in the Inyan Kara and Minnelusa water tables underlying the Dewey Burdock Project site some 12 miles north of Edgemont in 1868 Ft. Laramie Treaty territory. This will jeopardize irreplaceable historical, cultural and natural heritage but most of all the sacred water, Water is Life! [...] Please don't make the mistake of focusing only on the land itself. Give equal thought to who will use the land, live on it, learn about it, or help to protect it for the future generations. Land that does not involve people on an ongoing basis becomes "out of sight and out of mind" – and subject to abuse. Thank you for your time! Ex. 6 Personal Privacy (PP) Mandaree, ND President, Fort Berthold Protectors of Water and Earth Rights The nation that destroys its soil, destroys itself. – Franklin Delano Roosevelt
275	Ex. 6 Personal Privacy (PP)	I do not want any further degradation of our waters encompassing current tribal needs, namely the Pine Ridge, Cheyenne River, Standing Rock, Rosebud, Lower Brule, Crow Cree, SissetonWahpeton, and Santee Sioux, Flandreau, and Yankton reservation lands and waters. I do not want any other peoples health jeopardized as well, i.e. all of the South Dakota, North Dakota, Montana, Wyoming, and Nebraska states populations. Thank you for considering my comments. Ex. 6 Personal Privacy (PP)
279		Subject: EPA seeks public comment - draft permits and aquifer exemption for uranium mining project in southwestern South Dakota Please do not continue with these draft permits and aquifer exemption for uranium mining in the Black Hills. These are the tribes land. All protections should be done to protect these lands and water from ever having any mining on them.
281		Subject: Comments on Dewey-Burdock Proposal For me the most important argument against the proposed permits is that the Lakota community seems nearly unanimously against them. The recent findings of elevated uranium levels in a local reservoir only reinforce lack of trust in any uranium mining operation. [...] The debt of justice we owe is staggering; for the land alone the Supreme Court has placed the price at over one billion dollars (counting interest and inflation). Against that debt, to refrain from more uranium mining seems to me to be a small payment.
294		The policy is extremely vague regarding the disturbances of Indian tribes and their land. It is important to include more details on how this topic will be handled and how the policy could impact the tribes. There are various potential impacts of disturbances to the Indian tribes land. [...] There may also be disturbances to food sources and the Indian tribes water sources ultimately affecting their daily lives.
305		Subject: STOP PLEASE STOP RUINING SACRED GROUND! STOP MINING FOR URANIUM!
320		Subject: Please stop Dewey Burdock Uranium Aquifer mining When I visited South Dakota, I heard about uranium mining causing birth defects, mainly among indigenous populations. I would like you to make a halt on this poisonous mining. Please!
333	n	Subject: South Dakota uranium mining permits I oppose wholeheartedly the two draft permits issued to Powertech, a multinational corporation and division of Azarga Uranium Corporation of Canada. These wells would bore hundreds of feet into the ground and pierce the Inyan Kara system of underground aquifers. The second of the two permits is to allow the disposal of hazardous waste materials resulting from uranium mining. Both permits would needlessly expose the Lakota Oyate to the devastation of uranium mining and continue America's war against Red Nations' peoples.
375		Subject: EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota NO! Leave the sacred Black Hills alone.

384	Ex. 6 Personal Privacy (PP)	Should an accident occur here, it will put further harm to the drinking water source for the Lakota people. With the controversy of DAPL still fresh with recent oil spills, it's crucial that there is no more destruction to Native American lands. Make sure to revoke any license for uranium mining for the future. Thank you and have a nice time.
387		Subject: Uranium mining in the Black Hills [...] And also importantly, The Black Hills are the Lakota Garden of Eden. Woud you drill in your Garden of Eden? This is where we came from, our Creation Story - would you destroy something so sacred?
392		Subject: No uranium mining!! Stop the mining on sacred Native American lands. No uranium mining in the Black Hills!!
429		Another subject about this project that gives me reason to pause is the proposal to do this on Native American land. I was able to witness the lack of respect given to Natives during the construction of the Dakota access pipeline. Sacred sites were not respected nor was a cease order given, when requested from other government agencies, when sacred sites where at risk. With all that is considered in this project I don't think the E.P.A. would be standing up to their name by allowing these permits. Please consider rejecting the permits for these projects. Thank you for your time.
440		Dear Ms Valois, I am writing you to oppose the in-situ recovery (!SR) of uranium using deep injection wells within the Inyan Kara group of aquifers (souther Black Hills region of Custer and Fall River counties). First and foremost, the Black Hills are sacred to the Indigineous peoples in the area. It would be morally repugnant to desecrate sacred land in such a way.
470		Please listen to the many united voices of all colors & all faiths, who are against the permit to Azarga/Powertech for the Dewey-Burdock uranium mine. The Lakota people cry for the water – Mni Wiconi – water is life.
470		And it has to be said and cannot be ignored that the United States Government has used control and contamination the water supply to contain and exterminate the Lakota people for generations. If the US Government has a shred of integrity left, it will put a stop to the Dewey-Burdock Uranium Project and any future proposed uranium drilling projects in the Black Hills. Thank you
470		NO uranium mining in the Black Hills! As an indigenous woman, a human being and giver of life, I am completely against uranium mining in the Black Hills. Not only will this poison the water, this does great destruction to my home, my birth place and many of our sacred sites. I want a sustainable and healthy future for my children. Uranium mining hurts everyone's future!
472		I value the rights of the Lakota people who never ceded the Black Hills; I value the land and ecosystems around that area that are risked and in all probability irreversibly damaged in prep, before, during and after uranium mining. As we know, everything is connected and uranium mining in this are would affect others, especially at the level of the aquifers. 1) NO PERMIT SHOULD BE GRANTED
489		Why pollute indigenous lands to the sole benefit of China and France? So wrong.
495		Please respect this important religious, cultural and historical site
537		To Indigenous peoples, contamination of water also raises cultural concerns. To Indigenous peoples, water, in particular, holds special meaning and is regarded as a sacred element. Indigenous cultures all over the world recognize a simple predicate: water is life. Water is identified as the first medicine. It is the first environment in which we live while we are being carried in our mothers. It is an offering made in prayer ceremonies and is a spiritual being in and of itself. All of these factors should be considering in evaluating the requested permits. [...] The Black Hills, known as *Paha Sapa* to the Lakota, are the center of their spiritual and cultural universe. To the Lakota, throughout all of Creation, *Paha Sapa* has been "The Heart of Everything That Is." Lakota medicine man Pete Catches, describes the relationship between *Papa Sapa* and the Lakota: To the Indian spiritual way of life, the Black Hills is the center of the Lakota people. There ages ago, before Columbus came over the sea, seven spirits came to the Black Hills. They selected that area, the beginning of sacredness to the Lakota people... The seventh spirit brought the Black Hills as a whole--brought it to the Lakota forever, for all eternity, not only in this life, but in the life hereafter. The two are tied together. Our people that have passed on, their spirits are contained in the Black Hills. This is why it is the center of the universe, and this is why it is sacred to the Oglala Sioux. In this life and the life hereafter, the two are together.[29] Many sites are sacred because it is a location where an event of great spiritual significance occurred. The late Native American scholar Vine Deloria, Jr. writes, "Tradition tells us that there are, on this earth, some places of inherent sacredness, sites that are Holy in and of themselves."[30] Vine Deloria, Jr. writes, "Every society needs these kinds of sacred places. They help to instill a sense of social cohesion in the people and remind them of the passage of the generations that have brought them to the present. A society that cannot remember its past and does not honor it is in peril of losing its soul."[31] The EPA should deny the permits because environmental justice policy requires nothing less. The EPA should deny these permits in order to restore relationships with tribal communities and in recognition of the long history of environmental racism towards Native American communities as they have endured the burdens of energy production for this country.

		The EPA defines "environmental justice" as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." Here, fair treatment and meaningful involvement of Indian tribes requires doing more. Instead of proceeding through the process with the end goal being approving the permits in the most hasty, least expensive manner possible, consider the long-term impacts from these mines. Consider at what cost these mines are approved- destruction of historic sites, the unburying of Native American gravesites, desecration of sacred sites, lost water resources, and a continued policy of treating Indian communities as expendable populations. [...] **V. Rates of Violence Towards Native American Women Increase in Mining Towns and the EPA Has an Obligation to Consider These Impacts and Deny the Mine Permits.** The EPA should deny the mine permits due to the social dangers that accompany mine projects, particularly the impacts to Native American women. When a mine operation opens, transient workers move in for employment, primarily male workers, often skewing the malefemale ratio in the community. This has led to an increase in more women working in strip clubs and bars. This new sex industry has brought unwanted problems to once-smaller communities. Crimes against women, particularly domestic violence and sexual assaults, rise as the population of mine workers grows.[40] In North Dakota, the oil boom resulted in a 162% increase in the violent crime rate from 2002 to 2012.41 On the Fort Berthold Reservation, sexual assaults have increased by 75%.[42] Sexual violence against Native American women is extremely high as 1 in 3 Native women has been raped or experienced an attempted rape.[43] Bringing in transient mine workers only exacerbates these problems. Sex trafficking among young Native people has also increased in communities after mine operations begin.[44] The EPA has a responsibility to study and evaluate increased rates of violence towards Native American women as a result of mining booms, and other secondary impacts to vulnerable populations.
7451		Subject: Public comment on proposed Uranium mining project [...] Dear Ms. Shea, I am writing this email to express my concern for the proposed uranium mining project in southwestern South Dakota. My concerns are mainly for future generations and the of course the environment. Coming from both a scientific background and from an Indigenous background, I urge you to deny this project in whole. Seeing and living the long term effects of uranium mining in my own community as well as on my reservation, I have seen and experienced all the negative impacts uranium mining has on both people that live in close proximity as well as the environment surrounding the mines. I personally seen the destruction to the land, the air and especially the water.
7456		Dear people, Sorrow and pain cannot be measured and brokered. Please don't inject poison into the beautiful and Holy Black Hills (or anywhere)
07459 (Valentine hearing)		DUSTIN BROUGHT PLENTY: My name is Dustin Brought Plenty. I'm from Standing Rock, Fort Yates, North Dakota, Standing Rock Reservation. I'd just like to be here to show my support for the people here that have concerns here about the uranium mining in this area. Just like our concern about the pipeline that was up there, just here to show support for these people here that have all these concerns for this uranium mine. Thank you.
07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	It will contaminate the land, the water, wildlife, and the air. The single most highly cherished concern and interest to my people is the Black Hills. It always has been, and it always will be. [...] Until Congress can come out from behind the bigoted mask of Manifest Destiny and we can come to a clear and encompassing agreement on the return of our ancestral lands, I ask that the EPA reject the Dewey-Burdock application and all future applications to mine uranium in the Black Hills and to preserve its cultural, historical, social, and spiritual significance and value to the Oceti Sakowin. I pray to the Creator that these lands remain sacred and in balance, and I include you all in my prayers. (Speaking in indigenous language.)
7460 (5/8 Rapid City hearing)		This is our -- this is our homeland here. Our creation story comes from the Black Hills, and we want to protect it forever, like I said, for our youth and the many generations to come. [...] We're committed to -- this may be a first, but this is -- what would you do to stop something that hurts your children, that hurts your land, you know? We're going to do the same thing. We're not going to let it happen, no matter what -- what comes down. So, just giving you a heads-up that we're here to stay. This is our land, and we're not going to let it happen.
7460 (5/8 Rapid City hearing)		Specifically, you know, I just want to say that, you know, South Dakota is not a nuclear waste dump. And that's my biggest concern out of all of this, is that -- ensuring that, you know, we -- you know, our citizens are heard and our communities are heard, and especial our Native American communities.
7460		And now I was inspired by my brother, Ezekiel, to come up here and stand with the Cheyenne, the Sioux, Lakota/Nakota/Dakota. Because growing up, all I've seen from the law, from what we are supposed to entrust our faith into, what we call a diplomatic system of justice, as politicians or bureaucrats would call, but all I've seen was corruption, oppression on my people. And I see the same in the Sioux Nation.

(5/8 Rapid City hearing)		And so if this project is granted its permit, there will be people like me to stand in its way to fight to the fullest. And out of this will only be sorrow, grief, bloodshed, more hatred and distrust for our government. And all my life, I despised the U.S. government for its oppression and colonialism that it has spread in this ground that we call home, the indigenous land that we now call home. And so in my opinion, I would have to deny the permits for this mining project.
7460 (5/8 Rapid City hearing)		This morning I was looking and listening to the birds singing this morning. It's really a pretty thing to hear. And then I was watching as animals, rabbits, you know, they like to race to see if they can outrun you, and I always have to let them win, you know. I let up on the gas and let them cross. The prairie dogs doing the same thing, watching that. Life is a miracle. Everybody believes that. We all say that. And so I ask you to not allow the permit and give us our life. Let us live. It's crazy that you two get to sit there and have this decision, and you have to listen to all this testimony. It's really absurd actually. And I think that we deserve the right to live. We all do. You do deserve to live, and maybe your grandchildren will come and live in the Black Hills one day, and they should have the right to live, too. And so that's what I ask.
7460 (5/8 Rapid City hearing)		And we should think of my Native brothers and sisters, what they have given to this country. There's no measure of what has been given by them, taken from them for the benefit of this country. We owe them a hell of a lot, and maybe now we better start listening to their hearts. They tell some stories of history, things we should be paying attention to. We're not so wise. [...] They can't leave, and we cozily sit at home, watching our TV, sipping a tall drink or a short one. When I get home, I'm going to have one, I'll guarantee you, after this afternoon.
7460 (5/8 Rapid City hearing)		There's no guarantee, none. So the decisions that you make, it's going to fall on your conscience, spiritually. You want to jeopardize all these people, this beautiful sacred Black Hills that doesn't even belong to you.
7460 (5/8 Rapid City hearing)		Many Native American tribal organizations have issued statements opposing this project. In addition, local conservation districts have expressed concern.
7460 (5/8 Rapid City hearing)		And at the end of the day, like many of my relatives, the Black Hills are -- are very sacred. And so is all of Turtle Island, and even our reservations. And we have been in this long-standing issue of really working towards developing a platform for us to be at peace and be as ourselves, and this is another issue that brings up that conflict. We know what's going to happen, and it's going to keep happening unless we stand up and take the steps. And the only thing I would like to be able to say to you guys entirely is that you'll always hear concepts about being the change. And you have to basically be able to see like, Hey, this is not okay. This isn't going to pan out at all. It's been the same thing, whether it be the genocide that took place against my people. It's the same thing with every single other issue that has been constantly present within all of the society, all of this country, all of every single country.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	BARBARA DUNFEE: Hello. My name is Barbara Dunfee, spelled B-A-R-B-A-R-A, last name D, as in dog; U, as in union; N, as in news; F, as in Frank, E-E. And I'm a native of Rapid City, pretty much a lifelong resident here. A few years spread other places, but pretty much spent my life here. And this is going to be a little bit rambling because it's stuff that I've been thinking of just listening to other people. One of the things that -- a lot of people here, a lot of the Native American people who have spoke talked about the treaty rights. But I think Mr. Looking Horse was the only one who really talked about how this is -- how the Black Hills are integral to the religion and that basically Black Hills are the Native American, Plains Indian holy land. And I think that's been -- I think that's been overlooked, how important that is culturally. You know, it's -- there's -- religions all over the world see mountains as holy. It's like, you go clear ack to the Greeks with Mount Olympus, and you think of the Psalms with, "I lift up mine eyes unto the hills, from whence cometh my help. My help comes from the Lord." Mountains are important, and it's universal, and the Black Hills are part of that universal whatever-it-is that speaks to people. And it spoke to the Plains Indians. It spoke to the Indians that were native here in South Dakota. And we can't ignore that.
7461 (5/9 Rapid City hearing)		BOYD ANDREW CATT-IRON SHELL: Good afternoon, Your Honor and community members. My name is Andrew Catt-Iron Shell. I'm an enrolled member of the Eastern Band of Cherokee Indians who has been raised among the Lakota Nation. I'm here today to express my feelings against uranium mining in the Black Hills and against uranium mining overall, that that should be left in the ground. And there really is no purpose. You know, Chairman Frazier asked why, and we know why. Because America was built off the natural resources of Indian country, and they are still -- we are still under attack. We are still looked at as only a natural resource in this country. We are still not looked at as human beings. [...] We know that corporations over time have benefited off our communities, first with the railroad. They were the first monopoly to come into this territory and make the same, similar claims that, "We only want to use a little bit of your land. We only want to take a little bit of your water." [...] We know that our water is poisoned. You can look at our epi profile. You can see the cancer rates. You can see all of the illnesses that are related to poisoned water in our bodies -- in our bodies, in our spirit because of the mining that has already taken place in this territory, and the -- the environment of this Americanized life.
7461		HENRY QUICK BEAR, SR.: (Speaking in indigenous language.)

(5/9 Rapid City hearing)		My relatives, I greet all of you. Good afternoon. I am Henry Quick Bear. I'm a member of the Rosebud Sioux Tribe. I am currently on the Treaty Council, and I'll like to read something for you guys. The impact to tribal lands could be catastrophic if uranium mining is allowed on or near the reservations. [...] So as far as this -- the Treaty Council goes, we oppose uranium mining. I am here -- I ask all of you to think of your children, the sicknesses that this can cause. We, as Lakota people, we take care of Unci Maka, Mother Earth. And for digging uranium mines or anything done to Mother Earth is like poking needles in your own body. I mean, if you can put yourself in that position, then you would be able to understand all of this. [...] And as a Treaty Council, we have given you the -- our paperwork through e-mail, and on behalf of the Lakota people, we also oppose uranium mining. So I humbly ask you, EPA, to reject the proposed permits for this uranium mine. I humbly ask you. Thank you. (Speaking in indigenous language.)
7461 (5/9 Rapid City hearing)		In 2007, the Oglala Sioux Tribe declared the Pine Ridge Reservation a nuclear-free zone. I know that the EPA knows about respecting the environment -- the environmental quality across jurisdictions. After the publication titled "Stream sediment geochemistry of the upper Cheyenne River watershed within the abandoned uranium mining region of the Southern Black Hills, South Dakota, USA" was released, how was this draft permit for further uranium mining respectful of my tribe's wish to be a nuclear-free zone? [...] You want to segregate us and call us the Oglala Sioux Tribe, the Rosebud Sioux Tribe, the Cheyenne River Sioux Tribe, the Standing Rock Sioux Tribe, go ahead. But you also need to consider that we are the Great Sioux Nation and think about how you're impacting us. Thank you.
7461 (5/9 Rapid City hearing)		KEITH JANIS: Okay. Thanks for allowing me the time to speak. I just want to start off first about this area, Inyan -- I think everybody is saying "Inyan" -- Inyan Kara. But I'm a person that likes to uphold the rights and the proper perspective of our Lakota terms and sacred places. And Inyan Kara is a beautiful place we are talking about. It is traditionally known as Inyan Kara. It means it's the home of the stone -- home of the stone people. Inyan Kara.
7461 (5/9 Rapid City hearing)		Now, you know, first -- in my first comment, I have to just only just talk for Unci Maka, which means Mother Earth. We all have a common link to this mother, and we also have a common responsibility to protect her and to make sure that several generations of our children coming behind us, that we hand this earth to them in better condition than we received it. And honestly, it's a really -- it's a sin how we are handing the earth to our future generations, and shame on -- shame on us. We shouldn't do that. Now -- so I just want to say that first, you know, that we -- in my comments first that I spoke for the earth and for our children.
7461 (5/9 Rapid City hearing)		Do not steal any more land. This isn't your land to steal. This land doesn't belong to anyone, like what she said. The land cannot be bought and sold. I'm sorry. That's true. On paper you may so say. If you really want me to tell you what that paper is good for, I will: fire starter, for one; and to clean your bum for another. That's it. Thank you for your time. Mni Wiconi.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Turtle Island, this land, that's what it's called -- [...] WANKINYA HO WASTE: All right. Again, this land you're on is called Turtle Island, Keya Wita. The Black Hills is the heart of this nation. And if you was to lay the cancer you call uranium on that heart, you will kill all future representations of the culture in this state, which is our seventh generation.
7461 (5/9 Rapid City hearing)		Why is it that you guys want this land? Why do they want this land to destroy it so bad when this is the sacred grounds? (Speaking in indigenous language.) [...] You know what? We were put here to take care of this land. We don't own this land. Nobody owns this land. We all belong to this land. When we die, we go back to the land. Why is it so important for you guys to come and do all this stuff on our land? And then again, I'm going to get mad at you ones that support this. My people, I'm going to say something. (Speaking in indigenous language.)
07463 (Edgemont hearing)		ANDREW BLANCHFLOWER: Hello, everyone. Thanks for the indigenous people of this place for patience here and continued welcome and support that I feel here. Mostly that's why I'm here, is to stand in support of that. I saw you guys in Valentine, and kind of good to see familiar faces. You guys, like, must really know each other by now.
07463 (Edgemont hearing)	e	Now, this place where we stand here today is our ancestral territory. You're not the first peace commission to come out here. One came 149 years ago and negotiated the 1868 Fort Laramie Treaty, the 1851 Horse Creek Treaty with our ancestors. That treaty retained a land base and water right where we stand here today. This is my people's land. We call the Black Hills He Sapa. To us it's the heart of everything that is. Now, I don't want you to let Azarga encroach on our ancestral territory. This is not just a little community of Edgemont. This is not just a little county. This is ancestral territory of the Lakota nation, the Cheyenne nation, the Arapahoe nation.
07463 (Edgemont hearing)		Our -- when we've been here for thousands of years, this place was pristine. In 500 years since Columbus thought he was in India, 500 years since then, you notice how this water, our atmosphere, everything changes in just 500 years.

		Our people were -- at one time there was scalps, people paid for scalps for Indian scalps. And smallpox, and blankets were given to us with smallpox in it to get rid of us. Our women and children were massacred, and yet we're still here. We're not going nowhere. A lot when -- a lot of you are gone and move on, we'll still be here. [...] EARL TALL: Well, in wrapping up, I guess I'd like to say the Black Hills are still not for sale.
07463 (Edgemont hearing)		We have sacred sites all over here, and all our relatives and ancestors, they are buried all over the Black Hills. And we don't want what happened in Japan, contaminating the whole Pacific ocean now, and we don't want that to happen here. (Speaking in indigenous language.)
07463 (Edgemont hearing)		ISAIAH COX: I'm Isaiah Cox, and I didn't think I'd be back here so soon. But anyway, well -- I will -- for one, I want to, like, tell everyone here to sign up to speak. You know, even if you don't really have that much to say, you should still sign up or write a comment. There's a comment box over there. But anyway, so you want to, like, mine this -- mine it -- or mine the uranium. Sorry if I sound weird. But anyway, if one person who lives there, if they don't want it, I don't think you should do it just because of that one person, mainly because it's their -- they live there, too. It's not just, like -- everyone is -- like, everyone's voice should matter, sort of. That one person, that should kind of change it to where it -- you at least take that into consideration, if you're not. And it's not even our land. Well, it's not our land first, you know. So the people who had this land before we came, they aren't -- they don't want this, you know. So why are you trying to take this away from them? Thank you. And that is all.
07463 (Edgemont hearing)		When I was at Standing Rock, I saw firsthand the blatant racism and brutality that gave rise to the genocide of the first people of this land. This attitude continues in our country today and is evidenced by this project, which is attempting to force a dangerous and unnecessary threat to our land and water, forcing this upon we, the many people who do not want it. This project will benefit only a few who will profit in money, but risk the loss of their souls. We are all downstream.
07463 (Edgemont hearing)		KATHLEEN BAILEY: Again, the profound truth of the chronic abuse of the indigenous peoples. I can't -- I'm here -- I -- I've already spoken three times and presented all that I was capable of presenting.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	ROBERT WHITE MOUNTAIN: Good afternoon. I was going to introduce myself in my language, but I think it's -- I will skip that because it takes too long. I want to save my time so I can talk. Last time I got cut off. My name is Robert White Mountain. I'm Hunkpapa Lakota from Standing Rock. And I'm just here trying to understand both sides because I was taught that. I'm a fair person, so I have to look at both sides. And I have. You know, I've not an expert in all this, but I've been working on this for quite a while. My first experience with this was 36 years ago right up here, right up the road where they were trying to destroy some very sacred sites that our people have. And that's really important, not only for our people, because it also is important for everybody, to protect these sacred sites, because it explains life as we know it here on earth. And if we destroy these, you know, it's like we are -- you know, we're lost.
07463 (Edgemont hearing)		We are the original landowners. Also, scientists, teachers, doctors, Environmental Protection Agency, so on and so forth, we are the original on that. So then I'd also like to say before I go on to my reading that these companies, large corporations, they continue today to steal our resources. For instance, in the Black Hills, we're all talking about our gold, uranium, plutonium, coal, oil, trees by the thousands daily, and the effect of all of that is our water. All of our resources are being stolen and sold still. You have tried to buy us, and we have said no. You pay anyways, but we don't want it. We don't want your money. We want our Paha Sapa, Black Hills. Paha Sapa.
07463 (Edgemont hearing)		Another fact, you know, 500 years my people have been through attempted genocide. Where this country has been built on the backs of slaves and off the profits of indigenous resources, on stolen land. Recognize this. Understand it. Do you have a conscience? Will you be able to go home if you were to permit this and actually look into your family's eyes and said you did something right? It's scary. You guys literally have the power of my child's future in your hand, and his health and his well-being. You have that power, not me, not any of these people in this room. You do. Please make the right decision. You know what's right. We shouldn't even be coming to this and having to voice this. We shouldn't. You shouldn't have to hear what we have to say. You should already know what's right. I mean, you'd be a mass murderer. Would you be able to let that rest on your conscience until the day you die? Please don't poison me. And most of all, please don't poison my son. Please don't poison those children that were just standing up here. That took a lot of courage to sing you a song. I know when I was that age, I didn't have that strength and courage. But they get it. Our children are the betterment of our generation. They have -- they know more. They get history, they have recent history with us. They'll know all this. They'll find out.
07463 (Edgemont hearing)		And you remember those are in Lakota. Those are in Lakota. Those -- those are -- the mining operations that they want to operate in, those are in Lakota.
07463 (Edgemont hearing)		We as adults make these decisions, and I can honestly say I go home every night to my children, and I look at my children and say, I stood up for you today. I stood up for my daughter who is going to carry my grandchildren. I stood up for her daughter that's not even here yet, as a matriarch, as the backbone. Respect our sovereignty and recognize us as human beings and understand that we have a say. Even if we did not grow up in Edgemont, this is still our land. (Speaking in indigenous language.)

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	WANIYA LOCKE: I, too, am an educator. I have a bachelor's in Native American studies and linguistics, and I also have a criminal justice degree. And as an educator, I truly cannot look at my students and honestly tell them that they have a bright future when uranium mines, copper mines, pipelines are coming in every single day. I, too, am from South Dakota. I, too, grew up in small-town communities. And we are literally in the last stages. The environmental fight has been going on since the '60s, and we're still fighting it. We're still fighting racism. We're still fighting social injustice and social ailments. And what it all boils down to is money. All our social ailments boil down to money, and corporations that have bought out our governing systems. So I'm asking you guys to really listen to the people that have come here with good hearts, good words, and that actually have -- that actually have a stake in this. Because my children do have a stake in this. They have a claim to the Hills. My children are truly Lakota-Dakota children that speak their own language, that can trace back their ancestors nine generations prior to Europeanism. So they should be acknowledged, and their future should be considered. So as a true educator that has taught at prestigious schools, that has taught at private schools, that has taught at college level, I honestly cannot look at my students and tell them, You can grow up to be anything you want, but you can't have clean air, you can't have clean water.
7642 (Hot Springs hearing)		I'm a legal resident of South Dakota, and I vote in Lake County. I value the rights of the Lakota people who never ceded the Black Hills.

Letter ID	Commenter Name		Text
27	Ex. 6 Personal Privacy (PP)		Subject: Please Leave the Black Hills In Peace Please, we need you to participate in doing the "ethical and sane" thing. Please leave our Black Hills alone. I know the powers that be would like to have us warring, angry, overwhelmed and distracted. We know this. Please step up and care about this nation as a whole. We the people deserve healing, lucidity and truth from our governing bodies. The treaties were broken, 1000 times over, the gas lighting never ceased, Indigenous nations were decimated and destroyed - turning our people into shells, barely human. Our government succeeded in humiliating, destroying and bringing Indigenous Nations on this continent to our knees. That is not a governing body who unites, nurtures and expands - it is divisive. Please work with the ethical, the humane and the joyful parts of yourself and this nation. Please stay out of sacred sites and allow us our peace. Honor the Treaties!
36		tella	The Black Hills region was recognized as the land of the Dakota, Nakota, and Lakota peoples of the 'Great Sioux Nation' in the Fort Laramie treaties signed with the US government in 1851 and 1868. After gold was discovered in the region in 1874, the Act of 1877 was orchestrated to provide legal cover for the seizure of the Black Hills by the US federal government, facilitating the entry of prospecting settlers. In 1980 after years of protracted legal arguments, the US Supreme Court affirmed that the sale of Black Hills had indeed violated these treaties and awarded the 'Great Sioux Nation' a settlement of $106 million. Not one nation accepted the payment, insisting that the sacred region cannot be sold. The settlement, now approaching $1 billion, continues to grow in an interest-earning account (Howe, Soldier, and Lee 2011). Today home to the mining, logging, ranching, and tourist industries, the Black Hills remains contested, unceded treaty territory to which Native and non-Native peoples, with very different understandings of and relationships to the federal government, economic development, and the land, lay claim. The politics of uranium mining in the region must be understood in this complex context.
42			The indigenous communities have treaties to this land. Please honor our shared resources and the sacred treaties. Our word is our honor.
57			Subject: In situ leach mining, Black Hills Hello. I am writing to express my opposition to the Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota. These aquifers belong by treaty to the Lakota Sioux people, who have been working toward the return of their ancestral lands.
60			Subject: Uranium from the Black Hills I urge you to reject the plan to mine Uranium in the Black Hills. Please protect the Hills and the aquifer below them. Respect the Treaties.
63			Subject: Dewey Burdock Uranium Aquifer Territories governed by treaty should be protected from exploitation of people and resource. The uranium mining above an aquifer under their promised tribal lands does that. This would put the country in violation of international law, and our own Constitution. It could open a state or the country as a whole to sanctions by governing bodies. Also consumer boycotts of great expense and exorbitant legal challenges that will get my consideration for support. Hope the next time we communicate it is not prior notice
66			Subject: Powertech Uranium I understand that you are seeking public comment on a project where uranium could be used on Lakota lands. As a citizen, my comments is please, please, no. This seems an egregious betrayal of too many treaties and against the common good of both Lakota nation and United States citizens.
73			Subject: Business Hello, my name is Ex. 6 Personal Privacy (PP) and I'm just curious as to why you think it's a good idea to store uranium on American Indian lands. One it's against the treaty's and 2 it's just plain wrong. Besides the history and the usual blah blah blah tell me why you think it's a good idea?
81			Subject: No Mining There should not be any mining in the Black Hills. US Treaty clearly states this is Native land. A Sovereign Nation,
85			This is treaty territory for our natives and it's against treaties to destroy this area for uranium.
90			Subject: NO to Uranium Mining Uranium mining of the Black Hills is not only an assault on Native sovereignty over a religious, cultural, and historic site for many Nations,
97			Uranium and the Winters Doctrine by Ex. 6 Personal Privacy (PP) The Winters Doctrine, which I discussed at the Edgemont hearings, was just upheld by a June 14, 2017 court decision for the Standing Rock Sioux Tribe in the latest North Dakota Pipeline decision. This reaffirmed their rights against water pollution. The Winters Doctrine mentioned in this case is a cornerstone of Native American Law. This confirmed their rights to an ancestral home, which implies original water rights dating from the original treaty agreement. This allows for present and future water needs along with things like hunting and fishing. It did not matter that Dakota Pipeline was upstream from the reservations: any potential disasters were still a threat to a basic concept of a livable reserved homeland. In the Edgemont, South Dakota hearing I presented 11 pages on the Winters Doctrine. This doctrine provides a legal framework to hang all testimony in defense of a reserve homeland by the Tribes. These concepts have just been upheld in court. These concepts have grown wider in application over time, and now apply reserve rights to things like National Grasslands, National Parks, and National Recreation Areas as well as tribal reservations. The Rapid City Journal notes rancher John Sides of the Fall River County Conservation District says a uranium exemption and development could devastate 125 wells. "It would turn communities into ghost towns and ranches into wastelands ." In applying the Winters Doctrine to National Grassland ranching, it does not matter that contaminated wells for leases would be located just outside the Grassland boundary. It is still the same aquifer and the effect is still disastrous on the federally reserved resource, hence unallowable. The same applies to all federally reserved lands from the time of their inception. The Standing Rock decision brings this water law doctrine into the 21st century for Native American issues. Even if amounts are not easily quantifiable, a usable homeland cannot have zero usable water. Left overs and contaminated dregs destroy the concept of a reservation.

		Original treaties were based on what was understood at the time, not on some rules, policies, executive actions, or laws made up decades or centuries later. In the years following 1950 the government and President Nixon made a decision that areas of the country would be considered sacrificial areas mandated by atomic pollution. This decision and the resultant succeeding culture spawned countless decisions that were damaging and poisonous to the Cheyenne River and Sioux homelands. Just like the pipeline decision these were considered inconsequential since they were outside the reservation boundaries. A poor minority would receive the negative results while the powerful got rich. How well would a poor minority be able to defend themselves anyway? This totally ignores that the federal government holds these rights in trust for the Tribes. The government must defend these rights as their own and all decisions must be in the Tribes' favor. For decades or more uranium decisions have not been made in the Tribes' favor, or even in the favor of other federally reserved areas, such as the Badlands National Park, where the Cheyenne River flows. The issue of uranium is not just whites versus Indians. The Winters Doctrine applies to at least nine local federally reserved areas, including the two reservations. Edgemont water quality analysis shows above acceptable radiation limits, and uranium near the limits in two categories. It is time for the EPA to reopen investigation and enforcement of suspect private uranium mines and gain physical entrance, as per multiple tribal and non-tribal requests at the hearings. Such questions under investigation should not allow further questionable, likely damaging, and possible irreversible actions to the environment to be made. It is time for the federal government to stand up to their trust responsibilities under the Winters Doctrine.
109		Subject: NO to Dewey Burdock Uranium Aquifer Mining Hello, Sending public comment on Dewey Burdock Uranium Aquifer Mining. Don't allow mining there. No uranium on treaty territory.
110		Subject: Don't Allow Uranium Waste Storage on Lakota Land Dear Valois Shea, I'm writing to ask that the EPA deny the permits for the proposed Dewey-Burdock Uranium Mine project. This proposed mining project is likely to contaminate aquifers of the Black Hills and put the health and safety of those drinking that water at risk. In addition, the mining project is next to the Black Hills, and is within the boundaries of an area set aside for the tribes of the Great Sioux Nation by treaties signed in 1851 and 1868. The Black Hills are sacred to the Lakota Nation. These tribes oppose this mining project; it violates their 1851 & 1868 Treaty Rights and they did not give up their water rights or mineral rights to these areas. The EPA must deny these permits. Thank you very much for your time.
146		[...] In addition, the mining project is next to the Black Hills, and is within the boundaries of an area set aside for the tribes of the Great Sioux Nation by treaties signed in 1851 and 1868. The Black Hills are sacred to the Lakota Nation. These tribes oppose this mining project; it violates their 1851 & 1868 Treaty Rights and they did not give up their water rights or mineral rights to these areas. The EPA must deny these permits. Thank you very much for your time.
155		Subject: Powertech for uranium mining These Lands belong to the Native Tribes, they are Sacred and/or Treaty Lands. This proposal will deface and pollute and contaminate the land. Why is this necessary? We need clean water & land more than we need uranium.
198		Subject: Dewey Burdock Uranium Aquifer Mining [...] Furthermore this is treaty land. This mining is illegal. Help us stand up for our children's future. Thank you.
214	Ex. 6 Personal Privacy (PP)	Subject: No Uranium Waste Storage on Lakota Land Dear Valois Shea, I'm writing to ask that the EPA deny the permits for the proposed Dewey-Burdock Uranium Mine project. This proposed mining project is likely to contaminate aquifers of the Black Hills and put the health and safety of those drinking that water at risk. In addition, the mining project is next to the Black Hills, and is within the boundaries of an area set aside for the tribes of the Great Sioux Nation by treaties signed in 1851 and 1868. The Black Hills are sacred to the Lakota Nation. These tribes oppose this mining project; it violates their 1851 & 1868 Treaty Rights and they did not give up their water rights or mineral rights to these areas. The EPA must deny these permits. Thank you very much for your time.
247		Furthermore, many treaties, including the Fort Laramie Treaties of 1851, require consent of the Indigenous peoples whose land mines would be located on. Without consent, mining is a genocidal act of theft and desecration.
252		Subject: Black Hills Dear U.S.,EPA Region 8, I am asking for no uranium in treaty territory. I am asking for a strong no to the Dewey Burdock Uranium in the Black Hills. No, to this whole thing.
260		Subject: Say no to the Dewy Burdock Uranium Aquafer mining The Black Hills are sacred territory and treaty land. We have already stolen so much from native peoples when are we going to stop? For once do the right thing and keep the water clean.
269		Subject: Uranium mining in Treaty Territory Please help to discontinue this vile procedure of uranium mining on any Treaty or Native American lands. Thank you for your cooperation.
275		Subject: Public comments for draft permits Dewey Burdock Please be advised that I am hereby submitting my comments regarding the draft permits on DeweyBurdock insitu mining. An enrolled member of the Standing Rock Sioux Tribe, I disagree with any mining on our treaty lands, and jeopardizing the aquifers from which the Great Sioux Nation (Oceti Sakowin) receives drinking water. For your information the Oceti Sakowin is made up of seven councils of recent history.
279		It is not necessary. Why should any exemptions be made?. This land is owned by the tribes and should be treated just like any other private land.
279		Subject: EPA seeks public comment - draft permits and aquifer exemption for uranium mining project in southwestern South Dakota

		Please do not continue with these draft permits and aquifer exemption for uranium mining in the Black Hills. These are the tribes land. All protections should be done to protect these lands and water from ever having any mining on them. It is not necessary. Why should any exemptions be made?. This land is owned by the tribes and should be treated just like any other private land. the water should be protected from contaminants at all cost.
289		Granting these exemptions would be illegal. It violates the treaty rights of the Sioux Nation. The Pine Ridge and Rosebud reservations will be effected by this proposed mining because they take a portion of their drinking water &om the aquifers that are threatened. They also still have hunting and fishing rights in this area pursuant to the Fort Laramie Treaty of 1868. These are precisely the issues that are now swinging the tide in the favor of the Standing Rock Sioux and the other tribes who have joined them in their ongoing battle against the Dakota Access Pipeline. The United States Supreme Court has held in, United States v. Sioux Nation of Indians,448 U.S. 371 (1980) that the Black Hills including the area of the Dewey Burdock proposed mines was illegally taken from the Sioux Nation and awarded them compensation with interest from the date of the taking, 1877. This money is still accumulating and is being held in trust for the Tribe because they do not accept it and want the Black Hills returned to them. Granting these exemptions would lead to more taking of rights from the Sioux Nation, rights to hunt, fish, gather and to have safe water. [...] More compensation plus interest would have to be paid to the Sioux Nation and to these other people under the Fifth Amendment of the United States Constitution.
301		Subject: Uranium mining & storage on Lakota Lands Lakota land belongs to the Lakota people. No mining or any other thing should be done on these lands. The United States has broken countless treaties over the years. Please chose to be the person who stops this.
00306, 00307	**Ex. 6 Personal Privacy (PP)**	What it boils down to is that the more we allow these companies to do whatever they want to do, especially if they are doing it unregulated and irresponsibly, the more lives we are effectively putting in danger! Uranium mining should not be allowed for the simple fact that not only will it contaminate the water it will contaminate the air as well, it puts far too many lives in danger human, animal and otherwise, but the more legal argument is that it would take place on treaty land that would directly impact the tribe that owns it! Do we think the company that wants to do it cares? Sure they do! They care as much as Kelsey Warren and Energy Transfer Partners gave a damn about the Sioux and The Standing Rock Reservation! We simply cannot allow these companies to do whatever they want to wherever they want to simply because they have money! There are many things in this world that money cannot buy nor replenish and our environment is right at the top of that list! Once a species of plant or animal is extinct it is gone forever, there is no bringing it back and cloning is not a substitute for natural organic matter! Please help us to deliver a message loud and clear the we are not interested in their materialism and that you do not make a country great again by dismantling it from the inside and killing off its citizens via contaminated water, air and soil! No good will come from allowing anyone to blast for uranium, it's bad for the people, it's bad for the environment and again as far as the legal argument is concerned this company wants to blast on treaty land and the tribe has already spoken, therefore the tribes request should be honored and the company needs to be denied access. At the end of the day what should prevail is what works for the greater good and that is honoring the treaties and protecting the environment, not allowing any company to endanger both in pursuit of the almighty dollar and their own corporate greed!
326		Subject: NO to uranium mining in the Black Hills! I am writing to virulently object to proposed uranium mining in the Black Hills. The fact that this land is stolen means no settlers should be there in the first place. But to engage in a practice that has poisoned thousands, and for something so fleeting and filthy as money, is the lowest form of evil.
355		Dear Shea, If you can send me any information pertaining to any activities on Treaty Territory of 1851 and 1868 Fort Laramie Treaties. I understand there is some activity with uranium mining.
390		Subject: Uranium in the black hills. In these times of tension, I believe few things could be as damaging toward a true reconciliation with and the recognition and respect of the sovereignty held by the first people of this continent than the EPA's proposed plans to extract Uranium in the Black hills; particularly without tribal sanction. It seems that with each passing year, the US seems less and less committed of maintaining its obligations to the First Nations; first forcing the unwanted Keystone pipeline upon them and now this. We as a nation should be reaffirming our commitment to respecting the sovereignty and cultural spaces which connect the Indigenous communities to their history & culture, which both have a lot to teach us all about the true meaning of stewardship, reciprocity, and conservation.
393		In addition, this mining project is next to the Black Hills, and is within the boundaries of an area set aside for the tribes of the Great Sioux Nation by treaties signed in 1851 and 1868. The Black Hills are sacred to the Lakota Nation, and these tribes are opposed to this mining project, it clearly violates their 1851 & 1868 Treaty Rights. They did not give up their water rights or minerals rights to these areas. Therefore, to follow the law, the EPA has no choice but to deny these permits.
396	N/A Sicangu Lakota Treaty Council	SICANGU LAKOTA TREATY COUNCIL RESOLUTION NO. 2017-02 WHEREAS, the Rosebud Sioux Tribal Council has established a Sicangu Lakota Treaty Council to protect, analyze, educate, and study issues related to the Fort Laramie Treaty of 1851 and the Fort Laramie Treaty of 1868, and other related treaties; and WHEREAS, the Sicangu Lakota Treaty Council to consider and protect the Sicangu Lakota Way of Life pertaining to cultural practices and sacred sites within the treaty boundaries makes the following recommendation, and WHEREAS, the Rosebud Sioux Tribe or Sicangu Lakota Oyate is a successor Tribe to the bands of the Dakota/Nakota/Lakota Oceti Sakowin Tribes also known as the Great Sioux Nation that are signatory bands to the Fort Laramie Treaties of 1851 and 1868; and WHEREAS, the Oceti Sako win tribes of the Lakota, Dakota, and Nakata consider the Black Hills of South Dakota embodies ancient sacred sites to include and not limited to Inya Kaga, Ki Iyanka Ocanku Sa (Red Race Track), Wasun Wiconiye (Wind Cave), Mato Tipila (Bear Butte), Hihan Kaga (Black Elk Peak), Buffalo Gap, Pesla, and

WHEREAS, the Sicangu Lakota Treaty Council determines that the Dewey Burdock Uranium Mine Injection Wells are within the sacred site Ki Iyanka Ocanku Sa or Red Race Track which is held as a spiritual and sacred site, and

WHEREAS, the Policy Statement in the EPA's policy is to consult on a government-to-government basis with federally recognized governments when EPA actions and decisions may affect tribal interests. Consultation is process of meaningful communication and coordination between EPA and tribal officials prior to EPA taking actions or implementing decisions that may affect tribes. As a process, consult includes several methods of interaction that may occur at different levels. The appropriate level of interaction is determined by past and current practices, adjustments made through its Policy the continuing dialogue between EPA and tribal governments, and program and regional of consultation procedures and plans. and

WHEREAS, the United States Environmental Protection Agency Region 8 is requesting public comment by May 19, 20177, on two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and VIC program regulations. The Dewey-Burdock site is located in southwestern Custer County and northwestern Fall River County, on the Wyoming/South Dakota border, and

WHEREAS, the EPA Region 8 UIC Program is issuing two Draft UIC Area Permits to Powertech (USA) Inc. of Greenwood Village, Colorado, for injection activities related to uranium recovery. One is a UIC Class ill Area Permit for injection wells for the ISR of uranium; the second is a UIC Class V Area Permit for deep injection wells that will be used to dispose of ISR process waste fluids into the Minnelusa Formation after treatment to meet radioactive waste fluids into the Minnelusa Formation after treatment to meet radioactive waste and hazardous waste standards. The EPA is also proposing an aquifer exemption approval in connection with the Class III Area Permit to exempt the uranium-bearing portions of tine Inyan Kara Group aquifers, and

WHEREAS, the EPA is also seeking comment on two options for approval of the aquifer exemption that Powertech requested related to the Class ill permit application. The two options are discussed in the Auquifer Exemption Draft Record of Decision available on the EPA Region 8 UI Program Website, and

WHEREAS, the Sicangu Lakota Treaty Council has determined that both of the proposed injection wells are located within the 1851 and 1868 Fort Laramie Treaty Boundary lines, and therefore in violation of the Fort Laramie Treaty of 1851 and 1868,

WHEREAS, Article 6 if the US Constitution states that "This Constitution, and the laws of the United States which shall be made in pursuance thereof; and all treaties made, or which shall be made, under the authority of the United States, shall be the supreme law of the land; and the judges in every state shall be bound thereby, anything in the Constitution or laws of any State to the contrary notwithstanding." And

WHEREAS, the American Indian Religious Freedom Act (AIRFA) (16 U.S.C. 1996) AIRFA establishes the policy of the federal government "to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise the traditional religions of the American Indian, Eskimo, Aleut, and Native Hawaiians, including, but not limited to, access to sites, use and possession of sacred objects, and the freedom to worship through ceremonials and traditional rites and

WHEREAS, the Archeological Resources Protection Act of 1979. (ARPA) (16 U.S.C. 470aa-mm) ARPA requires federal agencies to consult with tribal authorities before permitting archeological excavations on tribal lands (16 U.S.C. 470cc(c)). It also mandates the confidentially of information concerning the nature and location of archeological resources, including tribal archeological resources, and

WHEREAS, the National Historic Preservation Act (NHPA) Regulations Implementing Section 106 (36 CFR Part 800) The regulations implementing Section 106 of the NHPA require consultation with Indian tribes throughout the historic preservation review process. Federal agencies are required to consult with Indian tribes on a government-to-government basis, in a manner that is respectful of tribal sovereignty. The regulations require federal agencies to acknowledge the special expertise of Indian tribes in determining which historic properties are ofreligious and cultural significance to them, and

WHEREAS, the Native American Graves Protection and Repatriation Act (25 U.S.C. 3001 , et. seq.) NAGPRA requires consultations with Indian tribes, traditional religious leaders and lineal descendants of Native Americans regarding the treatment and disposition of specific kinds of human remains, funerary objects, sacred objects and other items. Under the Act, consultation is required under certain circumstances, including those identified in Sections 3002(c), 3002(d), 3003, 3004, and 3005, and

WHEREAS, the National Environmental Policy Act (NEPA) Implementing Regulations 40 CFR Part 1500 NEPA requires the preparation of an environmental assessment (EA) or environmental impact statement (EIS) for any proposed major federal action that may significantly affect the quality of the human environment. While the statutory language of NEPA does not mention Indian tribes, the Council on Environmental Quality (CEQ) regulations and guidance do require agencies to contact Indian tribes and provide them with opportunities to participate at various stages in the preparation of an EA or EIS. CEQ has issued a Memorandum for Tribal Leaders encouraging tribes to participate as cooperating agencies with federal agencies in NEPA reviews. Section 40 CFR 1501.2(d)(2) requires that Federal agencies consult with Indian tribes early in the NEPA process, and

WHEREAS, the EPA states that "Class V wells are used to inject non-hazardous fluids underground. Most Class V wells are used to dispose of wastes into or above underground sources of drinking water. This di sposal can pose a threat to ground water quality if not managed properly.", and near the Black Hills which the Oceti Sakowin Tribes considers sacred, and

WHEREAS, the Sicangu Lakota Treaty Council reminds the EPA that according to Lakota oral history there are underground water channels or chambers in the Black Hills region that reach the Oglala Aquifer and that said the injection wells toxic chemicals or substances could harm water sources, wells and supplies that are used by humans within tbe said Treaty Boundaries, and

WHEREAS, The Sicangu Lakota Treaty Council opposes any permits to be granted by the EPA for mining, injection wells, fracking, or any type of activities that will hann tbe Sacred Black Hills and the Oceti Sakowin Tribes within the Fort Laramie Treaty of 1851 and 1868, and

THEREFORE, BE IT RESOLVED, that the Sicangu Lakota Treaty Council hereby strongly urges and requests the EPA to deny both permits and any future permit applications relating to Uranium mining or the extraction of minerals or rare earth elements.

CERTIFICATION

		This is to certify that the above Resolution No. 2017-02 was duly passed by the Sicangu Lakota Treaty Council on May 2, 2017, Motion to approve by Shane Red Hawk. Second by Delano Clairmont with a vote of Four (4) in favor, Zero (0) opposed, and One (1) not voting. The said resolution was adopted pursuant to authority vested in the Sicangu Lakota Treaty Council under the laws of the Rosebud Sioux Tribe. A quorum was present. ATTEST: Fremont Fallis - Chairman Sam High Crane - Vice-Chairman
419		Subject: Uranium Mining comment Dear Valois Shea, My name is Ex. 6 Personal Privacy (PP) and that means Ex. 6 Personal Privacy (PP) in Lakota. I am Hunkpapa, Mnicoujou, and Itazipco Lakota of the Cheyenne River Tribe in South Dakota. I am 24 years old and am a mother to a beautiful six year old boy. I want to submit my comment in OPPOSITION of the draft permits wishing to be granted by company, Azarga for the reasons listed below: -First and foremost, according to the treaties of 1851 and 1868, this is completely illegal-- the Black Hills belong to the Lakota and for over a century, the US government allows companies to commit these crimes that circulate around the using indigenous soils and waters as ways to profit for their own selfish needs
00441		The Black Hills of South Dakota are owned by the Great Sioux Nation who have treaties that will be dishonored by allowing the uranium mining to occur. Our Great Sioux Nation has the first and last word regarding what is to take place on their homeland. These are the highest laws of American, Native Americans are about protecting the land, water, and air for the greater good of all mankind. No uranium mining should ever be allowed. We need to support the Native Americans who are the owners and keepers of this sacred land. God bless Native America and keep her safe from ravagers.
470		Additionally I believe the Black Hills are rightfully the land of the Lakota & should be returned. Honor the Treaties.
470		The Black Hills have been awarded to the Lakota People by Supreme Court decision
472		The Tribal sovereignty and cultural issues have not been genuinely addressed.
482		I would like to submit a comment regarding the Black Hills. Please, no uranium in treaty territory. Please, no to the Dewey Burdock Uranium Aquifer Mining.
487		3. The *morality* of giving permits to companies without Native American, farmers and ranchers, and other citizens living in the area, without their consent or benefit. The white Europeans have done their best to abuse and steal the lands in the 1868 treaty. But there is now a coalition of people who will try to legally fight these permits because there are 10 other companies standing in line, licking their chops to do mining projects. **WE DO NOTWANTTHEMI**
495		Uranium mining of the Black Hills is an assault on Native sovereignty...
503		NO URANIUM IN TREATY
506	Ex. 6 Personal Privacy (PP)	A Summary of the 1851 and 1868 Treaty Issue in South Dakota The Great Sioux Nation, which is composed of the Lakota, Dakota, and Nakota speaking people, once resided in a vast land area in the central part of the United States covering what is now 14 states and 3 Canadian Provinces. One of the Lakota origin stories says that the people of the Great Sioux Nation came onto the Earth from the mouth of Wind Cave in the. Black Hills. The Black Hills were so sacred that they were used for ceremonial, medicinal, and funeral purposes only. The encroachment of the European-Americans, and the subsequent devastation of the buffalo, caused the people of the Great Sioux Nation to wage war upon the United States. When the US realized that they could not win the war, they asked the Great Sioux Nation for a treaty for peace. The Great Sioux Nation agreed in 1851, and again in 1868, to treaties for peace at the request of the US, both times relinquishing large tracts of land but always keeping the sacred Black Hills intact within their care. The people of the Great Sioux Nation had resided in this area for over 11,000 years. On March 3rd, 1871, the US Congress passed a law which said that treaties made prior to that date would not be abolished. It also said that no new treaties would be made in the future with Indian nations. From that date to this, since the Fort Laramie Treaty of 1868 was made prior to March 3, 1871, any laws passed by the United States are applicable only to the people of the United States, but not to the people of the Great Sioux Nation. To try to enforce any American law that violates the Fort Laramie Treaties of 1851 and 1868 would also be a violation of the March 3rd Act of 1871. Furthermore, to violate any treaty would also be a violation of the US Constitution which states that "treaties are the supreme law of the land." The land area that is stipulated in the Fort Laramie Treaties of 1851 and 1868 includes all of western South Dakota from the East bank of the Missouri River to the summits of the Big Horn Mountains. This also includes all of the Black Hills and is the actual, legal, land base of the Great Sioux Nation. A larger land area surrounds this central base and is reserved for the exclusive use of the people of the Great Sioux Nation. This reserved area includes portions of Nebraska, Colorado, Wyoming, Montana, and North Dakota. William Allen White, a newspaper publisher, once said, "Peace without justice is tyranny." Upholding the 1868 Fort Laramie Peace Treaty would be upholding justice as well as the Constitution of the United States.
520		Please be advised, pursuant inherent rights, power, and authority, as handed down through the generations and embraced by the United States Congress of the United States of America, the Black Hills Sioux Nation Treaty Council continues to serve the people (Oyate) in a representative capacity, as it has done in the years and centuries past. The Black Hills Sioux Nation Treaty Council asserts its authority pursuant the following: 1. The United States Constitution states that no State shall enter into a Treaty, thereby precluding the State of South Dakota from entering any Treaty, nor amending or otherwise modifying any existing Treaty to wit: The Constitution of the United States Article. I. US Const., Art. I, Section. 10. No State shall enter into any Treaty... 2. The United States Constitution states in Article VI that Treaties shall be the supreme law of the land, to wit: US Const., Article. VI.

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

3. Attorneys across America who have taken oaths, by and through their licensing process, to support and defend the United States Constitution equally take an oath to support and defend Article VI (treaties) of the same United States Constitution. A violation, willful misinterpretation or circumvention of a Treaty (1851 & 1868 inclusively) is a violation of the United States Constitution.

4. Pursuant the United States Constitution, done in Convention by the Unanimous Consent of the States present the Seventeenth Day of September in the Year of our Lord one thousand seven hundred and Eighty seven and of the Independence of the United States of America the Twelfth, the 1851 and the 1868 Treaties are supreme law of the land.

5. The Black Hills Sioux Nation Treaty Council is a well established Council embraced and approved by the Oyate (people) of the member Tribes extending 1851 Treaty territory as defined by the 1851 Fort Laramie Treaty signed on September 17, 1851.

6. The delegates of the Council, as descendents and/or successors of the 1851 Treaty Council Delegates, are appointed or elected by the respective member Tribe's traditional processes. The Council Members or Delegates, singularly or collectively, carry a very unique and special authority, and also in a representative capacity, as traditional leaders of the Oyate ("people") and various Tiospayes ("extended families"). This authority has been recognized and embraced since the first Treaties made by and between the United States of America and the various Tribes, more particularly the 1851 and 1868 Fort Laramie Treaties. See below:

September 17, 1851

Articles of a treaty made and concluded at Fort Laramie, in the Indian Territory, between D. D. Mitchell, superintendent of Indian affairs, and Thomas Fitzpatrick, Indian agent, commissioners specially appointed and authorized by the President of the United States, of the first part, and the chiefs, headmen, and braves of the following Indian nations, residing south of the Missouri River, east of the Rocky Mountains, and north of the lines of Texas and New Mexico, viz, the Sioux or Dahcotahs, Cheyennes, Arrapahoes, Crows, Assinaboines, Gros-Ventre Mandans, and Arrickaras, parties of the second part, on the seventeenth day of September, A.D. one thousand eight hundred and fifty-one.

ARTICLE 6. Parties to the second part of this treaty having selected principals or head-chiefs for their respective nations, thorough whom all national business will hereafter be conducted, do hereby bind themselves to sustain said chiefs and their successors during good behavior.

7. By the highlighted sentences, we can clearly see that the Chiefs, Headmen, Principals and HeadChiefs served the respective Tribal Nations in a representative capacity before the United States representatives. By the United States Congress's approval of the Treaty, the Congress also validated the Chiefs, Headmen, Principals and Head-Chiefs as representatives for the various Tribal Nations. Additionally, the United States of America and its Congress, as authors of the Treaty, offered, granted, and approved that the Chiefs, Headmen, Principals and Head-Chiefs, and their successors, to conduct [A]ll national business thereafter, and further to bind themselves to sustain said chiefs and their successors during good behavior.

8. The above stated Chiefs, Headmen, Principals and Head-Chiefs served as a Treaty Council *de facto,* although not so named at the time of making the Treaty.

9. We also learn that the Chiefs, Headmen, Principals and Head-Chiefs maintained their representative capacity, as Treaty Delegates by and through the 1868 Fort Laramie, to wit:

Fort Laramie Treaty, 1868

ARTICLES OF A TREATY

MADE AND CONCLUDED BY AND BETWEEN

Lieutenant General William T. Sherman, General William S. Hamey, General Alfred H. Terry, General 0. 0. Augur, J.B. Henderson, Nathaniel G. Taylor, John G. Sanborn, and Samuel F. Tappan, duly appointed commissioners on the part of the United States, and the different bands of the Sioux Nation of Indians, by their chiefs and headmen, whose names are hereto subscribed, they being duly authorized to act in the premises.

ARTICLE XVII.

It is hereby expressly understood and agreed by and between the respective parties to this treaty that the execution of this treaty and its ratification by the United States Senate shall have the effect, and shall be construed as abrogating and annulling all treaties and agreements heretofore entered into between the respective parties hereto, so far as such treaties and agreements obligate the United States to furnish and provide money, clothing, or other articles of property to such Indians and bands of Indians as become parties to this treaty, but no further.

10. In other words, except for territory (Article II), money, clothing and articles of property (farm implements'), no other provision of the 1851 Treaty was abrogated or annulled. Article 6 of the 1851 Treaty providing for the Chiefs, Headmen, Principals and Head-Chiefs, and their successors, to conduct (A]ll national business thereafter, and further to bind themselves to sustain said chiefs and their successors during good behavior remained in full force and effect.

11. In 1934, the Indian Reorganization Act ("IRA") was signed into law, however, because the 1851 and 1868 Treaties are supreme laws of the land under the US Constitution, and preceded the enactment of IRA, IRA could only prevail if the writings drafted were within the framework of the already existing Constitutional Article VI, thereby forcing continuance in honoring the Treaties.

12. The above is further evidenced by a 1935 amendment to IRA codified as 25 USC Sec. 478b, to wit:

US TITLE 25 - INDIANS

CHAPTER14-MISCELLANEOUS

SUBCHAPTER V - PROTECTION OF INDIANS AND CONSERVATION OF RESOURCES

Sec. 478b. Application of laws and treaties

STATUTE-

All laws, general and special, and all treaty provisions affecting any Indian reservation which has voted or may vote to exclude itself from the application of the Act of June 18, 1934 (48 Stat. 984) [25 U.S.C. 46 I et seq.], shall be deemed to have been continuously effective as to such reservation, notwithstanding the passage of said Act of June 18, 1934. Nothing in the Act of June 18, 1934, shall be construed to abrogate or impair any rights guaranteed under any existing treaty with any Indian tribe, where such tribe voted not to exclude itself from the application of said Act.

SOURCE-

(June 15, 1935, ch. 260, Sec. 4, 49 Stat. 378.)

The Indian Reorganization Act of June 18, 1934 (IRA, Sec. 16).

		Any Indian tribe, or tribes, residing on the same reservation, shall have the right to organize for its common welfare; and may adopt an appropriate constitution and bylaws, which shall become effective when ratified by a majority vote of the adult members of the tribe, or of the adult Indians residing on such reservation, as the case may be, at a special election authorized by the Secretary of the Interior under such rules and regulations as he may prescribe...]. In addition to all powers vested in any Indian tribe or tribal council by existing law, the constitution adopted by said tribe shall also vest in such tribe or its tribal council the following rights and powers: To employ legal counsel, the choice of counsel and fixing of fees to be subject to the approval of the Secretary of the Interior; to prevent the sale, disposition, lease, or encumbrance of tribal lands, interests in lands, or other tribal assets without the consent of the tribe....]. 13. THEREFORE, notwithstanding the Indian Reorganization Act of 1934, nor as may be amended, the 1851 and 1868 Treaties continue today as the supreme law of the land, and Article 6 of the 1851 Treaty providing for the Chiefs, Headmen, Principals and Head-Chiefs, and the successor Treaty Councils shall continue to conduct [A]ll national business, and further to bind themselves to sustain said chiefs and their successors during good behavior. Article 6 of the 1851 Treaty remains in full force and effect. 14. The Oglala Sioux Tribal Council, and its courts are bound by the 1851 and 1868 Treaties as further evidenced by their own Tribal Constitution, to wit: PREAMBLE We, the Oglala Sioux Tribe of the Pine Ridge Indian Reservation, in order to establish a more perfect organization, promote the general welfare, conserve and develop our lands and resources, secure to ourselves and our posterity the power to exercise certain rights of home rule not inconsistent with Federal laws and our treaties, and in recognition of God Almighty and His Divine Providence, do ordain and establish this constitution for the Oglala Sioux Tribe. ARTICLE IV - POWERS OF THE COUNCIL Section 4. Enumerated Powers. The Oglala Sioux Tribal Council shall exercise the following powers; subject to any limitation imposed by the statutes or the Constitution of the Unites States and subject further to all express restrictions upon such powers contained in this Constitution and the attached Bylaws: ARTICLE XV - OATH OF OFFICE Section 1. Each Tribal Council Representative and Executive Committee Officer shall be required to take an oath of office prior to assuming constitutional duties. (Oath) I,[*insert name here*] do solemnly swear that I will promote, preserve, and strengthen the general health and welfare of the Oglala Lakota Oyate, ; and I will support and defend this Constitution and the human rights of the Oglala Lakota Oyate and the human rights of other peoples as recognized in international laws, treaties - which includes both the 1851 and 1868 Fr. Laramie Treaties, and declarations. 15. The Oglala Sioux Tribal Law & Order Code, Ch. 1, § 20.27 (a) clearly states that Treaties shall have binding effect, to wit: Chapter I, SECTION 20.27 - APPLICABLE LAW In determining any case over which it has jurisdiction, the Oglala Sioux Tribal Court shall give binding effect to: (a) any applicable constitutional provision, treaty, law, or any valid regulation of the United States; 16. Because the Tribal Constitution asserts that it may not enact any law inconsistent with the Treaties (1851 & 1868), nor enact any law inconsistent with the Federal laws (US Constitution Article 6 and 25 USC 478b. Application of laws and treaties), and furthermore, in light of Council Representatives and Executive Committee Officers taking oaths to support and defend treaties (1851 & 1868), treaties take precedent over any and all Tribal law and ordinances. 17. THEREFORE, pursuant paragraphs 16 through 30, the Black Hills Sioux Nation Treaty Council, and/or its delegates, asserts that by and through their inherent rights, authority and power as successor representatives of the 1851 and 1868 Treaties (Treaty Councils), they have the right, authority, power and duty to have standing in any and all actions of any court on any membership reservation. This standing and/or personal jurisdiction extends to representation over all Tribal business, land and resources (whether natural or otherwise) issues of a kind, Tribal finances, the general welfare of the Oyate, and etcetera.
521	**Ex. 6 Personal Privacy (PP)**	A DECLARATION TO INVOKE INHERENT RIGHTS AND AUTHORITY UNDER THE 1851 AND 1868 FORT LARAMIE TREATIES • OVER MINERAL EXPLORATION AND EXTRACTION; • OVER ENERGY AND FUEL PIPELINES OF A KIND; • THE UNAUTHORIZED CEDING OF LAND IN THE NAME OF PARKS; • AND OTHER MATTERS. TO ALL UNITED STATES: STATE, FEDERAL,AND OTHER OFFICIALS LISTED ON THE ATTACHED SERVICE LIST AND THE PUBLIC AT LARGE: By the power and authority vested in the Black Hills Sioux Nation Treaty Council, by and through a traditional and inherent process of the Oyate (people), hereby declares DECLARATION TO INVOKE INHERENT RIGHTS AND AUTHORITY OVER MINERAL EXPLORATION AND EXTRACTION: AND OVER ENERGY AND FUEL PIPELINES OF A KIND: AND THE UNAUTHORIZED CEDING OF LAND IN THE NAME OF PARKS (Tribal National Park) UNDER THE 1851 AND 1868 FORT LARAMIE TREATIES, and submits the following positions: [ATTACHMENT: “Black Hills Sioux Nation Treaty Council Declaration of Inherent Authority over Treaty Land”]
523		The Tribe's Rights and Trust Resources in the vicinity of the Dewey-Burdock Uranium Mine • Reserved water rights: The Tribe enjoys reserved water rights in the Missouri River Basin as well as related groundwater in an amount sufficient to fulfill the purposes of the Reservation. See Winters v. United States, 207 U.S. 564 (1908); Arizona v. California, 373 U.S. 546, 600 (1963). These reserved water rights are a trust resource for which the United States owes a fiduciary duty. These rights are a function of the Tribe's extant treaty rights. See Treaty of Fort Laramie with the Sioux, Etc., 11 Stat. 749 (Sep. 17, 1851); Treaty with the Sioux -Brule, Oglala, Mniconjou, Yanktonai, Hunlcpapa, Blackfeet, Cuthead, Two Kettle, Sans Arc, and Santee, 15 Stat. 635 (Apr. 29, 1968). The Tribe retains reserved water rights in off-Reservation waterways and other bodies of water in the Missouri River Basin as well as groundwater and aquifers outside its Reservation.

• Hunting and fishing rights: The Tribe enjoys hunting and fishing rights in Lake Oahe, the reservoir of the Missouri River that are subject to the United States' trust duty. The rights are a function of the Tribe's extant treaty rights and have been preserved by Congress. See Treaty of Fort Laramie with the Sioux, Etc., 11 Stat. 749 (Sep.17, 1851); Treaty with the Sioux-Brule, Oglala, Mniconjou, Yanktonai, Hunlcpapa, Blackfeet, Cuthead, Two Kettle, Sans Arc, and Santee, 15 Stat. 635 (Apr. 29, 1868); Act of Sep. 3 1954, Pub. L. 83-776, 68 Stat. 1191. Numerous off-Reservation tributaries and aquifers belong to the Lake Oahe hydrologic system and consequently will impact the Tribe's retained hunting and fishing rights in Lake Oahe.

• Historic. spiritual, and cultural resources: There are numerous sites of historic, spiritual, and cultural significance to the Tribe throughout the Tribe's large aboriginal territory, but especially within the boundaries of the lands reserved to the Tribe in the *Treaty of Fort Laramie with the Sioux, Etc.,* 11 Stat. 749 (Sep. 17, 1851). Furthermore, the Tribe's reserved water 1ights themselves constitute a spiritual and cultural resource in light of the primary role that water plays in Lakota religious sacraments, which require environmenta1ly and ritually pure water. (A map showing the Tribe's 1851 territory is enclosed herewith.)

United States Trust Duty

The United States has a two-fold trust duty to the Tribe. Courts have long recognized the "existence of a general trust relationship between the United States and the Indian people." *United States v. Mitchell,* 463 U.S. 206, 225 (1983). The courts are clear that "any Federal government action is subject to the United States' fiduciary responsibilities toward the Indian tribes." *Nance v. EPA,* 645 F.2d 701, 711 (9th Cir. 1981) (emphasis in original) (citing *Seminole Nation v. United States,* 316 U.S. 268, 297 (1942)).

Secondly, the federal government has a specific trust duty to protect the rights reserved in the 1851 and 1868 Fort Laramie Treaties. The Tribe was a party to the 1851 and 1868 Fort Laramie Treaties, which reserved land and water to the Tribe in order to fulfill the purpose of the Reservation to provide for self-sufficiency. *See Winters* v. *United States,* 207 U.S. 564 (1908). The reserved water right recognized in the *Winters* doctrine, and reserved for the Tribe, includes the right to clean, safe water. *See, e.g., United States v. Gila River Irrigation Dist.,* 920 F. Supp. 1444, 1448 (D. Ariz. 1996). Likewise, the Tribe has retained its right to hunt, fish, and gather on the Reservation and in Lake Oahe. Act of September 3, 1954, Pub. L. 83-766, 68 Stat. 1191; *South Dakota* v. *Bourland,* 508 U.S. 679, 697 (1993) (noting that Congress explicitly has reserved the Cheyenne River Sioux Tribe's original treaty rights, including the right to hunt and fish, on Lake Oahe); *see also United States* v. *Dion,* 476 U.S. 734, 738 (1986) ("Indians enjoy exclusive treaty rights to hunt and fish on lands reserved to them .... "). The Tribe's water rights include a right to water that is sufficient in amount and quality to support hunting and fishing rights. *United States v. Adair,* 723 F.2d 1394, 1409, 1411 (9th Cir. 1983). As a result of the federal government's trust responsibilities to the Tribe, the EPA must ensure that such trust resources are preserved in any activity that may impact the Tribe's rights, including the Underground Injection Control Draft Area Pennit and Proposed Aquifer Exemption decision for Dewey-Burdock Uranium In-Situ Recovery Site.

[...]

Tribe's Requests Concerning the Underground I11jection Control Draft Area Permit and Proposed Aquifer Exemption decision for Dewey-Burdock Uranium In-Situ Recovery Site

1. The Dewey-Burdock Uranium In Situ Recovery Site Poses a Serious Threat to Tribal Rights that the EPA Must Thoroughly Evaluate

The Dewey-Burdock Uranium Mine is proposed to be sited within the Tribe's 1851 territory and in areas that impact aquifers and tributaries that affect Cheyenne River Sioux Reservation lands and waters. As such, the Dewey-Burdock Uranium Mine will have se1ious impacts on (a) the Tribe's treaty rights and reserved water rights, (b) the Tribe's cultural resources; and (c) the Tribe's religious exercise, as set forth in further detail below.

a. The Dewey-Burdock Uranium Mine Poses a Serious Threat to the Tribe's Treaty Rights and Reserved Water Rights

The proposed Dewey-Burdock Uranium Mine is proposed to be sited in areas that affect aquifers, watersheds, and tributaries that are hydrologically connected to the waters that affect Cheyenne River Sioux Reservation lands and waters. These lands and waters have been guaranteed to us by Treaty, and the United States must act as our fiduciary in protecting them as a matter of federal law as set forth above.

In 2005, when a drought threatened the Tribe's only source of drinking water, which is drawn from an intake project at the confluence of the Cheyenne River and the Missouri River at Lake Oahe, the U.S. Army Corps of Engineers determined that a loss of this water source would devastate our Tribe. As a consequence, we are vigilant in our monitoring and stewardship of our waters. The Cheyenne River, the waterway that gives our Reservation its name, constitutes the southern border of our Reservation and flows into the Missouri River (Lake Oahe) at precisely the place where the United States has built the water intake that serves our entire Reservation. The Cheyenne River also flows through the Black Hills very close to the site of the proposed Dewey Burdock Uranium Mine. Other historical uranium mines and other metal mines have been sited near the Cheyenne River in the Black Hills.

The Tribe has collected water samples over many years from the Cheyenne River in an effort to protect the health, safety, and welfare of our people. These samples show levels of 16-32 pCiPl (Pico liter series per liter) in the Cheyenne River. This demonstrates that past uranium mining has, and future uranium mining will, migrate out of the resources and will not be contained. We have also seen high levels of radiation on the Moreau River, another tributary of the Missouri River, caused from past uranium mining upstream. In light of these facts, the Cheyenne River Sioux Tribe strongly opposes any and all current, new, or ongoing uranium mining projects in lands and waters that affect our Reservation.

The current analyses of the Dewey-Burdock Uranium Mine specifically identifies the Cheyenne River and its tributaries as an area that will be affected by the Dewey-Burdock Uranium Mine. Significantly, however, the current analyses conspicuously do not address the impacts of the mining activity on the Cheyenne River Sioux Tribe. There is no risk data concerning human health impact of the Dewey-Burdock Uranium Mine on the Cheyenne River Sioux people as it relates to the aquifers, watersheds, or tributaries that feed our Reservation. There is no analysis of impacts to fish and wildlife on our Reservation and in Lake Oahe, to which we have rights embodied in both Treaty and federal statute. There is also no analysis of impacts upon plants that we rely upon for food and medicine.

[...]

In light of its fiduciary duty to the Cheyenne River Sioux Tribe, until the EPA has thoroughly evaluated the above impacts to the Tribe, any authorizations of the instant uranium mine violates federal law and would be arbitrary and capricious.

[...]

		I appreciate the EPA's request for comments on this important issue. As noted above, these comments are ***preliminary.***
524	Ex. 6 Personal Privacy (PP)	Transmitted herewith are an original and two (2) copies of Resolution No. 145-2017-CR which was duly adopted by the Cheyenne River Sioux Tribal Council during its Regular Session held on May 4, 2017. [ATTACHMENT: "RESOLUTION NO. 145-2017-CR"]
525		As the Chairman of the Cheyenne River Sioux Tribe ("Tribe"), I am contacting the U.S. Environmental Protection Agency ("EPA") to submit the Tribe's official comments on the EPA's Region 8 Underground Injection Control Draft Area Permit and Proposed Aquifer Exemption decision for Dewey-Burdock Uranium In-Situ Recovery Site. The Cheyenne River Sioux Reservation is located wholly within the exterior boundaries of the State of South Dakota. (A map showing the location of the Tribe's Reservation is enclosed herewith.) However, our rights and trust resources extend beyond our Reservation borders as a matter of federal law, and they are rights for which the United States owes us a fiduciary duty. [...] The Tribe's Rights and Trust Resources in the vicinity of the Dewey-Burdock Uranium Mine • Reserved water rights: The Tribe enjoys reserved water rights in the Missouri River Basin as well as related groundwater in an amount sufficient to fulfill the purposes of the Reservation. See Winters v. United States, 207 U.S. 564 (1908); Arizona v. California, 373 U.S. 546, 600 (1963). These reserved water rights are a trust resource for which the United States owes a fiduciary duty. These rights are a function of the Tribe's extant treaty rights. See Treaty of Fort Laramie with the Sioux, Etc., 11 Stat. 749 (Sep. 17, 1851); Treaty with the Sioux -Brule, Oglala, Mniconjou, Yanktonai, Hunlcpapa, Blackfeet, Cuthead, Two Kettle, Sans Arc, and Santee, 15 Stat. 635 (Apr. 29, 1968). The Tribe retains reserved water rights in off-Reservation waterways and other bodies of water in the Missouri River Basin as well as groundwater and aquifers outside its Reservation. • Hunting and fishing rights: The Tribe enjoys hunting and fishing rights in Lake Oahe, the reservoir of the Missouri River that are subject to the United States' trust duty. The rights are a function of the Tribe's extant treaty rights and have been preserved by Congress. See Treaty of Fort Laramie with the Sioux, Etc., 11 Stat. 749 (Sep.17, 1851); Treaty with the Sioux-Brule, Oglala, Mniconjou, Yanktonai, Hunlcpapa, Blackfeet, Cuthead, Two Kettle, Sans Arc, and Santee, 15 Stat. 635 (Apr. 29, 1868); Act of Sep. 3 1954, Pub. L. 83-776, 68 Stat. 1191. Numerous off-Reservation tributaries and aquifers belong to the Lake Oahe hydrologic system and consequently will impact the Tribe's retained hunting and fishing rights in Lake Oahe. • Historic. spiritual, and cultural resources: There are numerous sites of historic, spiritual, and cultural significance to the Tribe throughout the Tribe's large aboriginal territory, but especially within the boundaries of the lands reserved to the Tribe in the *Treaty of Fort Laramie with the Sioux, Etc.,* 11 Stat. 749 (Sep. 17, 1851). Furthermore, the Tribe's reserved water 1ights themselves constitute a spiritual and cultural resource in light of the primary role that water plays in Lakota religious sacraments, which require environmenta1ly and ritually pure water. (A map showing the Tribe's 1851 territory is enclosed herewith.) *United States Trust Duty* The United States has a two-fold trust duty to the Tribe. Courts have long recognized the "existence of a general trust relationship between the United States and the Indian people." *United States v. Mitchell,* 463 U.S. 206, 225 (1983). The courts are clear that "any Federal government action is subject to the United States' fiduciary responsibilities toward the Indian tribes." *Nance v. EPA,* 645 F.2d 701, 711 (9th Cir. 1981) (emphasis in original) (citing *Seminole Nation v. United States,* 316 U.S. 268, 297 (1942)). Secondly, the federal government has a specific trust duty to protect the rights reserved in the 1851 and 1868 Fort Laramie Treaties. The Tribe was a party to the 1851 and 1868 Fort Laramie Treaties, which reserved land and water to the Tribe in order to fulfill the purpose of the Reservation to provide for self-sufficiency. *See Winters* v. *United States,* 207 U.S. 564 (1908). The reserved water right recognized in the *Winters* doctrine, and reserved for the Tribe, includes the right to clean, safe water. *See, e.g., United States v. Gila River Irrigation Dist.,* 920 F. Supp. 1444, 1448 (D. Ariz. 1996). Likewise, the Tribe has retained its right to hunt, fish, and gather on the Reservation and in Lake Oahe. Act of September 3, 1954, Pub. L. 83-766, 68 Stat. 1191; *South Dakota* v. *Bourland,* 508 U.S. 679, 697 (1993) (noting that Congress explicitly has reserved the Cheyenne River Sioux Tribe's original treaty rights, including the right to hunt and fish, on Lake Oahe); *see also United States* v. *Dion,* 476 U.S. 734, 738 (1986) ("Indians enjoy exclusive treaty rights to hunt and fish on lands reserved to them .... "). The Tribe's water rights include a right to water that is sufficient in amount and quality to support hunting and fishing rights. *United States v. Adair,* 723 F.2d 1394, 1409, 1411 (9th Cir. 1983). As a result of the federal government's trust responsibilities to the Tribe, the EPA must ensure that such trust resources are preserved in any activity that may impact the Tribe's rights, including the Underground Injection Control Draft Area Permit and Proposed Aquifer Exemption decision for Dewey-Burdock Uranium In-Situ Recovery Site. [...] *Tribe's Requests Concerning the Underground I11jection Control Draft Area Permit and Proposed Aquifer Exemption decision for Dewey-Burdock Uranium In-Situ Recovery Site* 1. The Dewey-Burdock Uranium In Situ Recovery Site Poses a Serious Threat to Tribal Rights that the EPA Must Thoroughly Evaluate The Dewey-Burdock Uranium Mine is proposed to be sited within the Tribe's 1851 territory and in areas that impact aquifers and tributaries that affect Cheyenne River Sioux Reservation lands and waters. As such, the Dewey-Burdock Uranium Mine will have se1ious impacts on (a) the Tribe's treaty rights and reserved water rights, (b) the Tribe's cultural resources; and (c) the Tribe's religious exercise, as set forth in further detail below. **a. The Dewey-Burdock Uranium Mine Poses a Serious Threat to the Tribe's Treaty Rights and Reserved Water Rights** The proposed Dewey-Burdock Uranium Mine is proposed to be sited in areas that affect aquifers, watersheds, and tributaries that are hydrologically connected to the waters that affect Cheyenne River Sioux Reservation lands and waters. These lands and waters have been guaranteed to us by Treaty, and the United States must act as our fiduciary in protecting them as a matter of federal law as set forth above.

		In 2005, when a drought threatened the Tribe's only source of drinking water, which is drawn from an intake project at the confluence of the Cheyenne River and the Missouri River at Lake Oahe, the U.S. Army Corps of Engineers determined that a loss of this water source would devastate our Tribe. As a consequence, we are vigilant in our monitoring and stewardship of our waters. The Cheyenne River, the waterway that gives our Reservation its name, constitutes the southern border of our Reservation and flows into the Missouri River (Lake Oahe) at precisely the place where the United States has built the water intake that serves our entire Reservation. The Cheyenne River also flows through the Black Hills very close to the site of the proposed Dewey Burdock Uranium Mine. Other historical uranium mines and other metal mines have been sited near the Cheyenne River in the Black Hills. The Tribe has collected water samples over many years from the Cheyenne River in an effort to protect the health, safety, and welfare of our people. These samples show levels of 16-32 pCiPl (Pico liter series per liter) in the Cheyenne River. This demonstrates that past uranium mining has, and future uranium mining will, migrate out of the resources and will not be contained. We have also seen high levels of radiation on the Moreau River, another tributary of the Missouri River, caused from past uranium mining upstream. In light of these facts, the Cheyenne River Sioux Tribe strongly opposes any and all current, new, or ongoing uranium mining projects in lands and waters that affect our Reservation. The current analyses of the Dewey-Burdock Uranium Mine specifically identifies the Cheyenne River and its tributaries as an area that will be affected by the Dewey-Burdock Uranium Mine. Significantly, however, the current analyses conspicuously do not address the impacts of the mining activity on the Cheyenne River Sioux Tribe. There is no risk data concerning human health impact of the Dewey-Burdock Uranium Mine on the Cheyenne River Sioux people as it relates to the aquifers, watersheds, or tributaries that feed our Reservation. There is no analysis of impacts to fish and wildlife on our Reservation and in Lake Oahe, to which we have rights embodied in both Treaty and federal statute. There is also no analysis of impacts upon plants that we rely upon for food and medicine. [...] In light of its fiduciary duty to the Cheyenne River Sioux Tribe, until the EPA has thoroughly evaluated the above impacts to the Tribe, any authorizations of the instant uranium mine violates federal law and would be arbitrary and capricious. [...] I appreciate the EPA's request for comments on this important issue. As noted above, these comments are *preliminary.* [ATTACHMENT: "Sioux Treaty lands and surrounding area" and untitled map (images)]
537	Ex. 6 Personal Privacy (PP)	**III. The Federal Government Has a Legally-Recognized Federal Trust Responsibility to Protect Native American Sacred Sites.** **While the necessary cultural data still needs to be collected and analyzed and the granting of the mine permits is premature without this cultural data, one thing is certain- the federal government has a trust responsibility to protect Native American sacred sites. The National Historic Preservation Act, the Native American Graves Protection and Repatriation Act, the Religious Freedom Restoration Act, and Executive Order No. 13007 all offer protections for Native American sacred sites and weigh in favor of denying the permits.** **The federal government and Indian tribes have a unique legal relationship, known as the trust relationship, in which the federal government has legal obligations and duties to Indian tribes.[25] This trust relationship requires the federal government to protect the property and resources of Indian tribes, including rights to water and protection of sacred sites.[26] Here, there is no doubt that the proposed mining project would impact Indian people and communities.** **EPA itself has taken a broad view of the role of tribal governments in policy decisionmaking. In the EPA Policy for the Administration of Environmental Programs on Indian Reservations, the EPA states, "the Agency will view tribal governments as the appropriate nonfederal parties for making decisions and carrying out program responsibilities affecting Indian reservations, their environments, and the health and welfare of the reservation populace."[27] In addition, EPA states it will "look directly to Tribal Governments to play this lead role for matters affecting reservation environments."[28] Here, the proposed permits significantly impact tribal communities and resources. EPA should adhere to its own policy and follow the lead of the tribe. The tribe has been clear in its position and its opposition to uranium mining in the sacred Black Hills.** [...] **IV. The Treaty Rights of the Lakota People Under the 1868 Fort Laramie Treaty Should Be Recognized and Honored.** The Lakota have exclusive treaty rights to the Black Hills and have never waived those rights. After the Lakota were successful in defending their lands from white settlers and their victory over the U.S. military in the Powder River War of 1866-1867, the United States government sought to end the conflict in the region and initiated treaty negotiations, resulting in the 1868 Fort Laramie Treaty. The Lakota agreed to withdraw their opposition to the construction of railroads, to not attack settlers, and to withdraw their opposition to military posts in exchange for absolute rights to the land as well as hunting grounds outside the reservation.32 The United States pledged that the Great Sioux Reservation and the Black Hills would be "set apart for the absolute and undisturbed use and occupation of the Indians."33 The U.S. agreed that no unauthorized persons "shall ever be permitted to pass over, settle upon, or reside in [the] territory."34 However, after gold was discovered in the area, the U.S. government, under the direction of President Grant, failed to uphold their treaty obligations and allowed miners and non-Indians to invade lands set aside exclusively for the Lakota.[35] After the U.S. government breached its treaty obligations by allowing miners onto land expressly reserved for the Lakota, the U.S. Supreme Court found the government guilty of an unconstitutional taking of the Black Hills from the Lakota.[36] In 1876, the government withheld food rations from the Lakota in an attempt to starve them into signing an agreement giving away the Black Hills.[37] The Lakota refused. Article XII of the Treaty provided "No treaty for the cession of any portion or part of the reservation herein described which may be held in common shall be of any validity or force as against the said Indians, unless executed and signed by at least three-fourths of all the adult male Indians."[38] Even in the face of starvation, the U.S. government was only able to secure signatures from 10% of the adult male population, far fewer than the three-fourths of adult male signatures legally required by the Treaty.[39] As such, the Lakota never consented and never agreed to give their rights to the Black Hills away.

		The Lakota retain their treaty rights to the Black Hills and their opposition to uranium mining in the Black Hills should be recognized and adhered to. Without following the direction of the tribe, the United States continues an unconstitutional taking and carries on a legacy of disrespect and dishonorable dealings with Indian tribes.
537	Ex. 6 Personal Privacy (PP)	**VI. EPA Should Recognize and Follow United Nations Human Rights Principles and Deny the Permits.** The EPA should look to principles of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) when working with Native American communities. The UNDRIP requires that state and federal governments, in good faith, receive "free, prior, and informed consent" from tribal nations on any project affecting their lands, territories, or resources.[45] Clearly, the Lakota have not given consent to mine uranium in the Black Hills. UNDRIP recognizes that "respect for indigenous knowledge, cultures, and traditional practices contributes to sustainable and equitable development and proper management of the environment."[46] Indigenous peoples throughout the world believe in principles of natural law as opposed to western concepts of law. Whereas western law prohibits the mix of church and religion with law, Indigenous peoples rely on cultural and religious teachings as the ultimate source of law. Natural law is a set of laws that originates from the earth and recognizes all living beings as equal. It is the belief that all beings in creation are connected and that there are familial relationships among all of creation. Natural law recognizes the role of a human as a steward of the land, to look after the land, and protect the land for future generations rather than using the earth and its resources for temporary gain. It is a concept that recognizes that the lives of human beings may end, but the world will regenerate and continue on without humans.[47] Natural law is based on principles of respect and responsibility. These principles are reflected in the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). Article 25 of the Declaration states, "Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally-owned or otherwise occupied and used lands, territories, waters and coastal seas and other resources and to uphold their responsibilities to future generations in this regard."[48] To grant the proposed permits to Powertech, the EPA violates this internationally-recognized human right. In early 2017, United Nations Special Rapporteur on the Rights of Indigenous Peoples, Victoria Tauli-Corpuz visited Indigenous communities throughout the US. Ms. Tauli-Corpuz summarized her findings, recommending that a full environmental impact statement be done in every case where an extractive industry project affects Indian tribes. In addition, the UN Special Rapporteur noted the challenges that exist in the consultation process between tribal governments and the US government. The Special Rapporteur mentioned Executive Order 13175 as a well-intentioned but confusing and disjointed framework that "suffers from loopholes, ambiguity, and a general lack of accountability."[49] The Special Rapporteur went on to write, "The breakdown of communication and lack of good faith involvement in the review of federal projects has left tribal governments functionally unable to participate in consequential dialogue with the United States on projects affecting their lands, territories, and resources."[50] As a signatory to the UN Declaration on the Rights of Indigenous Peoples, the United States has an obligation to meet its human rights obligations and provide for fair and meaningful engagement of tribal governments. The UN Special Rapporteur reminds US agencies: The goal of tribal consultation is not simply to check a box, or to merely give tribes a chance to be heard. Rather, the core objective is to provide federal decision makers with context, information, and perspectives needed to support informed decisions that actually protect tribal interests. Treaty rights, the federal trust responsibility to tribes, environmental justice, and the principles enshrined in the Declaration all must be given life and meaning in federal decisions that impact tribes.[51] The EPA should fulfill its human rights responsibilities under the UN Declaration on the Rights of Indigenous Peoples and deny the mine permits. Thank you for your consideration of these comments.
546		I serve as President of the Oglala Sioux Tribe, and I write to submit testimony on behalf of the Oglala Sioux Tribal Council, in opposition to the application by Powertech, Inc. for a Class V Underground Injection Control (UIC) permit, for uranium mining waste at the proposed Dewey-Burdock project site. An overview of our concerns is as follows: [...] As discussed in more detail below, for these reasons, the permit application must be denied. THE PROPOSED DEWEY BURDOCK PERMIT VIOLATES THE 1851 FORT LARAMIE TREATY AND 1868 FORT LARAMIE TREATY In 1848, the United States needed the permission of the *Oceti Sakowin Oyate* to establish the Oregon Trail. This resulted in the Fort Laramie Treaty of 1851, in which the United States recognized as Sioux Country a vast territory in the northern plains. (11 Stat. 749). Article V defines the territory of the Great Sioux Nation as follows: The territory of the Sioux or Decotah Nation, commencing at the mouth of the White Earth River on the Missouri River: thence in a southwesterly direction to the forks of the Platte River; thence up the north fork of the Platte River to a point known as the Red Butte, or where the road leaves the river; thence along the mountain range known as **the Black Hills,** to the headwaters of the Heart River; thence down Heart River to its mouth and thence down the Missouri River to the place of beginning. (11 Stat. 749). T he proposed Dewey-Burdock underground injection wells are clearly within the boundaries of Sioux Country as defined in Article V of the 1851 Fort Laramie Treaty. The permit application, if granted, will violate the Treaty rights of the Oglala Sioux Tribe under the 1851 Treaty. Soon after the Treaty was ratified by Congress, the 1863 Montana gold rush resulted in trespassers entering Sioux Country. The United States began building military outposts in Wyoming Territory, in violation of the 1851 Fort Laramie Treaty. Oglala Lakota forces led by Chief Red Cloud defeated the United States in the Powder River War of 1866-1867, forcing closure of the military forts. The United States then negotiated the Fort Laramie Treaty of April 29, 1868. In the 1868 Treaty, the Oglala and other bands of the *Oceti Sakowin Oyate* reserved the Great Sioux Reservation, as described in Article II:

The United States agrees that the following district of country, to wit, viz: commencing on the east bank of the Missouri river where the 46th parallel of north latitude crosses the same, thence along lowwater mark down said east bank to a point opposite where the northern line of the State of Nebraska strikes the river, thence west across said river, and along the northern line of Nebraska to the 104th degree of longitude west from Greenwich, thence north on said meridian to a point where the 46th parallel of north latitude intercepts the same, thence due east along said parallel to the place of beginning; and in addition thereto, all existing reservations of the east back of said river, shall be and the same is, set apart for the absolute and undisturbed use and occupation of the Indians herein named, and for such other friendly tribes or individual Indians as from time to time they may be willing, with the consent of the United States, to admit amongst them; and the United States now solemnly agrees that **no persons,** except those herein designated and authorized so to do, and except such officers, agents, and employees of the government as may be authorized to enter upon Indian reservations in discharge of duties enjoined by law, **shall ever be permitted to pass over, settle upon, ot reside in the territory described in this article.**
(15 Stat. 635).

Thus, the Great Sioux Reservation comprised all of present-day South Dakota west of the Missouri River (to the east bank), including the Black Hills. Article II recognizes the right of our Tribe to exclude PowerTech. The sacred nature of the Black Hills to the *Oceti Sakowin Oyate* is well documented -these are sacred lands that should not be desecrated in the manner described in the draft UIC permit. The Black Hills are integral to our creation story, and remain an important place for pilgrimage and ceremony by our Tribal members. Ultimately, the proposed permit violates Article II of the 1868 Fort Laramie Treaty and must be denied.

The recharge area for the Black Hills aquifers affected by the proposed DeweyBurdock permit is also protected under the 1868 Treaty. The Powder and Platte River basins were identified as Sioux Country in the 1851 Treaty. Although they lay outside of the Great Sioux Reservation as described in Article II of the 1868 Treaty, we retained title to these lands for hunting. Under Article XVI of the Fort Laramie Treaty of 1868, these areas are defined as unceded, and remain in Sioux ownership:

The United States hereby agrees and stipulates that the country north of the North Platte River and east of the summits of the Big Hom mountains shall be held and considered to be **unceded.** Indian territory, and also stipulates and agrees that no white person or persons shall be permitted to settle upon or occupy any portion of the same; or without the consent of the Indians, first had and obtained, to pass through the same.
(15 Stat. 639).

Article XI of the 1868 Treaty established a process by which a Commission would be formed, to include our head men, prior to approval of "works of utility or necessity" that may affect the Great Sioux Reservation. The Dewey-Burdock permit application may not be approved by EPA in the absence of the formation of a commission as required by Article XI of the 1868 Fort Laramie Treaty.

Under Article XII of the 1868 Treaty:

No treaty for the cession of any portion or part of the reservation herein described which may be held in common shall be of any validity or force as against the said Indians, unless executed and signed by at least three-fourths of all the adult male Indians.
15 Stat. 638.

The United States violated Article XII in every unilateral land taking against the *Oceti Sakowin Oyate.*

In any event, these treaty obligations remain in effect today. As explained by the Chief Justice John Marshall –

The Indian nations had always been considered as distinct, independent communities, retaining their original natural rights, as the undisputed possessors of the soul from time immemorial. . . The very term 'nation," so generally applied to them, means "a people distinct from all others." The constitution, by declaring treaties already made, as well as those to be made, the supreme law of the land, has adopted and sanctioned the previous treaties with the Indian nations, and consequently admits their rank among those powers who are capable of making treaties. The words "treaty" and "nation" are words of our own language, selected in our diplomatic and legislative proceedings by ourselves, having each a definite and well understood meaning. We have applied them to Indians as we have applied them to other nations of the earth. They are all applied in the same sense.

(Worcester v. Georgia, 31 U.S. (6 Pet.) 515, 559-560 (1832)).

Consequently, the obligations of the United States to the Oglala Sioux Tribe under the 1851 and 1868 Fort Laramie Treaties remain in effect today. The Fort Laramie Treaties enjoy a legal status comparable to treaties with foreign nations. For this reason, the requirements of the United Nations Declaration of the Rights of Indigenous Peoples apply to the Dewey-Burdock UIC permits. Article 29 paragraph 2 prohibits approval of the proposed permits without the consent of the Oglala Sioux Tribe:

States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent.

(U.N. Doc. NRES/61/295, Sept. 13, 2007).

In Article 37, paragraph 1, the U.N. Declaration requires compliance with our Treaty rights:

Indigenous peoples shall have the right to the recognition, observance and enforcement of treaties.

These requirements gain special significance under international law where, as here, sacred lands are at risk. Article 25 of the U.N. Declaration provides that:

Indigenous people have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied lands.

The Dewey-Burdock UIC permit application threatens Treaty land and water of the Oglala Sioux Tribe. The applicable principles of international law require EPA to deny the permit.

These requirements are incorporated into the laws of the United States, pursuant to Executive Order 13175 on *Consultation and Coordination with Indian Tribal Governments.* E. 0. 1317 5 provides that:

The United States continues to work with Indian tribes on a government-to-government basis to address issues concerning Indian... treaty and other rights. **Agencies shall... honor treaty rights** and other rights.

(65 Fed. Reg. 67249).

The title to the Dewey-Burdock project area remains disputed by the Oglala Sioux Tribe. In the case of *United States v. Sioux Nation of Indians,* 448 U.S. 371,387 (1980), the United States Supreme Court ruled that the taking of Sioux Nation treaty lands under the Act of February 2, 1877 and other laws violated the 5th Amendment of the United States constitution. In affirming a judgment of $108 million, the Court described the treatment of the Sioux Nation by the United States as "(a) more ripe and rank case of dishonorable dealings will never, in all probability, be found in our nation's history."

			The Oglala Sioux Tribe and *Oceti Sakowin Oyate* have not accepted the award of money damages, and have continuously insisted that land restoration be the cornerstone of a settlement of the outstanding Treaty claims under the 1851 and 1868 Treaties. As explained by South Dakota District Judge Lawrence Piersol, "If there is to be any other resolution for these past wrongs ... then (it) must come from Congress." *(Different Horse v. Salazar,* Civ. 09-4049, Memorandum Op. and Order p. 9, (D.S.D. 2009)). Legislation has been introduced in past Congress' to return title to the lands affected by the proposed Dewy Burdock project to the *Oceti Sakowin Oyate.* E.g. 99th Cong., S. 1453 ("Sioux Nation Black Hills Act"). Indeed, the centuries-long efforts of the Oglala Sioux Tribe for the return of our sacred Black Hills has been well documented, and is ongoing. Ultimately, as the largest band of the *Oceti Sakowin Oyate,* the Oglala Sioux Tribe retains an unresolved claim under the 1868 Fort Laramie Treaty to the title to the land within and surrounding the project area. The EPA cannot ignore this claim. The proposed Class V UIC permit violates the 1851 and 1868 Fort Laramie Treaties, the United Nations Declaration of the Rights of Indigenous Peoples and Executive Order 13175. The EPA must deny the Dewey-Burdock permit application. THE PROPOSED INJECTION WELLS THREATEN WATERS OF THE OGLALA SIOUX TRIBE Under the principles enunciated by the United States Supreme Court in *Winters v. United States,* 207 U.S. 564 (1908), in the Fort Laramie Treaties, the Oglala Sioux Tribe reserved water rights for all present and future beneficial uses on the Pine Ridge Indian Reservation. The waters sources to fulfill our rights extend to all waters arising upon, flowing over, and bordering our Reservation, as well as to groundwater. Indian water rights are prior and superior to the state law water rights of non-Indians, because they derive from Treaties with an earlier priority date, and are recognized by federal law, and are not dependent upon state law. Our reserved water rights extend to the Cheyenne River. The proposed injection wells threaten the Cheyenne River watershed near its headwaters. The proposed DeweyBurdock injection wells and potential migration pathways lead to the Cheyenne River. Dewey Burdock directly threatens waters subject to the Winters Doctrine water rights claims of the Oglala Sioux Tribe. Water rights are property rights, reserved in our Treaties. In addition to our reservation ofland, our forefathers reserved the water necessary to transform our remaining landholdings into a permanent homeland for our people. This is specified in Article XV of the 1868 Fort Laramie Treaty: The Indians herein named agree that when the agency-house or other buildings shall be constructed on the reservation named, **they will regard said reservation their permanent home.** 15 Stat. 639. Thus, our water rights extend to all waters needed for a permanent homeland. This includes the right to water free from contamination or degradation *(United States v. Gila Valley Irrigation Dist.,* 920 F.Supp. 1444 (D. Ariz. 1996). Consequently, the risk to water quality posed by approval of Dewey-Burdock will violate the Winters Doctrine water rights of the Oglala Sioux Tribe.
546	Ex. 6 Personal Privacy (PP)		The proposed waste injection site is within the boundaries of the Great Sioux Reservation, as defined in the Treaty of Fort Laramie of April 29, 1868. (15 Stat. 635). The United Nations Declaration of the Rights of Indigenous peoples prohibits approval of the permits without our consent, and we do not consent. In fact, the Oglala Sioux Tribe adopted Ordinance No. 07-40 explicitly declaring the Pine Ridge Indian Reservation, including its aboriginal territory boundaries, to be a nuclear-free area. Executive Order 13175 on Consultation and Coordination with Indian Tribal Governments requires all agencies to respect Treaty rights, and approval of the Dewey-Burdick permit violate the 1868 Fort Laramie Treaty. Under the Fort Laramie Treaty, and applicable principles of federal and international law, the permit must be denied. The Oglala Sioux Tribe possesses reserved water rights to the Cheyenne River, under the legal principles established in *United States v. Winters,* 207 U.S. 564 (1908). The interconnection of the Madison and Minnelusa aquifers and of ground and surface water at artesian springs threatens the Cheyenne headwaters with contamination. The EPA lacks adequate data to demonstrate that our waters will remain protected. Under section 106 of the National Historic Preservation Act, the EPA must consult with the Oglala Sioux Tribal Historic Preservation Office in the identification, evaluation and determination of potential impacts to historic properties by the proposed DeweyBurdock injection wells. (54 U.S.C. §306108). Under Executive Order 13175, the EPA must also engage in government-to-government consultation with the Oglala Sioux Tribal Council on the proposed UIC permit. (65 Fed. Reg. 67249). The attempt by EPA to combine Section 106 consultation meetings with government-to-government consultation resulted in confusion and lack of compliance with either consultation requirement.
547		the	ORDINANCE OF THE OGLALA SIOUX TRIBAL COUNCIL ENACTING THE OGLALA SIOUX TRIBE NATURAL RESOURCES PROTECTION ACT OF 2007. WHEREAS, the Oglala Sioux Tribe has adopted its Constitution and By-Laws by referendum vote on December 14, 1935, in accordance with Section 16 of the Indian Reorganization Act of 1934 (25 U.S.C. § 476), and under Article IV of the Oglala Sioux Tribe Constitution the Oglala Sioux Tribal Council is the governing body of the Pine Ridge Indian Reservation, and WHEREAS, the Oglala Sioux Tribal Council is vested with authority "to protect and preserve the natural resources of the Tribe, and to regulate the use and disposition of property upon the reservation" under Article IV, Section 1 (m) of the Oglala Sioux Tribal Constitution, and (n) "to protect the heal th and general welfare of the Tribe", and WHEREAS, the purpose of the Oglala Sioux Tribe's Natural Resources Protection Act of 2007 is to ensure that no damage will come to the people, the culture, the environment, including the air and water, and economy of the Oglala Sioux Tribe because of uranium mining or processing in the region of the Upper Midwestern United States, and...
552			WHEREAS, THAT LAND IN, ON OR AROUND THE He' Sapa ARE FOREVER SACRED AND MUST BE PROTECTED BY ALL NA TIO NS OF THE SIOUX PEOPLE IN ACCORDANCE WITH Wope' OR NATURAL LAW AND TRIBAL LAW, APPROVED BY TRIBES.
555			I write to submit written testimony of the Standing Rock Sioux Tribe in opposition to the Dewey Burdock Class V Underground Injection Control permit application, by Powertech USA, Inc. I request that this letter be included in the administrative record for the Dewey Burdick UIC permit application, and that our concerns be given full consideration by EPA. The Standing Rock Sioux Tribe opposes the permit application for the following reasons: (1) The proposed Dewey Burdock project will desecrate sacred lands and waters in the Black Hills, in violation of the Treaty of Fort Laramie of April 29, 1868. (15 Stat. 635); [...] As discussed in more detail below, for these reasons, the permit application must be denied.
555			1. The Draft Dewey Burdock Permit Violates the 1868 Fort Laramie Treaty

	Chairman Standing Rock Sioux Tribe	The Treaty of Fort Laramie of April 29, 1868 is denominated "Treaty with the Sioux - Brule, Oglala, Minneconjou, Y anktonai, Hunkpapa, Blackfeet, Cuthead, Two Kettle, Sans Arcs, and Santee ... " (15 Stat. 635). The Standing Rock Sioux Tribe is comprised of the Y anktonai, Hunkpapa, Blackfeet and Cuthead bands of the Lakota and Dakota Nation. Accordingly, Standing Rock is a signatory to the 1868 Fort Laramie Treaty and our Tribe is entitled to the rights prescribed therein. The 1868 Fort Laramie Treaty established the Great Sioux Reservation. The boundaries of the Reservation were described in Article 2: The United States agrees that the following district of country, to wit, viz: commencing on the east bank of the Missouri River where the 46th parallel of north latitude crosses the same, thence along low-water mark down said east bank to a point opposite where the northern line of the State of Nebraska strikes the river, thence west across said river, and along the northern line of Nebraska to the 104th degree of longitude west from Greenwich, thence north on said meridian to a point where the 46th parallel of north latitude intercepts the same, thence due east along said parallel to the place of beginning; and in addition thereto, all existing reservations of the east back of said river, shall be and the same is, set apart for the absolute and undisturbed use and occupation of the Indians herein named, and for such other friendly tribes or individual Indians as from time to time they may be willing, with the consent of the United States, to admit amongst them; and the United States now solemnly agrees that no persons, except those herein designated and authorized so to do, and except such officers, agents, and employees of the government as may be authorized to enter upon Indian reservations in discharge of duties enjoined by law, shall ever be permitted to pass over, settle upon, or reside in the territory described in this article. (15 Stat. 635). The Black Hills are a significant part of our Treaty Reservation. In the negotiations for the 1868 Treaty, our forefathers emphasized the importance of the Black Hills to our Tribe and ensured that our Treaty Reservation included the Black Hills. This is sacred land. The Black Hills are integral to our creation story, and remain an important place for pilgramage and ceremony by our Tribal members. They are the spiritual center for the Lakota and Dakota Nation. The late David Blue Thunder, a prominent Sicangu ceremonial leader, explained that "The Black Hills are the heart of our home, and the home of our heart." (S. Hrg. 99-844, p. 234, statement of David Blue Thunder). It is akin to Jerusalem or Bethlehem, for Christianity and Judaism. It is unlikely that EPA would suggest that uranium mining waste be permitted to be injected into disposal wells at those sacred places. EPA should not permit injection wells for uranium mining wells at the Dewey Burdock project location in the Black Hills. Article 12 of the 1868 Treaty was supposed to ensure that our sacred lands would not be taken or despoiled without our consent: No treaty for the cession of any portion or part of the reservation herein described which may be held in common shall be of any validity or force as against the said Indians, unless executed and signed by at least three-fourths of all the adult male Indians. (15 Stat. 638). Nevertheless, as explained by the Standing Rock Sioux Tribal leader Aljoe Agard to the U.S. Senate Committee on Indian Affairs: Members of the committee, there are only two things that caused the government to break the 1868 treaty and deny our rights to the Black Hills. These two things were gold and greed. Once many white men learned there was gold in the Black Hills, they began to move in, driven by greed ... Our efforts to protect land made the Government angry. The Government decided that we must give up our land. They tried everything - negotiations, threats, and then fierce attacks by the Army. Nothing worked. We refused to sell our land. How could we sell it? As Crazy Horse said, "One does not sell the earth upon which the people walk." And when General Custer tried to wipe us out, we defeated him at the great battle of Little Big Horn. The Government then decided to starve us into selling our land. They cut off all our rations and dent a commission to make an agreement with us. But the usual threats and bribes did not work. Under the 1868 treaty, no agreement was valid unless it was approved by three-fourths of the adult male Sioux. Less than 10 percent of our men approved the agreement. Having totally failed to either fight us, bribe us, or starve us into selling our land, Congress tried to pass a law trying to take our Black Hills. But it is my firm belief, and the firm belief of the Sioux Nation, that these illegal acts did not succeed in tearing the sacred Paha Sapa away from us. (S. Hrg. 99-844, pp. 44-45, statement of Aljoe Agard). The title to the Dewey Burdock project area remains disputed by the Standing Rock Sioux Tribe. In the case of United States v. Sioux Nation of Indians, 448 U.S. 371, 387 (1980), the United States Supreme Court ruled that the taking of Sioux Nation treaty lands under the Act of February 2, 1877 and other laws violated the 5th Amendment of the United States constitution. In affirming a judgment of $108 million, the Court described the treatment of the Sioux Nation by the United States as "(a) more ripe and rank case of dishonorable dealings will never, in all probability, be found in our nation's history." The Standing Rock Sioux Tribe and Oceti Sakowin Oyate have not accepted the award of money damages, and have continuously insisted that land restoration be the cornerstone of a settlement of the outstanding Treaty claims under the 1851 and 1868 Treaties. As explained by Aljoe Agard: It has been over 100 years since the Federal Government broke faith with our people and illegally tried to take the Black Hills from us ... we will continue our fight for the restoration of our sacred lands. We have not given up in 100 years and we will not give up now. (S. Hrg. 99-844, p. 44). The Standing Rock Sioux Tribe and Oceti Sakowin Oyate have rejected a monetary settlement of the issues litigated in the United States v Sioux Nation case, and have insisted that land restoration be the cornerstone of any settlement. Consequently, there is a cloud on the title to the land impacted by the proposed Dewey Burdock project. There is uncertainty with respect to future land use in the area, as the Oceti Sakowin Oyate pursues our claim. Ultimately, the proposed Dewey Burdock UIC permit violates Article 2 of the 1868 Fort Laramie Treaty and must be denied. The requirements of the United Nations Declaration of the Rights of Indigenous Peoples apply to the Dewey Burdock UIC permits. Article 29 paragraph 2 prohibits approval of the proposed permits without the consent of the Standing Rock Sioux Tribe: States shall take effective measures to ensure that no storage or disposal of hazardous materials shall take place in the lands or territories of indigenous peoples without their free, prior and informed consent. (U.N. Doc. A/RES/61/295, Sept. 13, 2007). In Article 3 7, paragraph 1, the U .N. Declaration requires compliance with our Treaty rights: Indigenous peoples shall have the right to the recognition, observance and enforcement of treaties. These requirements are incorporated into the laws of the United States, pursuant to Executive Order 13175 on Consultation and Coordination with Indian Tribal Governments. E.O. 13175 provides that:

		The United States continues to work with Indian tribes on a government-to-government basis to address issues concerning Indian .. . treaty and other rights. Agencies shall... honor treaty rights and other rights. (65 Fed. Reg. 67249). The proposed Class V UIC permit violates the 1868 Fort Laramie Treaty, the United Nations Declaration of the Rights of Indigenous Peoples and Executive Order 13175. The EPA must deny the Dewey Burdock permit application.
565		There are other omissions. The first is consideration of the Fort Laramie Treaties of 1851 and 1868, which reserve the Black Hills to the Lakota. The U.S. Supreme Court recognized this in a 1980 decision, and the U.S. constitution recognizes treaties as "the supreme law of the land." [...] Lakota people say "Mni Wiconi" which roughly translates to "Water is Life." Anything that threatens our water in any form in this semi-arid region is of immediate concern due to the need for water, our spiritual connection to water, and the status of the area's water under treaty law. Lakota people and their allies have a history of protecting water resources from uranium mining, and we will continue to do so. If you have any questions, please feel free to contact me at the address or phone number shown, or by e-mail at Ex. 6 Personal Privacy (PP)
07459 (Valentine hearing)		These sacred Black Hills that belong to us were given to us by treaty. [...] We have spiritual significance. And historically, my tribe has also given testimony from different administrations. They have also provided resolutions that are not accepting this permit that they are requiring. The former tribal president, Bryan Brewer issued one. My tribe issued one. And I am sure the president of the Oglala Sioux Tribe will be forthcoming with that document. Our reasons are, there's an immediate threat of contamination which will create irreparable harm. My people still hunt. My people still fish.
07459 (Valentine hearing)		And I'd like to know if -- oh, I know that you are in violation of international law for violating the treaty. And the treaty, it says you've got to get three-fourths male referendum vote from the Great Sioux Nation to dig a hole anywhere on our land. You've never, ever done that. That's a violation of international law. That's why I'm asking, you know, why are you guys doing that? A treaty is supreme law of the land they tell us. For who? Because this is our land, and you're constantly stealing our natural resources. We see the coal being stolen every day, now the uranium. Leave the -- leave the natural resources alone. Leave it in the ground where it belongs. You're killing Mother Earth. Thank you.
07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	The Fort Laramie Treaties of 1851 and 1868 were imposed upon the Lakota by the federal government and ultimately breached by Congress in 1877. The result of these broken treaties were generations of resentful Indians with a deep mistrust of the government and its officials. [...] In 1980, the Supreme Court ruled that the United States federal government did misappropriate the Black Hills and awarded the Lakota $105 million in monetary damages. Today, that figure is over $1 billion and is currently sitting in the Federal Treasury. Under the Fort Laramie Treaty of 1851, we gather today on unceded Indian territory in what is now known as Valentine, Nebraska. Through genocide, ecocide, historical and intergenerational trauma, and in the wake of being one of the most poverty-stricken areas in the world, we prefer to retain and protect our sacred Black Hills.
07459 (Valentine hearing)		Also, I would also like to ask that you consider, as some of our other people that came up, is to honor our treaty as it is a ratified act of Congress and it's a supreme law of the land, and that there are other laws that are -- that are within the departments of the United States that support EPA and the other laws -- environmental laws in different departments, that they be considered when you're doing this.
07459 (Valentine hearing)		PHILIMON TWO EAGLE: (Speaking in indigenous language.) My name is Phil Two Eagle. I'm here on behalf of my tiyospaye, my future generations, the unborn. Also I represent the Sicangu Lakota Treaty Council. We are chartered by the Rosebud Sioux Tribe since 1992 to address treaty-related issues. Also, I want to start with the Treaty of 1851 that was signed, the first treaty that was signed. There's a lot of other treaties, but I want to refer to the Treaty of 1851 and tie it to the U.S. Constitution Article VI that states that: The Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the Supreme Law of the Land; and the Judges in every State shall be bound thereby, any -- any Thing in the Constitution or Laws of any state to the contrary notwithstanding."
7460 (5/8 Rapid City hearing)		CAREY MACCARTHY: Hello, members of the panel and everybody in the audience. Thank you so much for giving us this opportunity to voice our hearts and our minds on this issue. It's very important. First of all, I'd like to just say I'm here speaking on behalf of the Native people of this land. You want to drill for uranium in the Black Hills, which, for one, is not our land to drill on. It was stolen by a broken treaty, and it's not okay to just continue with greed and force people into making choices that they have no jurisdiction.
7460 (5/8 Rapid City hearing)		HELENE GADDIE: Good evening. I am coming from the Oglala Lakota Nation. My name is Helene Gaddie. My Lakota name is (Speaking in indigenous language). And I wanted to share my concerns about this uranium mine that is proposed. There's some -- the greatest concerns that I have for this is, of course, the treaties first because they are the supreme law of the land, the 1868 and 1851 treaties, which we shouldn't even be standing here questioning why somebody wants to put a mine, why it should have gone this far.
7460 (5/8 Rapid City hearing)		MARGARET ROSS: Good afternoon. I had no plans on speaking today because of my voice is giving out and -- however, I just wanted to add to what many of my relatives were talking about today. When they talked about, I listened to my leksi talk about the 1851 and the 1868 Fort Laramie Treaties.
7460 (5/8 Rapid City hearing)		But I do have faith in spiritual laws and natural laws, and I do have faith in the people. The Black Hills is still owned by the Lakota Nation, Oceti Sagowin, all the Lakota-Dakota.
7460		And, you know, if you look at our people here and you look at the Black Hills, the Supreme Court ruling saying that, you know -- this rank and disarm dealings in history. And now the American people are starting

(5/8 Rapid City hearing)		saying that, you know -- this rank and disarm dealings in history. And now the American people are starting to realize what we've already realized, you know, and what we realized and live with today, you know.
7460 (5/8 Rapid City hearing)	**Ex. 6 Personal Privacy (PP)**	FLOYD LOOKS FOR BUFFALO: Hello. Excuse me. Too loud. I come here on behalf of the Great Sioux Nation of the 1851 and '68 treaty. I am a treaty chief of the Oglalas under Red Cloud. I'm a descendant. And what I'm here for is that during Obama's administration, under the United States Constitution Article VI is a supreme law of this country after 1492. We gave a trespass authority on -- under 1851 to the European-American immigrants to trespass to West Coast. We did not give them the water rights, our mineral rights. And under this declaration, we reminded Obama. So as of August 23rd, 2013, Obama in executive order acknowledged that. And the declaration we have here is that the members of the Cheyenne River, Crow Creek, Fort Peck, Lower Brule, Oglala Pine Ridge, Rosebud, Standing Rock, Yankton, and Santee. This Treaty Council represents the Great Sioux Nation of the Black Hills, and we own the property of the 1868 territory, which is the Black Hills. So therefore, the declaration here I have is the Declaration to Invoke Inherent Rights and Authority Under the 1851 and '68 Fort Laramie Treaties over mineral exploration and extraction; over energy and fuel pipelines of a kind; the unauthorized ceding of land in the name of the parks; and other matters. To all United States: State, federal, and other officials listed on the attached service list and the public at large. Then invoke inherent rights and authority over mineral exploration and extraction; over energy and fuel pipelines of any kind; and the unauthorized ceding of land in the name of parks under the '51 and '68 Fort Laramie Treaties. And if you look at the United States Article VI, it will clearly tell you that North America is a ceded land under treaty. And an order -- this is direct and inherent rights of Native people. Underneath that is an agreement between the United States government and the Native people. They call that Bible and a pipe transaction, sacred pipe. That is an agreement which is called Article VI, treaty to live here, not to extract mineral. We own the mineral. Furthermore, I would like to remind you that I will side with the Clean Water Act here, and we're not going to go through the federal. We are going to go through the United Nations Treaty. And while the United Nations Constitution automatically suspends the state action and federal. Because under the treaty act, the federal is the second one. And the last is the state. That's the order of -- under the United States Constitution. So you need to know your U.S. Constitution and Treaty Council before you start trying to -- what I foresee here is that privatization of all these uranium areas we have under Trump. And what I see coming here is condemnation of all you old home folks in Black Hills, to extract the minerals, gas and oil and zeolite and uranium or inositol. And let's not bother the aquifer with a lot of fairy tales because that's our livelihood. That's what's serious. Don't mix oil and water and drink it together. I'll go without water. No uranium. I'm going to put a stop to it under the treaty. Thank you.
7461 (5/9 Rapid City hearing)		Red Cloud is Lakota. He was trying to get a treaty, but it was the other people who were trying to get the treaty. He just wanted hunting lands. He wanted some food for his people. He didn't even want to consider the part of the treaty that says that your country was going to give him all the means to provide that food by growing it out of the ground, out of the land. You should honor that part of the treaty before you consider putting anything in the earth.
7461 (5/9 Rapid City hearing)		And second, I have done a number of these kind of scoping meetings, and I'm kind of familiar with them. And, you know, when you leave, you're going to count the comments and the number that actually supported the treaty and the NEPA process and tribal historic rights. And so before I continue on, I want you to take a note of a silent vote from the people here. And so I'm asking the people here standing behind to show your hand if you support the 1868 Treaty of the Lakota people and raise your hand. So I'd like you to take note that the majority of people here who might not mention that did, in fact, vote in favor of you recognizing the working power and authority of the 1868 Treaty. [...] Next, I would like you to take note that the United States or its signators to the 1974 Self-Determination Act of the indigenous people of this country known as United States, and by doing so, that gave us a constitutional right under the U.S. Constitution and the recognition of the sovereign authority of the indigenous peoples wherever they live. And so I would like you to take note of that. And then also, I want to -- I think it's important that you understand also that there's also not only the previous violations that I spoke of, where you had the show of hands, silent vote in favor of those comments of mine, but you also need to recognize international law and the rights of indigenous people under the United Nations Declaration on the Rights of Indigenous Populations [sic], which the United States is a signator to. So I want to read that to you as quickly as I can before I lose my time. The United Nations Declaration on the Rights of Indigenous Populations [sic]. Article 27, Adjudication: "States shall establish and implement, in conjunction with indigenous peoples concerned, a fair, independent, impartial, open, and transparent process, giving due recognition to indigenous peoples' laws, traditions, customs, and land tenure systems, to recognize and adjudicate the rights of indigenous peoples pertaining to their lands, territories, and resources, including those which were traditionally owned or otherwise occupied or used. Indigenous peoples shall have the right to participate in this process." Article 25 of the U.N. Declaration on the Rights of Indigenous Peoples, a Distinctive Relationship: "Indigenous peoples have the right to maintain and strengthen their distinctive spiritual relationship with their traditionally owned or otherwise occupied and used lands, territories, waters, and coastal seas and other resources and to uphold their responsibilities to future generations in this regard." Article 26 of the same document -- [...] KEITH JANIS: I will right now. Use and Ownership: "Indigenous peoples have the right to the lands, territories, and resources which they have traditionally owned, occupied, or otherwise used or acquired. Indigenous peoples have the right to own, use, develop, and control the lands, territories, and resources that they possess by reason of traditional ownership or other traditional occupation or use, as well as those which they have otherwise acquired."

		And: "States shall give legal recognition and protection to these lands, territories, and resources. Such recognition shall be conducted with due respect to the customs, traditions, and land tenure systems of the indigenous people concerned." Thank you. Mni Wiconi.
7461 (5/9 Rapid City hearing)		And then when I looked into my genealogy, found that my great-great-grandfather was a warrior, Akicita, and fought for my grandfather and father's right to these treaties that they signed with you guys. And I'm not sure that you've read them, honestly, because if you guys have read these treaties, you would understand what you're doing is just simply wrong in every sense of the word.
7461 (5/9 Rapid City hearing)		You know, you look at our treaties, and I know you guys recognize our treaties. I always said in prior meetings with government officials, when an Indian violates federal law, you throw us into Leavenworth or some federal prison; but when you violate federal law, nothing happens. And this action is in violation of federal law because the treaty is law, a contract. Now, as I asked -- I asked, and I know you won't answer this question. But do you live and promote the United States Constitution? If so, Article VI should be adhered to. Our treaties are the supreme law of the land. And I don't even know why you guys are doing this, because we own everything underneath. We even own Spearfish because we've never been paid for it. You guys come in, took our lands, and you justify it by bringing a treaty to our people, a peace treaty, telling us where we can live, where we can, you know, work, what we can do and can't do. Promises made that were never kept. So these are all violations of federal law, but yet none of you will see or sit behind bars. But if an Indian did, we would be. Shame on the federal government. The federal government has always failed us. Always has and always will. You know, this is going to end up in court. That's the only way I see. Or any frontline action necessary to try to stop this. Because you guys will come and come and come. And we always -- if you look back and understand who we truly are, we are powerful people, and we're just standing up to protect our future, your future as well if you live here.
7461 (5/9 Rapid City hearing)		You'd be doing the same -- if I was to lay uranium in your backyard, you'd be doing the same protection. But I'm not allowed to do that because I'm an Indian. I have no rights on your land, so why not -- why should you have rights on mine? By treaties, you have no rights.
7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	BEN GOOD BUFFALO: (Speaking in indigenous language.) A treaty is a contract between two or more sovereign nations. That is as binding today on the governments that signed it as when agreed to more than 100 years ago. (Speaking in indigenous language.) You violated all these treaties, our treaties. [...] And I was thinking about this treaty here. And I think sometimes this treaty belongs, this EPA, this should be on the reservation. I don't see them there. I don't even see them there at all. That's where the people are. The people are there to -- like him, Hollenbeck, they want to talk to him, like you. And they want to know what's the best direction, but there's none of that. [...] BEN GOOD BUFFALO: And today it's not going to be -- I see it's not going to be dealt with. (Speaking in indigenous language.) I hope you study this treaty. I'm going to pass it on to you other people. I hope you have a job tomorrow.
7462 (Hot Springs hearing)		ENDONNIS MORENO: Hello. I would like to introduce myself in my traditional language. (Speaking in indigenous language.) Hello, my relatives. I would like to give you a warm, a heartfelt handshake. My name is Endonnis, and I am a young woman. I am 12 years old. I was born in Pine Ridge Reservation, and I live in Rapid City, South Dakota. I was taught by my Auntie Tonia Stands that spiritually is stronger than scientifically. So I would -- so I know for a fact that according to the Fort Laramie treaty of 1851, this is Indian land, and what would the government do if we broke a treaty? Thank you.
7462 (Hot Springs hearing)		Just let me remind you, the 1851 Fort Laramie Treaty, that this is all illegal anyway. So (speaking in indigenous language). Thank you for listening and have a good day.
7462 (Hot Springs hearing)		And like it was said earlier, this is Native land, and it is illegal to be here. And it's just -- just frustrating, you know.
7462 (Hot Springs hearing)		Technically you don't even have a right to be on this land doing the things you're doing. The things that you've done in the past, you haven't cleaned up or cared for. These things continue to poison these lands and these people.
07463 (Edgemont hearing)		DEBRA WHITE PLUME: Okay. What I want to say is that the -- I mentioned the treaty. I want to mention the United Nations Declaration on the Rights of Indigenous People, which says governments must have free and prior informed consent of Native peoples before they bring development in, and we didn't give that. Our Oglala Sioux Tribe said no to uranium mining, no to radioactive waste coming in, and I say that, too, on behalf of my grandchildren, my coming generations, all the animals and the standing silent nations, the plants that we need here. So I ask you to take this home. Take this home to your offices, share your paperwork, share your paperwork and study it. And don't think of this as a science experiment because we live here. So I thank you for coming, and I thank you for listening to me. (Speaking in indigenous language.)
07463 (Edgemont hearing)		After hearing some of the testimony here today, I went home and I went to the internet, and I've given the EPA a copy of this. I believe you still have it. This is from the Congressional Research Service. And it's called: Indian Water Rights Under the Winters Doctrine, An Overview. This is an 11-page review, and I'm going to quote from it. Starting off in the summary, the first paragraph says: Although the federal government has authority to regulate water, it typically defers to the states to allocate water resources within the state.

		The federal government maintains certain federal water rights, though, which exist separate from state law. I'm going to repeat that: Separate from state law. You as the EPA are the guardians of federal water rights. And this is from the Congressional Review: In particular, Federal reserved water rights often arise in questions of water allocation related to federal lands, including Indian reservations. Indian reserved water rights were first recognized by the U.S. Supreme Court in Winters versus United States in 1908. Under the Winters Doctrine, when Congress reserves land, i.e. for an Indian reservation, Congress also reserves water sufficient to fulfill the purpose of the reservation. And I'm going to skip to page 5, to the heart of the matter here. Paragraph heading, Water Quality: Degradation of water quality would undermine the water's use for reservation purposes. Courts have recognized water quality as another element of Indian reserved water rights. Reserved water rights. Federal courts -- federal courts have ruled that reserved water rights holders can seek legal protection from water quality degradation by other water users. Specifically, in the United States versus Gila Valley Irrigation District, the Ninth Court approved a District Court's finding that a reserved water right was impaired when other users' actions increased the salinity of water used by a tribe for irrigation of agricultural crops. I spent two and a half years as a Native American journalist for the Confederate, Salish, and Kootenai tribes in Montana. And this I can assure you, that as an EPA, this issue of water rights, water quality, mining, it looks to me like you're going to be facing this over and over and over in your careers. I would urge you to become acquainted with this doctrine. I would urge you to defend and protect water quality rights. And thank you.
07463 (Edgemont hearing)	**Ex. 6 Personal Privacy (PP)**	DOROTHY ROWLAND SUN BEAR: Hello, everyone. My name is Dorothy Rowland Sun Bear. I come from Wounded Knee, South Dakota on the Pine Ridge Indian Reservation. Concentration Camp 344. I oppose this uranium mine. America is built on stolen land. They came and stole our land here, and they are digging holes everywhere. The Black Hills are like cheese now. So full of holes. We need to stop. Recognize our treaties and stop mining in our Black Hills. Stop stealing our natural resources. Leave it in the ground. Thank you. (Speaking in indigenous language.)
07463 (Edgemont hearing)		We have just begun to hear about treaty rights, and I've just begun learning about treaty rights and all the issues that are connected with them. [...] Treaties between nations are the highest laws of the land. Treaties are still in place which ensure that the Black Hills are the lands of the Lakota people. [...] To reiterate, this is Lakota land. The United States government should honor the treaties with them.
07463 (Edgemont hearing)		TASINA SMITH: Hi, again. I spoke yesterday. My name is Tasina Sapa Win. That means Black Shawl Woman in Lakota. (Speaking in indigenous language.) Of the Cheyenne River Sioux Reservation which is, you know, running right through -- the Cheyenne River, runs right through this town. This beautiful, beautiful town. So I'm back again to first say this: First and foremost, this is completely illegal. The Black Hills belong to the Lakota. You need to recognize that right now, and foremost, before we can go on with anymore permits. We need to start recognizing our treaty, recognizing our children's future. I mean, we have people who, you know, are so ignorant of the facts here. Really, ultimately, when I hear from locals or from the opposite side, all they can really come up with is money as a pro to this permit being granted. That's really all it is.
7642 (Hot Springs hearing)		So what I'm asking one last time, you know, is please respect us. Honor our treaty of 1851, 1868. Honor our indigenous rights as people -- not just as indigenous, but as human people. This is not just as an indigenous problem. This is a human problem, an all-life problem, all of life -- the four-legged, the wind, the water, the plants, the earth. And it's a serious problem. Please start respecting us, or you'll be expecting more of us. Thank you.

Notes

already responded via email

Roger Trudell signed the resolution
Ex. 6 Personal Privacy (PP) submitted it

Letter ID	Commenter Name	Text
106	Ex. 6 Personal Privacy (PP)	...and to have a Lakota translator/transcriptionist present at all hearings.
108		...Lakota translator/transcriptionist at hearings.
165		Finally I want Lakota translators/transcriptionists at all hearings.
202		Subject: Azarga Uranium/Black Hills, South Dakota [...] This project will most heavily impact the indigenous peoples on the Pine Ridge Indian Reservation and their health and rights should be an utmost priority in the decision making process. The negative impacts far outweigh any positive ones and clearly highlights the need for this project to be shut down permanently. Please act in favor of protecting of the health of our nation, its people, wildlife and the earth.
226		Subject: Permits and Exemption Dear Ms. Shea, It is my understanding that the EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. I strongly urge you to reconsider any decision to allow permits to mine any region that impacts Native American lives. We all know how Native Americans are considered second class citizens in this country; how their lands are up for grabs; and how their health is not as important as expanding drilling for oil, uranium, copper and so on. These substances are not for consumption here (not that this would be acceptable) but to enrich the companies that sell them overseas. Please do not continue to perpetuate these injustices and do not approve any draft permits or any aquifer exemption. Thank you.
240		Subject: Comments on Dewey-Burdock Class III and Class V Injection Well Draft Area Permits [...] Both permits would needlessly expose the Lakota Oyate to the devastation of uranium mining and continue a record of disregarding the health and welfare of native populations.
244		- that there is a Lakota translator/transcriptionist at hearings Thank you very much for your consideration.
281		Subject: Comments on Dewey-Burdock Proposal For me the most important argument against the proposed permits is that the Lakota community seems nearly unanimously against them. The recent findings of elevated uranium levels in a local reservoir only reinforce lack of trust in any uranium mining operation. I have learned the bitter historical truth that we white Americans stole most of the Lakota land, kidnapped their children, nearly obliterated their culture, almost caused the extinction of the bison, and massacred their people on multiple occasions. I benefit from these actions in part because my house sits on some of the stolen land. The debt of justice we owe is staggering; for the land alone the Supreme Court has placed the price at over one billion dollars (counting interest and inflation). Against that debt, to refrain from more uranium mining seems to me to be a small payment.
285		Subject: Uranium mining and storage comment We are writing to ask that the EPA DENY permits to Powertech/Azarga Uranium Corporation for uranium mining and storage on Lakota lands. Comment deadline is today. My husband is a retired biologist and I am a 63 yr old schoolteacher from KS. We are done with all the wrongs that we have heaped on the original inhabitants of this country. Particularly by a foreign company. This is blatant environmental racism, it is wrong, and we need to do better.
287		A translator would also be helpful during court.
326		Indigenous people object to the rape of the earth on which they live. This disregard for human voices, let alone those of their ancestors and spirits, is medievally cruel and shameful. Please contact me directly with any further questions.
472		5) LAKOTA TRANSLATORS NEEDED AT HEARINGS
494		We have spoken to people that reside in and around our area who have made comments about their relatives using certain lands for sacred and spiritual activities, burials etc. that have not **been** respected **and .-e** visibly contaminated by uranium activities. Blatant dsrespect of an indigenous cunure and tislorical abuse! No one should be allowed to do this to any cutture!
495		3) Tribally defined consultation 4) Full tribal approved surveys Lakota translation/transcription
7443		The white men from Europe have already stolen the whole of America from the original Aborigines who lived here and almost committed genocide on their population. Now you want to go and commit more pollution and ravage their land so it's uninhabitable forever. Have you no conscience?? Even considering this proposal is absurd!
7460 (5/8 Rapid City hearing)		PAULA ANTOINE: Good afternoon. My name is Paula Antoine, and I'm from Rosebud. I'm a Sicangu Lakota, and I'm part of the Oceti Sakowin. I'd like to thank you for this opportunity to come speak with you. I spoke in Valentine as well, but there was a couple other ideas that I thought were very important. We have several, many Lakota language and Dakota language speakers that come in, and I notice that you use a transcriber. So I was wondering how you transcribe their testimony when they speak in our native language.

		And I would like to ask you for the opportunity for a translator for that, for the hearing and for the transcribing, and have that approved by language speakers so the translation comes out to the correct meaning that they're intending with their testimony.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	WANIYA LOCKE: (Speaking in ingidenous language.) My name is Waniya Locke. I'm from Standing Rock. First and foremost, I should be able to address you in my own language since our language was the first language ever spoken here. So I request that the EPA, the next time you come into our homelands, to bring a translator and a transcriber for the Lakota language.
7462 (Hot Springs hearing)		It's like, Well, on religious grounds, you know, this is -- that's illegal, you know. Just on that alone, you can't -- you can't build there, you can't do whatever, you know -- wipe out the people living in this area because you want money or whatever. It's disgusting that anybody would do that, like, let people do that, let people suffer for money, for things you won't even see, you know. It should be denied on the grounds of, you know, just common decency, you know. It's horrible that, you know, someone who will allow this and they see no benefit from it. Just, you know, I was told to so it's okay. I'll just let it go. It's just part of the job, you know. [...] These people have to live here. This is lasting effects. I don't want my kids to have to avoid South Dakota because their life will be shortened by 20 years by drinking a bottle of water from here. It's ugly, you know. These people tell stories of, you know, Oh, my mother brought me out here, you know, I drink from these waters, I learn things, lessons, cultural lessons, religious lessons, you know. Who we are as a people is defined by these lands, and to destroy them is just spitting on us, who we are, who we will be, who are our kids are going to be. Leave something for them to, you know, learn from. Leave something for them to, you know, see. That's, you know, begrudged for time.
7462 (Hot Springs hearing)		MOUNTAIN MAN SCOTT: (Speaking in indigenous language.) I ask forgiveness in advance of the elders and the people of this land. I do not know your language well, and out of respect, I should or at least have a translator here. So in the future, I suggest that happen. Thank you for allowing us this time to speak. I'm a water-protector. I heard it said that you also are a water-protector. I can't think of a higher honor, at least for me. But it goes beyond water. It's all life. I don't get paid financially to be who I am. I am who I am because I was created to be this, and I'm grateful. I had the opportunity not long ago up in Standing Rock to stand with some of the finest men, women, and children that I've had the honor of knowing, to stand up against great atrocities, much like many that have happened well over 500 years and many that happened that were far worse than what we're going through. It shames me to know that these beautiful people from here have to continue to fight the same battle over and over and over and over simply so they can remain here on the lands that they were born on and their ancestors held in great regard and cared for and tended to, to have to protect them so that their children no longer have to be poisoned. This is wrong. Every bit of it is wrong. It disgusts me, and I have no understanding how it could not disgust you. I hope it does. When you go home, please, look in your children's eyes, look in your mother's eyes, look in your grandmother's eyes, look in your dog's eyes, in your cat's eyes, would you like them to be poisoned? Do you think that's fair and proper?
07463 (Edgemont hearing)		Thanks for having this hearing again and an opportunity for us to be here. And I just want to read this. I went out to the George S. Mickelson Trailhead this morning. I looked around down there for any acknowledgement of the people that were here before, and I didn't see anything on the sign. So I looked online to see if there was anything here, and I found a page that wasn't a state page, it wasn't a South Dakota page. It was a user of the trail that apparently built a site. And this person who likes trails, Rails-to-Trails, and he's ridden the trail in its entirety. My wife and I rode part of it, but we got tired by the time we got to the top of that hill outside of Deadwood a few years ago. It said bicycling the length of the George S. Mickelson Trail, it's easy to see why the Black Hills remain sacred land to the Lakota nation. He said Lakota nation, I understand it's really Oceti Sakowin and some others. Consider that. So I wanted to just remind you of that. I looked all over on the state page. And I actually called the state coordinator, and she called back while I was listening to other testimony, so I will find out what she says about that. But I think at least this state is -- irrelevant to this, but at least the State of South Dakota should acknowledge the people that were here before. Everything that they have starts with Custer and Wild Bill somebody or other, and that's the history. They act as though that's the beginning of time here, and the railroad, of course, is the beginning. Well, I can't introduce myself in my original tongue. I don't even know the creation story, the creation place that I came from. Most of my blood is from Scotland area and what used to be called Britain. I think I'm mostly Brit, not sure because I don't have the history. A couple thousand years ago, Christianity started, and that's what this is here, symbols and icons around here of Christianity. Only 2,000 or so years ago that began. That's an Abrahamic religion. Judaism started about 1,000 years before that possibly, around there. So we really don't have history. I want to speak a little bit to the folks from Caucasia. I say that lightly, the Caucasians here. I want to say that our -- we don't have that history. Perhaps we're a little jealous of that, that we can't go back and find our original place of origin. The people that testified here can. And our job now is to, as descendants of these people, is to do whatever we can -- sorry. I feel strongly about things, and this comes up -- to allow us to protect their stories and their history. And that's -- that's why I'm here.

		There might be -- somebody told me, a Lakota person actually told me that there might be a good way for -- my wife and I were up at Standing Rock, and we learned a lot. We heard stories of this sort of thing everywhere, I mean everywhere. They are trying to -- I won't talk about those, but everywhere. We've been traveling through the Transwestern pipeline, we've ben traveling the old flat, we've been traveling to the outside of the -- the edge of the Grand Canyon, where they are going to take uranium across the mainland again and again. Put that out there. So I keep hearing stories, so we went to hear and to see them first place -- firsthand. So we can't do it again. We shouldn't step on the rights of other people who have acquired the land, bought from whoever stole it during those broken treaties. We can't do it. We can't do that that way. I say -- when I was in the Air Force, we had -- it was that time of the sexual harassment training that we had to do, and I was part of the conducting of it. We had a saying: No means no. If a person -- if a potential sexual partner says "no," it means no. And there's real wisdom about that. And so I say that if the people that hold this land sacred say "no," "no" means no. "No" means no. "No" means no. (Audience chanting.)
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	TONIA STANDS: Okay. I just want to start with this. And I forgot to give this to you yesterday. And I meant to tell you a history, and I was telling that story yesterday about this water. This water is very sought after water. I have two more. So -- okay. My name is Tonia Stands, and I'm from Oglala, South Dakota, right east of here. And I'm a full-blooded Oglala Lakota woman from Oglala. And I was raised by my grandmas who have direct connection with this land. I was trying to tell you yesterday. And as a child, I was brought into this area for many different reasons throughout the year. My grandparents, they would come in a certain way into the Black Hills, into these doors, and we're supposed to come in like that. And so what I was telling you yesterday was, we weren't citizens of this country even though we're the original people to the Black Hills. If you want to talk about stakeholders, you want to bring that into such an area, I mean, that's just like the audacity, you know, an insult to us that you have more, I guess, privilege over us. And you're using your white privilege to come over us and our religious beliefs in connection to this land and what's under this land. So you want to -- you want to talk about stakeholders, you're insulting us. We were forced out of here. [...] And then come in here and have the audacity to say you're a stakeholder. This land was stolen. This land was taken. And we were forced out to a reservation. And we were disconnected. And we didn't have religious freedom. Look at this church, where we all get to stand in. You want to be respectful? Let's go stand in our church.
07463 (Edgemont hearing)		WANIYA LOCKE: (Speaking in indigenous language.) I grew up on the Missouri River. I am from Standing Rock. I have been a part of this preliminary hearing, and I sat in some of rounds like this before against NAGRPA. I want to reaffirm that you guys are guests within our home territory. We are Lakota-Dakota people, and we should be able to address you in our own language. So I ask respectfully that you bring a Lakota-Dakota translator when you come to our home.
7642 (Hot Springs hearing)		Lakota translators are needed at these hearings. Do we have some?

Letter ID	Commenter Name	Commenter Org.
15	Ex. 6 Personal Privacy (PP)	Individual
24		Individual
31		Individual
36		Individual
36		Individual
39		Individual
44		Individual
103		Individual
106		Individual
108		Individual
136		Individual
164		Individual
172		Individual
174		Individual
188		Individual

230	Ex. 6 Personal Privacy (PP)	Individual
244		Individual
262		Individual
272		Individual
280		Individual
280		Individual
287		Individual
290		Individual
294		Individual
300		Individual
304		Individual
315		Individual
316		Individual
317		Individual
328		Individual
389		Individual
394		Individual
459		Individual

469	Ex. 6 Personal Privacy (PP)	Individual
470		Individual
472		Individual
486		Individual
488		Individual
489		Individual
493		Individual
495		Individual
519		Black Hills Clean Water Alliance
522		Cheyenne & Arapaho Tribes Tribal Historic Preservation Office
523		Chairman Cheyenne River Sioux Tribe

523	Ex. 6 Personal Privacy (PP)	Chairman Cheyenne River Sioux Tribe

525	Ex. 6 Personal Privacy (PP)	Chairman Cheyenne River Sioux Tribe

525	Ex. 6 Personal Privacy (PP)	Chairman Cheyenne River Sioux Tribe
525	Ex. 6 Personal Privacy (PP)	Cheyenne River Sioux Tribe
527		Clean Water Alliance
528		Aligning for Responsible Mining

537	Ex. 6 Personal Privacy (PP)	Native Research Solutions

546	Ex. 6 Personal Privacy (PP)	President Oglala Sioux Tribe
546		President Oglala Sioux Tribe

548	Ex. 6 Personal Privacy (PP)	Tribal Secretary who signed the Oglala Sioux Tribe Ordinance submitted with OST letter

552	Ex. 6 Personal Privacy (PP)	Chairman Santee Sioux Nation who sigend athe resolution
555		Chairman Standing Rock Sioux
555		Chairman Standing Rock Sioux Tribe

565	Ex. 6 Personal Privacy (PP)	Thunder Valley
565		Thunder Valley Community Development Corporation
565		Thunder Valley Community Development Corporation
7454		Environmental Director Ponca Tribe of Nebraska

07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	Vice President Oglala Sioux Tribe
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
7460 (5/8 Rapid City		Individual
7460 (5/8 Rapid City		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual

7461 (5/9 Rapid City hearing)	on	Individual
7461 (5/9 Rapid City hearing)		Chairman Crow Creek Sioux Tribe
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City		Individual
7461 (5/9 Rapid City		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual

7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Chairman Cheyenne River Sioux Tribe
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		Individual

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
7464 (mass mailer text)		N/A
7642 (Hot Springs hearing)		Individual

Text
A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.
Subject: Re: Dewey-Burdock templates [...] I urge that a full survey of cultural and historical sites be conducted prior to mining or deep disposal and all efforts to protect cultural and historical sites.
4. Consideration of legal and cultural impacts In addition to the possibility of technology failure, the cultural significance to the area must also be taken into consideration. The Black Hills have been home the The Lakota, or the Sioux tribe, for generations. Because of this, the EPA is required to comply with the National Historic Preservation Act under the EPA's Tribal Policy on Consultation and Coordination with Indian Tribes. These people have been interested in the potential outcomes of the Powertech operation, and as such have requested the EPA provide them with a concise and well researched identification of potential effects of the proposed project. These are historic and sacred lands, and as such the EPA continues to provide the tribe with as much information as possible, however these potential cultural impacts must be weighed against the benefits.
Legal precedent - most notably Lyng v. Northwest Indian Cemetery Protective Association - suggests that even in the most extreme circumstances, the religious and cultural significance of a place will not prevent the completion of mining and resource extraction projects, as the significance of the whole (in our case, the Black Hills) is conceived by permit-granting institutions as separate from its part (the Dewey-Burdock project area), and the latter is not seen by the federal government to impose a substantial burden on the exercise of religious or cultural rights. Nonetheless, the EPA has still undertaken enhanced outreach activities, including extensive public participation hearings closer to the Oglala Sioux Tribe and Cheyenne River Sioux Tribe, in order to hear their concerns. To us, this action shows the EPA has some interest in accounting for the impact this project would have on Lakota and other Native peoples. This document thus presents an argument that the historic environmental justice concerns of the Lakota, Dakota, and other tribes must be taken into account more substantially and meaningfully as a condition of this and any future EPA permitting in the Black Hills region.
4. Meaningful involvement and consultation Adequate attention to this history would further require the EPA revisit its existing approach to meaningful involvement and tribal consultation with regard to the proposed Dewey-Burdock project. While the EPA docket detailing the draft Class III and Class V permits for the project contains a draft document detailing plans for compliance with the National Historic Preservation Act (NHPA), including plans for tribal consultation, these plans do not feature as part of the EJ analysis, which we strongly feel they should. In this draft NHPA compliance document, the EPA details its plans to first conduct "inform and educate" sessions with tribes prior to beginning government-to-government consultation. The EPA notes in this document that after meeting with Oglala Sioux Tribal leaders, the EPA "was informed that the Tribe considered these meetings to be "inform and educate" meetings rather than government-to-government consultation." Such a difference in interpretation cannot characterize a legitimate consultation process, and we are left wondering why it is that meetings which the EPA considered to be consultative were instead considered to be informational by the Tribe. At the public comment sessions in Rapid City on May 8-9, Lakota testifiers reminded the EPA that those public hearings do not qualify as meaningful tribal consultation. We urge the EPA to remember this, along with the EPA's own definitions of EJ, articulated in EO 12898 and the EJ 2020 Action Agenda, which state that people, and particularly Indigenous peoples, must participate, be meaningfully involved in, and indeed influence the direction of decision-making processes related to environmental justice - not simply have knowledge of those decision-making processes. We feel that meaningful tribal consultation could result in the EPA adjusting the draft UIC permits in question as well as the EJ analysis itself, perhaps by expanding its 20-mile buffer zone of interest around the proposed project site or, for example, implementing a watershed analysis approach instead. At the hearings in May, Ms. Valois Shea reassured all those present that the EPA permits in question would not be issued until the tribal consultation process was completed. We hope the EPA takes this promise seriously and soon embarks upon a meaningful tribal consultation process which stands up not just to the standards of Lakota and other Native EJ scholars and activists, but indeed the stated standards of the EPA itself.
PowerTech/Azarga must formally consult under Section 106 of NHPA with First Nations of the 1851 and 1868 Fort Laramie Treaties. The Oglala Sioux Tribe currently stands against, in opposition to uranium mining in the Black Hills. Indigenous people know it is not worth the risk!
Other Reasons I object are: The HeSapa, or Black Hills, is Treaty Territory under both the 1851 and 1868 Ft. Laramie and under Law it is mandated to consult with tribal governments as Government to Government Relations. This includes following National Historic Preservation Act rules and regulations with the tribes. However, South Dakota and federal agencies involved in permitting this uranium mining have continuously ignored tribal nations and their expert testimony regarding cultural properties and sacred sites in the target area.
A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.
...to consult with the Sioux nation before any action, to conduct tribally approved archeological and cultural surveys...
• A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected. • Tribally defined consultation...
A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.
I also want tribally defined consultation as well as full tribally approved archeological and cultural surveys done.
Subject: Permits for Dewey-Burdock Uranium Mine [...] A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected
Subject: Opposition to Dewey Burdock Uranium Aquifer Mining [...] The National Historic Preservation Act requires tribal consultation. The current administration does not respect America's indigenous people and the agreements we have with them. I have no faith that this administration will adhere to the law, democratic principles, or human decency in their handling of the Tribe's concerns
Subject: No Uranium in treaty territory [...]

3) The EPA is obligated under the National Historic Preservation Act to consult with the Tribes to identify the potential effects of the project on traditional cultural places, historic, and sacred sites. As you are probably aware, this current administration is openly dismissive and even hostile towards the interests of America's indigenous peoples. We cannot expect there will be a good faith reckoning of the Tribe's concerns.

Therefore, for all these concerns, and more, I must register my opposition to the proposal for ISR activities in the area. Please deny the permit.

So I urge you to listen, as many of the speakers at the hearings have already said. Listen to the people here when you make your decisions. Seek the input of the native tribes who occupy and know this area, and truly listen to them. Listen to your own hearts: what matters to you? Does your children's future matter to you, or does money matter to you? Which is going to last longer? Which is something you want to look back on at the end of your life?

- that there is tribally defined consultation

[...]

- that there are fully tribally approved archeological and cultural surveys

This would be the first EPA-led Class 3 UIC permit ever issued for ISL mining. At the start of the Powertech application process, EPA met with Powertech representatives and worked to define key terms of the regulations without any involvement by Native American Tribes nor the public. We feel this was wrong and we ask for the EPA to begin developing a formal and standardized Class 3 UIC permitting process.

A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.

A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected. The black hills in particular are a site of extreme cultural and historic significance and should not be mined.

A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected. The black hills in particular are a site of extreme cultural and historic significance and should not be mined.

PLEASE remember to have a tribally defined consultation in addition to FULL tribally approved archeological and cultural surveys !!!

A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.

Direct impacts to cultural resources are a significant topic that should be discussed in the policy. According to the Tribal Energy and Environmental Information Clearinghouse, increases in human access and disturbances can result in unauthorized removal of artifacts around the site (Tribal Energy and Environmental Information Clearinghouse, 2017).

Subject: Public Comments at Valentine, NE

I was told the reason you scheduled a meeting in Valentine on April 27, 2017 at Niabrara Lodge is so the two reservations in South Dakota would have a place to comment. It isn't going to happen. If you truely want comments from the two reservations, you will have to hold them on the reservations. Contrarely, to public knowledge, the reservations have modern hotels and large public meeting places on the reservations. In fact, Rosebud has a very modern hotel and meeting rooms, just twelve miles north of Valentine at the state line of South Dakota. Because they are not welcome in Valentine, unless they come in the daytime to spend their money. Yes, discrimination is alive and well in the Untied States, before Trump started spewing his hate on us.

If the EPA were to not consult and coordinate with tribes during the public comment period, then they would be in violation of the National Historic Preservation Act and the Tribal Policy on Consultation and Coordination with Indian Tribes; but EPA has been involving the tribes throughout the process (McClain-Vanderpool, 2017).

Subject: Re: Public comment period extended through Monday, June 19 for the proposed EPA actions at the Dewey- Burdock site

My name is Ex. 6 Personal Privacy (PP) and I am a student at Sinte Gleska University and a member of the Rosebud Sioux Tribe. Since the Public Comment period was extended, I was wondering, if I can secure a venue, if your team would be willing to come to the Rosebud reservation for more consultations? I feel we can reach more people, especially elders, who have trouble getting around. I also believe that the people who want this mine are using scare tactics, such as shutting down the wifi at the Edgemont Church that is owned by a mine supporter so nobody can go live. I have also been hearing reports that opposers have been harassed and surrounded at one of the consultations, which makes it hard to voice opposition. Thank you for your time and consideration.

I contacted you last week about scheduling a consultation on the Rosebud Sioux Indian reservation and since I've gotten no response, I have no option but to address my Tribe about the allegations of scare tactics at certain meetings. I fear for my people and their safety and I beg that you schedule consultations on our reservation.

Subject: Urgent Dewey Burdick consultations

Dear Miss Shea

Will be addressing my Tribe on the allegations of scare tactics used at the Dewey Burdock consultations. Please consider on reservation consultations as I said before, the opportunity for turnout will be greater. Please promptly reply. Thank you.

Subject: Re: Urgent Dewey Burdick consultations

Hi Miss Shae its me again. So Ive called around and talked to Russell Eagle Bear at the Rosebud Sioux Tribe Historic preservation office, also with Phil Two Eagle from our Treaty Council, they seem to think that the public comment hearings aren't legitimate Tribal consultations. is this true? They seem to think they have never ending time. What is the process for consultation with Tribes? or is this it. Is June 19th the last day of public comment and Tribal consultation? They seem to think they are getting a special invitation or is that what the last letter was? I'm sorry I'm confused. I'd like to know when the last day for our Tribe to consult with the EPA. Thank you for your time. I appreciate it very much.

This is also Indian land. How do you have consultation when they clearly have said no? I am a Republican. I am all for business but not when there is risk like this.

A full survey of cultural and historical sites is needed before any mining or deep disposal is allowed. Cultural and historical sites must be protected. It should also be noted that the proposed mining area falls within the boundary of the Fort Laramie Treaty of 1868. Full engagement over this issue with any tribes who are party to that treaty is essential. The US constitution states that treaties are the supreme law of the land.

A full survey of cultural and historical sites is needed before mining or deep disposals allowed. Cultural and historical sites must be protected

I KNOW THAT THE AGENCY IS LIKELY TO GET SUED, WHETHER IT ISSUES FINAL PERMITS OR NOT, BUT THIS ONE-SIDED CONSIDERATION OF THE SITUATION SIMPLY INCREASES THE PROBABILITY OF EXTENDED LITIGATION -AT TAXPAYERS' EXPENSE. SO DOES THE LACK OF PROPER TRIBAL CONSULATION, WHICH HAS CAUSED THE NRC ENDLESS HEADACHES. YOU CAN'T START TRIBAL CONSULTATION PART WAY THROUGH THE PROCESS. IT NEEDED TO BE COMPLETED YEARS AGO.

• A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.

Have genuine consultation with the tribes and tribal approved archaeological and cultural surveys!

3) GENUINE TRIBAL CONSULTATION SHOULD OCCUR

4) TRIBAL APPROVED & ARCHAEOLOGICAL SURVEYS!

Susan

safeguards

need more dialogue/consultation with tribal nations

Troubled times: FBI, EPA funding

Delay

...as well as a tribal consultation.

These [cultural and historical surveys] must be tribal approved!

Regarding the identification of traditional cultural properties at the Dewey-Burdock Project site. Formal consultation under Section 106 of NHPA with First Nations of the 1851 and 1868 Fort Laramie Treaties must be completed. See attached documents for listing.

3) Tribally defined consultation

Full tribal approved surveys

As part of the new process, the EPA should do thorough tribal consultation. The existing documents indicate that this process has barely begun, and yet draft permits have been issued. This makes a mockery of the consultation process, which should be completed well before draft permits are issued, so that the resulting information can be analyzed. The EPA must halt all further action until mutually-satisfactory consultation is completed. All cultural and historical properties must be given adequate protection.

[...]

1. The undersigned respectfully request that the EPA stop the permitting processes for the proposed Dewey-Burdock project. At the very least, tribal consultation and a de novo NEPA process are required. At best, the permits and the exemption should be denied.

On behalf of the Cheyenne and Arapaho Tribes, thank you for the notice of the referenced project. I have reviewed your Consultation request under section 106 of the National Historic Preservation Act regarding the project proposal and commented as follows:

At this time, it is determined to be categorized as No Adverse Effect; however, if at any time during the project implementation inadvertent discoveries are made that reflect evidence of human remains, ceremonial or cultural objects, historical sites such as stone rings, burial mounds, village or battlefield artifacts, please cease work in area of discovery and notify the THPO Office within 72 hours.

In addition, if inadvertent discoveries are made; pursuant to Title 36 Code of Federal Regulation Part 800.13, as amended; you will also be required to make arrangements for a professional archaeologist to visit the site of discovery and assess the potential significance of any artifacts or features that were unearth. If needed, we will contact the Tribes NAGPRA representatives.

Please contact me at (405) 422-7484 or vrichey@c-a-tribes.org, if you have any questions or concerns. Alternate contact is Micah Demery; she can be reached directly at (405) 422-7416 or mdemery@c-a-tribes.org. Thank you again for your notification!

b. The Dewey-Burdock Uranium Mine Poses a Serious Threat to the Tribe's Cultural Resources

The site of the proposed Dewey-Burdock Uranium Mine is within the Tribe's 1851 territory. Specifically it is in the vicinity of the Black Hills, among the most sacred sites to the Lakota people. Our people lived in this area, hunted in this area, and made religious pilgrimages in this area from time immemorial. Our Tribal Historic Preservation Officer advises that the site of the proposed mine has the potential to contain numerous sites of cultural and spiritual significance. While it is our understanding that some efforts have been made to identify cultural resources in the project area, the EPA has not consulted with the Tribe pursuant to the National Historic Preservation Act.

c. The Dewey Burdock Uranium Mine Poses a Serious Threat to the Tribe's Religious Exercise

Water is an essential aspect of the Lakota religion. It figures prominently in our theology as the origin of our creation as Lakota people and as a key aspect of how we became who we are today. In addition, water is a key component of many of our religious ceremonies. While many or our religious sacraments require either water or ritual deprivation thereof, water is an essential component of one of our most important religious sacraments, the *inipi* ceremony or sweat lodge. Importantly, this sacrament requires that we use only water that is both environmentally and ritually pure. As noted above, the Tribe has very limited access to water on the Reservation and relies solely on water drawn from the confluence of the Cheyenne River and the Missouri River at Lake Oahe for its drinking water and which represents reserved water rights of the Tribe. Upstream contamination of these waters in which the Tribe owns reserved water rights has the very serious potential to affect the Tribe's and its members' religious exercise in violation of the Religious Freedom Restoration Act.

2. The EPA must engage in meaningful government-to-government consultation with the Tribe

As described herein, the Underground Injection Control Draft Area Permit and Proposed Aquifer Exemption decision for the Dewey-Burdock Uranium In-Situ Recovery Site poses serious threats to the Tribe's reserved water rights, hunting and fishing rights, cultural and spiritual sites, and religious exercise in ways that implicate federal statutes and treaty rights. As further described herein, as a function of its fiduciary duty to the Tribe and as a matter of federal law, the EPA must engage in meaningful government-to-government consultation with the Tribe on the issues discussed herein and other issues that may arise.

On May 12, 2017, officials of the Cheyenne River Sioux Tribe, including myself, attended the public hearing on the Dewey-Burdock Uranium Mine in Rapid City, South Dakota. At that hearing, our representatives and other representatives of the *Oceti Sakowin* (the Great Sioux Nation) provided testimony consistent with the comments herein. Furthermore, at that hearing, the EPA's representative confirmed explicitly that the EPA does not consider any public hearing or written public comments such as these to constitute meaningful government-to-government consultation with the Tribe and that we can expect to have further contact with the EPA. In addition, Cheyenne River Sioux Tribal Historic Preservation Officer Steve Vance received an email from you on May 18, 2017 advising that "the public comment period is different from our Tribal consultation process," and further advising that "[t]he EPA Tribal consultation process is currently in progress for Dewey-Burdock."

The Tribe looks forward to such consultation. Your email instructed the Tribe to contact you or EPA Region 8 Tribal Advisor, Patrick Rogers. As such, we have submitted a formal letter under separate cover requesting government-to-government consultation with the EPA on the Dewey-Burdock Mine to both you and Mr. Rogers. As set forth in that letter, the Tribe believes that such consultation must encompass the following *at a minimum:*

• Provide the Tribe with all pertinent information concerning the impact on the Tribe's rights before consultation in a timely manner.

• Coordinate with the Tribe before consultation begins, especially with development of an agreement on consultation timelines.

• Consult only with Tribal representatives who have been authorized to engage in government-to-government consultation by the Tribal government.
• Make every effort to conduct Tribal consultation at the seat of Tribal government, Eagle Butte, South Dakota or elsewhere on the Cheyenne River Sioux Reservation.
• Ensure that federal participants in Tribal consultation have actual decision-making authority.
• Provide written confirmation that the agency has considered tribal comments and concerns and the agency's response, whether positive or negative.
• Obtain resolution of approval from the Tribe that the agency has satisfactorily consulted with the Tribe and the Tribe agrees with the agency's response to Tribal concerns in each instance.
Finally, the EPA must be aware that consultation required under the National Historic Preservation Act concerning cultural and spiritual resources is not sufficient to meet the United States' obligation to consult about reserved water rights, treaty rights, or other religious freedom issues.

The Cheyenne River Sioux Tribe ("Tribe") formally requests government-to-government consultation with the Environmental Protection Agency ("EPA") leadership on the EPA's Region 8 Underground Injection Control Draft Area Permit and Proposed Aquifer Exemption decision for Dewey-Burdock Uranium In-Situ Recovery Site ("Proposed Permit").

We make this request pursuant to EPA Policy on Consultation and Coordination with Indian Tribes, May 4, 2011 ("EPA Consultation Policy"), and the EPA Policy on Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights, February 2016 ("EPA Treaty Guidance"), and the EPA Responses to Comments on EPA Policy for Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights ("EPA Treaty Guidance Comments"). Our request is also informed by the conclusions of the U.S. Department of interior, the U.S. Department of the Army, and the U.S. Department of Justice in their report entitled Improving Tribal Consultation and Tribal Involvement in Federal Infrastructure Decisions, January 20, 2017 ("Improving Tribal Consultation"). We have attached copies of these documents for your reference.

This request is also made in response to the email from Shea Valois to Cheyenne River Sioux Tribal Historic Preservation Officer Steve Vance on May 18, 2017, advising that "the public comment period is different from our Tribal consultation process," and further advising that "[t]he EPA Tribal consultation process is currently in progress for Dewey-Burdock." The email further instructed the Tribe to contact Shea Valois and EPA Region 8 Tribal Advisor, Patrick Rogers to arrange such consultation.
The Cheyenne River Sioux Reservation is located wholly within the exterior boundaries of the State of South Dakota. (A map showing the location of the Tribe's Reservation is enclosed herewith.) However, our rights and trust resources extend beyond our Reservation borders as a matter of federal law. As set forth herein, the Proposed Permit will affect our reserved water rights, our treaty rights, and our historic, spiritual, and cultural resources. For this reason, the EPA must consult with the Tribe on the Proposed Permit.
[...]
The United States Must Consult on the Tribe's Rigltts and Has a Duty to Protect Them

The United States and the EPA's trust relationship does not only extend to the affamative obligations to protect tribal rights and trust resources, but the United States must also engage in meaningful pre-decisional consultation on projects that will affect the Tribe's treaty rights and trust resources. Executive Order 13175, Consultation and Coordination with Indian Tribal Govemments (Nov. 6, 2000); EPA Policy for the Administration of Environmental Programs on Indian Reservations (Nov. 8, 1984); EPA Policy on Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights (Feb. 2016).

"In carrying out its treaty obligations with the Indian tribes, the Government is something more than a mere contracting party." *Seminole Nation v. United States,* 316 U.S. 286, 296-67 (1942). Instead, "it has charged itself with moral obligations of the highest responsibility and trust." *Id.* Pursuant to its trust duty, agencies are required to "consult with Indian tribes in the decision-making process to avoid adverse effects on treaty resources." *Klamath Tribes v. United States,* No. 10-2130, 1996 WL 924509 (D. Or. Oct 2, 1996) (quoting *Lac Courte Oreille Band of Indians v. Wisconsin,* 668 F. Supp. 133, 140 (W.D. Wis. 1987); *Ctr. for Biological Diversity v. Salazar,* No. 10-2130, 2011 WL 60000497, at *11 (D. Ariz. Nov. 30, 2011). It is not a discretionary duty. *Ctr. for Biological Diversity,* at * 11.

The duty to consult is binding on an agency when the agency has announced a consultation policy, and the Tribes have come to rely on that policy. *Yankton Sioux Tribe v. Kempthorne,* 442 F. Supp. 2d 774, 784 (D. S.D. 2006); *see also Oglala Sioux Tribe v. Andrus,* 603 F.2d 707 (8th Cir. 1979); *Lower Brule Sioux Tribe v. Deer,* 911 F. Supp. 395 (D. S.D. 1995); *Albuquerque Indian Rights v. Lujan,* 930 F.2d 49, 58 (D.C. Cir. 1991); *Indian Educators Fed'n Local 4524 of Am. Fed'n of Teachers, AFL-CIO v. Kempthorne,* 541 F. Supp. 2d 257, 264-65 (D. D.C. 2008). At a minimum, this requires that the agency give fair notice of its intentions, which requires, "telling the truth and keeping promises." *Yankton Sioux Tribe,* 442 F. Supp. 2d at 784 (citing *Lower Brule Tribe,* 91 I F. Supp. at 399). An agency's failure to provide tribes with accurate information necessary to meaningfully consult before a decision is made is agency failure to meet its consulta6on obligation. *Id.* at 785; *see also Cheyenne River Sioux Tribe v. Jewell,* No. 3:15-03072, 2016 WL 4625672 (D. S.D. Sep. 6, 2016). *Reviewing a Tribe's comments submitted in conjunction with an agency's general invitation/or public comme11ts is not sufficient to meet this obligation.*

The federal government has further obligations to tribes under the National Historic Preservation Act ("NHP A") and the Religious Freedom Restoration Act ("RFRA"). The NHPA was enacted to preserve historic resources in the midst of modern projects and requires agencies to fully consider the effects of its actions on historic, cultural, and sacred sites. Section 106 of the NHP A requires that p1ior to issuance of any federal funding, permit, or license, agencies must take into consideration the effects of that "undertaking" on historic properties. 54 U.S.C. § 306108; 36 C.F.R. § 800.1. The Section 106 process also requires consultation between agencies and Indian Tribes on federally-funded or authorized "undertakings" that could affect sites that are on, or could be eligible for, listing in the National Register, including sites that are culturally significant to Indian Tribes. 54 U.S.C. § 302706. An agency official must "ensure" that the process provides Tribes with "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties ... articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(H)(A). This requirement imposes on agencies a "reasonable and good faith effort" by agencies to consult with Tribes in a "manner respectful of tribal sovereignty." *Id.* 36 C.F.R. § 800.2(c)(2)(ii)(B); *see also id.* § 800.3(-f) (any Tribe that "requests in writing to be a consulting party shall be one").

Under RFRA, the "Government shall not substantially burden a person's exercise of religion" w1less the Government "demonstrates that application of the burden to the person-(!) is in furtherance of a compelling governmental interest; and (2) is the least restrictive means of furthering that compelling governmental interest." 42 U.S.C. § 2000bb-l(b). Tribal religious practices are significantly tied to oral tradition, ancestral lands, and natural resources.

Significantly, the EPA along with several other departments of the United States Federal Government, entered into a Memorandum of Understanding on Interagency Coordination and Collaboration for the Protection of Indian Sacred Sites on September 23, 2016. The Memorandum acknowledges that federal agencies hold in trust many culturally important sites held sacred by Indian tribes, and federal agencies are responsible for analyzing the potential effects of agency projects carried out, funded, or permitted on historic properties of traditional cultural and religious importance to Indian tribes including sacred sites. Additionally, international law, treaties, and jurisprudence has repeatedly affirmed the right of Free Prior Informed Consent. *See Declaration on the Rights of Indigenous People,* art. 10, United Nations (Mar. 2008). The purpose of Free Prior Informed Consent is to establish bottom up participation and consultation of an Indigenous population prior to the beginning of a development on ancestral land or using resources within the Indigenous population's territory. *Id.*

[...]

The Tribe reserves the right to submit supplementary comments after engaging in government-to-government consultation with the EPA. Further, in addition to these comments, a formal request for consultation has been sent to you under separate cover. Please do not hesitate to contact me if you should have any questions.

Therefore, the purpose of these comments is to insist that the EPA must act as a fiduciary by both consulting with the Tribe on any impact to those rightas and by protecting those rights from harm.
Please note that these comments do not satisfy the EPA's consultation obligation to the Tribe. Moreover, they should be considered a preliminary sataement of some of the Tribe's concerns regarding the Dewey-Burdock Mine. The Tribe cannot fully assess its concerns until it has had an opportunity to engage in meaningful government-to-government consultation on these issues as described more fully herein.
[...]

b. The Dewey-Burdock Uranium Mine Poses a Serious Threat to the Tribe's Cultural Resources

The site of the proposed Dewey-Burdock Uranium Mine is within the Tribe's 1851 territory. Specifically it is in the vicinity of the Black Hills, among the most sacred sites to the Lakota people. Our people lived in this area, hunted in this area, and made religious pilgrimages in this area from time immemorial. Our Tribal Historic Preservation Officer advises that the site of the proposed mine has the potential to contain numerous sites of cultural and spiritual significance. While it is our understanding that some efforts have been made to identify cultural resources in the project area, the EPA has not consulted with the Tribe pursuant to the National Historic Preservation Act.

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On May 12, 2017, officials of the Cheyenne River Sioux Tribe, including myself, attended the public hearing on the Dewey-Burdock Uranium Mine in Rapid City, South Dakota. At that hearing, our representatives and other representatives of the *Oceti Sakowin* (the Great Sioux Nation) provided testimony consistent with the comments herein. Furthermore, at that hearing, the EPA's representative confirmed explicitly that the EPA does not consider any public hearing or written public comments such as these to constitute meaningful government-to-government consultation with the Tribe and that we can expect to have further contact with the EPA. In addition, Cheyenne River Sioux Tribal Historic Preservation Officer Steve Vance received an email from you on May 18, 2017 advising that "the public comment period is different from our Tribal consultation process," and further advising that "[t]he EPA Tribal consultation process is currently in progress for Dewey-Burdock."

The Tribe looks forward to such consultation. Your email instructed the Tribe to contact you or EPA Region 8 Tribal Advisor, Patrick Rogers. As such, we have submitted a formal letter under separate cover requesting government-to-government consultation with the EPA on the Dewey-Burdock Mine to both you and Mr. Rogers. As set forth in that letter, the Tribe believes that such consultation must encompass the following *at a minimum:*

• Provide the Tribe with all pertinent information concerning the impact on the Tribe's rights before consultation in a timely manner.

• Coordinate with the Tribe before consultation begins, especially with development of an agreement on consultation timelines.

• Consult only with Tribal representatives who have been authorized to engage in government-to-government consultation by the Tribal government.
• Make every effort to conduct Tribal consultation at the seat of Tribal government, Eagle Butte, South Dakota or elsewhere on the Cheyenne River Sioux Reservation.
• Ensure that federal participants in Tribal consultation have actual decision-making authority.
• Provide written confirmation that the agency has considered tribal comments and concerns and the agency's response, whether positive or negative.
• Obtain resolution of approval from the Tribe that the agency has satisfactorily consulted with the Tribe and the Tribe agrees with the agency's response to Tribal concerns in each instance.
Finally, the EPA must be aware that consultation required under the National Historic Preservation Act concerning cultural and spiritual resources is not sufficient to meet the United States' obligation to consult about reserved water rights, treaty rights, or other religious freedom issues.
[...]

The Tribe reserves the right to submit supplementary comments after engaging in government-to-government consultation with the EPA. Further, in addition to these comments, a formal request for consultation has been sent to you under separate cover. Please do not hesitate to contact me if you should have any questions.

The United States Must Consult on the Tribe's Rights and Has a Duty to Protect Them

The United States and the EPA's trust relationship does not only extend to the affirmative obligations to protect tribal rights and trust resources, but the United States must also engage in meaningful pre-decisional consultation on projects that will affect the Tribe's treaty rights and trust resources. Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (Nov. 6, 2000); EPA Policy for the Administration of Environmental Programs on Indian Reservations (Nov. 8, 1984); EPA Policy on Consultation and Coordination with Indian Tribes: Guidance for Discussing Tribal Treaty Rights (Feb. 2016).

"In carrying out its treaty obligations with the Indian tribes, the Government is something more than a mere contracting party." *Seminole Nation v. United States,* 316 U.S. 286, 296-67 (1942). Instead, "it has charged itself with moral obligations of the highest responsibility and trust." *Id.* Pursuant to its trust duty, agencies are required to "consult with Indian tribes in the decision-making process to avoid adverse effects on treaty resources." *Klamath Tribes v. United States,* No. 10-2130, 1996 WL 924509 (D. Or. Oct 2, 1996) (quoting *Lac Courte Oreille Band of Indians v. Wisconsin,* 668 F. Supp. 133, 140 (W.D. Wis. 1987); *Ctr. for Biological Diversity v. Salazar,* No. 10-2130, 2011 WL 60000497, at *11 (D. Ariz. Nov. 30, 2011). It is not a discretionary duty. *Ctr. for Biological Diversity,* at * 11.

The duty to consult is binding on an agency when the agency has announced a consultation policy, and the Tribes have come to rely on that policy. *Yankton Sioux Tribe v. Kempthorne,* 442 F. Supp. 2d 774, 784 (D. S.D. 2006); *see also Oglala Sioux Tribe v. Andrus,* 603 F.2d 707 (8th Cir. 1979); *Lower Brule Sioux Tribe v. Deer,* 911 F. Supp. 395 (D. S.D. 1995); *Albuquerque Indian Rights v. Lujan,* 930 F.2d 49, 58 (D.C. Cir. 1991); *Indian Educators Fed'n Local 4524 of Am. Fed'n of Teachers, AFL-CIO v. Kempthorne,* 541 F. Supp. 2d 257, 264-65 (D. D.C. 2008). At a minimum, this requires that the agency give fair notice of its intentions, which requires, "telling the truth and keeping promises." *Yankton Sioux Tribe,* 442 F. Supp. 2d at 784 (citing *Lower Brule Tribe,* 91 I F. Supp. at 399). An agency's failure to provide tribes with accurate information necessary to meaningfully consult before a decision is made is agency failure to meet its consulta6on obligation. *Id.* at 785; *see also Cheyenne River Sioux Tribe v. Jewell,* No. 3:15-03072, 2016 WL 4625672 (D. S.D. Sep. 6, 2016). *Reviewing a Tribe's comments submitted in conjunction with an agency's general invitation/or public comme11ts is not sufficient to meet this obligation.*

[...]

Significantly, the EPA along with several other departments of the United States Federal Government, entered into a Memorandum of Understanding on Interagency Coordination and Collaboration for the Protection of Indian Sacred Sites on September 23, 2016. The Memorandum acknowledges that federal agencies hold in trust many culturally important sites held sacred by Indian tribes, and federal agencies are responsible for analyzing the potential effects of agency projects carried out, funded, or permitted on historic properties of traditional cultural and religious importance to Indian tribes including sacred sites. Additionally, international law, treaties, and jurisprudence has repeatedly affirmed the right of Free Prior Informed Consent. *See Declaration on the Rights of Indigenous People,* art. 10, United Nations (Mar. 2008). The purpose of Free Prior Informed Consent is to establish bottom up participation and consultation of an Indigenous population prior to the beginning of a development on ancestral land or using resources within the Indigenous population's territory. *Id.*

The federal government has further obligations to tribes under the National Historic Preservation Act ("NHP A") and the Religious Freedom Restoration Act ("RFRA"). The NHPA was enacted to preserve historic resources in the midst of modern projects and requires agencies to fully consider the effects of its actions on historic, cultural, and sacred sites. Section 106 of the NHP A requires that p1ior to issuance of any federal funding, permit, or license, agencies must take into consideration the effects of that "undertaking" on historic properties. 54 U.S.C. § 306108; 36 C.F.R. § 800.1. The Section 106 process also requires consultation between agencies and Indian Tribes on federally-funded or authorized "undertakings" that could affect sites that are on, or could be eligible for, listing in the National Register, including sites that are culturally significant to Indian Tribes. 54 U.S.C. § 302706. An agency official must "ensure" that the process provides Tribes with "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties ... articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(H)(A). This requirement imposes on agencies a "reasonable and good faith effort" by agencies to consult with Tribes in a "manner respectful of tribal sovereignty." *Id.* 36 C.F.R. § 800.2(c)(2)(ii)(B); *see also id.* § 800.3(-f) (any Tribe that "requests in writing to be a consulting party shall be one").

Under RFRA, the "Government shall not substantially burden a person's exercise of religion" w1less the Government "demonstrates that application of the burden to the person-(!) is in furtherance of a compelling governmental interest; and (2) is the least restrictive means of furthering that compelling governmental interest." 42 U.S.C. § 2000bb-l(b). Tribal religious practices are significantly tied to oral tradition, ancestral lands, and natural resources.

The EPA must also do thorough tribal consultation. The existing documents indicate that this process has barely begun, and yet draft permits have been issued. This makes a mockery of the consultation process, which should be completed well before draft permits are issued, so that the resulting information can be analyzed. The EPA must halt all further action until mutually-satisfactory, government-to-government consultation is completed. All cultural and historical properties must be identified by Lakota experts, who should be paid if they so desire, and given complete protection.

[...]

Turning to the NHPA document, EPA should not rely on the NRC's section 106 review and consultation. That process is grossly incomplete. A section 106 review should, of course, have been completed before draft permits or a draft aquifer exemption were issued. At this point, the EPA should conduct its own review to insure that different viewpoints are brought to bear on the situation and to insure that thorough work is done by the federal agencies that are involved in the Dewey-Burdock project.

The NHPA document also indicates that tribal consultation is in its infancy. Tribal leaders from the two reservations that are most likely to experience impacts from the Dewey-Burdock project, the Oglala Sioux Tribe and the Cheyenne River Sioux Tribe, have not yet started consultation. Yet draft permits and a draft aquifer exemption have already been issued. This is a travesty, and it's difficult to see how the EPA can rectify the situation.

EPA must delay any permitting action until a fully competent cultural resources survey is conducted and the Tribe and the public has an opportunity to review and comment on the potential impacts to those important resources. Additionally, EPA should reject the PA as inadequate and engage in meaningful and good-faith consultation with the Oglala Sioux Tribe professional staff and Tribal Council in order to ensure that, in coordination with the Tribe, all cultural resources are identified, impacts are assessed and mitigation measures are developed and implemented.

[...]

4. COMMENTS ON THE IDENTIFICATION OF TRADITIONAL CULTURAL PROPERTIES AT THE DEWEY-BURDOCK PROJECT SITE AREA OF POTENTIAL EFFECTS

EPA states that:

Based on the information we have reviewed to date, and subject to resolving concerns identified in the NRC administrative review process, the EPA believes that the level of work completed under the auspices of the NRC on the Class III Cultural Resources Survey appears thorough and comprehensive for the APE defined by the NRC, provided the PA stipulations are followed concerning the unexpected discovery of additional historical properties.

EPA states that its consideration of the extent of cultural resource issues at the Dewey- Burdock site is based on "Section 3.9.3 of the NRC Supplemental Environmental Impact Statement prepared for the Dewey-Burdock Project (SEIS) and summarized in Appendix B of the NRC PA."

EPA's characterization of the current status of the NRC Staff's National Environmental Policy Act and National Historic Preservation Act compliance is not consistent with the Nuclear Regulatory Commission's recent ruling.[10]

In fact, the result of the Nuclear Regulatory Commission process was an express holding that the Class III archaeological study conducted at the site **failed** to satisfy any of the requirements associated with either the National Environmental Policy Act (NEPA) or the National Historic Preservation Act (NHPA) with respect to cultural resources.

Specifically, the NRC affirmed the Atomic Safety Licensing Board's express ruling that:
The Board finds that the NRC Staff has not carried its burden of demonstrating that its FSEIS complies with NEPA and with 10 C.F.R. Part 40. The environmental documents do not satisfy the requirements of the NEPA, as they do not adequately address Sioux tribal cultural, historic and religious resources.
In the Matter of Powertech USA, Inc., LBP-15-16, 81 NRC 618, 708 (2015).
Thus, EPA's reliance on the NRC SEIS is entirely misplaced. There has never been a cultural resources survey conducted on the Dewey-Burdock site that took into account any Sioux cultural resources. **EPA simply cannot rely on the NRC SEIS analysis in any way for such a survey**.
Further, the NRC affirmed the Board's ruling that "Meaningful consultation as required by [the NHPA] has not occurred." Id. This ruling was made despite the existence of the Programmatic Agreement, ("PA") which EPA suggests it might sign on to in an effort to fulfill its NHPA obligations.

However, EPA appears to be unaware that the PA it references was roundly condemned by every single Sioux tribal government that reviewed it. **Not a single Tribe has agreed to be a signatory on the PA meaning the PA has been literally shoved down the Tribes' collective throats.** The critique of the terms of the PA from the Tribes was severe.[11] In these letters, the Oglala Sioux Tribe identifies specific terms in the PA that fail to provide any detail or specificity as to future analyses of the project area, methodologies proposed for these analyses, or what mitigation measures may be adopted in the future to address the impacts.[12]

The Standing Rock Sioux Tribe raised similar concerns, but goes into highly specific detail, offering not only a letter describing their frustration in dealing with the NRC Staff on this issue, but also providing multiple substantive line by line comments, questions, and critiques to the PA.13 Unfortunately, NRC Staff did not provide any specific substantive response to either set of tribal concerns, nor did NRC Staff incorporate the changes proposed by either tribe. Instead, NRC Staff and Powertech pushed to finalize the PA without addressing the tribes' concerns.

These failure to comply with NEPA and NHPA are being highly scrutinized by federal courts. See *Standing Rock Sioux Tribe v. U.S. Army Corps of Eng'rs* , (D.C. Cir., slip. op. June 14, 2017).14 In that case, the Court ruled that the agency failed to include a large enough area in its analysis (similar to the comments herein that Buffalo Gap, SD, should be included in the EJ Analysis) and also that an EIS should have been done. These same failures are present in this EPA UIC permit decision.

This type of lack of meaningful consultation, in part, is what led to a NRC ruling finding a failure to comply with the NHPA consultation duties. EPA should not compound and exacerbate this failure by endorsing such a deeply flawed PA. Instead, EPA should seek to conduct a consultation effort that complies with the NHPA and meaningfully involves the Tribes in a discussion of the potentially affected cultural resources, the potential impacts to those resources, and possibly mitigation measures that can be implemented to protect those resources.

In any case, the existing PA is currently the subject of further discussion and negotiation as part of the NRC's finding that the NRC Staff has failed to comply with either NEPA or the NHPA with respect to identifying and evaluating impacts to Sioux cultural resources at the site. *See* May 31, 2017 letter from Oglala Sioux Tribe Historic Preservation Office; May 19, 2016 and January 31, 2017 Oglala Sioux Tribe/NRC Staff meeting summaries (all specifically identifying changes to the PA as necessary topics of ongoing NHPA consultation).

As such, EPA should increase its involvement and either work to develop an agreement with the affected Tribes, including the Oglala Sioux Tribe that properly takes into consideration the Tribes' perspectives. In the alternative, EPA should engage in the ongoing discussions between NRC and the Tribes, including the Oglala Sioux Tribe, and work toward a PA that satisfies all parties. The Oglala Sioux Tribe has a formal ordinance in effect regarding consultation, which requires the involvement of the Oglala Sioux Tribal Council.[15]

Notably, the record developed during the NRC hearing process demonstrates that the proposed Dewey-Burdock site contains significant cultural resources that could be impacted by the project. This fact is made clear even though no meaningful cultural resources survey has been conducted on the property.
Even the Augustana Class III archaeological survey upon which EPA attempts to rely recognizes that "the sheer volume of sites documented in the area is noteworthy."[16] Despite this acknowledgement, no competent Sioux cultural resources survey has ever been conducted on the site.

The NRC hearing record demonstrates that EPA simply cannot rely on the Powertech produced Class III archaeological survey for purposes of identifying impacts to cultural resource so as to satisfy its environmental impact review or NHPA obligations. Powertech candidly admits "that identifying religious or culturally significant properties in a project area is entirely reliant of the Tribes themselves and the special expertise of the Tribal cultural practitioners…."

Simply put, entities such as NRC or Powertech are not equipped with the Tribe-specific knowledge and traditions to adequately instruct a specific Tribe using 'proper scientific expertise' on this subject."17 The record and testimony contains no evidence that NRC Staff successfully equipped itself or acquired the necessary resources to meet NRC's NEPA duties involving religious and cultural resources.

The primary reliance by EPA on the Augustana study is not supportable – particularly given the testimony at the NRC hearing. Dr. Hannus, who lead the Augustana study at the behest of the applicant admitted that his team is not "in any way qualified to be conducting TCP surveys" and further conceded that given the heightened cultural issues of the Sioux Tribes that "there will be sites that will need to be addressed archaeologically"; Dr. Hannus: "And again, that really should clearly, I think, show us that for us to then be able to make some kind of in roads ourselves, being not of Native background, to identification of sites that are traditional cultural properties that have a tie to spirituality and so on, it is not in our purview to do that.").[18]

Applicant witness Dr. Luhman reiterated this point, confirming that "a traditional Level 3 survey may, in fact, encounter some resources that would be associated with Native American groups or which they would identify. But, they wouldn't necessarily identify all of the resources primarily because some of the knowledge is not available to those conducting the Level 3 survey. That would be provided by the Native American groups themselves."[19]

OST witness Mr. Mesteth: "[w]e're the ones that are the experts, not the archaeologists. They make assumptions and hypotheses about our cultural ways and it's not accurate. Some of the information is not accurate. And that's why we object in certain situations."[20]

Dr. Hannus testified that his office has never worked on any projects that considered the cultural resources at a site.[21] Despite this fact, NRC Staff witness Dr. Luhman testified that NRC Staff relied on Augustana to conduct all of the initial and follow up field survey work at the site, with the exception of the three non-Sioux tribes that submitted reports.[22]

Upon the Sioux Tribes' request as early as 2011 that cultural resource surveys be conducted at the site, NRC Staff prompted the applicant to bring in Dr. Sabastian and her firm to coordinate this review.[23] However, Dr. Sabastian also testified that she also has never been involved in any kind of "actual physical on-the-ground TCP survey-kind of thing that we're talking about."[24]

Lastly, Mr. Fosha testified that he worked with the applicant and Augustana "from the very start of the project, so the bulk of this material is a result of myself reviewing what Augustana College had been doing in the field."[25] Mr. Fosha testified that he met with the applicant and between them discussed methods for identification of sites and the methods and steps to take "throughout the process," but only related to the State of South Dakota permit, and having "nothing to do with the NRC permit or anything like that" – even remarking that "up until the point where Augustana was nearly finished I was the only review agency on this project."[26]

Despite Mr. Fosha being the only person giving any direction to Dr. Hannus' Augustana team, Mr. Fosha testified that his experience and focus was solely "the field of archaeology" and not culturally as to the concerns of the Tribes.[27]

The only NRC Staff or applicant witness that testified to having any experience in conducting cultural resource field surveys was NRC Staff witness Dr. Luhman. However, as stated, Dr. Luhman admitted to relying exclusively on Augustana for both the initial field work and the follow up field studies, even though Dr. Hannus' testimony had confirmed that Augustana had no culturally relevant experience.[28]

Dr. Luhman did testify that "in those projects in which I have been involved [a cultural survey] it is typically that [the Tribes] are working alongside with the archaeological survey team as they are going about doing the survey. It could be in the preliminary stages of doing the generalized recognizance (sic) of the project area. Oftentimes the federal agency and other parties will be along that process so that there can be discussions while out in the field, and these are for sometimes very large projects. But in my experience it typically is at the same time when there is an ongoing consultative and survey process."[29]

NRC Staff witness Ms. Yilma admitted that no written cultural resources analysis prepared during any part of the NEPA analysis included any comments or reports from any Sioux Tribes.[30] This is despite testimony from NRC Staff witness Ms. Yilma as to the NRC Staff's recognition of the importance of the area to the Sioux from a cultural perspective from the earliest stages of the application review stage.[31] NRC Staff witness Ms. Yilma also testified as to the importance and focus at least as early as 2011 by both the Sioux Tribes and within NRC Staff on the need for culturally-based field surveys in order to fulfill the NEPA and NHPA requirements.[32]

NRC Staff witness Ms. Yilma testified that after meeting in 2011 with the Oglala Sioux, Standing Rock Sioux, Flandreau Santee Sioux, Sisseton Wahpeton (Sioux), Cheyenne River Sioux, and Rosebud Sioux , NRC Staff specifically de 33 liberated about conducting an ethnographic study of the site to ensure incorporation of Sioux cultural and historic perspectives, but "the ultimate decision was instead of an ethnographic study a field survey was necessary, so we focused our attention on the field survey approach."[34]

Despite admitting that it was "necessary" to the analysis, no cultural resources review or field study incorporating any Sioux cultural expertise was ever conducted at the site or incorporated into any NEPA document.[35]

This testimony and evidence establishes NRC Staff's failure to conduct the necessary hard look under NEPA, as by their own admission, despite it being necessary to the analysis, no Sioux comments or reports were incorporated into the cultural resources reviews, and none of the parties that conducted any cultural review of the site, including field surveys, were trained, experienced, or competent to review or survey the area for, let alone determine impacts from the project to, the cultural resources of Sioux origin. Admissions and testimony confirm that NRC Staff deferred to the applicant's unqualified consultants, while rejecting proposals to incorporate Sioux cultural expertise.

As a result of Powertech's and NRC Staff's inability to fulfill their obligations to properly ensure a competent cultural resources survey of the Dewey-Burdock site, EPA cannot rely on the NRC's NEPA documents to assess the cultural resources impacts of the proposed mine.

Similarly, because NRC Staff has failed to fulfill its government-to-government consultation duties under the NHPA, EPA also cannot rely on the PA or any other NRC Staff consultation to fulfill its own obligations under the NHPA.

[...]

6. Comments on measures to avoid, minimize or mitigate potential adverse effects on historic and traditional cultural properties pursuant to Section 106 of the National Historic Preservation Act and 36 CFR § 800.2(d) and § 800.6(a)(4)

The Environmental Protection Agency National Historic Preservation Act Compliance and Review for the Proposed Dewey-Burdock In-Situ Uranium Recovery Project, which is part of the Administrative Record for the UIC Class III Draft Area Permit, discusses how the EPA intends to comply with Section 106 of the National Historic Preservation Act.

To date, the EPA has done nothing meaningful to avoid, minimize or mitigate potential adverse effects on historic and TCPs under Section 106 other than rely on the promises of an insolvent and corrupt organization. Therefore, there has been a complete failure to provide measures required by Section 106 of NHPA and 36 CFR § 800.2(d) and § 800.6(a)(4).

Cultural data, including archaeological and burial sites, need to be inventoried in order to ensure sites are protected. Making a decision on the permits and exemption now without the necessary data is unwise and premature. Proceeding with the permits before all the information is available denies the public a meaningful opportunity to participate and be heard.

[...]

The EPA needs to visit tribal reservations, view the conditions, learn the history, and listen to Indian communities most impacted. Simply consulting the tribes, receiving comments without truly considering the alternative of denying the mine permits, is nothing more than going through the motions and checking off a box. The trust responsibility places additional duties on the federal government to protect places of prayer relied on by Indian communities.

Under section 106 of the National Historic Preservation Act, the EPA must consult with the Oglala Sioux Tribal Historic Preservation Office in the identification, evaluation and determination of potential impacts to historic properties by the proposed DeweyBurdock injection wells. (54 U.S.C. §306108). Under Executive Order 13175, the EPA must also engage in government-to-government consultation with the Oglala Sioux Tribal Council on the proposed UIC permit. (65 Fed. Reg. 67249). The attempt by EPA to combine Section 106 consultation meetings with government-to-government consultation resulted in confusion and lack of compliance with either consultation requirement.

EPA FAILED TO COMPLY WITH THE CONSULTATION REQUIREMENTS OF NHPA SECTION 106

Under Section 106 of the National Historic Preservation Act, "The head of any Federal agency ... prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, shall take into account the effect of the undertaking on any historic property." (54 U.S.C. §306108). In the administrative record, EPA has acknowledged that the need to comply with this requirement. However, EPA's *National Historic Preservation Act Draft Compliance and Review Document* fails to demonstrate compliance with NHPA Section 106.

The draft document purports to demonstrate consultation with the OST THPO by reference to a separate document of the Nuclear Regulatory Commission, captioned *Summary of Meeting with OST Regarding the Dewey-Burdock In Situ Uranium Recovery Project. May 19, 2016.* This meeting does not constitute Section 106 compliance by EPA.

The *Summary of Meeting* document states:
The purpose of the meeting was twofold: (i) to introduce the NRC's new management team responsible for the consultation process with the Oglala Sioux Tribe and the Tribe's new Tribal Historic Preservation Office staff, and (ii) to start the dialogue, on a Government-to-Government basis, regarding a path forward for consultation with the Oglala Sioux Tribe to address the Atomic Safety and Licensing Board's findings ...
(www.nrc.gov/docs/ml 1618mll 6182a069.pdf).

The meeting was about a related action by a separate agency, and not specifically about the identification, evaluation and determination of impacts from the proposed UIC injection wells to be permitted by EPA. It does not constitute compliance by EPA with NHP A Section 106. There were no members of the Oglala Sioux Tribal Council at the meeting. It was not government-to-government consultation in compliance with E.O. 13175. The meeting combined and confused the two separate consultation requirements, and complied with neither requirement.

The Table beginning on page 7 of the *National Historic Preservation Act Draft Compliance and Review Document* likewise combines the issues of section 106 consultations and government-to-government meetings. On page 9, the Table lists "April 28, 2016 Consultation meeting with the Oglala Sioux Tribe," described as "In-person meeting at the Oglala Sioux Justice Center." The EPA totally confused the govemmentto-government consultation requirement under E.O. 13175 with the NHPA Section 106 consultation requirement -and complied with neither requirement.
The lack of NHP A Section 106 consultation is evidenced by the failure to address the OST THPOs concerns with the Programmatic Agreement, as discussed in the May 19, 2016 meeting between the Tribe and NRC. The lack of government-to-government consultation is evidenced by EPA's failure to comply with OST Ordinance No. 11-10 (*Ordinance Establishing Procedures for Government-to-Government Consultation Between the Oglala Sioux Tribe and the United States).* Ultimately, EPA failed to comply with the consultation requirements of federal law, and the Dewey-Burdock UIC permit applications must be denied accordingly.
I further express my support for the related concerns of the consolidated intervenors in this docket, as well as the testimonies of the Tribal Historic Preservation Officers of the *Oceti Sakowin Oyate.*
The concerns of the Oglala Sioux Tribe must be fully considered and acted upon by EPA. Approval of the Dewey-Burdock injection well application would violate the 1851 and 1868 Fort Laramie Treaties. Consequently, it violates federal and international law. It poses extreme risk to the waters of the Oglala Sioux Tribe, reserved under the Winters Doctrine. The EPA has given no consideration to these valuable property rights of our Tribe. Important consultation requirements under NHPA Section 106 and E.O. 13175 have been avoided and confused. EPA has failed to comply with these important consultation requirements. Further, the EPA has failed to consider the cumulative impacts of its actions on water quality and impact on the Pine Ridge Indian Reservation. For these reasons and as further described in the attached addendum, the Dewey-Burdock Class V UIC permit application must be denied.
Additional comments of the Oglala Sioux Tribe providing more detail are attached in the addendum hereto and incorporated herein.
[...]
ADDENDUM TO OGLALA SIOUX TRIBE COMMENTS
The federal courts have addressed the strict mandates of the National Historic Preservation Act:

Under the NHPA, a federal agency must make a reasonable and good faith effort to identify historic properties, 36 C.F.R. § 800.4(b); determine whether identified properties are eligible for listing on the National Register based on criteria in 36 C.F.R. § 60.4; assess the effects of the undertaking on any eligible historic properties found, 36 C.F.R. §§ 800.4(c), 800.5, 800.9(a); determine whether the effect will be adverse, 36 C.F.R. §§ 800.5(c), 800.9(b); and avoid or mitigate any adverse effects, 36 C.F.R. §§ 800.8[c], 800.9(c). The [federal agency] must confer with the State Historic Preservation Officer ("SHPO") and seek the approval of the Advisory Council on Historic Preservation ("Council").

Muckleshoot Indian Tribe v. U.S. Forest Service , 177 F.3d 800, 805 (9th Cir. 1999). See also 36 C.F.R. § 800.8(c)(1)(v)(agency must "[d]evelop in consultation with identified consulting parties alternatives and proposed measures that might avoid, minimize or mitigate any adverse effects of the undertaking on historic properties and describe them in the EA.").

The Advisory Council on Historic Preservation ("ACHP"), the independent federal agency created by Congress to implement and enforce the NHPA, determines the methods for compliance with the NHPA's requirements. See *National Center for Preservation Law v. Landrieu* , 496 F. Supp. 716, 742 (D.S.C.), *aff'd per curiam,* 635 F.2d 324 (4th Cir. 1980). The ACHP's regulations "govern the implementation of Section 106," not only for the Council itself, but for all other federal agencies. *Id* . See also *National Trust for Historic Preservation v. U.S. Army Corps of Eng'rs* , 552 F. Supp. 784, 790-91 (S.D. Ohio 1982).

NHPA § 106 ("Section 106") requires federal agencies, prior to approving any "undertaking," such as the UIC permits for the proposed Dewey-Burdock Project, to "take into account the effect of the undertaking on any district, site, building, structure or object that is included in or eligible for inclusion in the National Register." 16 U.S.C. § 470(f). Section 106 applies to properties already listed in the National Register, as well as those properties that may be eligible for listing. See *Pueblo of Sandia v. United States* , 50 F.3d 856, 859 (10th Cir. 1995). Section 106 provides a mechanism by which governmental agencies may play an important role in "preserving, restoring, and maintaining the historic and cultural foundations of the nation." 16 U.S.C. § 470.

If an undertaking is the type that "may affect" an eligible site, the agency must make a reasonable and good faith effort to seek information from consulting parties, other members of the public, and Native American tribes to identify historic properties in the area of potential effect. 36 C.F.R. § 800.4(d)(2). See also *Pueblo of Sandia* , 50 F.3d at 859-863 (agency failed to make reasonable and good faith effort to identify historic properties).

The NHPA also requires that federal agencies consult with any "Indian tribe ... that attaches religious and cultural significance" to the sites. 16 U.S.C. § 470(a)(d)(6)(B). Consultation must provide the tribe "a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects." 36 C.F.R. § 800.2(c)(2)(ii).

Apart from requiring that an affected tribe be involved in the identification and evaluation of historic properties, the NHPA requires that "[t]he agency official shall ensure that the section 106 process is initiated early in the undertaking's planning, so that a broad range of alternatives may be considered during the planning process for the undertaking." 36 C.F.R. § 800.1(c) (emphasis added). The ACHP has published guidance specifically on this point, reiterating in multiple places that consultation must begin at the earliest possible time in an agency's consideration of an undertaking, even framing such early engagement with the Tribe as an issue of respect for tribal sovereignty. ACHP, Consultation with Indian Tribes in the Section 106 Review Process: A Handbook (November 2008), at 3, 7, 12, and 29.

Regarding respect for tribal sovereignty, the NHPA requires that consultation with Indian tribes "recognize the government-to-government relationship between the Federal Government and Indian tribes." 36 C.F.R. § 800.2(c)(2)(ii)(C). See also Presidential Executive Memorandum entitled "Government-to-Government Relations with Native American Tribal Governments" (April 29, 1994), 59 Fed. Reg. 22951, and Presidential Executive Order 13007, "Indian Sacred Sites" (May 24, 1996), 61 Fed. Reg. 26771. The federal courts echo this principle in mandating all federal agencies to fully implement the federal government's trust responsibility. See *Nance v. EPA* , 645 F.2d 701, 711 (9th Cir. 1981) ("any Federal Government action is subject to the United States' fiduciary responsibilities toward the Indian tribes").

Whenever there is ambiguity interpreting or applying NHPA, or other laws, the federal agency staff is not entitled to "deference to an agency interpretation of an ambiguous statutory provision involving Indian affairs. In the usual circumstance, '[t]he governing canon of construction requires that 'statutes are to be construed liberally in favor of the Indians, with ambiguous provisions interpreted to their benefit.' This departure from the [normal deference to agencies] arises from the fact that the rule of liberally construing statutes to the benefit of the Indians arises not from the ordinary exegesis, but 'from principles of equitable obligations and normative rules of behavior,' applicable to the trust relationship between the United States and the Native American people." *California Valley Miwok Tribe v. United States* , 515 F.3d 1262 (D.C. Cir. 2008) *quoting Albuquerque Indian Rights v. Lujan* , 930 F.2d 49, 59 (D.C. Cir. 1991); *Cobell v. Norton* , 240 F.3d 1081, 1101 (D.C. Cir. 2001) (*quoting Montana v. Blackfeet Tribe of Indians* , 471 U.S. 759, 766, (1985)).

EPA states that:

Based on the information we have reviewed to date, and subject to resolving concerns identified in the NRC administrative review process, the EPA believes that the level of work completed under the auspices of the NRC on the Class III Cultural Resources Survey appears thorough and comprehensive for the APE defined by the NRC, provided the PA stipulations are followed concerning the unexpected discovery of additional historical properties.

EPA states that its consideration of the extent of cultural resource issues at the Dewey-Burdock site is based on "Section 3.9.3 of the NRC Supplemental Environmental Impact Statement prepared for the Dewey-Burdock Project (SEIS) and summarized in Appendix B of the NRC PA."

EPA's characterization of the current status of the NRC Staff's National Environmental Policy Act and National Historic Preservation Act compliance is not consistent with the Nuclear Regulatory Commission's recent ruling. See CLI-16-20 (https://www.nrc.gov/docs/ML1635/ML16358A434.pdf). In fact, the result of the Nuclear Regulatory Commission process was an express holding that the Class III archaeological study conducted at the site failed to satisfy any of the requirements associated with either the National Environmental Policy Act (NEPA) or the National Historic Preservation Act (NHPA) with respect to cultural resources.

Specifically, the NRC affirmed the Atomic Safety Licensing Board's express ruling that:
The Board finds that the NRC Staff has not carried its burden of demonstrating that its FSEIS complies with NEPA and with 10 C.F.R. Part 40. The environmental documents do not satisfy the requirements of the NEPA, as they do not adequately address Sioux tribal cultural, historic and religious resources.

In the Matter of Powertech USA, Inc., LBP-15-16, 81 NRC 618, 708 (2015). Thus, EPA's reliance on the NRC SEIS is entirely misplaced. Indeed, there has never been a cultural resources survey conducted on the Dewey-Burdock site that took into account any Sioux cultural resources. Moreover, NRC has divided its project approval into segments rendering the scope of NRC's consultation inapplicable to EPA's UIC analysis and approvals. As such, EPA simply cannot rely on the NRC SEIS analysis in any way for such a survey.

Further, the NRC affirmed the Board's ruling that "Meaningful consultation as required by [the NHPA] has not occurred." Id. This ruling was made despite the existence of the Programmatic Agreement, which EPA suggests it might sign on to in an effort to fulfill its NHPA obligations. However, EPA appears to be unaware that the PA it references was roundly condemned by every single Sioux tribal government that reviewed it. Indeed, not a single Tribe has agreed to be a signatory on the PA. The critique of the terms of the PA from the Tribes was severe. See attached February 5, 2014 Letter from Oglala Sioux Tribe President Bryan Brewer to NRC Staff; February 20, 2014 email from Standing Rock Sioux Tribe Historic Preservation Officer to NRC Staff (marked Exhibit NRC-016). In these letters, the Oglala Sioux Tribe identifies specific terms in the Agreement that fail to provide any detail or specificity as to future analyses of the project area, methodologies proposed for these analyses, or what mitigation measures may be adopted in the future to address the impacts. Id. at 2. The Standing Rock Sioux Tribe raises similar concerns, but goes into highly specific detail, offering not only a letter describing their frustration in dealing with the NRC Staff on this issue, but also providing multiple substantive line by line comments, questions, and critiques to the Agreement. Id. at 7-20. Unfortunately, NRC Staff did not provide any specific substantive response to either set of tribal concerns, nor did NRC Staff incorporate the changes proposed by either tribe. Instead, NRC Staff and Powertech pushed to finalize the PA without addressing the tribes' concerns.

This type of lack of meaningful consultation, in part, is what led to a NRC ruling finding a failure to comply with the NHPA consultation duties. EPA should not compound and exacerbate this failure by endorsing such a deeply flawed PA. Instead, EPA should seek to conduct a consultation effort that complies with the NHPA and meaningfully involves the Tribes in a discussion of the potentially affected cultural resources, the potential impacts to those resources, and possibly mitigation measures that can be implemented to protect those resources.

In any case, the existing PA is currently the subject of further discussion and negotiation as part of the NRC's finding that the NRC Staff has failed to comply with either NEPA or the NHPA with respect to identifying and evaluating impacts to Sioux cultural resources at the site. *See* attached May 31, 2017 letter from Oglala Sioux Tribe Historic Preservation Office; May 19, 2016 and January 31, 2017 Oglala Sioux Tribe/NRC Staff meeting summaries (all specifically identifying changes to the PA as necessary topics of ongoing NHPA consultation). As such, EPA should increase its involvement and either work to develop an agreement with the affected Tribes, including the Oglala Sioux Tribe, that properly takes into consideration the Tribes' perspectives. In the alternative, EPA should engage in the ongoing discussions between NRC and the Tribes, including the Oglala Sioux Tribe, and work toward a PA that satisfies all parties. The Oglala Sioux Tribe has a formal ordinance in effect regarding consultation, which requires the involvement of the Oglala Sioux Tribal Council. See Ordinance No. 11-10 of the Oglala Sioux Tribal Council of the Oglala Sioux Tribe. Notably, the record developed during the NRC hearing process demonstrates that the proposed Dewey-Burdock site contains significant cultural resources that could be impacted by the project. This fact is made clear even though no meaningful cultural resources survey has been conducted on the property. Even the Augustana Class III archaeological survey upon which EPA attempts to rely recognizes that "the sheer volume of sites documented in the area is noteworthy." Report at page 7.8. Despite this acknowledgement, no competent Sioux cultural resources survey has ever been conducted on the site.

The NRC hearing record demonstrates that EPA simply cannot rely on the Powertech-produced Class III archaeological survey for purposes of identifying impacts to cultural resource so as to satisfy its environmental impact review or NHPA obligations. Powertech candidly admits "that identifying religious or culturally significant properties in a project area is entirely reliant of the Tribes themselves and the special expertise of the Tribal cultural practitioners.... Simply put, entities such as NRC or Powertech are not equipped with the Tribe-specific knowledge and traditions to adequately instruct a specific Tribe using 'proper scientific expertise' on this subject." See attached Powertech Opening Statement at 34. The record and testimony contains no evidence that NRC Staff successfully equipped itself or acquired the necessary resources to meet NRC's NEPA duties involving religious and cultural resources. The primary reliance by EPA on the Augustana study is not supportable – particularly given the testimony at the NRC hearing. Dr. Hannus, who lead the Augustana study at the behest of the applicant admitted that his team is not "in any way qualified to be conducting TCP surveys" and further conceded that given the heightened cultural issues of the Sioux Tribes that "there will be sites that will need to be addressed archaeologically and there will be probably sites that need to be addressed as traditional cultural properties." See attached August 19, 2014 Transcript at p. 858, lines 4-8; 12-20. See also August 19, 2014 Transcript at p. 859, lines 18-24 (Dr. Hannus) ("And again, that really should clearly, I think, show us that for us to then be able to make some kind of in roads ourselves, being not of Native background, to identification of sites that are traditional cultural properties that have a tie to spirituality and so on, it is not in our purview to do that.").

Applicant witness Dr. Luhman reiterated this point, confirming that "a traditional Level 3 survey may, in fact, encounter some resources that would be associated with Native American groups or which they would identify. But, they wouldn't necessarily identify all of the resources primarily because some of the knowledge is not available to those conducting the Level 3 survey. That would be provided by the Native American groups themselves." August 19, 2014 Transcript at p. 762, line 24 to p.763, line 6. See also, August 19, 2014 Transcript at p. 764, lines 14-18 (OST witness Mr. Mesteth) ("[w]e're the ones that are the experts, not the archaeologists. They make assumptions and hypotheses about our cultural ways and it's not accurate. Some of the information is not accurate. And that's why we object in certain situations."); p. 765, line 25 to p. 766, line 9 (Mr. Mesteth).

Indeed, Dr. Hannus testified that his office has never worked on any projects that considered the cultural resources at a site. August 19, 2014 Transcript at p. 843, lines 4-7. Despite this fact, NRC Staff witness Dr. Luhman testified that NRC Staff relied on Augustana to conduct all of the initial and follow up field survey work at the site, with the exception of the three non-Sioux tribes that submitted reports. August 19, 2014 Transcript at p. 818, lines19-22.

Upon the Sioux Tribes' request as early as 2011 that cultural resource surveys be conducted at the site, NRC Staff prompted the applicant to bring in Dr. Sabastian and her firm to coordinate this review. August 19, 2014 Transcript at p. 784, lines 20-25 (Dr. Sabastian). However, Dr. Sabastian also testified that she also has never been involved in any kind of "actual physical on-the-ground TCP survey-kind of thing that we're talking about." August 19, 2014 Transcript at p. 846, lines 9-21.

Lastly, Mr. Fosha testified that he worked with the applicant and Augustana "from the very start of the project, so the bulk of this material is a result of myself reviewing what Augustana College had been doing in the field." August 19, 2014 Transcript at p. 865, lines 3-6. Mr. Fosha testified that he met with the applicant and between them discussed methods for identification of sites and the methods and steps to take "throughout the process," but only related to the State of South Dakota permit, and having "nothing to do with the NRC permit or anything like that" – even remarking that "up until the point where Augustana was nearly finished I was the only review agency on this project." August 19, 2014 Transcript at p. 865, line 23 to p. 866, line 5. Despite Mr. Fosha being the only person giving any direction to Dr. Hannus' Augustana team, Mr. Fosha testified that his experience and focus was solely "the field of archaeology" and not culturally as to the concerns of the Tribes. August 19, 2014 Transcript at p. 867, lines 14-20.

The only NRC Staff or applicant witness that testified to having any experience in conducting cultural resource field surveys was NRC Staff witness Dr. Luhman. However, as stated, Dr. Luhman admitted to relying exclusively on Augustana for both the initial field work and the follow up field studies, even though Dr. Hannus' testimony had confirmed that Augustana had no culturally relevant experience. August 19, 2014 Transcript at p. 818, lines19-22 (Dr. Luhman). Dr. Luhman did testify that "in those projects in which I have been involved [a cultural survey] it is typically that [the Tribes] are working alongside with the archaeological survey team as they are going about doing the survey. It could be in the preliminary stages of doing the generalized recognizance (sic) of the project area. Oftentimes the federal agency and other parties will be along that process so that there can be discussions while out in the field, and these are for sometimes very large projects. But in my experience it typically is at the same time when there is an ongoing consultative and survey process." August 19, 2014 Transcript at p. 836, line 18 to p. 837, line 2.

Consistent with the admitted lack of any culturally relevant experience or focus by any of the prior analysts in reviewing sites for cultural resource impacts, at the live hearing NRC Staff witness Ms. Yilma admitted that no written cultural resources analysis prepared during any part of the NEPA analysis included any comments or reports from any Sioux Tribes. August 19, 2014 Transcript at p. 821, lines 3-7; *id* . at p. 875, lines 6-11. This is despite testimony from NRC Staff witness Ms. Yilma as to the Staff's recognition of the importance of the area to the Sioux from a cultural perspective from the earliest stages of the application review stage. August 19, 2014 Transcript at p. 774, line 21 to p. 775, line 1. See also, August 19, 2014 Transcript at p. 771, lines 1-7 (Ms. Yilma). NRC Staff witness Ms. Yilma also testified as to the importance and focus at least as early as 2011 by both the Sioux Tribes and within NRC Staff on the need for culturally-based field surveys in order to fulfill the NEPA and NHPA requirements. August 19, 2014 Transcript at p. 776, line 22 to p. 777, line 3; p. 790, lines 1-17. Indeed, NRC Staff witness Ms. Yilma testified

that after meeting in 2011 with the Oglala Sioux, Standing Rock Sioux, Flandreau Santee Sioux, Sisseton Wahpeton (Sioux), Cheyenne River Sioux, and Rosebud Sioux (see August 19, 2014 Transcript at p. 810, lines 16-22), NRC Staff specifically deliberated about conducting an ethnographic study of the site to ensure incorporation of Sioux cultural and historic perspectives, but "the ultimate decision was instead of an ethnographic study a field survey was necessary, so we focused our attention on the field survey approach." August 19, 2014 Transcript at p. 846 line 22 to 847, lines 8. Despite admitting that it was "necessary" to the analysis, no cultural resources review or field study incorporating any Sioux cultural expertise was ever conducted at the site or incorporated into any NEPA document. August 19, 2014 Transcript at p. 821, lines 3-7 (Ms. Yilma); id. at p. 875, lines 6-11 (Ms. Yilma).

Taken together, this testimony and evidence establishes NRC Staff's failure to conduct the necessary hard look under NEPA, as by their own admission, despite it being necessary to the analysis, no Sioux comments or reports were incorporated into the cultural resources reviews, and none of the parties that conducted any cultural review of the site, including field surveys, were trained, experienced, or competent to review or survey the area for, let alone determine impacts from the project to, the cultural resources of Sioux origin. In answering a follow-up question by Chairman Froehlich to Dr. Hannus asking whether, as Dr. Sabastian had testified, did Dr. Hannus believe that identification of Sioux traditional sites "depends on the knowledge and traditional culture practitioners," Dr. Hannus responded: "Yes, I mean, I absolutely would have to, because there isn't any other way the framework that I work within functions." August 19, 2014 Transcript at p. 860, lines 1-8. In short, admissions and testimony confirm that NRC Staff deferred to the applicant's unqualified consultants, while rejecting proposals to incorporate Sioux cultural expertise.

As a result of Powertech's and NRC Staff's coordinated inability to fulfill their obligations to properly ensure a competent cultural resources survey of the Dewey-Burdock site before approvals are given and the aquifers are impacted, EPA cannot rely on the NRC's NEPA documents to assess the cultural resources impacts of the proposed mine. Instead, the scope of EPA's consultation must match the scope of the UIC duties, which apply to the full life of the proposed mine, not the initial set of NRC-approved segments. Similarly, because NRC Staff has failed to fulfill its government-to-government consultation duties under the NHPA, EPA also cannot rely on the PA or any other NRC Staff consultation to fulfill its own obligations under the NHPA. Rather, EPA must delay any permitting action until a fully competent cultural resources survey is conducted and the Tribe and the public has an opportunity to review and comment on the potential impacts to those important resources. Additionally, EPA should reject the PA as inadequate and engage in meaningful and good-faith consultation with the Oglala Sioux Tribe professional staff and Tribal Council in order to ensure that, in coordination with the Tribe, all cultural resources are identified, impacts are assessed and mitigation measures are developed and implemented.

ORDINANCE OF THE OGLALA SIOUX TRIBAL COUNCIL ESTABLISHING PROCEDURES FOR GOVERNMENT-TO-GOVERNMENT CONSULTATION BETWEEN THE OGLALA SIOUX TRIBE AND THE UNITED STATES GOVERNMENT, AND OTHER GOVERNMENTS.

WHEREAS, the Government-to-Government relationship between the Oglala Sioux Tribe was established in the United States Constitution, Article 6 (Supremacy Clause); the Treaty of July 2, 1825, United States-Oglala Band of Sioux Nation, 7 Stat. 252; Rev. Stat. § 2116, 25 U.S.C. § 177 *(codifying* section 12 of the Trade and Intercourse Act of June 30, 1834, ch. 161, 4 Stat. 730); the Treaty of September 17, 1851, United States-Teton Division of Sioux Nation, et *al.,* 11 Stat. 749; the Treaty of April 29, 1868, United States-Sioux Nation,15 Stat. 635; Rev. Stat. § 2079, 25 U.S.C. § 71 *(codifying* the Act of March 3, 1871, ch. 120, § 1, 16 Stat. 566), the Indian Reorganization Act of June 18, 1934, ch. 476, 48 Stat. 984, 25 U.S.C. § 461 et *seq.,* the Indian Self-Determination and Education Assistance Act of January 4, 1975, P.L. 93-638, 88 Stat. 2203, 25 U.S.C. § 450, et *seq.,* and other Congressional enactments, and

WHEREAS, the 1851 Treaty recognized title in the Oglala Band to 60 million acres of territory currently in the States of North Dakota, South Dakota, Nebraska, Montana and Wyoming for the Oglala Sioux Tribe and other Sioux tribes, and WHEREAS, a permanent homeland was established within the 1851 Treaty territory for the "absolute and undisturbed use and occupation,, of the Oglala Sioux Band and other Sioux bands, which homeland has been referred to as the "Great Sioux Reservation" and comprises substantially all of present day South Dakota west of the east bank of the Missouri River, and

WHEREAS, the Indian Claims Commission also found that the Oglala Band and other Sioux bands held aboriginal (non-treaty) title to 14 million acres east of the Missouri River in the States of North Dakota and South Dakota, and

WHEREAS, uncontested encroachments on the 1851 Treaty territory by the United States and its citizens resulted in the Powder River War of 1866-1868 between the United States and the Oglala band and other bands of Sioux Indians. as a result of which, peace was concluded between the United States and the Oglala Band and other Sioux bands by treaty on April 29, 1868, 15 Stat. 635 ("1868 Fort Laramie Treaty," which treaty was duly ratified by the United States on February 16, 1869 and proclaimed by the President on February 24, 1869, and

WHEREAS, the 1868 Treaty provided for a mutual demobilization of the United States and Oglala Band and other Sioux bands without terms of surrender on either side, and as a result thereof, the Oglala Band and other Sioux bands were never militarily conquered by the United States, and the Oglala Band has abided by the 1868 Treaty and resided on its reservation in accordance of the terms of the treaty since 1868, except for incidences in Montana in 1876 where the Oglala Band and other Sioux bands were legally exercising its 1868 Treaty, Article 11, hunting rights and yet had to defend themselves from attack by the United States Cavalry in violation of Articles 1 and 11 of the 1868 Treaty, and

WHEREAS, subsequent to ratification of the 1868 Treaty, no aboriginal or treaty territory of the Oglala Band was ever acquired by the United States in accordance with 25 U.S.C. § 177 or Article 12 of the 1868 Treaty, and all acquisitions of Oglala Band's territory was either confiscated by the United States or acquired with the requisite consent of the Band, and

WHEREAS, the "Oglala Band" reorganized in 1936 as the "Oglala Sioux Tribe of the Pine Ridge Indian Reservation" under Section 16 of the 1934 Indian Reorganization Act of June 18, 1934, ch. 576, 48 Stat. 987, 25 U.S.C. § 476, by adopting a constitution and bylaws approved by the Secretary of the Interior, and presently enjoys all of the rights and privileges guaranteed under its existing treaties with the United States in accordance with 25 U.S.C. § 478b

WHEREAS, as a result of its unique government-to-government relationship with the United States, and because the Oglala Band (now Oglala Sioux Tribe) is one of the few militarily unconquered Sioux tribes in the United States and all of its territory now in the possession of the United States was acquired without its consent, the Oglala Sioux Tribe still possesses very strong aboriginal rights within all the territory that comprised its aboriginal homeland, and as a result thereof, the Tribe has both a domestic and international rights to government-to-government consultations with the United States on the formulation of federal policies, or on all federal actions or undertakings that adversely affect its aboriginal and treaty territories, and WHEREAS, the Executive Branch of the united States Government has recognized the right of government-to-government consultations with Indian Tribes in:

a. President Clinton's Memorandum of April 29, 1994, which, among other things, directed agencies to:
(i) "ensure that the department or agency operates within a government-to-government relationship with Federally-recognized Trial government,"

(ii) "consult, to the greatest extent practicable ad to the extent permitted by law with Tribal governments prior to taking actions that affect Federally recognized tribes, to be open and candid so that all interested parties may evaluate for themselves the potential impact of relevant proposals," and

(iii) "assess the impacts of Federal government plans, projects, programs, and activities on tribal trust resources to assure that Tribal government rights and concerns are considered during the development of such plans, projects, and activities."

b. President Clinton's Executive Order No. 13084 of May 19, 1998, which directed federal agencies to respect tribal self-government and sovereignty, tribal rights, and tribal responsibilities whenever they develop policies "significantly affecting Indian tribal governments,"

c. President Clinton's Executive Order No. 13175 of November 6, 2000, which directed all federal agencies to establish consultation and collaboration with tribal officials in the development of federal policies that have tribal implications, and

d. President Barak Obama Memorandum of November 5, 2009, to the heads of the Executive Department and federal agencies to submit plans of actions that the agencies will take to implement the policies and directives of President Clinton's Executive Order 13175,
and

WHEREAS, Congress has also mandated government-to-government consultation with Indian tribes, which have been implemented in statutes, orders, regulations, rules, policies, manuals, protocols and guidance, most of which are described in a document issued by the White House-Indian Affairs Executive Working Group (WH-IAEWG), dated January, 2009, and entitled "List of Federal Tribal Consultation Statutes, Orders, Regulations, rules, Policies, Manuals, protocols and guidance," and

WHEREAS, the Oglala Sioux Tribe has never enacted legislation (ordinances) establishing procedures for government-to-government consul tat ion between the Tribe and the United States, and believes that such procedures are necessary to establish a clear process for documenting the nature and results of consultations between the Tribe and the United States and its agencies, now
THEREFORE BE IT ORDAINED, that the following sections relating to government-to-government consultations are hereby adopted for the Oglala Sioux Tribe.
Section 1. Title. This ordinance shall be known and referred to as the Oglala Sioux Tribe Consultation and Coordination Ordinance of 2001.

Section 2. Definitions. The following words and phrases used in this Election Code shall have the following meanings:

"Consultation" and/or "government-to-government" consultation shall mean the formal process of cooperation, negotiation, and mutual decision making between the Oglala Sioux Tribe and the United States Government, and other governments. It is the process through which sovereign governments develop a common understanding of technical and legal issues and use this understanding to formulate mutually agreeable decisions.

Section 3. Scope. This ordinance is intended to extend to:
a. All of the aboriginal homeland of the Oglala Sioux Tribe, including, the 60 million acre territory Sioux territory described in Article 5 of the 1851 Ft. Laramie Treaty; the territory and the expanded hunting rights territory described in Articles 2, 11 and 16 of the 1868 Ft. Laramie Treaty;
b. All of the aboriginal title (non-treaty) Sioux territory comprising 14 million acres located east of the Missouri River in the present states of North Dakota and South Dakota; and
c. All undertakings and actions that adversely affect the Oglala Sioux Tribe's aboriginal, treaty or statutorily recognized rights and interests within its aboriginal and treaty recognized territories.
Section 4. Purpose. The primary purpose and intent of this ordinance is to:
a. Establish a clear process for documenting the nature and results of government-to-government consultations between the Oglala Sioux Tribe and Federal Government and its agencies;
b. Provide a consistent, orderly process to government-togovernment consultation to make and ensure that government-to-government consultations are meaningful and effective, and
c. Be applicable, to the fullest extent possible, for documenting the nature and results of government-togovernment consultations between the Oglala Sioux Tribe and other Indian tribes, inter-tribal organizations and state governments and agencies.

Section 5. Authority. This ordinance is adopted pursuant to the Oglala Sioux Tribe's inherent sovereignty and Article IV, Section 1 (a) of the Amended Constitution of the Oglala Sioux Tribe, which empowers the Tribal Council "(a) To negotiate with the Federal, State, and local governments, on behalf of the tribe, and to advise and consult with representatives of the Interior Department on all activities of the Department that may affect the Pine Ridge Indian Reservation."

Section 6. Principles and guidelines. All government-to-government consultations between the Oglala Sioux Tribe and the Federal Government, and State or other tribal governments, shall be conducted with the Oglala Sioux Tribe under the following principles and guidelines:
a. The Oglala Sioux Tribe is a sovereign government with attendant powers;

b. All treaties between the Oglala Sioux Tribe and the United States must be honored and enforced to the fullest extent possible;

c. The Oglala Sioux Tribe has never been militarily conquered by the United States, and has existed in a peaceful relationship with the United States since 1868, pursuant to Article I of the 1868 Ft. Laramie Treaty; and

d. The Oglala Sioux Tribe and its territories are not possessions of the United States.
Section 7. Procedures. All consultation between the Oglala Sioux Tribe and the Federal Government, and State or other tribal governments, must:
WHEN CONSULTATION IS REQEUSTED BY THE FEDERAL GOVERNMENT OR OTHER GOVERNMENTS
a. Occur through a formal meeting with the Oglala Sioux Tribal Council. Neither the Executive Committee nor any Executive Committee member or staff member of the Tribe shall be authorized to engage in government-to-government consultations with any government or governmental agency;
b. Accomplish the goals and objectives described in Section 8.

c. Be initiated by serving a formal written request for government-to-government consultation with the Secretary of the Oglala Sioux Tribe. The request for consultation should describe the impending, proposed project or activity that may or may not affect the Oglala Sioux Tribe's interests in its aboriginal or treaty territory and/or rights or interests therein. This include the Tribes aboriginal and treaty territory both within and outside the exterior boundaries of the Pine Ridge Indian Reservation;

d. It shall be the duty of the Tribal Secretary to immediately notify all members of the Executive Committee and Tribal Council of each request for consultation;

e. Upon receipt of a request for consultation, the Tribal President, or council members under established procedures, shall call a special council meeting for the purpose of responding to the request for consul tat ion. The Tribal Council shall:

(i) Request by resolution a policy-level meeting, initiating government-to-government consultations;

(ii) Authorize the Tribe's technical staff (and when appropriate the Tribe's attorneys) to meet with the responding government's technical staff to discern and define the issues that are subject to the request for consultation including how the proposed governmental undertaking or activity affects the tribe's aboriginal, treaty, statutory or other interests;

(iii) Schedule a special council meeting in which the Tribe's technical staff (and when appropriate the Tribe's attorneys) can fully brief the Tribal council on the issues that are subject to consultation, with recommendations and opinions;

(iv) Schedule a follow-up special council meeting in which the Tribe through the Tribal council shall engage in formal government-to-government consultation based on the recommendations and opinions of its staff (and attorneys); and

(v) Pass a resolution fully articulating the Tribe's formal decision, which decision shall be consistent with the provisions of this ordinance.

WHEN CONSULTATION IS REQEUSTED BY THE OGLALA SIOUX TRIBE

a. Be initiated by passing a tribal council resolution requesting government -to-government consultation, which resolution shall be executed and sent by the Tribal President to appropriate official of the Federal Government or tribal or state government with which consultation is desired;

b. Follow the procedure described in Subsections 7. e. (i) through (v) above; and

c. Accomplish the same objectives described in Section 8.

Section 8. Objectives.

All government-to-government consultations should ensure the following results:

a. Tribal officers and officials proceed in a dignified, orderly manner, keeping in mind that the Oglala Sioux Tribe is engaging in the consultations as a sovereign government that maintains government-to-government relations with the United States Government and other governments. Tribal officials engaging in consultation should dress in appropriate attire during the consultation proceedings, and conduct themselves in a professional, dignified, and diplomatic manner;

b. Tribal officers and officials fully understand the issues to be discussed prior to engaging in and consul tat ion proceeding; this includes an understanding of tribal history, federal treaties and federal statutes, regulations and rules, that will be discussed at each consultation;

c. Ensure that the Tribe's interest are fully protected, including interests in all tracts of land located within the Tribe's aboriginal and treaty territories, and interests therein, as well as tribal cultural resources, human remains, and any other tribal patrimony;

d. Ensure compliance with federal treaties, statutes, regulations and rules and tribal policies (e.g., policy that the Black Hills Are Not For Sale and tribal land claims must include restoration of federally held lands to the Tribe);

Section 9. Documentation. Following any governmental-to-government consul tat ion between the Oglala Sioux Tribe and the Federal government, or other governments, the Tribal Council shall:

a. Achieve a bi-lateral decision between the Tribe and the United States, or other government;

b. Adopt a resolution documenting the nature and results of the consultation and bilateral decision;

c. Direct the Tribal Secretary to file a copy of the resolution and all backup documentation with the Tribal Records Department.

Section 10. Representations. Neither the Federal Government nor any agency thereof, nor any other government, shall legitimately represent to any other government or governmental entity, nor to any third party, that they have consulted with the Oglala Sioux Tribe unless they fully comply with the terms and conditions of this ordinance.

Section 11. Effective Date. This ordinance shall become effective immediately.

Section 12. Repeal of inconsistent ordinances. All previously enacted ordinances are hereby repealed to the extent that they are inconsistent with this ordinance.

C-E-R-T-I-F-I-C-A-T-I-0-N

I, as undersigned Secretary of the Oglala Sioux Tribal Council of the Oglala Sioux Tribe, hereby certify that this Ordinance was adopted by a vote of: 13 For; I Against; 0 Abstain; and O Not Voting, during a SPECIAL SESSION held on the 7th day of JUNE, 2011.

WHEREAS, THE URANIUM MINING PROJECTS INCLUDING DEWEY BURDOCK HAVE NOT LEGALLY CONSULTATED WITH TRIBES IN MEANINGFUL WAYS TO MOVE THE PROJECT FORWARD SAFELY AND WITH THE PERMISSION OF TRIBES IN THE GREAT PLAINS REGION.

(2) The Nuclear Regulatory Commission failed to conduct a good faith identification of traditional cultural properties in the project area, in violation of National Historic Preservation Act section 106 and 36 CFR §800.2(C)(2)(ii); and

2. The Nuclear Regulatory Commission Failed to Properly Identify Traditional Cultural Properties

Section 106 of the National Historic Preservation Act establishes requirements for the identification of the impacts of a federal undertaking on cultural resources. Section 106 requires that:

The head of any Federal agency ... prior to the approval of the expenditure of any Federal funds on the undertaking or prior to the issuance of any license, shall take into account the effect of the undertaking on any historic property.

(54 U.S.C. §306108).

The identification efforts of historic properties under section 106 must include identification of traditional cultural properties of Indian Tribes in the area of potential effects. Under section I01(d)(6) of the act, Native American traditional cultural properties are eligible for inclusion on the National Registry:

Property of traditional religious and cultural importance to an Indian Tribe or Native Hawaiian organization may be determined to be eligible for inclusion on the National Register (of Historic Places).

(54 U.S.C. §302706(a)).

The section 106 regulations prescribe the process for identifying historic properties and traditional cultural properties; evaluating their eligibility for the National Register; determining whether there are adverse impacts and resolving or mitigating those impacts.

(36 CFR Part 800).

The statute requires consultation with Indian Tribes on the identification of the traditional cultural properties which may be impacted by a federal undertaking:

... a Federal agency shall consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to property

(54 U.S.C. §302706(a)).

The regulations explain:

Section 10l(d)(6)(B) of the act requires the agency official to consult with any Indian tribe or Native Hawaiian organization that attaches religious and cultural significance to historic properties that may be affected by an undertaking.... The agency official shall ensure that consultation in the section 106 process provides the Indian tribe or Native Hawaiian organization a reasonable opportunity to identify its concerns about historic properties, advise on the identification and evaluation of historic properties, including those of traditional, religious and cultural importance, articulate its views on the undertaking's effects on such properties, and participate in the resolution of adverse effects.

36 CFR §800.2(c)(ii).

The role of Tribes is further delineated for the identification of traditional cultural properties in section 4 of the regulations:

In consultation with the SHPO/THPO, the agency official shall: (d)etermine and document the area of potential effects ... (and) Gather information from any Indian tribe or Native Hawaiian organization ... to assist in identifying properties, including those located off tribal lands, which may be of religious and cultural significance to them.
36 CFR §800.4(a).

The consultation and identification efforts must be reasonable and in good faith:

... in consultation with the ... THPO, and any Indian tribe or Native Hawaiian organization that might attach religious and cultural significance to properties within the area of potential effects, the agency official shall take the steps necessary to identify historic properties within the area of potential effects. The agency official shall make a reasonable and good faith effort to carry out appropriate identification efforts, (to include) ... consultation.

36 CFR §800.4(b).

The EPA administrative record does not demonstrate compliance with these requirements. To the contrary, the NRC, as lead agency, in cooperation with PowerTech, refused to consult in good faith with the Tribes as required by the section 106 regulations. 36 CFR §800.3(f)(2). Early discussions about Tribal participation in the identification of traditional cultural properties went nowhere. NRC and PowerTech refused to establish a meaningful area of potential effects (APE) in consultation with the Tribes. They were uncooperative and unresponsive in the limited discussions on a scope of work and funding for Tribal traditional cultural properties surveys.

As a result, the NRC failed to properly identify traditional cultural properties that are directly or indirectly impacted by the proposed Dewey Burdock UIC wells in the APE, in violation ofNHPA section l0l(d)(6)(B), and 36 CFR §§800.2(c)(ii) & 800.4(a) & (b).

The Standing Rock Sioux Tribe THPO documented our Tribe's fruitless efforts for the requisite section 106 consultation and Tribal role in the survey of traditional cultural properties in the sacred Black Hills. The Standing Rock Sioux Tribal Historic Preservation Office sent correspondence dated February 4, 2014 to provide comments on a draft Programmatic Agreement. None of the comments were incorporated into the Final PA, and the stated concerns with the section 106 process were totally ignored. Correspondence from our THPO dated November 5, 2012 and August 30, 2011 likewise received no response. There was no consultation on the identification of TCPs.

As stated above, the Black Hills are sacred Treaty lands of the Standing Rock Sioux Tribe under the 1868 Fort Laramie Treaty. The NRC actually attempted to rely on consultations with the Three Affiliated Tribes of Fort Berthold and Turtle Mountain Band of Chippewa Indians for the consultation on TCPs of the Oceti Sakowin Oyate. The consultation requirement applies to "any Indian tribe that attaches religious and cultural significance to historic properties" (36 CFR §800.2(c)(2)(ii)) or "located on ancestral, (or) aboriginal. .. lands." (36 CFR §800.2(c)(2)(ii)). For the Black Hills, that applies to the Oceti Sakowin Oyate and Northern Cheyenne Nation. The NRC cannot simply select any Indian Tribe willing to consult on its project. That is what occurred with Dewey Burdock.
The Final Programmatic Agreement acknowledges but mis-portrays and attempts to minimize the significance of the lack of good faith efforts in identifying TCPs. It states on page 3:

... the parties were unable to reach agreement on the scope and the cost of the Tribal survey.

That does not obviate the need for compliance with the section 106 regulations. Nevertheless, the NRC refused to engage in the good faith consultation and identification efforts that are required. Ultimately, the NRC failed to adequately consult with the Standing Rock Sioux Tribe THPO in the identification and evaluation of Traditional Cultural Properties in the Dewey Burdock project area. Consequently, the EPA must deny the PowerTech UIC permit application.

Along the same line, the importance of the Black Hills to Lakota people is mentioned, but not analyzed. Instead, it is mentioned and then ignored. Also, the Black Hills are considered in a historic context, rather than in a modern

As mentioned above, the analysis of cultural and historical resources must not ignore the current cultural importance of those resources and their modern uses. The Black Hills are sacred to the Lakota, much like Jerusalem is to the Jews or the Vatican is to Catholics. Sacred cultural and historical resources must be fully protected, and doing this relies on the involvement of knowledgeable Lakota people, plenty of time, adequate finances, and the willingness to put the sacred above the dollar. Some places should not be subjected to uranium mining. Lakota people who are sharing their ancient knowledge, which they have spent a lifetime learning, should be offered compensation for their efforts and given credit for resulting information.

It also appears that tribal consultation has barely begun, yet the EPA has issued draft permits. This is putting the cart before the horse. Tribal consultation must be thorough and done on a government-to-government basis, including Full tribal consultation should be completed before a draft permit is issued. As that did not happen, it should very clearly be completed before the EPA takes further action.

I contacted my Tribal Chairman and he would like to engage in Tribal Consultation. We are working on the date for a Tribal Council meeting that would work best for us.

The organizations involved here did not come to the Oglala Sioux Tribe on a government-to-government relationship to meet with us, to explain to us, and to allow us to do what we are doing here today, to tell you how important the Black Hills is to us.

[...]

By allowing this permit, you're going to desecrate what was there before. We have burial grounds. We have ceremonial sites. We have campsites. And our people still trek to the Black Hills to pray, even today.

There we follow the constellations. We follow the moon, the sun, when they are shining on our sacred ceremonial sites. We go to the Black Hills to pray. These are all ancestral ways that have been here long before.

So to issue that permit would be detrimental to the Oglala Sioux tribal people because that water flows toward Pine Ridge. So I ask you today to reject that permit and require them to come and consult with the Oceti Sakowin. Not just the Oglala Sioux Tribe, but the Oceti Sakowin as a whole.
And I thank you today for allowing us to come here to voice our opinions.
(Speaking in indigenous language.)

MICHELLE HAUKAAS: (Speaking in indigenous language.)

My name is Michelle Haukaas. I am Sicangu from the Lakota Oyate of the Oceti Sakowin, indigenous people of Turtle Island. On behalf of my tiyospaye and tiwahe, family and extended family, I am here today to stand in opposition and resistance to the Dewey-Burdock in-situ uranium mining and waste disposal application in the Black Hills.
The proposed mine, if developed, will cause irreparable damage to our ancestral homelands and aquifers. It will destroy cultural and historical sites, ancestral graves, and prayer sites.

[...]

Even now, without the United States's commitment to the U.N.'s Declaration on the Rights of Indigenous Peoples, I wonder how meaningful these consultations really are.

Regarding the identification of traditional cultural properties at the Dewey-Burdock project site, formal consultation under Section 106 of the National Historic Preservation with First Nations must be completed.

And the Lakota Nation -- the importance of the Black Hills to the Lakota Nation, that is our birthplace, that is our creation story, that is where we come from.

And destroying and -- not only the water that's in that area, but also the culturally and spiritually significant areas that are in that area. So I am asking that you provide us with meaningful consultations with the local tribes, including not only the Lakota Tribes, but in the surrounding states, Wyoming as well.
And I'd also like to ask that there be a full cultural and historical survey of the area to determine any culturally significant or spiritually significant sites to our tribe and other local tribes.

And I would also like that that tribal consultation be defined by the local tribal -- tribal people, not defined by the laws and regulations that are set out for a tribal consultation.

And I'd also like to ask that the EPA comply with the Section 106 of the National Historic Preservation law, which is the NHPA law, which also defines and clearly states that there must be formal consultation with local tribes.
[...]

And to please recognize our right as a sovereign nation and to conduct those meaningful consultations.

You know, the He Sapa are sacred to us. We go there annually to pray. It has significant cultural to us. One of the things that I really, really, really ask as a Standing Rock Sioux tribal member, to have a meaningful consultation, truly have meaningful consultation, to not just sit there and to
listen and do away with our -- do away with our testimonies.

Secondly, there is -- the entire area of the Black Hills is very, very important, and it's very -- it's a very sacred place. And in that area there's sacred sites, traditional Lakota burial sites as well as different parts of, you know, where you would find historical petroglyphs and different sacred sites like that.

I also ask that you give meaningful tribal consultation because this is treaty land that we're talking about. So thank you.

Also I would like to say that we would like a tribally approved consultation, defined by the tribes.

And I think my last point would be tribal consultation, no -- I had four points that I wanted to make, but I think that was the most important one, is no mine, no expansion.
Thank you.

I thought it was funny that it was brought up that they said they were consulting with the tribes. I honestly just think that sounds like you're listening to us tell you no, and then you're going, Oh, well, thanks for your input, and then, you know, just going to move on from there.

We are also requesting, as someone from Standing Rock, to have true and meaningful consultation with tribes, not to just sit there and listen, but to have true, meaningful consultation with tribally approved archaeologists and tribally approved surveyors, because (Speaking in indigenous language), the Black Hills belong to us.
They are historical, they are spiritually significant to our people, and we stand in opposition of the uranium mine. Mni Wiconi. Water is life.

And one final comment, please consult the tribes. They know this land better than anyone.

Thank you.

BERNITA IN THE WOODS: Thank you. Good evening. I'm from the Cheyenne River Sioux Tribe, and again, this is not consultation. And I do serve on the Tribal Council, but my brother did come yesterday as well, and he's more of the eloquent speaker.

It just seems like we have these hearings all the time, and you hear all of this over and over and over, that it seems like you do this on purpose to become callous. And it's frustrating for the tribes, especially because the water is life for us, and we depend on that for our future of our children, and not just our Native American population, but all races in our nation.

And it just seems like -- it's like we're constantly having to fight over and over and over just to live, and it's frustrating.

So I believe that you failed on providing meaningful consultation from the tribes, and that still needs to happen. So I'm requesting that that happen, that meaningful consultation does happen with the people. I mean, it affects all of us, I know, but we see it coming close to our reservation, especially to some of our sacred lands where a lot of our medicine, our traditional medicines and ceremonial practices, where those all take place, and it's near that part.

So we are going to fight. We are going to fight, and we will continue to fight at this until we can't anymore. But it's never going to be over. So, I'm not very good at speaking in public, but I just want to let you know that we're never going to stop this fight. And Mni Wiconi. And we will always be here. You'll never get rid of us.

Even though this is probably one tactic that may be affecting our future of our people, but we'll stop it. We will. We'll stop it. But that meaningful tribal consultation has to happen. And please, please -- it just seems like -- don't become callous because, you know what, it's your kids, too, and your grandkids and their grandkids. And everyone is going to be affected by it. So that's all I wanted to say.

Thank you.

That said, again, Chairman Frazier brought up the issue of the United States government breaking the law in this process by not holding true consultation hearings with the governance

of the Lakota tribes in this area.

And that is the law. That's on the rule books. And like he said, if we don't follow the law, we go to jail. We get punished for not following the U.S. Constitution.

But even though this process is a nice way to show, maybe, a dog and pony show, we know that in this process, our words are often put on the congressional record just for archives for, you know, later on, some historical data about, oh, the Indians didn't really like that, but they did it anyways.

This is a comment period. Where is the tribal consultation? Come to our tribes and talk to us. Let us talk to you from the heart instead of on a piece of paper.

You know, that's how we operate. We put too many rules and regulations in front. You know, I probably heard 50 rules and regulations you just cited before we even started. Is that to -- is that just the way the government works? Is that how we're supposed to be stopped not to go on and tell you from our hearts what's going on?

My name is Carla Rae Marshall, and I am a resident of Rapid City here. I've been living here for many, many years. I am an enrolled member of the Cheyenne River Sioux Tribe; however, this is not tribal consultation. I just want to make that clear.

[...]

The other reason is that the He Sapa, or the Black Hills, is treaty territory. Under the 1851/1868 Fort Laramie Treaty and under law, it is mandated to consult with the tribal governments as government-to-government relations.

This includes following the National Historical Preservation Act rules and regulations with the tribes. However, South Dakota and federal agencies involved in permitting this uranium mining have continuously ignored tribal nations and their expert testimony regarding cultural properties and sacred sites.

I find the EPA's acknowledgement of the cultural importance of the Black Hills to, quote, "many Native American tribes" and associated consultation processes inadequate and disappointing, as many people have noted today.

In the -- from the National Historic Preservation Act document that was offered on the website, the -- the -- it was noted that the Oglala Sioux Tribe considered government-to-government consultation attempts to be inform-and-educate meetings. So when you have one side considering meetings to be government-to-government consultation and another side seeing those meetings as being inform-and-educate from one side, that's a problem.

And next I would like to talk about the -- this National Environmental Protection Act, the NEPA process, and that you are supposed to have consulted with the tribe all along in determining any kind of development within our territorial homelands, and you have not done that, and that's illegal.

And so I would like to have another silent vote from the audience to raise your hands that you support that the EPA and any corporations that come here have to undergo and respect the NEPA process with respect to the tribes whose land they are on.

So I join with the other voices from today to urge you to listen, as many of the speakers have already said. Listen to the people here when you make your decisions. Seek the input of the tribes and truly listen to them. Listen to your own hearts, what matters to you. Does your children's future matter to you, or does money matter to you? Which is going to last longer? Which one is something that you'll want to look back on at the end of your life?
Thank you.

So does the lack of proper tribal consultation, which has caused the NRC endless headaches. You can't start tribal consultation partway through the process. It needed to be completed years ago.

I'm listening to the dialogue today, it was -- and yesterday. It was very powerful to me. I thought it was really very passionate. And I do think that what did come out was that there really needs to be more consultation with all the tribal units. And if that doesn't happen, that's -- that will be a real mistake.

One thing that bothers me is that the tribes haven't been consultated and -- consulted, and it bothers me because in the presentations that you give, you give us the appearance like it has. You're withholding information, and I don't really feel like you're being completely honest, and I don't feel like you ever will be.

[...]

See, you guys have a false perception of what that is, and I really wish that you would value life over money. Because I come from a poor nation. You do not have the right to tell me that I can't afford to have clean drinking water, and that my children don't have a right to live.

What happens when it becomes your water? What happens when you step away from the reservation and it's in your city or where you're from? You know, we've been standing for our water for a long time. I feel like our people are being attacked. We're not being respected. We're not being listened to, and our life value doesn't amount to yours because we're indigenous, we're poor, we're on a reservation, we don't -- it's like you're -- it's like you're not respecting.

See, it all boils down to respect. Would you feed your children the same water that you're trying to feed us? Every time you take a drink of that bottled water, where do you think that came from? It's probably stolen from indigenous lands. Every time you drink that coffee, it's made with the water, you know? What's happening there? I was in Standing Rock. You guys folded.

[...]

You know, we think we have control. You don't know what control is. That's -- that's false. It's not real. It's something that you tell us. See, we come in, and you guys are this civilized entity that's going to teach us savages how to behave, but it seems like you're the savages.

You come in here and rape the land, pollute the water. But do you really listen to anything that's being said? Like I said, I'm 36 years old. My mom and dad stood for this exact same thing in the '80s. Never once did you listen then. Don't come here to pacify us. Come to truly listen. Participate.

You know, a lot of people were right, your guys' decision basically has already been made. Because if it wasn't, the tribes would have been involved in the beginning. See, Cheyenne River, you guys are trying to border our land. Do you know that we have pipelines trying to go through our land? They are trying to bury nuclear waste on my reservation?

HAROLD FRAZIER: Thank you. One of the things I've noticed is, there's no schedule for tribal consultation. And I do -- and you're aware under NEPA you are required government- -- government-to-government consultation with tribes, and I see no schedule for that. And I don't even know if anything has been done in the area of consultation.

So my question to you, are you going to issue these permits before tribal consultation is completed or not?

Today, like we said, you know, the chairman before me, he said the NEPA, NHPA, all the federal laws that your government is supposed to protect for the people is not happening. So today, for the record, and your record, I'm going to say that there was never no true meaningful consultation on these issues.

And stand up for and with the people and everybody that's here. I oppose it. And I'm sure that everybody that got up here is opposing it. And I hope you're counting each person that comes up here and makes a statement, that they are in opposition to this.

I, too, feel like everything that you guys put on the earth, the video that we all saw, I feel like it's all a done deal again. And it has been. And I served, since 1990 on -- I mean, 2000 on Tribal Council. And there was never no true meaningful consultation for our tribes.

The federal government comes in, they have all this planned. And they sit there and they listen, and they say this is a consultation. Whether we agree or disagree, it happens anyway. When it's all -- it's all pre-done. Everything is done already. And then it's given to the people like it's happening right here today.

[...]

So just -- this afternoon or this evening, you know, I, too, come here, and I oppose it. And as a part of the Oglala Sioux Tribe, we opposed it by resolution, and we're going to continue opposing it. And for your record, there was no true meaningful consultation on this issue.

These lands all around here, these lands are sacred. There are burial sites for these beautiful people's families. Throughout history, their history, their ancestors have lived for many years in peace and harmony with these lands.

And then for many -- about 500 years, if not more, a great deal of conflict and pain. But they're still here. They're still here and they're strong. And it's an honor to be here amongst them, and it's an honor to have been called here. I thank you for allowing me to speak today.

But what we haven't talked about is white supremacy, and white supremacy allows that for 500 years us, as tribal people, kept saying no, and it doesn't matter.

We said no to the project up in Standing Rock. And what did you guys do? They brought up guns and tanks. So we can say no. We've been saying no. Your consultation process is rigged for the industry, and all of this is really rigged for the industry.

The cultural resources that you were wondering about and stuff like that, as a rancher, when I want to put a pipeline and I'm several miles away from where you're going to put this site, I have to do this study. And the reason why is because pre-historic Indians were in the area.

Well, then you just follow the trail, and it goes up to Craven Canyon, where the petroglyphs are. And anyway, that's relatively close to where the mining is. So I'm quite sure all the Natives that have spoken here really know that, you know, this is a sacred ground to them.

Very honored to see the youth here today, expressing themselves from their heart. The contamination that they fear is going to happen.

But quickly, I want to mention a few things. We've met before, Valois, Mr. Minter. We've met here in Hot Springs, we've met in Bismarck, we've met again in Rapid City covering these same things. And there were some issues that came up then that date back several years.

Number one is we need to conduct independent cultural surveys on the Dewey-Burdock area.

[...]

And you're putting the cart before the horse again by issuing a draft permit while all of these safety regulations haven't been met. So you're putting the cart before the horse. If you remember, the ASLB required you to do consultation again, do adequate consultation with the tribes. And you'll find that all of these tribes are opposed. I'll stop there.

Thank you very much for your time tonight.

MIENGUN PAMP: Hi. Bonjour.

(Speaking in indigenous language.)

My name is Miengun Pamp. I'm from Lansing, Michigan. My clan is Wolf. I just figured if everybody is introducing themselves in the proper way, I probably should.

The thing that I missed last time was, I wanted to say that what I saw at Standing Rock was nobody -- nobody looked over on the lands. Nobody respected what was there, you know.

I want proper geographic surveys of the land that you guys are going to be putting whatever holes in. Probably shouldn't do that anyways. I'd say no to that, just for the record.

But I mean, like one of the most horrible things I've ever seen is when, you know, these people were allowed to make this pipeline path or whatever, people watched bones being pushed up out of the ground.

I don't know how many people heard about it or saw pictures of it, but you could see it when that ground was, you know, pulled up. There were bones sticking out of it. That was people's ancestors, family members, grandparents, mother, fathers, children. It's a horrible thing, you know, that was allowed to happen.

So you know, it has to be voiced that that should be, you know, looked at, and it should definitely be looked at while under supervision of tribal members or something. Because from the sounds of it, from earlier testimonies, even if there are, you know, things found, Oh, let's just sweep it under the rug and pretend it wasn't there, you know. Oh, it's just meaningless.

EARL TALL: I heard a lot of good things from these young people today, our future generations. I spoke a couple days ago in Rapid City, and I talked about the Bible. And we all know that this land is stolen land. This land belongs to Lakota people. And we need to be consulted if anything is going to happen on this -- in these Black Hills.

They [the Lakota people] should be consulted, and they are the ones to approve the cultural, archaeological, and religious surveys that take place, and they should have the final say about what goes on here.

[...]

This project should not go forward at all unless and until the old mines have been cleaned and tribal-approved cultural, religious, and archaeological surveys take place, and true, genuine consultation with the tribes happens.

And you can't take it and say, Oh, this area is sacred, this area is sacred, this area is sacred. Well, I'm going to go and mine here and here where it's not sacred. You know, they did that at Crow Butte.

Oh, we know it's sacred, we know that. And they didn't consult with us. Again, they went to the state, the state preservation officer of Nebraska. And don't detach yourself on that. That is the Environmental Protection Agency. Again, we keep reiterating that.

I ask that you stand here with us and have an honest, open ear because there's only 2.5 percent drinkable water.

I ask again that you have tribally approved archaeologists, tribally approved surveyors, and understand that we are fighting for the future, and we should not be going up against our own government agencies to protect our future.

A full survey of cultural and historical sites is needed before mining or deep disposal is allowed. Cultural and historical sites must be protected.

Genuine tribal consultation should occur. Tribal-approved cultural and archaeological surveys should occur.

[...]

The tribal sovereignty and cultural issues have not been genuinely addressed.

Letter ID	Commenter Name	Text
103		SUBJECT: HAZARDOUS WASTE MATERIAL. I am a resident of Oglala, SD and I lived here most of my life. I grew up drinking water from Makizita Wakpa (White River) that runs through the western end of the Pine Ridge Indian Reservation. The water was naturally drinkable at that time, today it is contaminated with sewage, chemicals, medical waste, pesticides, herbicides, oil, trash, etc. and unsafe for drinking today and causes cancer. I am a cancer patient, I may have contracted the disease from working at Igloo, SD moving houses to the Pine Ridge Indian Reservation. There are 37 test holes at Slim Buttes, SD north of Chadron, NB. In 1981, there was a sudden breakout of SIDS and took the lives of many new born Indian children. Doctors at the IHS Indian hospital did report that it was caused from something in the air, perhaps radium – radon from the open test holes, so authorities transferred out the doctors. At that time, it was not clear if those test holes were capped, they sure did have lids. Capping is when cement is used to seal off each layer of sediment (rock, oil, natural gas, uranium etc.) When I was small Hoksila (boy) my parents told me that someday we will be asked if we are Christians. If you say yes then you will be punished or killed. Native Americans had their own spiritual beliefs like the cannunpa that a spirit woman brought to the Lakota Dakota Nakota people, 500 years before Christians came to turtle island, an anti-Christ followed them here, like another church called free mason, and 13 colonies formed a united constitution and declared themselves an independent government. Every U.S. president since has been a mason, native Americans were neither Christian nor mason, with the power of the $$$$ they ruled turtle island by their application of federal laws on everything, then they said we are citizens, but we are Ikce wicasa (natural people) and we have right to live this way because we have our own laws, spiritual or otherwise. (...) What is underground in the underworld must remain forever. Pro Dewey/burdock people believe that it is perfectly safe for hazardous mining waste deposition in the Mniluzahan aquifer. A speaker at Edgemont E.P.A. hearing quoted a story, "Bible creation story tells of Eve take an apple from forbidden tree and gave it to Adam. They were driven away from the garden, in shame Adam took the apple and buried it in the ground to remain forever. The apple represents the underworld where the oil, the uranium, and other evil things are. They are not to bring these up to the upper world or it would destroy all life."
268	Ex. 6 Personal Privacy (PP)	The Indigenous peoples (also known as Native Americans or Indians) creations stories come from Mother Earth. The instructions, to protect Mother Earth were giving to us since the beginning of time. I live with oil and gas and witnessed the environmental and health impacts. We're in the next wave of assimilation, our land has been mortgaged out to those who don't know its value or how important it is to our people. We have left our future, our children's futures, and the question of a healthy environment in your hands and what do we have left? We have continuously been forced to assimilate to live how their society thinks is the only way. Everything has been taken repeatedly, every promise broken. And we have to accept it. Our lands have been taken, mined, and extracted of resources that will never be available again because of white man's GREED. It's destroying us. White people in the capitol, who don't live anywhere near the devastation that we have to deal with on a daily basis, are making decisions that don't affect them. Yet they profit from selling out the people they claim to represent. We were forced to relocate here, and it is the only lands that we have left that ties us to our ancestors. The intruders can leave whenever they want, we don't have that option. We will have to deal with the aftermath of the irreparable environmental destruction. These white people are only here to profit off our oil, which is another flood of the same invaders who came to our lands centuries ago. These people have no ties to this community, their roots aren't here. They came from Europe and settled here. They have no respect for our Mother Earth. They don't know any better because their history proves their trail of destruction. They blinded our people with lies and greed. They told us how safe it is to extract oil and to build their pipelines. We do not know if our water is safe to drink, if the air is safe to breathe, if our land is healthy to sustain life. We are surrounded by flares while our people die in the winter. We live next to the 2 encroachers on our lands. We see pipelines running through the lands as if they are veins of our Mother Earth. The poison isn't going to end. "A review of the ethnographic literature demonstrates that the Black Hills was a sacred area for several Tribes, and that it has been encoded as an important landmark in tribal narratives." According to the National Park Service, many tribes have potential cultural affiliation with Black Hills. Traditional ceremonial activities which demonstrate the sacred nature of Black Hills to tribes include: Personal Rituals: Prayer offerings (bundles and cloths), sweatlodge ceremonies, vision quests, funerals. Group Rituals: Sun Dance. Sacred Narratives: Origin legends, legends of culture heros, and legends of the origins of ceremonies and sacred objects. Today we are seeking to: (1) continue our religious practice as we have traditionally (2) maintain the land that has ancestral significance and provides deep ties to our culture that has been severely affected by colonization and American expansion, (3) preserve the land in its natural state and maintaining its deep, religious connections, and finally, (4) protect and preserve the soil – it is the foundation of healthy land and water.
281		I have learned the bitter historical truth that we white Americans stole most of the Lakota land, kidnapped their children, nearly obliterated their culture, almost caused the extinction of the bison, and massacred their people on multiple occasions. I benefit from these actions in part because my house sits on some of the stolen land.
470		No uranium dumping in our area or anywhere in the mid-west. We have to take care of Mother Earth for use by generations to come. The Lakota medicine wheel has four parts. They are each a different color and represent a race of people and their purpose. The east is yellow, representing Asian and/or Oriental people who are responsible for spirituality. The south is white, representing Caucasian people who are responsible for the physical self or going inward to find self. The west is black for African Americans who are responsible for the emotional or psychological and the water. The north is the color red, for Native Americans who are responsible for the land and the mental aspect of life. Caring for Mother Earth.
515		We all used world wide resources that our Earth has provided for her two-legged children for centuries. Out of her lover for use we are still here today! It is out of that love & nurture, that I pray for your spirits that have become stagnant which has occurred overtime of ignoring our history. We should utilize our past to stop burning ourselves in the same fire! This representing the choices we make to destroy our Grandmother Earth, expecting different results to make what was once created perfect for us a supposedly "better place." For our brothers & sisters that have been led astray from their bond with Grandmother Earth by greed, let them be made aware it is a hunger that shall never be fulfilled! The emotion your spirit yearns for is the connection every child should have with their mother. The biggest band wagon to self-destruction is greed! A conception that the more currency you have will fill the emptiness that only mother earth can make whole. Let your spiritual roots grow, spiritual connection with Grandmother Earth is true happiness & we will not allow this to happen to our communities any longer.

		Do not mistake our kindness as an Indigenous people as a weakness among a misunderstood nation I obviously the last protectors of a wisdom that can heal our world. We will not be easily pushed aside time after time. I stand before our today, not only for the people standing strong behind me, but for your children you have sold out for what? Through my humbled spirit instilled within me through my connection with the Earth, I pray persistently for everyone among us that we may remove the veil from our spiritual consciousness & that our Grandmother Earth forgive our naïve curiosity derived from the discerning spread of greed. The ways of our Ancestors that flourished contently without depleting our precious resources are either chosen to be forgotten or stomped on. What is happening now here with the mine is just one of the many events of a bigger picture that will be an inevitable expression of cause & effect. We will soon no longer exist if we do nothing! If we fail to compromise the entity that plagues our lands, chaos will spread. Where a hose men hiding? In their planning rooms? They send out their minions that are programmed with paper printed with the faces of the people that have deceived all people...For that is the afflicted by any decisions made by the Government, Mankind?
07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	DARLA BLACK: (Speaking in indigenous language.) First of all, I want to greet you. I'm from the Oglala Sioux Tribe. I am the vice president of the Oglala Sioux Tribe. I'm an elected official. However, I also want to point out that as a member of the Oglala Sioux Tribe, in our traditional ways and our traditional beliefs, we also believe that water is sacred to us. As a woman, 90 percent of your body is water. When you carry a child, that child lives in water before they are born. There is major spiritual significance we are talking about here. Historical. It's our way of life and our belief system.
07459 (Valentine hearing)		LYNNE COLOMBE: Good evening. My name is Lynne Colombe, and I was born and raised on the Rosebud Sioux Indian Reservation, just about 40 miles from here, I suppose. I just wanted to speak a little bit on behalf of my own children, especially Johnny and Jocelyn Jones, who are now nine and ten years old. And they were with me throughout the movement up at Standing Rock. They spent a lot of time just kind of seeing what was going on. And they were there with me a couple of days before the Oceti Sakowin Camp was closed. And one thing that my nine-year-old asked was, "So, Mom, if they are going to put that pipe in that water, does that mean that they don't care about the children? Does that mean that they don't care about our future?" And I couldn't answer them that day. It was too intense, everything else that was going on around us. And, you know, then on the way over here today, my ten-year-old, who has autism -- she's very high-functioning, and she really tends to see the world in black-and-white. We were on our way over here, and she said, "Mom, why doesn't God help us?" And I said, "What do you mean?" And she said, "Why doesn't God help us to save the water? Why does he let these people come and just ruin our water?" So I had to tell her, well, we're all here with free will, you know, and we -- even though it's our job to be good stewards of the earth, and it's our job to protect the land and the water, and I explained to her about how everything in nature was a gift to us from God. And that we were the people, all of us here, that are charged with the stewardness of the land and the air and the water.
07459 (Valentine hearing)		We need -- we work -- as a Lakota people, in spirituality, we are connected to the land, that everything is alive -- the rocks, the trees, the vegetation, the animals. Everything is effective. When you hear the term "mitakuye oyasin," it means "all my relations." It means all the elements in the universe. And I ask them to come pay attention, to call for their attention to this center. There's something we call a hocoka. It is where we center, where the voice -- where we call our voice from. And the Black Hills is our hocoka. It is the center of the universe.
07459 (Valentine hearing)		ROWEN and SEQUOIA BLANCHFLOWER: (Singing in indigenous language.)
07459 (Valentine hearing)		SAM HIGH CRANE: Good evening to you, ladies, and good evening to you all. My name is Sam High Crane. I come from the Rosebud Lakota Reservation, same place where Lynne and some of the others that are here. And I think -- I have nothing written to present to you, but from the top of my head, I guess, I'll try to go. Way back when I was a young -- young boy, little boy, I had a great-grandmother who was the daughter of the well-known Chief Hollow Horn Bear. And she used to tell us stories, talk about the past a lot, and she also talked about the future. She said the world that we live in today is the second world that we are living in. The first one was demolished, and we surfaced to the earth from the Black Hills. And she said how the people got greedy, how they became liars and cheaters and Iktomi. Iktomi is a story that has many tales about wisdom, cheating, lying, stealing, all these things. And she said in the future, there's going to be a third world coming, and when that third world comes, it's going to be a major catastrophe. She said the weather is going to change, and the world is going to tip over to one side. And I thought all this time these were only stories, until one day I was in California. I just pulled into California, Sacramento, and they had that earthquake in the ocean in Japan. And that tsunami was coming towards the West Coast, and everyone was all excited. They didn't know where to go. They didn't know where to go hide. And eventually, about three or four days I believe it was, later, it hit Portland, Oregon. And the rain came, and it washed away all kinds of mountainsides. And look what the weather is like today. When I was a little kid, again, we were able to drink from the river back in Spring Creek, from the springs. They call it Spring Creek because almost every little valley, there's a spring that comes out from somewheres, and it becomes into Little White River. But anymore, we can't drink that water. We have to rely on well water, and even that is questionable. Because within the last 20 years, I believe, the cancer rate right there in Rosebud and surrounding has gone quite high. And it just -- I was sitting there thinking of how -- what do we have to do to get our message across that some of us -- we say money gives life. In Lakota we say Unci Maka gives us life -- the water, the plants, the animals. And so who do we talk to about our resistance? Because people that don't even live here, they come and they put uranium mines right in our backyard, as this one lady spoke about. Or they put oil lines, and we resist it and resist it, and they just said, "Well, put it in."

		That tells me we have -- our lives are ending. So I guess my stop sign popped up, so -- so anyway, thank you all for listening, and I'm sorry that we only have five minutes. I could have gone another hour. Thank you.
07459 (Valentine hearing)		And you remember this, you know, Christians, they have Jerusalem, their mecca. You know, the Black Hills is our mecca. That is the center of the universe. That's where everything started. We know that because our -- our history -- we were, we raised that. We grow our kids like that. We don't forget that ever. And that's been our philosophy. Don't you ever forget that. You come out of Wind Cave. So you know what, if we could ever get down there and look at it, which we can't, given though that's our home -- can you imagine that, never, ever going back in your home? Yeah. And you want to go in there and -- it's just really overwhelming. You know, because we swim, we fish, we just -- we're not in -- and that's our home. That's where we come out of. Go to Wind Cave, and they'll tell you that, too. And those aquifers down there, there's caves where we lived. And that -- those petroglyphs, those are all ours, and you take that away from us.
7460 (5/8 Rapid City hearing)		I just want to read a little bit about Chief Seattle's poem that he wrote to Washington when they wanted to take their land. "The President in Washington sends word that he wishes to buy our land. But how can you buy or sell the sky or the land? The idea is strange to us. If we do not own the freshness of the air and the sparkle of the water, how can you sell it then? "Every part of this earth is sacred to my people. Every shining pine needle, every humming insect, all are holy in the memory and experience of my people." And he goes on to say: "If we sell you our land, remember that the air is precious to us, that the air shares its spirit with all the life it supports. The wind that gave our grandfather his first breath also receives his last sigh. The wind also gives our children the spirit of life. So if we sell you our land, you must keep it apart and sacred as a place where man can go to taste the wind that is sweetened by the meadow flowers. "This we know: The earth does not belong to man, man belongs to the earth. All things are connected like the blood that unites us all. Man did not weave the web of life, he is merely a strand of it. Whatever he does to the web, he does to himself." [...] We cannot deny the effects that this project will have long-term for not only ourselves, but also for our children, our grandchildren. And it is of the Native belief that we need to keep in mind the lives of our grandchildren when we make decisions today, that seventh generation principle, and we can't forget that. So keep these words in mind and the prayers of the people and the life of this earth when you are making your decision. Thank you.
7460 (5/8 Rapid City hearing)		There's a prophecy, the Black Elk's prophecy saying that the seventh generation will come back and save this world and make changes to it. And as part of the seventh generation, it is our duty to -- my duty to protect our water, protect our way of life, and protect all living things. No matter how small or how big they may be, we will always protect them. Thank you.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	We come through a long time of historic trauma, and we survived so far from near extermination. We stood up in opposition to the Dakota Access Pipeline. We had over 500 nations come, over 600 flags. The value of water and life drove these people to come and stand with us. And for us to have to do it again over and over, to open the eyes and the ears of the world, if we have to do it over and over to make it happen, we will. But this is something that even you that sit here listening to us have got to fight for also. You have children. You have relatives. They are going to depend on the water. Now, we don't need no corporation or political people that live hundreds of miles away making decisions on our land, and so I come here hoping, praying that you will listen to the people. We already have made a lot of contamination in our water already from the Homestake gold mine, the Cheyenne River. A lot of my relatives back home on the Cheyenne River Reservation have cancer, diabetes, a lot of illnesses due to the water that we're drinking. And it's going to be even more so. I come from a family, White Buffalo Calf Pipe. Our first keeper lived to be 450 years old, and today, because of all the contamination in our world, it's between 35 to 75 years old. And it will get even less and less if we allow these here contaminations to happen. You're going to have a lot of birth defects in young people with no compassion for life. And so we have to do something for the future generations. My ancestors were fighters. Both my grandpas, you know, Crazy Horse and Sitting Bull, and they fought for their people. It's an honor to die for your people, for something worthy, for life. And so I hope that nothing happens here. This is our sacred lands here. This is our creation story that started. Our people came from Wind Cave. And this is where life began for us. We came on top of the world with the buffalo. The man and the buffalo came from Wind Cave. We had a great race around these Black Hills and the two-legged won. So here we are. Maybe if the buffalo won, we wouldn't have poisoned water or poisoned land. But we won. So now we have to keep this land in balance and harmony. So whatever we do today, the decisions we make, affects the future. And so I hope everybody in this world, in this room puts out the word. We can do the right thing here for the people, for the future. Because if we don't do that, this world will be lost. Our grandfathers prophesied that the seventh generation is a turning point, and we're at that turning point today. So either bring back the balance to the world or lose it. These are messages that our grandfathers gave us. And so I know that all the people that have a heart for the future generations will stand up and fight, because this is something that we all want. And it's not up to the very few political people, the billionaires that are in charge, corporations to destroy our world. It's our hope that we can all find it in our heart to reject and oppose this uranium mining and everything that is contaminating our world. So again, a'ho. Thank you for listening to me. Wopila.
7460 (5/8 Rapid City hearing)		I listened to one of my other uncles talk -- or two of my other uncles talk to you about creation and what creation means to us and what the Black Hills mean to us and then about what water means to us. My friend was talking earlier, and she was nervous about what should she say, and I was teasing her, giving her all kinds of things to say that would probably get her thrown out of here, and she was wise not to listen to me.

		But I wanted to -- I was thinking about something all while everyone was talking, and I really appreciate all the scientific words and testimony that was given today because I appreciate that. I appreciate all the people that have come and talked about the morality of this issue that we're facing. And I'm -- I'm from here. I'm born from this soil. And when I -- my spirit leaves, my body will be placed back to the soil. I have two children and two granddaughters, and I was thinking about them, like maybe I should say something on their behalf because nobody else is. I mean, we're in here, we're all speaking for our children and our grandchildren and our grandchildren that haven't even come here yet. And so we're trying to talk about what this means to us and to them and the reality of why we're even here talking about this. And it's not even -- it's important to us, but it seems like in this whole world of corporate rule, that it's not even important to that part of the world. And then I wonder, like, you know, and you guys probably know about this, that last year for a really long time, there was an encampment that was in North Dakota, right? And people gathered, and they protested, and we defined water-protectors. And so a lot of people here are water-protectors. We come here to protect our water. And so I wanted to share with you that if you could think about some time ago, it was a pretty long time ago, that the story is, like, told to me from my grandmothers and my grandfathers and from many of my relatives that they probably heard it the same way. But a long time ago, there was a time before everything, and in that time, there was nothing but darkness and Inyan. And Inyan is the one that made creation. And Inyan made Unci Maka. And in order for her to survive, he had to sacrifice his own life, and he did, and he gave her water so that she could live. And so that story is important to us, as all our creation stories are important to us. And so when you think about what does that mean, do we have value? Is there a value in our story? Because water is life.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	I am a mother and a grandmother, and I am deeply concerned about what the future -- what future we are leaving for the next generation, the future generations. As Lakota people, we say seven generations we have to think of, and each generation thinks of seven generations. So it keeps going on. [...] So each one of us must protect Mother Earth and her life blood, which is water. When we say Mni Wiconi, "Mni" is water, "Wiconi" is life. That's why Mni Wiconi.
7461 (5/9 Rapid City hearing)		I would like to say also that when the Anglos first came into this country, they came with a black book. They called it a Bible. And when they came again -- when they came to the Lakota people, they gave us that Bible, told us to read it. Some of the things that was in there was, "Thou shalt not steal," and then they stole our land, all our minerals, everything you see. Another -- another one was, "Thou shalt not kill." They killed our women and children in Wounded Knee. Other places, they were massacred after they were disarmed. Today we have a Bible. Everything else is gone. But we still claim this. It still belongs to us. And the Supreme Court decision on the Black Hills proved it, told everybody this land was stolen. And they try to offer us money for it. Today that money is still sitting there, wherever, in the Treasury with maybe several billion dollars with interest now. We still didn't touch it. That's what this -- that's what this land means to us, the Lakota people. We'll never sell it. And so we've just got -- I just want to say it's time to get ready for what's the next plan because, like was said, it seems like it's a done deal already. Permits are probably being issued again, so we need to start thinking about this, our next step here. (Speaking in indigenous language.)
7461 (5/9 Rapid City hearing)		IRMINA REDDOVE: I want to apologize because I'm Lakota, and I was raised with my grandparents and my parents together, and I'm a descendent of the Chief American Horse. I used to live on American Horse Creek in Kyle, south of Kyle. But I wanted to speak earlier, but everybody was facing this direction, and I was taught not to get up and speak in front of your people with your back turned to your people because that is an insult. And I didn't want to insult anybody in this room, so I chose to speak this way. And I listened. I came yesterday and I listened. I learned a lot. And this morning I went to Grey Eagle Society meeting because I'm a member of that group, and so I made a report as far as what I heard yesterday. And then I came back after lunch with them and came up here to listen to what else was being said so I can go back and report, make a complete report to the Grey Eagle Society members. We're an elderly advisory group to our people. We come from each district on our reservation in Pine Ridge, and we talk about what kinds of things we need to tell our leaders and to assist them in any way we can. With our knowledge and with what they know, it's sort of -- we work with the youth, too, and we're trying intergenerational communication so that we can all come from one place. And I really had a concern when I found out about the uranium mining, because I'm 74 years old, and I have great-grandchildren, and now I am expecting a great-great-grandchild very soon. So I'm really happy that I've lived this long to see that. But now I'm concerned with my leaving, what am I leaving behind for these children. And so I thought it's time to get -- stand up and speak out because I want to save whatever we can of Unci Maka for the future of our children that are coming, the seven generations that are coming for me. And so I -- I told my family, my extended family, our tiyospaye, that we need to start getting involved because we do things together as a tiyospaye, and so it's time to not only stand up and speak out. I have great-great-grandchildren coming, and so we all need to watch out for them. I know if I'm not around that they will be the ones to take care of them because we have no orphans as such. We are extended family. We take care of all our children together in our tiyospaye. And so I wanted to share that with you, my concern for the future of our children. And I wanted to really commend these young people, the indigenous peoples that stand up and work together with the non-Indians. And that's -- I've really learned to appreciate that, working together, and maybe completing our circles as we go along. Because in my life, everything is a circle. And I've learned that. And I teach -- I'm a retired teacher administrator, and I worked with children in our schools, and I teach -- within that circle teaching Black Elks. I read somewhere that everything is a circle. We need to be strong and happy again. Our hoop was broken, but we're on the mend, and so we need to widen our circles and be more inclusive to save our Mother Earth. I call her Mother because now I'm Unci, great-great-grandmother.

		And I appreciate every day of my life. Every morning when I wake up, I hear the birds, and then in the evening I sit outside and watch the stars because I know where I come from. And I want my grandchildren and my great-great-grandchildren to know where they come from and who they are. So I've been teaching the Lakota language and culture in the schools, and I'm becoming even more aware since I've been teaching the circles that we use in life that we have learned to see in nature. And I'm trying to teach these little kids. I love them so much. After the classes, they come around to me and hug me, and they'll say, "Unci, Unci, I need a hug." And so I give them a hug. I said, "Everybody needs hugs. I do, too." And so I try to give them a little love and some teachings that I know through stories and through the traditional teaching ways with the circle. So I'm developing a curriculum with certain teaching within the circle. And the beginning of that, as my elders told me, was that always begin with nurturing the spirit of the child, and that way they'll be strong and they'll be happy. And so that's the first thing we do is, they all know the medicine wheel. Most people know the medicine wheel, most people know the medicine wheel. But also Fools Crow taught me that within that medicine wheel, too, the colors stand for the peoples and each direction, the different races. The white [sic] was African-American, the red is indigenous peoples, the yellow is the Asian/Orientals, and the south was the Europeans. And we all belong in that circle as human beings. And so he said keep that in your heart. Everything should come from the heart. And then when this comes into play, it will be guided in the right direction. So that's what I wanted to say because I really feel somehow that we're -- we feel -- I feel threatened by this uranium mining, and we must -- must prevent it from happening for the future of all children. We all belong in that sacred circle. So that's just what I wanted to mention. Thank you.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	SOPHIA BLACK CLOUD: Hello. And thank you for calling my name again. I am a mother first and foremost, so that's why I wasn't here, I guess, when you called my name the first couple of times. So thank you. Again, my name is Sophia Black Cloud, and I am a descendent of Sitting Bull's tribe. My father is full Lakota Hunkpapa Sioux, and my mother is Aztec. And with that being said, I was born in Mobridge, South Dakota. And, quickly, two of my mother's family from Santa Barbara, California was taken off of the reservation for reasons of my mother's family's doings. So I was raised in Santa Barbara, California where as a child I was raised on the beach and in the mountains and had a father who was not around physically, but very much so in my ear and in my heart, and we wrote and spoke quite often. And being raised in California gave me the opportunity to see the drilling offshore and the drilling in our mountains. And as a child, swam amongst pipelines in our ocean that leaked just horrible toxins into the water we were literally swimming in. So I started to question that as a very young child. And then in elementary school, my first recollection of being introduced to knowledge of the Sioux Indians, as my elementary schoolbooks wrote, was horrific. And so I remember as a young child being turned off altogether to the white man's way of learning. It didn't explain who I was at all. It was just incredible the things that were written in my elementary schoolbook. And so anyway, so growing up in California, again, was able to see those things. And then became a woman and started having children and -- sorry, that clock is -- then started having children of my own and wanting to teach them who I was and where I came from. And after my father showing up on my doorstep after 20-some-odd years and reminding who I was after I had had children and that I wasn't teaching them truths and things that he had been teaching me my whole life, he then brought me back home to the Standing Rock Reservation, Fort Yates, North Dakota. And I fell in love. I fell in love with everything about who I was, who my family was. But then I started to take a good look around at what was really going on, and to who I was, and started reading and teaching myself what the school systems had failed to teach me about water and things like the Fort Laramie Treaty. [...] And so now looking into things and trying to get my children -- I now am a resident here in Rapid City, all the way from California, and trying to get to my hometown in North Dakota. And then seeing what's going on there, I just feel like -- it's like the blind leading the blind. You just don't know what you are doing. My great-great-grandfather fought for me to have these Black Hills. They are in our name, my last name. We belong to those Black Hills. You guys belong to the Black Hills. And the fact that you're willing to jeopardize that -- my three-year-old daughter was here. She is a water-protector. She knows how important water and those Black Hills mean to our family. You know, we go there to touch the ground and the water. And to think that I heard the lady yesterday say that those waters are dirty and contaminated, it just -- because you take a dump, you just don't not wipe again. Do you know what I mean? You just -- you don't keep contaminating things. You clean up the messes you guys have already created, and you help us protect these rights that you guys gave us, that we allowed you to give us. So I can see my time is up, and that's all I've been able to concentrate -- I could go on forever and a day. But I'm here fighting for my great-great-grandfather who fought for me to be here and to protect those Black Hills, and that's exactly what I'm going to do. I'm going to protect these free rights, and my children are going to do the same. So, my father fought in 1981 that uranium, and they won. And that's what we intend to do today.
7461 (5/9 Rapid City hearing)		WANKINYA HO WASTE: (Speaking in indigenous language.) As I stand here today, I'm standing with 500 years of resistance. I'm speaking in a 500-year-old voice that's still speaking resistance. When I speak up here, I'm speaking for the water, the earth, the sky, the land we walk upon. I'm speaking for your God that you settlers killed a long time ago. I'm speaking for your Jesus that you settlers hung on the cross and that still hangs there today. When you are here, I want to remind you whose land you're on. It's not mine and its none of these people. It's Mother Earth's. I'm only here for opposing something that is very detrimental for the environment. Or in deeper terms, you're trying to kill our mother. You can make all the plans that you want about how safe it is, but why not let us make plans. I want you to tell that foreign country to take their asses back to their own lands and fix their own air and water. I know -- everybody knows damn well Japan can't breathe their own air.

		[...] And by -- if the settlers learned from us, we would still be drinking out of the rivers that flow today. But yet we are still looking for gasses that still support our cars that we drive. We still look for ways to destroy the land without even knowing it. But I want you to realize that Mother Earth is a human being, not the way we see human, but she is a living, well entity. And if you keep throwing your cancer at her, she will throw an antibiotic right back, and she will wipe the human being out, which is us. I'm not trying to blame anybody for anything, but I want them to wake up and realize that this is all we have. We have nowhere else to go. Find it in your heart. Remind yourself why. Why kill lands for money? And even you coming here today, I want you to realize you've been programmed to work in the society. You've been programmed all your life to find this American Dream. Your jobs that you get paid for is all programmed real reality is outside of your homes with the land. And the water we drink is our -- should be our reality right now. We should be building the relationship to this earth rather than to economic systems and government svstems. And I know for sure that you don't want to be traveling. I know that you don't have to be here, but you could be traveling. But you've been paid to be here. You've been paid to hear crying voices that's been crying for 500 years, and I want you -- I want to get you -- I want to remind you why we are here, and it's for Mother Earth.
7462 (Hot Springs hearing)		ANGELINA ROJAS: (Speaking in indigenous language.) Hi. My name is Angelina Rojas. I am 15, and I am a young woman. I live in Rapid City, South Dakota. And I'm from Pierre, South Dakota. I was born in Pierre. And I have a quote from Evo Morales, he was a man, part of a movement for a social-political sovereignty people. And he said, "Sooner or later, we will have to recognize that the Earth has rights, too, to live without pollution. What mankind must know is that human beings cannot live without Mother Earth, but the planet can live without humans." My people are here spiritually. Our ancestors watch over us. If you heard the creation story, you will learn. We need to respect our Mother Earth. To think that the future generation and our children will have to grow up in a world where we cannot respect our Mother Earth and only think of theirselves and their profits. To my point, would you like your children, your grandchildren, the future generation to live in an environment that could have been protected if nothing at this point is done? Thank you. (Speaking in indigenous language.)
7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	At the very beginning -- yesterday I was at Rapid City, two days of that comments, talking, and I kind of felt bad. I felt bad because what these two ladies are going through. And all these people in our council, in our traditional ways, the men discuss what's best for the tribe. And they always consider the women the backbone of that nation. So there's a different government, different structure. (Speaking in indigenous language.) I can't see those at all. I said I heard a lot of what the women went through, and I felt bad. But (speaking in indigenous language) that's how you -- the White America is. It's always been that way that. A lot of our ancestors have told us about how it has been. And we are a very spiritual nation. We are a warrior nation, but spiritually. In our language, there is no cuss words. There is nothing bad. It's all humor. When something bad happens to somebody and I should get mad, they make it into -- they all start laughing. A lot of what I heard here is not compromising. It's all power. Somebody wants this done. And I know -- it cannot be done because of what it represents. (Speaking in indigenous language.) When something like this is taking place when life are concerned, think about it. Think about it. (Speaking in indigenous language.) The people, we think about it. [...] And I personally can say this: Mni Wiconi. This word means a lot. Mni Wiconi. Life. Water is life. There's four elements that we use in our spiritual ceremonies -- water, air, fire, and Grandmother Earth. Grandmother Earth makes an altar for us. It's universal. The whole world is the altar. Why would somebody come and start poisoning the water? It's not good. Not good for our coming generation, the seventh generation. The seventh generation is a very important generation for us.
7462 (Hot Springs hearing)		DANIELLE ROSE: My name is Danielle Rose. I live in Hot Springs and Eagle Butte. (Speaking in indigenous language.) My Lakota greeting was I greet each of you from this side of the room all the way around to here with a warm heart and a hearty handshake. My Lakota name is First Cloud. I was named after Chief White Swan's -- one of his three daughters, First Cloud. I'm a tribal member of Cheyenne River, and I grew up near Green Grass. Today I want to express my disagreement with the permits by using the medicine wheel. Most of you know, that's divided into four quadrants with the colors yellow, white, black, and red. Well, those colors represent the races. Yellow is for Asian or Oriental, and they're responsible for spirituality. White is for Caucasians, and they are responsible for the physical and introspection, going inside of self. The black, of course, is African-Americans, and they are responsible for the water. And red, of course, is us Native Americans, and we're responsible for the land, or Mother Earth. I beg you to listen to the learned speakers that have presented today. I'm -- I've learned so much. And I'd like to ask that you in your position -- and I know you have a lot of responsibility, especially in this current administration. It must be very difficult. But I ask you to look inside yourself, look at your heart, and have the courage to do what's right and protect the water and protect Mother Earth. (Speaking in indigenous language.)
7462 (Hot Springs hearing)		JEREMIAH MORENO: (Speaking in indigenous language.) I just introduced myself in my sovereign nation's traditional language. My name is Jeremiah. My grandmother's name is Margaret Red Shirt. My dad's name is Francisco Moreno. My mom's name is Gracie Red Shirt, and my daughter, who was just up here a little while ago, Endonnis. And we all have Lakota names. And I introduced myself to all of you and to you up here in our traditional way. That makes us relatives now.

		So a lot of -- just wanted to express some stuff. My students -- I brought some of my students with me. I work in Rapid City, South Dakota, and I work with the youth. And I work in West Middle School and Southwest Middle School, and we have an after-school program called Ateyapi. And there, you know, we have a good time, and my students, you know, I express a lot of knowledge to my students, and they express a lot to me. One of the things that they expressed to me is that they wanted to be here today, so I brought them. And they are not my students, really. They are my nieces and nephews. That's what I call them. I wanted to tell you a little bit about what they did today. On their own, they walked down to the little arbor, and they got some water. They tasted it, and they put some in a bottle, and they started drinking it on their walk over here from over there. And it warmed my heart up to see that, to see them sitting over here wanting to get up and do something and make a stand for what they believe in. I just wanted to let you guys know that you're sitting here on Indian land, and I would like to deny this uranium mine.
7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	ROBERT WHITE MOUNTAIN: Feels like I'm walking up on a talent show or something. (Speaking in indigenous language.) My name is Robert White Mountain. I'm a Hunkpapa Lakota. On my mother's side, I come from Sitting Bull, his tiyospaye. On my father's side, I come from Rain in the Face. And this lady that talked before me, I didn't quite get her name, but she brought up a thing that -- before I talk about that, I just want you to -- I think everybody is going to raise their hand if you're -- who drinks water? So everybody who drinks water, raise your hand. I think that's everybody. So I had another question. Who all loves water and would like to protect it? All right. So my grandfather told me one time, he said, "What is a Lakota?" And so he told me what a Lakota is. Now, I'm a Hunkpapa Lakota. That's what they call me. He said, "What is a Lakota?" A Lakota, he explained to me, is someone that claims to be an ally to the spirit of all that is. And water is part of all that is. Water is part of all creation. So if we love water, we want to protect water, we're all Lakota, and we're all related. We all breathe. We all drink. We all sleep. We all have red blood. We're all related. Even though we may be different colors, whatever it is, but we're all related. And 36 years ago, I was a young man, and I was at Craven Canyon, and they have some petroglyphs there they were trying to destroy for uranium mining. And these petroglyphs tell history from the beginning to the end on how we are all related, how we all come from the same place. But that's a long story. I won't get into that. But anyway, it just explains -- to me, just told me, you know, that through these petroglyphs -- we studied those for a long time. We also were put under siege for being there 36 years ago. And three -- two years ago, I was telling the story to some young kids around a fire over here in a cabin in the Black Hills here. And I was telling about how we were praying. All we did was pray for the water. We prayed for the land, and we got completely surrounded by cops. We got completely surrounded by vigilantes on horseback. Had 250 cops and vigilantes surrounding us because we wanted to pray for the land. End result was -- end result of that whole thing was that I was able to stop the uranium mining right there at Craven Canyon, and we have saved that sacred site. But now it's under fire again because of what's going on here today, and I really -- I really -- you know, I went up on the hill and I fasted and I prayed several times, a couple times. And I went up in the Badlands. And after this last time I went up there and I fasted and prayed for four days and four nights, I come to realize, you know, though that -- what that teacher was telling me that, you know, some day throughout your spiritual life or your life, you'll realize that someday you are going to look at people and you're not going to see the color, that you're going to see that we're all related. So after this last time I went up on the hill, I fasted and prayed. After that, I came down, and it was a whole different meaning for me. So it was -- it was to a point where I could not see color. I can look at that guy not as a white guy or black guy, I look at him because he's a human being, and we all are human beings and we all need water. I'm sorry. You know, but the basic thing is we all -- we have so much alternative things that we can do besides destroy ourselves, besides destroy man. You know, I heard a gentleman talking, and he said, you know, the wind -- wind is bad because it kills birds. Solar is bad because you still have to use natural materials to make the panels, costs too much. But I never heard anything about magnetic. [...] ROBERT WHITE MOUNTAIN: I never heard anything about geothermal. Those are all renewable energies. They don't stop, they are not expensive, and they don't cost -- you know, if you use -- and they are all renewable. We don't have to kill ourselves over it. So I just -- you know, to conclude here, you know, that this land was all taken illegally. That's all going to be settled eventually, but that's not for us to say right now because it was all taken illegally. We all know that. But I won't talk about that here, so -- but the thing is, what we're talking about right now is that we're all human. We are all of the human family. We all have to live, and we all want to live together as one family. Thank you.
7462 (Hot Springs hearing)		TONIA STANDS: Hello again. Hello again. I'm Tonia Stands. (Speaking in indigenous language.) That's my Lakota name, first Lakota name. So I hold that with all my heart because my grandma gave that to me. I really honor that. And the reason I'm going to tell you about my grandma and my Lakota name is there's a huge ancient connection through me that is, I guess, intellectual property. I'm not a scientist. I'm not -- I don't have no American degree. But through me -- time has passed through me, and I know things about this place and about this water. And you know, I look at you, and I think I would love for you to understand what this place means to them, the whole nation of people that speak Lakota, Dakota, and Nakota language. We're all one nation. And we don't -- and we come out of the ground. We come out of Wind Cave. You can go to Wind Cave, and there's a nice little sign that points at a hole in the ground, and it tells that story. And you can't take that away from us, and you can't deny that. And we -- we -- they made this country on a religious freedom, you know. It's the constitutional right we have, religious freedom.

		And you know, it -- and I'm -- I'm -- I was born in 1978. And in that year, in 1978, as old as I am, that is as long as we've had religious freedom. We can't go access these sacred sites because now they are in -- not on our property. All I can tell you is this is the mecca, this is the center of the universe. We have -- everything is a relative. We have a Lakota, Dakota, Nakota name for each element that science hasn't even caught up with. We have cultures that are like polar opposites. And the reality is the President is the center of everything, but in our way of life, it's the inner circle. That -- that's who we -- that's who leads us -- our children, our elders, never, ever, ever a man. And we're led -- and our people are led by the women. We're natural multitaskers. We can just have this all figured out and food on the table, everything done, and smiling. So -- and we honor that. And you guys come from a culture that's, again, the polar opposites. And you look at that, and you don't even have -- you couldn't even vote. You couldn't even vote. That's how -- that's how in that little amount of time that you've come, but yet we lived that since the beginning of time. So anyway, I come from Oglala, which is about, you know, as the bird flies, right over here. Well, through my family that comes from there, our territorial homeland guardians, we go south, my grandmas that raised me. So they brought me into this area and, you know what, I grew up off the land. I didn't have running water, electricity. I lived in a house that my grandpa built, my great-grandpa. And my great-grandpa, we lived here, and we were pushed back to a reservation, and we couldn't come back out here without a pass. So my grandmas come through Hot Springs, and they used to tell the story, and they used to cry. We don't go through Main, we go right up here. There was an old road through there. And they told the story how when they would come, everybody would come out of their houses and stare at them and throw stuff at them, and it was sad. They took that connection away.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	This is a public comment period, not a time for scientists and experts to come up here and impress each other with their big words. This is time for everyday people like me to come and speak to you government officials. I'm a mother, I'm a grandmother, I'm going to be a great-grandmother in November, the first time I'm going to be a great-grandmother. I want my takoja tiwahe's baby to come into a world where there's clean water. I want her to stand here someday as a great-grandmother, welcoming her great-grandchild into a world where there's clean water. I'm going to tell you, to the Lakota people, water is our first medicine. We know it's finite. It came here from the Star Nation. The water that's here is the water that was here when the dinosaurs came. There is no more water, people. I ask you to look at your papers when you go home and think about the Minnelusa. That's a Lakota word. It means swift water, the Lakota aquifer. That's another Lakota word. These waters are named by our people because we were here since time immemorial, and we want to be here far into the future.
07463 (Edgemont hearing)		DON MATT: Thank you. One young man here said we need some smiles. So I'm going to share something that a tribal elder shared at a tribal interpolicy meeting. He said, They tell me that they called us Indians because Columbus was looking for India. He said, I'm just really thankful that Columbus was not looking for Turkey.
07463 (Edgemont hearing)		EDWARD STARR: (Speaking in indigenous language.) I welcome everybody here that's here for the EPA hearing. My name is Edward Starr. I live in Oglala, and my grandfather has been here for ages and ages. My grandfather, in that time they had no need for any kind of money. Then 500 years ago, three boats came, and they brought some people. Along with that, they brought Christians, and what followed them Christians was a person, an anti-Christ. You know what an anti-Christ is. They are the ones that killed a man named Jesus Christ. [...] I went to boarding school, and they told me I was going to be an intelligent, civilized citizen. But I resisted all the way through. I ran away several times from school because I grew up traditionally. I preferred to stay in my -- in that way. But I realize today we are in a spiritual war that started 500 years ago for us. Our Lakota, Dakota, Nakota people and all the Native Americans on Turtle Island that we are standing on are in a spiritual war.
07463 (Edgemont hearing)		You know, our Lakota people and our indigenous people, we have records that go back millions of years. Millions. Not thousands, not hundreds, billions. We understand this land for billions and billions of years since we were put here, since we came here. So it's not something that we are not familiar with. We are -- we've been here, we always will be, and that's just the way it is. And now we see that, you know, since the last 500 years, our guests have come over here. You know, I think there's a lot of disrespect from our guests. Because you would think you would come over here and you own this land, but you don't. Because if you really look at it, the government has been in a position where nobody ever owns the land. As long as you keep paying your taxes, you can live on it. But you never will own it because it's under a parliamentary system. So then we go back to all that. Anyway, that's a long story. So basically, nobody will ever own this land because of the way it's set up. So if you say, I have these 140 acres. If you don't pay the taxes on that 140 acres, it's not yours. It goes to the next guy. That's just the way it is. So we all have to live here. I look at all of this, you know. It was -- I look at this town, you know. I was driving around this town, and I heard a gentleman say there was uranium mining here for 29 years. And, you know, I was like, Okay. I look around, you know. Mining towns, they're usually -- you know, when there's a mining town, it grows. I mean, a town will grow and grow and grow until finally it busts. The mine will close down, and slowly it dies out. That's just the record of everything -- all over, all over, all over the land here. You know, so -- you know, it's like you had 29 years of mining here, but this town is so tiny. There's nothing here. Why -- where is the growth? So where is the -- where is the lucrative point in mining? So then you think back through the basics of human beings, who are we? We are all human beings. I'm a Hunkpapa Lakota, but I'm still the same as you. I still have the same red -- same blood. I still have lungs and a heart and everything else as you. I'm no different.

		But I look out for my kids. I look out. I'm a father, I'm a grandfather, I'm a great-grandfather. I have great-grandkids. I look out for these kids because I also -- you know, I don't really care for what happened in the last 500 years. But it's the relatives that -- you guys are all here. And you guys aren't going to go. You should go home, but you ain't going. So we've got to leave here, you know. We have to live together. But we can't live together if we're poisoning each other. [...] You know, I look at the Bible, and I see this thing called the forbidden fruit. And it says that Adam went over there, and he grabbed that fruit, and he ate it. It could be anything. To me, the forbidden fruit is what's underneath the ground. [...] ROBERT WHITE MOUNTAIN: You can't touch it. It's all good. I knew you'd cut me off. So the forbidden fruit is what we have underneath the ground. There's two worlds here. We have the underworld and we have the above world. We have two worlds that we live in. We live in both. Maybe some of you guys don't know how you live in both, but we do. But we do. And so we have to protect that underneath as much as we can because it's going to affect above, too. Thank you.
07463 (Edgemont hearing)		And I was here 36 years ago over here. I kind of noticed, I went out -- we got surrounded over here when we were trying to defend our sacred site from what they did here, what they mined here. We defended over there 36 years ago. That was in Craven Canyon, to defend some great sacred writings here. I noticed that there was a couple guys around here. Because we got surrounded. You know, they surrounded us and it was under siege. I remember that. All we were doing was trying to protect. That's all.
07463 (Edgemont hearing)		ROWAN, ISLA, TAMARACH, SEA USIA BLANCHFLOWER: (Singing in indigenous language.)
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	So I'd like to give you the turtle with the sage in it. And then I'm going to read. It's called, "A Gathering of Sioux in Honor of Chief Sitting Bull." Sitting Bull said: "We must teach the children to read and write so the white men cannot cheat us, and we must hold onto our land until the young folks can speak English and look out for our own interests." A gathering of Sioux in honor of Chief Sitting Bull, 1890, December 15th. Hunkpapa Lakota Sioux and other tribal police conspired with the U.S. Cavalry to attack Chief Sitting Bull and those who fought to defend him. On that day, our most honored of all chiefs was held and killed by Sioux warriors. This was the day respect also died for our people. It is our way to mourn for one year when one of our relatives enters the spirit world. Tradition is to wear black while mourning our lost one. Tradition is not to be happy, not to sing and dance, and enjoy life's beauty during mourning time. Tradition is to suffer with the remembering of our lost one and to give away much of what we own and to cut our own hair short. But Sitting -- but Chief Sitting Bull was much more than a relation to just one family. He represented an entire people, our freedom, our way of life, all that we are. And for 127 years, we as a people have mourned our great leader. We have followed tradition in our mourning. We have not been happy. We have not enjoyed life's beauty. We have not danced or sung as a proud nation. We have suffered remembering our great Chief and have given away -- given away much of what was ours. And tens of thousands of Lakota Sioux have worn they hair short for 127 years and blackness has been around us for 127 years. During this time, the heartbeat of our people has been weak, and our lifestyle has deteriorated to a devastating degree. Our people now suffer from the highest rates of unemployment, poverty, alcoholism, drug addiction, and suicide in the country. We as a people are to blame for this loss of respect within our own nation and for the continuing destruction of our own people. Our only excuse: Ignorance. Sitting Bull foresaw our stupidity, but we would not listen. Sitting Bull said what would become of our people, and it has. If we are to deal with these problems, we must look into their origin, our present-day leadership. The new tribal government system has failed to reveal our nation, has failed to protect our people. It is a disgrace to all past Lakota leaders. But the response -- [...] SOPHIA BLACK CLOUD: -- for the destruction -- [...] SOPHIA BLACK CLOUD: -- of our people's lives must be shared with our second form of leadership, our traditionals -- chiefs, medicine men, pipe carriers. These traditional leaders must accept the fact that they too have not represented their position as they should be represented. The people, the men, and children have been paying the price for inadequate leadership since the death of Chief Sitting Bull. This is the kind of leadership that our people can no longer tolerate, and I'm going to finish up. Are we to continue to die? Are we to continue to watch our children suffer without realizing what must be done without standing together as one force to protect our children's lives? Have we as a people given up? Simply, no, for a whole new generation is born to carry out our great Chief's instructions. We are the new generation, and we will make a change. We will lead ourselves. We will rebuild our nation's respect, and the great Lakota nation will rise again.
07463 (Edgemont hearing)		SOPHIA BLACKCLOUD: Hello, again. I'm just going to finish off where I left off before I was stopped, so. Okay. So again, I was reading out of literature that I thought was important to my people and for the people of this town to hear. So it is time for -- it is time for us to begin. It is time for our tired nation to stop right where we are and look back, see where we came from and where we are now and where we are going on. It is time to remember Sitting Bull and all that he was and is to our people and to our way of life. And it is time to talk with respect within our nation. We must demand it without compromise. Compromise comes once respect is obtained. In 1990 December 15th -- or, I'm sorry, in 2017, December 15th will be exactly 127 years since the murder of Chief Sitting Bull.

		On that day the mourning of our Chief must come to an end. December 15, 2017 let us gather together as one people, as one nation, a nation the Great Spirit chose out of all other Indian nations to send us, his messenger, the sacred White Buffalo Calf Pipe Woman, to bring us the sacred pipe to worship him and to share with all other nations. On December 15th, let 100 drums gather. It must be a time of celebration, of living, of rebuilding and moving on. Our warriors will sing a new song, a song of a new beginning, a song of victory. Let our warriors sing clear and loud, so the heartbeat of our people will be heard by Sitting Bull and all of our ancestors in a spirit world. And our two worlds will become one again. We are a whole new generation fully educated and very capable of assuming control over our own affairs, capable of doing business with the U.S. and other countries with far greater effect than what is being done now. We are a new generation capable of rebuilding our nation. And this is the direction we must move in and move together as one. The direction we will move in is that of a modern high-tech world, but in that world there is nothing that we are not capable of understanding. In our new generation we now have people educated in almost every kind of job skill that exists. We must learn to use our education towards rebuilding our nation and securing a better future for our children. We now have the knowledge of two ways of life. And we can balance them equally. Knowledge with wisdom, high-tech machinery, with tradition, Indian businessmen listening to their chiefs, and chiefs listening to Indian businessmen. Chief Sitting Bull lives in the spirit world. We know this is true. We know also that he would want us to live and rebuild so our children can have good, happy lives and the old people restful last years. Many times Sitting Bull would ride around camp and sing messages to the people. Let us send to our great Chief a new song to sing when he rides around the people in the spirit world. Look at our children, they are going to live again. They are going to live again, Sitting Bull says as he rides. On December 15th, let us gather as one nation to honor Chief Sitting Bull and the warriors who stand by him. Let us together -- let us come together to honor his dreams, his words of wisdom, his strength, his leadership. Let us gather to celebrate his memory with pride, commitment, and a new beginning and a new direction. Let us come together as one and then move together as one. We are the Great Teton Lakota Nation. Let the spirit of Sitting Bull leap with joy that his people have been awakened. Written by Warrior Who Comes Home Alone. And so that's all that I wanted to read and I'm done. I've gotten a chance. Thank you. But then I had a couple of other things that I wanted to bring up aside from speaking with my people.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	You know, they named Harney Peak after William K. Harney because the Standing -- Chief Standing Rock went over there to hunt, and he left his family there, women and children. And, you know, General Harney came in and slaughtered that whole camp, so they named our sacred site after him. And that's Inyan Kara, under all -- from that top of this peak, the highest point, that's connected to the bottom of this. And you can't take us away from that because we were born -- and you guys, go to Wind Cave. There's a nice little sign there that says we came out of there. And you'll acknowledge that. [...] This is our church, this whole Black Hills area, from the top to the bottom. And the reason I know this is because my grandmas, we come from Oglala, and we gather -- we gather our plants and fruits and vegetables, and everything is provided for us here. That's our agreement with this land and the entities, the elements of this land. Those are our relatives. We come out of -- we come out of Wind Cave, and -- and you want to take that apart and discombobulate that and misconstrue it. But we are the original people to this land. This is the center of the universe, the whole world. The whole universe started right here, and we have those in our language. We have those connections still. And we have an oath and a duty to protect the sacred because they don't have a voice. They are considered animals, and no, those are our relatives. They have moms and dads, and they drink out of these creeks. And this whole area is our -- is our home. We're the real stakeholders here. And I come from Oglala, and we still make our trek here and gather our fruits and our vegetables, our food and our medicines. And you know what? Whew. I -- I have a friend that lives in this area, and I gathered some tipsila, which is our fruit. They are all deformed. They are all sick. So we can't come here and gather our food there. They destroyed it, and they want to keep destroying it. [...] So what I'm going to say is this: Our Oglala people came here, and you're detaching us from that. We can't ever come back here. Here we go, she cut me off. But I want to offer my water to you, and tell you this: That we got this water over here in Hot Springs. They call it kidney water, and it comes right from this aquifer, Inyan Kara, and this is sought-after water. It's healing water. And this is the same water these guys here want to contaminate and claim.
07463 (Edgemont hearing)		-- you know, yesterday in Hot Springs I got to speak and I got cut off and -- but what I want to state is this, is you know, our spirituality, you know, when you think about the reality of our -- of our -- of our genocide and surviving that in many various forms that have -- that we have endured, you know, you think about smallpox blankets, you think about tuberculosis, you know, the Spanish flu, you know, these are real, real close to my heart because my grandmas passed this collective knowledge, intellectual knowledge, intellectual property, you know, and that comes through us. You know, and we collect this knowledge. And what's in me is my grandmas and my grandpas. We come from Oglala into Oelrichs, and Oglala into Smithwick. Those are natural tracks for us to gather our plants, our berries, our tipsila. There's so many out there. And when you think about, again, water is life and how it puts back into those natural elements. And we don't have that right. And we'll keep talking about religious freedom. You know, 1978, we don't -- we don't have access to our religious freedom. They are -- they are governed by national parks, and we can't just go and pray and, you know, and do the things that we used to do here. We can't do that. And right here where the proposed site is, I mean, we don't want expose too much, but it's not a checkerboard. You remember that. It is not a checkerboard. [...]

		And my grandmas, they used to come and camp here in the park. That was our campsite. They detached us from that and sent us to the reservations. And then when we -- we got a pass to get off the reservation, we come back here to our home, we can't come back here. They -- they have this land, land steal in the Black Hills. So these guys, you know, immigrants came in here, and all they had to do was get a tool, a mining tool, strike it on the ground, and there's a whole land area that became theirs. That's how easy this land grab in the Black Hills became. You stole it. Our treaties, they confined us to the reservations, took our rights. And they were -- when we were off our reservation area, you know, we had to get a pass. And they would hunt us down. And each town, they have a hang site where, if they caught an Indian, they would take them up there and hang them. Rapid City has a hangman's cliff. And this is the reality. We can't come here, you know. You're supposed to protect the environment, you know. You have this in-situ leach mining program, and it destroys our aquifers.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	TONIA STANDS: Yeah, I think everything that I'm talking about is relevant. And I'm Tonia Stands, and I'm from Oglala, South Dakota again. What I want to say is, you know, we have -- we have this origin story amongst our people, and it goes back, way, way back when this land was all red. So, you see the strip that goes around the Black Hills, we're tied to this land and we lived in a time when all the nations, every single animal, nation, had -- we all talked the same language. We had this magical communication between each other. And then we came to this time where we were going to -- we were going to lose that. So they all came amongst each other, you know. It wasn't one that was on top of the other, or there wasn't a chain of command. They were all equal. Now, when they came together, they had this great race around the Black Hills. And whoever would win this race was going to be the chosen nation that was going to be the voice. Because we were going to come into this time exactly right now, when these -- there's every single creature -- you know, you have these crazy words for them. But we don't have those words. Those are our relatives. And we have direct relationships with them still. [...] We have names for these rivers, and they are our relatives that we treat them on human status. They are just like us, and they have families, and we honor that. And we -- and we respect that. Well, going back to this origin story of the red earth, when the earth was red. Well, you know, they did that great race around the Black Hills and, you know, ever since I was born, ever since I was a baby, my dad took me on that great race. Every year we run around the Black Hills. It's called the Sacred Hoop 500-mile run. And I've been running that for as long as I can remember. And they -- they keep that. We have to keep that alive. And we have to be -- we owe that oath and we owe that duty to these silent nations that can't talk, that's in those waters. And we hunt. I can't even hunt no more. You cut them up, and they are all, like, deformed, and there's white spots all over them. And down here, my dad lives, you know, we go on that river. We can't even go get our boats and go down the river like we want to. We can't do that on White River, either. And you know, our tribe monitors these water tests, so I have water tests from our tribe. And in the spring, when the run-offs come down in this community of Red Shirt, it floods all the way over to where my family lives. And I have to go tell them, Don't go by the river. Leave the river alone. Go, you know. And these people in this community, I go down each house, each house like that, and I -- I'm not lying, every one of my relatives in their house has cancer. And my auntie that lives at the corner house, she survived three cancers. I can't bring them here to tell their story, so I'm here for them. And I'm here for the silent nations that we owe. We owe that oath and that duty to them to speak up for them. And I never -- I never ever wanted to, like -- I humble myself and I'm not -- you know, I'm not -- I don't want to over-exert myself, but you know what, ever since we've been on this journey to stand against uranium, these animals, animals, you know, our relatives, have shown themselves to us. We've gone to Wind Cave, and we don't -- we don't -- we don't -- we know the buffaloes are powerful. Those are our people. Those are our relatives. We know that so they -- they come to us and it's like they are -- they are sharing their pain and they are sharing their stories with us. And you know today, we were just standing out here, we didn't ask for this little turtle to come across. And you know, he went across, and so we took him off the road because we didn't want him to get hit. Well, when we picked him up and looked at him, his whole beak, his whole little mouth is deformed. I'm like why, why, do they keep showing themselves to us? You know, we have a duty, and we're fulfilling that duty. And there's no -- they don't -- they don't speak about that. And that is old. That is old. As old as that red dirt is, that is as long as we have to protect this. And it's a prophesy, and that's what we're fulfilling. They are encroaching and they won't stop. And you know, over here on the winding side, just like full of uranium. They are coming. They are coming. And our aquifers are going to get destroyed. It's all going down around us, and this is our, kind of the last, you know, refuge from what's going on around us. And we always live on this, we were raised on this. The Black Hills were never for sale. With the U.S. government, they have a big bank account. They want us to take that money because they know they stole it. They know that. They have that money. And they want us to take that money, oh, it's like the feel bad money, the guilt money, the blood money, you know, the resource money. Nothing. We just want it back. We just want to go pray like we always did. We want to have that freedom. And for me, because I've always come here with my grandmas, I want to continue that and keep that alive for them. You know, and I want to see the relatives. And I'll end on this note. This morning we were leaving. And I really don't believe in these animals coming up to me. I feel like Snow White. But they keep coming. And this morning in Red Shirt, my boyfriend, he said something, and he, "hagh." He said that. And this bird came out of nowhere and it was eating, and it was, "hagh, hagh" and it was looking down upon us in this tree. And I said, Look at him, he's saying -- he's laughing at you because you said that. You know, because we were arguing about packing and what to take and what not to take. And then, "hagh," and you know. See, you're supposed to listen to me. See, we were having this little discussion.

		Well, this bird was just standing there. And they never show themselves to us. And I'm telling you, this is a spiritual connection. And it's older. We can go back through billions of years, not thousands and centuries, billions. And we can name how the earth, how this universe began. So please remember that. Okay? Thank you.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	WILL LEIGH: (Speaking in indigenous language.) Hello, everybody. My name is Will Leigh, and I'd like to read a letter from my Oyate. We all use worldwide resources that our earth has provided for her two-legged children for centuries. Out of her love for us, we are still here today. It is out of that love and nature that I pray for your spirit to not become stagnant, which has occurred over time of ignoring history, our history. We should utilize our past to stop burning ourselves in the same fire, this representing the choices we make to destroy our Grandmother Earth, expecting different results to make what was once created perfect for us a supposedly better place. For our brothers and sisters that have been led astray from their bond with Grandmother Earth by greed, let them be made aware of -- that that is a huge hunger that shall never be fulfilled. The emotion your spirit yearns for is the connection every child should have with their mother. The biggest bandwagon to self-destruction is greed, a conception that the more currency you have will fill the emptiness that only Mother Earth can make whole. Let your spiritual roots grow. Spiritual connection with Grandmother Earth is true happiness, and we will not allow this to happen to our communities any longer. Do not mistake our kindness as indigenous people as a weakness among a misunderstood nation. We will not be easily pushed aside time after time. I stand before you today not only for the people standing along beside me, but for your children, for what you have sold out for. Through my -- though my humble spirit instilled in me through my connection with the earth, I pray persistently for every one among us that we may remove the veil from our spiritual consciousness and that Grandmother Earth forgive our naive curiosity derived from the discerning spread of greed. The ways of our ancestors to forage consistently without depleting our precious resources are either chosen to be forgotten or stomped out. What is happening now here with the mine is just one of the many events of a bigger picture that will be another little expression of cause and effects. We will soon no longer exist if we do nothing. If we fail to compromise, the entity that plagues our lands with chaos will spread. Where are the men hiding, in their planning rooms? They send out others, others that are programmed with paper printed, and the faces of people that are derived from all people. For that is afflicted by any decision that is made by the government for mankind. That's from my Oyate. (Speaking in indigenous language.)
7642 (Hot Springs hearing)		And so with that being said, I just want to quote my -- our great head, Sitting Bull, by just reading a few of his quotes: Let us put our minds together and see what life we can make for our children. And another one: The white man knows how to make everything, but he does not know how to distribute it. Thank you.
7642 (Hot Springs hearing)		TASINA SAPA WIN: (Speaking in indigenous language.) My name is Black Shawl Woman. I am from the Cheyenne River Sioux Tribe from a little community called Swift Bird. I live right by the Missouri River. I'm also here to talk on behalf of the International Indigenous Youth Council. And what we are is a grassroots organization that started in Standing Rock that empowers youth in their comm- -- or to become leaders in their indigenous communities through activism that primarily circulates around social and environmental justice, treaty recognition, and tribal sovereignty. I'm -- I could come up here and give you a huge speech. I could give you a bunch of statistics. I could tell you pretty much everything that you've already heard from these fine people in this crowd. But instead, I'd rather tell you exactly what comes from my heart. And I'm looking at you right now in your eyes, and I'm going to plead with you to make the right decision here. I'm also a young mother of a beautiful five-year-old boy. He will be six here in a couple weeks, and he changed my life at a young age. And I made him a promise when he was born, and that was to protect him at all costs. And by protecting him, that's why I'm standing up here, not just him, but for all children of our future. Where I come from, Cheyenne River deals with a lot of addictions that are like alcoholism, meth addiction, gambling. The list goes on. Addiction has enablers. These companies and this government are addicted to nonrenewable energy. And just like all addictions, they have enablers. The EPA is being an enabler to addicts. Addictions to what? The cruel profit of indigenous resources -- money, power, and greed. Just like all addictions, they need -- they need help, and I'm begging that the EPA help this country. These companies are foreign. How could you let foreign companies come into this country and drill toxic, lethal chemicals out of the earth and then not clean up after themselves? That jeopardizes our health, my son's future, clean aquifers everywhere. I saw your presentation yesterday, and I seen a point that you made saying that the aqu- -- the water that you found underneath is undrinkable. Yeah, maybe undrinkable to humans, but it's not undrinkable to the earth. It's not undrinkable to the soil. It's not undrinkable to the plants or the rivers that it will be flowing into. We need water. I mean, Standing Rock and the indigenous people of this land have shook the world, opened the eyes of the public, and now we are saying to stop. Please stop. We don't want to be sick anymore. We don't want cancer rates skyrocketing, diseases going unexplained.
7642 (Hot Springs hearing)		THEODORE EBERT: My name is Theodore Adolph Philip Ebert. I've been going at this with these deals for -- since the beginning. I'm one of the original opponents that filed suit against Powertech to stop this in federal court. So I've been in this from the beginning. I appreciate all of you being here. Even you, Mark. Good to see you again. I say that because, Mitakuye Oyasin, I believe this, we are all related. We're all here on this planet, and we're all here for a reason. Tunkasila didn't put each other, all of us in each other's life for no reason. We're all here because this is where exactly we're meant to be right now. Everyone here is meant to be here, all right here. We have to choose what we are going to do. I can't believe the pressures that you guys are under. You know, your director of the EPA just got terminated or he quit or whatever because of the pressures that were being put on him. So I can understand that you guys are under those same pressures. But if you make the wrong decision and it's not politically correct, I won't be seeing you guys again.

		And I would not want that on you. Because you have families. I respect that. I'm a soldier. I was a soldier. I fought for this country. I faced the enemy. I had bullets going by my head, men dying near me. I was lucky. I came through those things unscathed. Those guys are all my heroes. They are all my heroes. There was a time that I lost sight of who I was and why I was there. I lost sight. I became just a machine. I no longer saw a wounded man or cared. I no longer saw an enemy before me, just an object, meant nothing to me. My commander noticed that, and he sent me home for a brief time. He said, Go see your family. So I was at home. I sat there for a long time. I said nothing to anyone. One of my aunt's children came up to me and sat there with me. And it took me a while, but I realized that I regained who I was. I became okay with being a soldier again because I realized why I was there. I wasn't there for me. I was there for everyone here in this room that never would have to do what I had to do so that they would not have to face those things. I was there for my children, for your children, for your grandchildren, for your great-grandchildren, so they'd have a place to live on this great planet. [...] So he knows, that man knows I'm not his enemy. From my heart to his, he knows that. He knows that as a member of this community, in the event that all this falls through -- and he's on the verge of losing everything he has. He knows that us as a community will come together to help him in any manner we can to see to it that he makes it through that. We know that, and he knows that. I told him that before, too. So anyway, you guys, I wish you the best in your decision-making process, and I'm sure happy that I'm not in your shoes. Sometimes you just gotta do what's -- just because it has to be done. I've lost many jobs. I've got court-martialed a few times, and I paid the price for things that I just refused to do and I said this isn't going to happen, not on my watch. So bless you guys. Thank you.

Letter ID	Commenter Name	Text
10		Subject: Uranium Mining in South Dakota - public comment Dear Mx. Shea, I am writing to express grave concerns about the plans to mine uranium in South Dakota. There seem to be clear environmental risks at stake and I am not reassured by the EPA's assertion that it has consulted with experts or with local Indian tribes. There is no way to guarantee that accidents won't happen and that it not a risk that I am willing to take. As a citizen of the US and a member of the public, I am staunchly opposed to this step. Sincerely and with all due respect,
12		We must protect the waters and the peoples of this country. Deregulation is NOT the answer. If any one person or company feels that these measures are just but would never perform such measures on the land in which he or she lives then it is not a proper way.
31	Ex. 6 Personal Privacy (PP)	3. Personal opinion of proposed action While taking all of the previous information into consideration, including the various technological controls, natural site features, and established plans of process and cleanup, I believe this operation has the potential to be a disastrous environmental catastrophe. Given the various technological failures that have occurred over the years, such as chemical plant explosions or the water contamination in Flint, Michigan, the most extreme consequences must be taken into consideration. These operations are highly digitalized and rely on a variety of different technological controls in order for the system to function properly without any unintentional runoff or seepage to occur. These processes are so streamlined and integrated that a single issue process could prove catastrophic to the community of Edgemont. For example, a chemical plant in the United States had a buildup of gases in a chemical reserve tank that caused in a backflow of chemicals into the system that resulted in a destructive explosion. This explosion destroyed most of the plant and resulted in one of the largest death counts from an industrial accident in recent years. These situations are thankfully not frequent occurrences, however a proper risk assessment must take into consideration both the probability and the impact of the consequences regardless of their assumed probability. [...] 6. Conclusion Thank you for the opportunity to provide input on the proposed aquifer exemption for uranium mining waste issue. These environmental issues are things that many citizens of this country must deal with in their everyday lives, and unfortunately will be present for future generations to deal with. The long term time frame and scale of the consequences that could from technological control failure, corporate negligence, and natural leakages must be taken into consideration when determining whether or not to approve this project. With the information provided, it only makes sense to discourage potentially dangerous operations such as these, and it is my hope that I have convinced you to take into consideration a perspective you may not share [...] 7. References Thares, Paul. "Proposed Powertech (USA) Dewey-Burdock In Situ Recovery Uranium Mine Project". iGrow | SDSU Extension. N.p., 2017. Web. 30 Mar. 2017. "EPA: Cleanup Not Required At Uranium Mines Near Edgemont". KELOLAND News. N.p., 2017. Web. 30 Mar. 2017. "Public Notice: Administrative Record For The Dewey-Burdock Class III And Class V Injection Well Draft Area Permits | Protecting Underground Sources Of Drinking Water From Underground Injection (UIC) | US EPA". Epa.gov. N.p., 2017. Web. 30 Mar. 2017. Kyllonen, David, and Kathy Peter. "GEOHYDROLOGY AND WATER QUALITY OF THE INYAN KARA, MINNELUSA, AND MADISON AQUIFERS OF THE NORTHERN BLACK HILLS, SOUTH DAKOTA AND WYOMING, AND BEAR LODGE MOUNTAINS, WYOMING". www.usgs.gov. N.p., 2017. Web. 30 Mar. 2017. "EPA Seeks Public Comment On Draft Permits And Aquifer Exemption For Uranium Mining Project In Southwestern South Dakota | U.S. EPA News Releases | US EPA". Epa.gov. N.p., 2017. Web. 30 Mar. 2017.
86		If any used water from mining is allowed to be spread on the surface of the ground it is my understanding that hazardous waste will be left behind that will be blown up into the air as dust and will contaminate our air.
90		but uranium mining is an environmental disaster itself, even if it all goes as intended.
92		Subject: Comments for the record: Dewey-Burdock / Application for ISR and UIC permits Comments for the record: It is time to stop injecting poisons into our earth for the sole purpose of a business venture to extract minerals for profits. (...) The benefit to one business enterprise is simply not the risk to the human race, the plants, the animals, the water and the air. (...) The simple answer is "NO MORE POISON SHALL BE INECTED INTO THE EARTH."
98		For health and economic reasons, I urge that the Environmental Protection Agency deny a permit. It IS in our national interest to have safe water and soils for generations to come. It IS in our national interest to protect our citizens' health. It is NOT in our national interest to issue permits to a company with a problematic environmental record. Respectfully submitted,
104		Subject: No uranium mining in the Black Hills We must stop depredations of the earth and the waters on which we all depend for life. Thank you for your attention and restraint.
121		9). Linsey McLean, Susan Henderson, Dr. Stone from SDSMT and Dr. LaGarry from Nebraska have presented you with chemical, biological and data information proving the terrible danger of allowing this mining to continue
121		4). There is no clean up known for ISL mining contamination
121		5). The UNC is not requiring P/T to decontaminate, only that it gets that contamination as low as reasonably achievable

124	Ex. 6 Personal Privacy (PP)	Fourth: In 3.6 P/T anticipates the potential for problems from winds and wind erosion with Fig 3.6-39 showing the wind directions and speeds in the mining and land application areas. The evapotranspiration will leave contaminated residue on the land to be blown away with the winds or washed away by the rains. In 3.11 " The landscape comprising the permit area is erosional in nature." This admits to the problem outright and taken at face value should indicate the inappropriateness of the area for the mining project. Additionally, we are told that radium will be the main contaminant and will simply sink to the bottom of the ponds (where it will sit up to 18 months with no covers before being removed or injected) but Table 3.4-10 shows the other dangerous byproducts of this type of mining. These include thorium, arsenic, cadmium, mercury, thallium, polonium and radon in addition to the uranium and radium. These dangerous by-products of ISL mining on the land and in the water cannot possibly be considered safe for wildlife, livestock or humans. In fact, P/T in 5.4.1.1.3, goes only so far as to say that the lead and thorium will be "treated as necessary" but fails to provide the details. In fact, how does one treat radon, or radioactive cadmium or arsenic??? These poisons will become concentrated due to the re-injection and recirculation of the water into and from the IK making the IK more contaminated rather than less. PT will tell you that the IK will get cleaner due to the bleed. I believe this is illogical nonsense. [...] Sixth: 5.6.2.1 Potential soil impacts: Two to six % slopes will cause rain and wind erosion. Impacts to disturbed areas include: compaction, loss of productivity, loss of soil, salinity, soil contamination caused by clearing, excavation, leveling, stock piling, and redistribution of soil. "Due to the use of heavy machinery and high volume..... ..some soils have the potential of compaction." This can "lead to decreased infiltration, thereby increasing run off". This compaction "will be restored as possible following use." (Ten to twenty years later!!!) The hazard for wind and water erosion vary between negligible and severe. Severe!!! P/T admits to the danger of compaction and erosion and then PT admits to build up on land of disposals of waste, salts, radionuclides, metals, metaloids, and the loss of soil fertility. This is not 95%clean or minimized or reasonably achievable or even a best effort. This is simply not proper and responsible work. Page 5-118 lists all the problems with spraying multiple contaminants on land, which I won't belabor as it has been covered by others. 5.6.5.1.3 PT accepts the potential of accidents which could release pollutants such as bulk chemical products, uranium loaded resin, dry yellow cake, solid by-product material. PT says it will simply remove the contamination. They do not say how unless you count their claim that it will wash off clean with water.They admit that the consequences of these spills range from minor exposures to "significant". And lest there be any doubt that this area will be radioactive and dangerous to human health this sign will be posted.: 5.7. 2.4 ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE MATERIAL. [...] Eighth: As we all know, and that includes the EPA, the NRC and P/T, the USGS has stated that there has never been an ISL mining operation that has returned the soil and water to a clean, before mining status. Not WY, not TX. If P/T wants to mine uranium in the Dewey-Burdock, then it has a debt to the people of the area and should guarantee in writing that they will clean up the soil and water to a clean uncontaminated state. That is what CO wanted. The Project Manager said at his meeting at the Fall River Conservation office recently that P/T would indeed guarantee completely that it would clean up the permit area 100% with no mention of minimum, no mention of 95%, no mention of putting forth a "best effort", but a verbal guarantee to absolutely clean up the permit site and the aquifers. Let us have a contract to that effect. It is my understanding that P/T would not/could not provide that guarantee to Colorado nor could it find 5 ISL operations that had cleaned up the water and the land as proof that it could be done. That is why P/T left Colorado empty handed and came to a sparsely populated area of the Black Hills in the hopes of trying it here. With some success I have to admit due to the state legislature having failed the citizens of this state by weakened the mining and water requirements for ISL mining and removing DENR responsibility of oversight. Not surprisingly, the bill was written by a P/T lobbyist. RCJ 22nd
124	Ex. 6 Personal Privacy (PP)	Tenth: 6.3 The project manager told me that I could actually drink a glass of radioactive water with no ill affects, that if one were to be subjected to radiation poisoning that this could simply be cleansed by the normal body functions or washed off with no ill effects, that radioactive equipment and material could be cleansed and made neutral if you will, by a high pressure wash system. In my mind, this demonstrates a complete lack of knowledge about radioactivity and the dangers of radioactive contamination. P/T says it can decontaminate the soil yet previously stated that contaminated soil would be removed to a NRC approved site and that contaminated equipment will remain radioactive and either be taken to another site or if liquid, injected into existing aquifers. Contaminating aquifers is not minimizing that contamination. It is just putting it out of sight. We have heard about "permissible limits", 95% cleanliness, minimized contamination, and recently a guarantee to contain the contamination within the permit boundary. The NRC allows that the permittee needs only to remove the contamination to as low as reasonably achievable (or ALARA). But we are told that it will be 100% cleaned. As mentioned previously, the NRC knows it can't be done cleanly so it abrogates its prime directive and puts the health of the mining operation in front of the health and safety of the citizens. The ALARA is in direct contradiction to that directive. Any DENR approval of this operation is in direct contradiction of its purpose to protect the people. There seems to be no true agreement as to just exactly how far any remediation has to go to qualify for a job well done and as we know, the contamination from an ISL mining operation is not cleanable. This vagueness should be, especially at this late stage, grounds for a denial.

124	Ex. 6 Personal Privacy (PP)	Fifth: In 5.0 it states that "potential environmental impacts will be minimized". There are two problems with this statement: a) It admits that environmental impacts will occur and b) it accepts the fact that they have no intention or do not have the ability to actually remediate these impacts just minimize them. This is not in the public interest and indeed violates state law regarding non-contamination of public waters. Of interest is 6.3.4.2 where it states that P/T will provide "95% confidence that the ...units"... will..." meet the cleanup guidelines or action levels". Minimum? 95% confidence? 95% of the cleanup guidelines is unacceptable and if that is the best they can do, then the permit needs to be denied. Indeed, P/T makes no offer to do anymore than what they decide is reasonable. Additionally, in 5.5, "Solid wastes such as pond sludge; soils contaminated by leaks; spills of loaded or spent IX resin; filter sand...parts; equipment...will be disposed of at an NRC... facility". This a very general statement which lacks specifics as to the method of gathering up all this radioactive contamination which will have drained into the soil in and outside of the permit area. The fact that they know about the leaks, (such as the dozens of leaks at Crowe Butte in Nebraska,) but cannot or will not prevent them must be cause for alarm. The public needs more assurance than this. 5.3.9.2 states only that erosion of disturbed areas will be minimized. There are three problems with this assurance. a) P/Ts admittance of the disturbed areas in the first place, b) they will not try to prevent any erosion outside of the disturbed areas only minimize the erosion inside the disturbed areas and c) they admit that they will not even attempt to repair the erosion to its original state. Public health is not served by this cavalier attitude towards runoff prevention. In 5.3.4.4 it admits that " all grades will provide for natural runoff" which as we have seen only further guarantees the flowing of contamination into the creeks and rivers. In 5.4.2.2, In reference to hazardous waste and "used oil"? " it is likely that this project will be classified as a conditionally exempt small quantity generator". CESQG This classification allows for up to 1000kg of hazardous waste a month or 12000 kg a year. What if it isn't so classified? Well, then, P/T simply assumes that they will obtain "the appropriate approvals or permits". This expectation of creating hazardous waste that needs yet another permit or approval due to its dangerous qualities should cast additional doubt as to the viability of this company to properly handle the responsibilities of this kind of operation. Another concern is in 5.5.1.2.3, where it states that excursions must be reported within 24 hours but the permit allows for a delay in correction of the excursion up to 30 days. 30 [...] There are several situations that require the Mining Board to deny a permit of this kind (((They are 1-40-27: (1) (a) If the permittee has intentionally misrepresented a fact If the permittee has had any permit revoked (denied)under the environmental laws of any state. (Colorado comes to mind.) (2)The applicant substantially duplicates an application within the past 5 years that has been denied, the denial having not been reversed by a court of competent jurisdiction))) 45-6B-32: (6) The proposed mining operation and reclamation cannot be carried out in conformance with the requirements of 45-6B-35 (grading, disposal of refuse, removal and handling of topsoil, disturbance to hydrologic balance, slides-subsidence or damage protection-fencing, and reclamation)(-38 states will not pollute surface or ground water!!!)(-41 Disturbance to hydrologic balance. Any disturbance to the prevailing hydrologic balance of the affected land and of the surrounding area and to the quality and quantity of water in surface and groundwater systems both during and after the mining operation and during reclamation shall be minimized.)
136		Subject: NO to Uranium mining at Dewy Burdock Please add my voice to those opposing this project. Please think of our long term environmental and public health. Do not approve this project.
136		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.
141	Ex. 6 Personal Privacy (PP)	It is not only a matter of damaging lands that can't be replaced. We must also take into consideration the negative effects that the project can have on the surrounding populations. There are several risks listed in the official report, two of which stand out to me. The first is stated as follows: [...] Second, "accidents" and "product spillage" was also a concern. Accidents happen, and we cannot have our lands polluted with toxic waste. Especially lands that are visited and honored regularly. Nuclear waste has the ability to cause major damage to the human body resulting in death. It is now that we must come together and work towards creating a better world that relies on alternative forms of energy. There are alternatives to uranium that are safer and just as profitable. We need to protect our resources not only for their cultural and historical relevance but out of respect for what a gift it is to be alive and for our future generations. Thank you again for your time and please feel free to contact me if you have any questions!
154		Subject: Comments on uranium mining Hello, I am writing to express my concern about the proposed uranium mining in South Dakota. I am very much AGAINST this idea and urge you not to proceed! This is very dangerous for our environment. Thank you,
163		Subject: Thanks for the reminder! Thank you for the reminder of the Dewey-Burdock comment period. I sent my comments to your email because the other contact sites seemed to route it through D.C. Hope that is okay. Thank you for your work in protecting our environment! I'm not a "tree hugger" as my husband would say, but I believe strongly in the protection of our planet. It's the only one we have! Keep up the good work regardless of the political scene. You are doing important work! Thanks!

180	Ex. 6 Personal Privacy (PP)	These permits should not be passed because for many years U.S industries have been under a misconception that underground injections have not been harming the inner core of the United States, when actually they have had extreme damages from disposes and allowing these toxins underground. Over the last few decades U.S companies have injected more than 30 trillion gallons of toxic liquid into the earth (Lustgarten, 2012). The invisible natural resources of the United States are have now become their "invisible dumping grounds" (Lustgarten, 2012). The sad part is many companies have gotten away with toxin disposal for the sheer reason that it has been underground [...] If these toxins were being disposed of above ground it would be a whole different story, or even not allowed at all. A question that policy makers should be asking is if companies were to inject or dispose of these toxins above the ground what would it look like? Would people be okay with it like they are okay with underground waste? Prior to a few years ago environmentalists and scientists didn't realize that deep layers of rock would not be able to handle these toxins as they thought especially in years to come
194		When the mother earth dies you scientists enginers and natural gas / oil field workers will all die a slow painful death. You will watch your family's and loved ones suffer from lack of clean air and die from poisoned water. This has been explained many times, there are many individuals who can attest to and bear witness the harmful destructive effects this uranium mining has had on our land, water, and health. All over the world the extraction of oil natural gases and minerals is killing our world, killing eco systems and environments that have flourished for centuries upon centuries. These eco systems are apart of what makes all life possible. Our existence depends are a very very delicate balance. When mother earth dies there will be no place for the ultra rich to hide. No bunker can withstand the Natural Powers of the Universe. No doomsday shelter will protect you. As for told by many spiritual leaders Sha men and your very own bible describes this in revelations. Please the world pleads with you to stop, stop ! Stop uranium stop big oil, stop natural gas, stop tar sands, stop coal bed methain. Stop coal .
202		The transportation of uranium is a whole other security issue that must be addressed, as are the chemicals used in the extraction process. Also, the EPA should evaluate the cleanup plans Azarga has in case of any spill, leak and/or contamination.
210		Subject: Comments on proposed uranium mining and storage plans on Lakota lands We are are in smack the midst of a point in history where our decisions will determine whether the planet survives with humans or not. The amount of poisons we have saturated the soil, water and air with is already killing thousands of us daily, whether it be from cancer or the harsh affects of life threatening ailments induced by everything from household chemicals to fossil fuel spills and by-products. Now is the time to stop the madness and embrace the common sense and logic pointing in the direction of supporting a sustainable environment. Please consider the majority of American citizens that pay your salary as we insist the EPA stop leaning "for" corporation's that are continuously determined to annihilate and poison the water which sustains us all, by their complete lack of concern for the environment and water, our livesource
247		Subject: Black Hills Uranium Mining I am writing to express my opposition to uranium mining in the Black Hills. Past and current uranium mining is causing significant environmental damage, health problems, and wide-spread contamination. Until all of the existing mines and contamination is cleaned up, we have not proven ourselves willing or capable of safely mining dangerous materials.
261		8. Regarding the surface-application alternative. The proposal is to fence the area where contaminated water will be applied to keep out livestock and people. How will you assure that deer and pronghorn do not enter this area and consume grass with high levels of arsenic and radioactive elements, which can then enter the human food chain via hunting and consumption of these animals? Ex. 6 Personal Privacy (PP)
270		Subject: Just say no to Dewey Burdock! I am writing you to beg you to deny these permits! Burying uranium is not safe, if it was then the people behind this project would have no problem doing lit in their own back yard instead of someone else's. If something we're to go wrong (and it probably will) this will be an unmitigated disaster for the people in the area, people down stream/down wind, and the wild life and ecosystem. Really, if this is so safe, why dont you propose that the uranium be buried near where you live or like to vacation? Thank you for your time. I.hope that you do the right thing.
271		I am very concerned the EPA is considering issuing a permit to Powertech for injection activities related to a proposed uranium recovery project. Please DO NOT issue this permit and endanger our wildlife and drinking water for the citizens of South Dakota. Ex. 6 Personal Privacy (PP)
272		Subject: Oppose Black Hills Uranium Mining Dear EPA, Region 8: I would like to submit my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells: • New mining in the Black Hills is potentially disastrous for the people, wildlife, and environment of the region.
276		Subject: South Dakota uranium mining exemption - opposed. Dear Valois Shea, I am opposed to the aquifer exemption for the uranium mining project in South Dakota. Polluting water, no matter how remote, with radioactive and toxic waste is a horrible idea. Water is life and we have a finite supply. It needs to be protected for future generations.
292		Subject: Please deny Dewey Burdock permits I am writing to request that the Dewey Burdock Well Draft Area permits be denied. I believe the environmental risks to water and land in the area are too high. Also, I believe problems with water could affect our region including the Black Hills and Oglala Lakota Reservation.

294	Ex. 6 Personal Privacy (PP)	Full consideration of the scientific arguments concerning the injections will help provide more reassurance to the safety of the policy. For example, the Interstate Technology Regulatory Council listed several environmental concerns including the alteration of food webs and sediment structure from contamination, impacts on natural biological activity including waste stability. There are also potential negative impacts on animals, marine life and their communities (Interstate Technology Regulatory Council, 2010). The environmental risks that are associated with the UIC of mining waste are substantial enough to reject the permit. [...] Thank you for the opportunity to provide input on the proposed policy regarding permits for aquifer exemptions of UIC injections of a uranium-mining project in South Dakota. It is encouraged to reconsider the policy proposed for numerous reasons. The disadvantages of the injections outweigh the advantages proving that the injections could be detrimental to all entities involved and so I strongly encourage you to deny these permits. I look forward to the opportunity to discuss this further. You can reach me at Ex. 6 Personal Privacy (PP) [...] Citations: Environmental Protection Agency (2017a). Class III injections wells for solution mining. Retrieved 26 March 2017, from https://www.epa.gov/uic/class-iii-injection-wells-solution-mining Environmental Protection Agency (2017b). History of the clean water act. Retrieved 12 April 2017, from https://www.epa.gov/laws-regulations/history-clean-water-act Interstate Technology Regulatory Council (2010). Backfilling and subaqueous disposal. Retrieved 29 March 2017, from http://www.itrcweb.org/miningwaste-guidance/to_backfilling.htm Kyllonen, D.P., & Peter, K.D (1987). Geohydrology and water quality of the Inyan Kara, Minnelusa, and Madison aquafers of the northern Black Hill, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming [PDF Document]. Retrieved from https://pubs.usgs.gov/wri/1986/4158/report.pdf Powertech (USA) Inc. (2012). Dewey-Burdock project report to accompany Inyan Kara water right permit application Custer and Fall River counties, South Dakota [PDF Document]. Retrieved 29 March 2017, from http://denr.sd.gov/powertech/wr/Inyankara/Report/InyanKaraWR Report.pdf Tribal Energy and Environmental Information Clearinghouse (2017). Coal: Construction and mining impacts. Retrieved 12 April 2017, from https://teeic.indianaffairs.gov/er/coal/impact/construct/index.htm
295		4. Uranium mining has already leaked in these ares causing damage to the land, waters, and polluting the aquifers. Don't you want a place where you can eat the plants right from the ground and have water you can swim in?
296		The Public health threat they pose grows greater the longer they are left abandoned. This threat to our health is invisible. It seeps into our water. It contaminates our livestock. It is carried in the wind for hundreds of miles and there is no dose of radiation that is harmless.
310		Subject: Public comment on Powertech permits. After reading the proposals I would like to ask the EPA, please do not grant Powertech these permits in SD. This project carries a lasting risk and is unnecessary. A clean environment has immeasurable valuable, do not allow Powertech to exploit it for profit.
351		Subject: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits PLEASE do not allow these permits! Protection for our environment is systematically being removed. South Dakota has had more than its share of environmental rape. But protecting our environment is important, whether this occurs in South Dakota, Wyoming, Oregon or any other state. Please do the right thing and deny these permits.
352		I consider this proposed project an exercise in foolishness, and considering the catastrophic outcomes that are truly possible, an endeavor with criminal intent. I would certainly hope that the EPA will be dubious of the opinions of Uzarga geologists who will suggest that their "experiment" will be 100% foolproof. The southern Black Hills honors its water supply and considers any threat to its viability a direct threat to the entire Black Hills area. With so much to lose in one of the premier recreational and tourist areas of the world, this project falls far short of any sensible consideration. Thank you.
379	Ex. 6 Personal Privacy (PP)	Subject: No waste Please I beg of you-no uranium mining waste released into SD aquifer!! You are effectively dooming the planet, and all her children, with your crazy CO2 beliefs and reckless and wanton destruction of our delicate environment. SHAME
383		Subject: Public comment on proposed Uranium mining project Dear Ms. Shea, I am writing this email to express my concern for the proposed uranium mining project in southwestern South Dakota. My concerns are mainly for future generations and the of course the environment. Coming from both a scientific background and from an Indigenous background, I urge you to deny this project in whole. Seeing and living the long term effects of uranium mining in my own community as well as on my reservation, I have seen and experienced all the negative impacts uranium mining has on both people that live in close proximity as well as the environment surrounding the mines. I personally seen the destruction to the land, the air and especially the water.
387		Subject: Uranium mining in the Black Hills [...] Plus uranium pollutes the soil and everything around it - for a million years. Why would be do this to our children and our future? We are ranchers and farmers, and we like to plan for the future - allowing this kind of damage to our lands is not going to leave anything for our future
419		Subject: Uranium Mining comment [...] This project poses yet ANOTHER threat to our land, water and all that is life.

		These are specific reasons to why I am in opposition to the proposed drafts to be granted. Should you have any questions regarding my comment please contact me via email at **Ex. 6 Personal Privacy (PP)** Thank you for your time and consideration in review of my comment
429		With an understanding of how mining damages an environment before(with consideration of constructing the mine itself and mining equipment), during, and after mining is completed I don't wish to allow another mine to open in this country.
439		3. Short term profit with long term pollution, and unemployment.
439		2. Uranium affects humans and animals on cellar level. Meaning it breaks down your whole body an organs. People over profit!!! (...) 5. Weather phenomena such as tornados spread Uranium, and radiation. Which is also causing cancer all around your area and starting to see the effect the radiation has on people. Please I hope you do the right thing and stop uranium mining.
443		Dear Persons, I am a lifelong resident of Custer County, S.D. I am adamantly opposed to any uranium activity in our area. [...] Please deny this ill conceived plan that will do irreparable damage to our environment.
450	Ex. 6 Personal Privacy (PP)	Our land, both surface and subsurface have been exploited for so long and for so much, that it is amazing the whole earth does not cave in to become one big sinkhole, to say the least regarding climate change. [...] One day this whole country is going to be one big sinkhole thanks to all the underground pipes, tracking and drilling for "supposed energy/fuel resources, and defense purposes", all the violations of surface and groundwater requirements, there will be no future for our grandchildren who will be forced to survive with the barest minimum which may come down to "only the strong survive". Of course there are some people that say "climate change is a hoax", but that is their opinion and won't be worth much when the country and the world have to pay the price for all the exploitation that has already been done to contaminate the quality of air, water, surface and subsurface areas of our country and the world. The sound of these comments may sound like doom and gloom but that is exactly what the end result of development, progress and energy independence is causing to happen to our country and this world.s
450		I am of the opinion the **"almighty dollar of profits",** no matter if the beneficiary is of our country or from a foreign country, is all that matters. The federal government making reference to regulating anything, no matter what the subject may be, is one big false effort. Companies no matter who they are or where they are from are granted permits, licenses, and everything they need to do their projects, but none are ever made to clean and restore the land once they have taken all that they can from the land and water. [...] I am sure there are some workers in all the bureaucracy that really care about mankind, but the profits to be made and the end $ figures to be made under the guise of progress and energy independence ensure that mankind and all of humanity should appreciate each and every day that they wake up and have air to breathe and water to drink (even if it is a little polluted), just be grateful for being able to rise another day. The air quality, the water quality, climate change, the whole environment quality is of no concern to those few with the wealth to continue to expand their personal empires where only those few will benefit, and humanity is on its own (every man for himself). [...] Forget the open spaces, the greenery, foliage, forests, wetlands, habitat, animal species, because some wealthy mogul has a need to increase his personal profits, and these topics and certainly the effects on mankind are the last things to be considered at all. The effects on the environment or on mankind **never** enter the equation at all. **ONLY PROFITS are to be considered!!** How much wealth does a person need to be satisfied with themselves and be happy each and every day? At the rate of exploiting our country and the world at such a fast pace, one day there won't be a need for any of the federal agencies to even exist, or if they do, for them to pretend there are regulations that prohibit or govern procedures how something should be done. Every elected official in this country, no matter what level of government, be it federal, state, city/county or tribal should consider it a privilege to represent the people, and serve to the best of their ability for what is best for the people. Yet, any person with common sense knows the elected officials, no matter the level of government, cannot accomplish what is needed, unless they have a majority of votes to accomplish what is best for the people. Partisan and bi-partisan become so tangled and enmeshed to "win a battle and forget about winning the war", whatever the topic is, that in the end nothing is accomplished, and the common citizenry can do nothing about our own personal situations, except continue to strive to meet each new day with hope and be thankful for each new day. I hope this letter expressing my concerns receives fair, uniform, and equal treatment and consideration that I richly deserve. Thank you for this opportunity to submit my response to oppose the projects being proposed to occur in the Black Hills.
464	Ex. 6 Personal Privacy (PP)	• Why allow mining in soils where the hazards for erosion are extreme? • Why allow mining where the winds will disperse contaminants into Edgemont and Hot Springs. [...] 5.7.2.4 Will the permit area, the water and the land, be contaminated as a result of the reality that ANY AREA WITHIN THIS FACILITY MAY CONTAIN RADIOACTIVE **MATERIAL?** [...] 6.4.3.6 Erosion control practices will be removed when no longer needed. As long as the soil is contaminated and as long as it rains, would it not serve the public interest to maintain all anti erosion systems?
469		May 10th, 2017

		Mother Earth weeps as we fill her with evil toxins and contaminants, destroying her naturalness. How much can we rob? Don't be fooled, she will retaliate? Eventually she will punish us wrongful, greedy souls? In behalf of us Mother Earth conservatives. There's no safe mining? • Leave our water alone.
470		I am against the permits of any kind and any numbers given to any company that would by any means endanger the land, air and water to contaminate anything in South Dakota, the World, or persons of Fall River County. I moved here from Ohio to improve my health, which has happened, no longer on numerous pain medication or need of a brace. Please do not allow permits for mining uranium in Edgemont, stop and do not permit incoming contaminated products into Edgemont from other states. Thank you!
470		Throughout the U.S .there has been a tragic history of environmental threats and leaks. **We cannot** afford to risk our future.
470		Against uranium mining because of pollution issues – dangerous material!
470		1. Do a complete analysis of abandoned uranium mines, to evaluate potential and current impacts to the environment, to the water, to wildlife, and to humans. [...] Protect our water. Protect our wildlife. Protect our people...future.
470		-NO- We do not need this to happen, believe it will only hurt the land and water & us! –NO-
00477		This letter is from a concerned resident of this area. I live at the home of my sister on Lariat Road, situated in Custer County, as shown on the map below. I've attended public information presentations and investigated the history of the uranium mining operations. Given the mining industry's past infractions of environmental safeguards, it appears that our well is at risk of contamination if the company is granted the permits to proceed. For instance, according to one report, between 2008-20 IO there were 60,467 wells with violations. Uranium leakage poses a serious irreparable hazard to our health. Water is essential to life and needs to be protected. Here is the location of our Canyon Calm home, where the health of I ivestock, children and adults is at risk if the mining is allowed to proceed. [The figure is a map showing the location of Canyon Calm on the southwestern edge of the Black Hill National Forest, southeast of the Dewey-Burdock project area and northeast of Edgemont.] Thank you for respecting this educated request,
483	Ex. 6 Personal Privacy (PP)	At this time I would like to share with you some of my thoughts and comments on the Dewey Burdock mining project currently pending in Edgemont, SD. I am a 75 year old retired teacher living in Hot Springs, SD. I have 40 years of experience teaching junior high school, 14 years in New Jersey, and 26 years in S.D. I moved here to South Dakota from New Jersey in 1976. I lived in Pine Ridge for 20 years, and in Hot Springs now for 21 years. When I left New Jersey in 1976, it had already become a toxic waste dump, yours in the making. This even included a superfund clean-up site a mere three miles down the road from our family farm. Because of the abnormally high rates of every kind of cancer in the state, it was already being called the cancer capital of the nations; also nicknamed "Cancer Alley", referring to its status as the thruway connecting Philadelphia and New Your City. I know without a doubt that this will happen here in Fall Fiver County, SD. What amazes me is that there are a few people here who believe that they have knowledge superior to the natural law, and expect us to follow along. They feel that this knowledge entitles them to "mess around" with the earth and pay no consequences for it. I have read all the facts and data, and I believe this is a disaster waiting to be unleashed on the public. [...] Thank you very much for taking the time to read my comments. They may not be much, but they come from a very concerned heart that has seen so much of life.
485		EPA Hearings 10 May, 2017 I object to the two draft permits for the proposed Dewey-Burdock uranium mine in Custer and Fall River Counties because of the following concerns. We need to protect our water, economy, health and way of life. Let's stop this bad idea. [...] This kind of stuff would also disturb cultural and historic sites, wild life and our ranching and tourism economy. Handling uranium in any form produces radioactive and toxic wastes that threaten peoples' health and our food chains.
487		RE: Comments to EPA on permits for in-situ uranium mining I attended two days of hearings in Rapid City on May 8 and 9th• As I listened to various people speak, there were various grave concerns including: **1.** The *science* of actual and potential harm to the water, land and sky. Our scientists have proved that in-situ uranium mining is dangerous and changes the water and environment.
489		I have children, grandchildren and great-grandchildren that this will – there is no "may" – affect. Please do not do this! I am deeply concerned for our town as we depend on water, tourism, and industry.
489		The probable loss of tourism and ranching would be devastating.
489		We do not need this at all. Cancer rates go up, all because the rich get richer.
489		Please do not permit this environmental disaster to happen.
489		The potential for environmental damage is too big a risk for this project to continue.
489		The mines for uranium have been and are an environmental disaster. These will be, too.
492		My name is Ex. 6 Personal Privacy (PP) I live in Sioux County, I was born and raised in the Crawford area. Please accept these as my comments to the formal hearing record.

		Deceptive language is snake oil, descriptions like uranium recovery, and the use of simple soda pop solutions, then to top it off, hiding radioactive waste in deep injection wells that pass through groundwater aquifers. Who will cover the costs of hazardous training for rural emergency responders, contaminated workers and equipment? Who will clean up license area soils that are contaminated because of the toxic waste land applications? Who will monitor the spray discharge of the evaporation pond poisonous waste water as it settles on the surrounding fields and prairie? Count on hazardous delivery spills occurring on your county roads, be ready to evacuate your home when it does. If you doubt it, come to Crawford, I'll give you a tour. The casual transport of yellowcake is lethal to wayside communities.
494	Ex. 6 Personal Privacy (PP)	We are writing this comment letter as a common family who resides together in Hot Springs. SD. We are not individuals with heavy scientific backgrounds, just concerned citizens. We are asking the EPA to deny any and alt permits related to Powertech/Azarga activities for uranium recovery and hazardous waste dumping. No superfund sites should be allowed at any time. We are familiar with and have read and researched the negative effects of tracking, ISL, UIC injection wells etc. and the negative effects of uranium on the environment, wildlife and humans. The negative effects have been well documented with research and are banned in many pfac8s ttvoughout the world. [...] We drink the water here; have friends with wels; swim, play and heal in the water; fish; hunt; boating activities; grow gardens; raise animals; wash; breath the air; raise children; hike; travel; live; own land; businesses; and pray here with many oorrvnon people just like us. We don, want to live in a place that could become a toxic waste area, as would anyone else. This is one of the few pristine water areas in the Americas! [...] Please protect our environment, **people, wildlife,** archeological sites, tourism and way of life in South Dakota by supporting the denial of Powertech/Azarga permits. Pleas lake no chances. Thank you for your time and consideration , Sincerely,
495		I'm part of the #WomensMarch movement. I'm from Colton, New York and I'm concerned about uranium disposal in South Dakota. Here's why: It should never be acceptable to poison the earth and its natural resources that we depend upon. Please do not approve the contamination of these precious resources that are depended upon. They feed and nourish our children and all of us. This disposal method can never be undone. In the first 100 days of this new administration, I hope that you understand and take these concerns seriously.
495		...and an environmental disaster in and of itself, even if it goes as planned. Please no not allow this to happen.
499		***Death and Destruction:*** *[Handwritten note] EIS* *Environmental Impact Statement* *There are many direct and indirect social ills associated with uranium mining. Wells in local areas will have their wells drop many feet. Livestock will suffer and radon emissions will affect the surrounding communities. Not to mention chloride, sulfate, radium and iron being present in wastewater ponds. It is bad enough wells contain arsenic already and contribute to the cancer rates. Cancer clusters are a reality. The cost of treating cancer is expensive and does lead to death. Add that to the cost of dying and it becomes more expensive.*
00500, 00501		With regard to the ISR mining operation, many people might be concerned that sedimentation ponds will leak and contaminate ground water {which they have in other ISR locations), migratory birds will land in these ponds, insects will obtain water from them to become food for birds, West Nile virus will become more prevalent because of the breeding opportunities for mosquitoes among other things.
537		NRS joins the tribes, the local communities, farmers and ranchers, and environmental and social justice organizations in asking the EPA to deny the UIC permits and deny the requested aquifer exemption. Given the recent history and the events that occurred in Standing Rock regarding the Dakota Access Pipeline, it is incumbent on the EPA to adhere to the most open and inclusive process, providing the public with all information necessary to provide a meaningful opportunity to be involved in matters most intimately impacting our lives.
546		The same problems exist where the EPA analysis lacks sufficient detail and simply requires plans to be submitted in the future to address other impacts, including air impacts, land disposal of radioactive waste, wildlife protections, and BMPs for storm water control. As discussed, for the most part, these mitigation measures are simply plans to make plans at some point in the future – outside of the public process and shielded from public review or comment. Such assurances, without any details as to the mitigation to be proposed and without evaluation of how effective these restorations efforts are expected to be, do not satisfy EPA's obligations.
547		WHEREAS, the Oglala Sioux Tribal Council finds that the wise and sustainable use of the Natural Resources traditionally has been and remains a matter of paramount governmental interest to the Oglala Sioux Tribe and a fundamental exercise of Oglala Sioux Tribal sovereignty, and WHEREAS, the Oglala Sioux Tribal Council supports preserving and protecting all of the natural resources within the confines of the Pine Ridge Indian Reservation especially the air, water, and earth as these resources are the foundation of life, and WHEREAS, the Oglala Sioux Tribal Council affirms that it is the duty and responsibility of the Oglala Sioux Tribe to protect and preserve the natural world in its purest form for the life of future generations, and WHEREAS, the Oglala Sioux Tribal Council upholds the right and freedom of the people to be respected, honored and protected with a healthy physical and mental environment, and WHEREAS, the Oglala Sioux Tribal Council finds that there is a reasonable expectation that future mining and processing of uranium in the region of the Upper Midwestern United States will generate economic hardships to the Oglala Sioux Tribe. These economic hardships include but are not limited to the potential damage to the land, air, water, vegetation, and other natural resources of the Oglala Sioux Tribe, now

		THEREFORE BE IT ORDAINED, that the Oglala Sioux Tribal Council does hereby declares the Pine Ridge Indian Reservation, including it aboriginal territory boundaries to be a nuclear-free area for the protection of the people and the Natural Resources of the Oglala Sioux Tribe. Any person, agency or entity, including federal, state, and county governments, or corporations, businesses, or companies who shall cause any nuclear pollution or contamination to enter the confines of the Pine Ridge Indian Reservation, including its 1851 & 18 68 Treaty boundaries and aboriginal territory boundaries, shall be prosecuted to the fullest extent of the law. C-E-R-T-I-F-I-C-A-T-I-0-N I, as the undersigned Secretary of the Oglala Sioux Tribal Council of the Oglala Sioux Tribe hereby certify that this Ordinance was adopted by the vote of: 16 for; *Q* against; *Q* abstaining; 1 not voting during a REGULAR SESSION held on the 7th day of AUGUST 2007.
7443		Posted by Aaron Kesel | Mar 2, 2017 | Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. NOT- BIGLY!! No permits, exceptions whatever! Water is life. I was alive during the time of the Times Beach Dioxin pollution, EXXON MOBIL Valdez and Deep Horizon. I also am a student of the problem with Chevron extracting oil, Etc in the previously pristine Ecuadorian Forest 30 years ago and leaving those poor natives with a mess from that process. The natives of had an ongoing legal dispute to get remedies for 25 years!!! Please stop insulting our intelligence!! I am a retired RN I have a BSN from major University and I practiced in Healthcare Management for 30 years. Don't reinvent the wheel. Healthcare has proven that PREVENTIONis a million times better than trying to treat the disease once you get it. Don't let these big companies make profit by destroying our public resources such as water in the aquifers and above ground on the land and in the water and the air. What don't you get? Your grandchildren and great-grandchildren are going to be around during this time in the future and they'll be the ones having to deal with this if we don't stop it before it starts. You cannot eat, drink and breathe CASH____. Do you not remember the rivers being on fire back in the sixties and seventies and the Erie Lake almost being dead from pollution? REMEMBER SMOG?????
7455		Public testimony in South Dakota has been overwhelmingly opposed to Powertech-Azarga's uranium mining permit. There is a good reason for this: South Dakotans value their water and other natural resources. Please respect this overwhelming testimony, from the people who will be directly affected by this permit, and reject the proposal.
07459 (Valentine hearing)		So we need to protect our country. We need to protect our land, our water, and our people, and the chokecherries, and the buffaloberries and, most of all, the water that we all have to live with.
07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	And just, I -- I tried to understand, you know, both sides of this coin that we call energy. And on ne side, you have -- you know, you want to -- you want to make sure that there's national security for America, so we have enough energy so everybody could live the lifestyle that they have. And I also found out that, you know, America only comprises of between 4 to 8 percent of the world population, but we use 96 percent of all the natural resources to live our lifestyle, and that's very disturbing to me. Because if we keep at this rate, we are going to run out of not only, you know, water, but all kinds of other resources that we need to survive. So we really have to take a look at that. [...] Oil companies, they just need to capitalize. If they want the money, make the wind generators, make the solar. We have so many alternative energies out there, that we don't need to destroy ourselves and our water supply by getting uranium, oil, all the other fossil fuels. We don't need to destroy ourselves. We don't need to destroy life. Just so a few people can have a bunch of money that they can't spend? You know, we're going to destroy life because of this? When we have all this other -- we have hemp oil. We have a guy in Germany that's changing all them cars today that we drive in to drive on hydrogen, you know. So the cars we drive now can be pretty clean, you know. So many things, you know. There's so many things that we could do as a people, you know. Because like I said, America uses 96 percent of all the natural resources to live the lifestyle that we have. [...] But it's like we survived all these things, and now we finally get some kind of quality of life, going to be taken away again. We have to think about this, I think. It's very important, very important. We don't need to destroy life. There's enough energies out here to provide life for everybody for thousands of years, for -- you know, if we take care of our land that we destroyed, we have enough land to make more food. It's all kinds of alternative things that we can do, you know, to sustain life. We don't have to kill life. You know, it's our place to control. It's up to us, with our God, our human needs, and we're all -- we all have to live. (Speaking in indigenous tongue.)
07459 (Valentine hearing)		And you know what, on top of that, we still eat our plants and our vegetables and our -- our medicines that grow down there. That's how we grew up. And so you're taking that away. You're ruining that whole ecosystem. And those outcrops from the Black Hills go all the way out to Spirit Lake, and that's another part of our nation. Those outcrops go that far. [...] You can't play God with science. So just remember that. You come from a long -- you're destroying a long, long line of people. You're not just -- you're not just going to go in there and take yellowcake. And the value of yellowcake is less than any of our plants and food we eat. I could go get chokecherries and buffaloberries, rare berries out of there. And the value of them is greater than your yellowcake cake.
7460		To look at the plants for example, you can't water them, they can't grow without water or they can't grow with contaminated water or any -- any kind of a chemical that's not supposed to be in the water.

(5/8 Rapid City hearing)		And to that, like -- like, they can't grow and they can't sustain their life because they are drinking that kind of poisoned water. And eventually the animals, they drink that water. And the animals that prey on the other animals, they are also passing that contamination on. So it all has -- it doesn't have to be just the water. It has to do with all -- all life. You know -- yeah.
7460 (5/8 Rapid City hearing)		IVAN LOOKING HORSE: Hello. My name is Ivan Looking Horse. I come before you for rejection and opposition of this uranium mining. I come here to speak for the animals that have no voice -- the deer, the fish, the buffalo.
7460 (5/8 Rapid City hearing)		SUZAN NOLAN: Thank you for the opportunity to address you today. I'm glad that you have come to Rapid City. It gives us all a chance to express some of our deepest, heartfelt feelings about this issue. These are crazy times, and all of us feel a great deal of vexation about a President who has the value of exploiting our -- our environment and supporting the wealthy. But what has happened as a result of this is that there are a lot of grassroots movements, from the women's movement to environmental movements. And I'm here to express some of the common sense values of people from Dakota Rural Action, an organization who I represent today. There are 100 of us that belong to this organization. Our numbers have burgeoned since the uranium mining issue came up several years ago. And so I'd like to share with you some of our resolutions. This is a resolution that Dakota Rural Action came up with in 2013. It represents our best thinking around this issue. And I'm not going to read it in the resolution language because that gets redundant and sounds stiff and formal, but here is a summary of what we've come up with: Whereas uranium mining has polluted the Black Hills area and adjacent locations with hundreds of unclaimed waste sites -- and you've heard that addressed today -- uranium mining releases radioactive contaminants, extremely hazardous for over billions of years. Uranium mining proposals currently threaten the Black Hills and surrounding areas with mine waste accident risks. Uranium mining entails private appropriation without compensation of the public water trust and contamination of precious land, water, air, and wildlife. Concentrated radioactive uranium process material is stored at and shipped from uranium mining sites on public thoroughfares where accidents, theft, and spills can occur.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	It is very arrogant for all of us to put and jeopardize life, all life, the environment. [...] If you allow this permit, you're going to live with it on your conscience because our people, our children, our relatives, our loved ones, the deer, the eagles, the fish, the water life will all be poisoned and contaminated, and it moves and it migrates. [...] And it is very immoral. It is very unethical. It is insanity. And I'm angry about it because I care about the world. I care about this earth. We have one earth. How arrogant for anyone to think of allowing any company, whether an American or foreign, to pollute and desecrate and destroy this earth, our aquifer, with their chemicals, with their radiation, with contamination. [...] And there's a lot of people that are going to stand up. Don't mess with our world, don't mess with our future, and don't mess with our environment.
7460 (5/8 Rapid City hearing)		JACOB HELVICK: That's fine. (Speaking in indigenous language.) I am Crying Eagle, but by the society, I am Jacob Helvick. I am from the Oglala Band of the Lakota Nation. And I would first like to say that y'all are crazy for even entertaining this at all, period. Inherently the society has, since the get-go pretty much been inherent conflict with what would be the betterment of humanity, our animals, plants, trees, and Unci Maka, Mother Earth as a whole. And one consistent fact that I think has just kind of sprouted out of virtually every single thing, whether it be pipelines or uranium mines or anything, all that, they pretty much consistently don't keep any sense of -- how would I say it -- basically any sense of, you know, making sure that everything is all good, everything is taken care of. It's always wound down to pollution. You can ask the people of Flint, Michigan. You can ask the people of Corpus Christi, Texas. You can ask the people of my Dine relatives of the Navajo reservation. It's the same consistency. These people are struggling, and this is happening all over the world.
7460 (5/8 Rapid City hearing)		Let's get smart for once. Let's not chase after the corporate entities. Let's look after ourselves. Let China clean up its own damn environment. [...] Don't dirty ours.
7460 (5/8 Rapid City hearing)		I like it here in South Dakota for a couple reasons, one being that we're far from most major cities, so we don't have much traffic and pollution. Two, I can enjoy the peace and quietness, especially at night. I'm from Southern California. That isn't something that we get to enjoy there. There is a survival community that just opened up outside in the Edgemont area. It's called Vivos xPoint. They have a big settlement where the military used to store bombs. They have turned the bomb bunkers into houses and created some other features like recreational areas and a shooting range. They dug wells to provide them with their water. I just -- I think it's interesting that there's a culture growing popular among people here in the states surrounding self-sufficiency and living off the grid. Society is getting bigger. Eventually we're going to be struggling with resources. Already we get most of our things from outside the U.S. If things were to fall apart tomorrow, how would people react? With so many people living around the poverty line, like in Pine Ridge, things would be real bad without anyplace to get food and water. So we would have to do these things ourselves.

		Is it worth it to have Powertech/Azarga come in and start mining? They want to convince us that the operation is going to be safe and nothing bad is going to happen. Well, shit happens. Nothing is perfect. Some accident will definitely occur.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	ANNA ROBINSON: Hello. My name is Anna Robinson, and I live here in Rapid City. I'm a young professional and a transplant. This is the third time I've moved to the state of South Dakota. I never planned it, but I found myself coming back here time and time again because there's something special about this state, and now I feel like I found a home in the Black Hills. I'd also like to point out I am overcoming my fear of public speaking in order to voice my opposition to this. You've heard many testimonies addressing treaties, ranches, concerns about the mining process, the environment, the water, concerns about the company, the beauty and sacredness of this land. And, frankly, I think all of those reasons are reason enough not to allow this permit. But in any case, I have some additional thoughts. I represent a growing population of young people in this country who are continually seeking out untouched, natural land. You may call us wanderlust-driven, adventurer-obsessed, outdoor enthusiasts. There are many names for us. We seek this untouched land, not to destroy it, but to enjoy it, to breathe its clean air, to escape the noise and congestion of the growing urban communities. And we seek it to connect to something we know is disappearing. It's us who are also trying to preserve and protect these untouched lands. We are prioritizing the environment, human connections, and sustainable futures over temporary, out-of-date, get-rich schemes like mining. And it's this young population who will eventually replace you in your offices, in your homes, and in your communities. The Black Hills is a destination for this large population of young people. [...] So to wrap up, I guess, I may be one of many young adventure-seekers, but the qualities that make us such adventurers are fearlessness and determination, and that's what you'll be facing if you approve this permit. Please do not allow uranium mining in the Black Hills.
7461 (5/9 Rapid City hearing)		Transportation and disposal of all related waste is an issue far-reaching compromises to the environment and contains its own very long list of concerns. We have found radioactive fracking socks discarded in North Dakota illegally. So is there any wonder that we are all skeptical of
7461 (5/9 Rapid City hearing)		This is real. Okay. So now the hunting land is cattle land. So now the cattle eat your grass that is polluted with all your radioactive sulfur, radon, everything else. Now you're going to eat that cattle. You should be testing your cattle. I'm sorry.
7461 (5/9 Rapid City hearing)		MARVIN KAMMERER: Here I am again. I still don't believe that you're really listening. The name Kammerer comes from a German name, a long ways back. It's kind of like the janitor or the custodian, but I imagine we were known as the family who followed the lord's horses with shovels. Having said that, that was a way of stewardship, and I'm still a steward of the land. I'm a Wasicu. I know there's not many with cowboy boots and hats whose land is treaty land. I'm here. And my brothers and sisters, all of them out here, they are my brothers and sisters. And we have to take care of the land. I'm getting sick and tired of corporations coming in here from other lands and telling us what a good thing they've got with jobs, caring about our environment. When they're through harvesting what they want to harvest and it's not profitable anymore, they pull out. And the Superfunds have to take over, if we have any. Knowing the outfit we've got running the country now, we probably won't have that. We'll have to live with the crap they leave us.
7461 (5/9 Rapid City hearing)		And basically, this is what bothers me because I live in this area as well, like as other people. If I would leave -- let my child to go and play in construction area, probably everybody will tell me a bad, horrible mother and call in police because I let my child to go and play in hazardous area. And here's a question: How I can stay away and do not come and speak if hazardous will be bringing here in Black Hills in my house? That's all that I want to say. I very appreciate your attention. Thank you so much.
7461 (5/9 Rapid City hearing)		And I just want you to think of the impact not only to us as local citizens, but how that is going to affect other people as they come into this area, the environmental impact. Thank you so much for your time.
7461 (5/9 Rapid City hearing)		So today that's for me to speak on. But also, I, too, am a mother, and I am a grandmother, and I believe that we need to take care of Mother Earth. And I don't see where our federal laws are protecting our own environment. And it isn't safe. You know, I still don't see where anything that was ever done where a federal agency says it's safe, it's okay, and we'll clean up, we'll do this. You know, all these corporations coming in, they are all from the different countries. They are from Canada, they're from China, Russia, everybody. They're coming in, and they're using our resources, which, you know, in long term it's damaging this earth that we live in. So today, you know, I come -- I put it on record, you know. Oglala Sioux Tribe is the largest Sioux Tribe in South Dakota. However, we have other Sioux tribes, like Rosebud. We have Cheyenne River, we have Lower Brule, Standing Rock. We have all these tribes opposing any kind of decisions that you, the EPA, are going to make. And I hope you oppose and I hope you don't go along with the request that these corporations are asking for. I'm asking that -- that in the presence of people, everybody that's here, everybody that's stayed and put their comments on the record, that you consider each one of them and that you oppose and do not honor the request from this Powertech or whoever is asking for this license. I hope you guys put a stop to it and not allow it to happen. (Speaking in indigenous language.)
07463 (Edgemont hearing)		ALEX GOOD CANE MILK: Hello, cousins. How's it doing today? All right, got to see some smiles. All right. So, my name is Alex Good Cane Milk. I am Yankton Sioux Hunkpapa, and I'm here to talk about common sense. So there's pros and cons to having common sense, you know. Pro, that you have it. A con is that you have to deal with those that don't have it. So we'll just let that sink in for a little bit, you know.

		You're willing to let something, doesn't matter what it is, destroy something that you're trying to live off of. Why would you allow uranium in your homes when you know it's going to destroy the lands you live off of, the water you drink, the animals you hunt, and the food, the plants that you eat. That's common sense to me. I don't know about you guys, you know. And then yeah, think about all the money, that's awesome. But how long does that last? We all have money, big stacks of it, but then we spend it, right? And it's gone, you know. You always can make more of it. But you destroy this land, you can't make more of it. You just can't. Proven fact. Common sense. You know, so I just wish that you guys would use your common sense. I realize what you are doing. And don't be that person that messed it up for everybody. We all know who that is. Don't be that person. That's all I'm saying. You guys have a good day.
07463 (Edgemont hearing)		I talked at a NRC hearing a couple years ago in Hot Springs. And I mentioned the United States should implement this COOL, Country Of Origin Labeling. Lakota people, we like our -- we like to eat meat, hamburgers, steak. And with that Country Of Origin Labeling at least we'll know where that meat is coming from. I'd sure hate to eat a cow that comes from this area with all the previous mines that are here. This -- I was here just for the afternoon. I have COPD, breathing difficulties. Just being here in this atmosphere is getting me sick. You guys might think it's -- you guys are safe here, but you're not. Uranium doesn't discriminate.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	Coming from New Jersey, I also know that companies, they do things for money. And right now, I believe, for me personally, is that this is very greed-driven. Because to me, yes, you say about uranium and mining uranium, well, it doesn't look to me that uranium -- and research that I've done -- I worked for the public school system for 25 years, back out east. And I've done a lot of research and I've done a lot of reading, and it doesn't seem to me that the money for uranium is what it's about. To me what my concern is is that Superfund sites, what happens with all the contaminates, everything that's going to be put into the ground or put someplace else, and supposedly be cleaned up. [...] I'm not saying that New Jersey is a toxic dump, but I'm from New Jersey for a couple hundred years. And I have seen what has happened with pollution, with big corporations. With people being, in my opinion, greed-driven for money, money, and not seeing what happens afterwards. Because a number of years later, there's still things that happen, and there's still effects on people and animals and plants and everything. And it's my concern that out here, if this does become like a Superfund site, a place where people are going to allow other countries -- if it's so safe, why are these people not doing this where they live? Why are they not doing this where they live? Live where you live, drink the water that's there, live in that area, and see. Because in my lifetime, I have seen what has happened out east, and seen what has happened in a lot of different, different ways. [...] You know, coming from where I've come from and then living in a such a beautiful area like this with, you know, so many beautiful people and surroundings and just everything is really, you know, very well-cared for, why even consider anything like this at all? Why even consider this? For money, for monetary purposes? To eventually become a toxic -- you know, a dump area. Things may have not happened now and people are saying, okay, well, yes, it's clean, we wouldn't want to do anything to hurt, you know, our families and our relatives. You wouldn't want -- nobody wants that to happen. But in the long run, there is no proof that this would be -- you know, if there is any contamination, that this will be cleaned up, this will be restored to its -- you, know, its exact condition. [...] The animals, the fish get parasites. It needs to be monitored for bacteria. There's a tremendous amount of issues that would come later on. Yes, it might seem like it's okay now. But like I said, in my lifetime and what I've seen, I don't -- I don't think it's a good idea. I think it's -- you know, it's a pretty -- it's a bad idea. And I've already sent, you know, in my comments and stuff previous for my entire family. Thank you, guys, for coming in to listen to everyone, too. Thanks.
07463 (Edgemont hearing)		ISAIAH COX: Well, I'm Isaiah Cox. And I'm here a third time. And I'm here because I believe that we can save this land, you know. And anyway, so, let's take the earth, you know, as a paint, like a painted circle, but it's filled with different kind of paints on the inside. So it's pretty much beautiful. And anyway, if you start taking the uranium out, and just fill it in with, like, black paint, you know, it becomes less beautiful, as you can tell because -- and, if you continue to do this, eventually the whole circle will become black. So that's one reason why you shouldn't do this. Also is that, when you really think about it, water is money. I mean, think about it. Because humans eat, like, animals and stuff and vegetables. But the -- like, the vegetables and the animals, they need water. So water is pretty much the same as life. And well, that life will feed other life, and that life would end up being humans, and we would -- and we created the money pretty much. So in that case, water is money then. If you try to continue to mine the uranium, water will become money. So one more thing is that, why would you try to ruin such a beautiful place, you know? That's something I don't get, because if you're trying to -- like, if you're doing this for money, all right, think about it, you don't -- well, money isn't the solution to everything. So why would you do this if you can easily just get what you need by actually working for it instead of doing something, like, the easy way, you know? So.
07463 (Edgemont hearing)		JUDY SCHUMACHER: I didn't know my number was going to come up so quick. I'm Judy Schumacher. I live down in Provo, South Dakota. I don't agree with this mining. I don't want it. It's dangerous at best. I grew up in Buffalo, South Dakota, and back in the -- I'm going to say late '50s to -- probably into the late '60s, maybe early '70s, they did some uranium mining up there.

		And they left these little divots in the ground where they dug, and these little divots collect water. Well, in dry years, when these little divots do get a little bit of water in them and the cows drink out of them and the sheep drink out of them, they get -- black cows will turn white, sheep lose their wool. They are down to their skin, get sunburned. [...] My father-in-law worked in this mill that was over here. He died from pancreatic cancer. Soft tissue cancer is caused by radioactivity. If you get too many X-rays, you will die from soft tissue cancer. [...] What's going to happen with these sediment ponds when they dry up? Are -- you know, is it still going to be able to rain in them and get all of that uranium active again?
07463 (Edgemont hearing)		Who will cover the cost of having hazardous training for rural emergency responders, contaminated workers, equipment? Who will clean up license areas soils that contaminated -- that are contaminated because of toxic wasteland applications? Who will monitor the spray discharge of the evaporation pond poisonous wastewater as it settles on the surrounding fields and prairie?
07463 (Edgemont hearing)		in And another thing that wasn't really talked about too much today that I have noticed is the waste. I was told that there's billions -- not billions. But there's tons of waste right over here, buried under some dirt, and nothing will grow on top of that. It's all white. So that was -- that was the -- the way that they handle this waste, was just to make more waste and to destroy more land here. So that's like -- that's my concern. Okay. Now, you're saying the process itself might be a little bit safe, and you're still -- you know, it's a theory that could be safe. It's not 100 percent. There's no 100 percent guarantee that it's completely safe. I haven't heard that yet. And so then you've got all these tailings. You got all the leftovers from all this mining. And that's poisoning. [...] Because you're going to kill lots more people that are down river because you -- you have no way -- there's no way to -- EPA -- I mean, I see all these tailings, all these open mines, and all these open -- all these, whatever you call these, test sites, boreholes. They are not covered and they are dangerous. They are still dangerous to the people. It's like, we need to really clean those up. You know, as EPA, as a person to person, we really need to clean these up. It's very important, you know, environmental protection, protect the environment. And I really feel that. So I thank you for your time. I know you're going to cut me off, so.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	SOPHIA BLACK CLOUD: (Speaking in indigenous language.) My name is Sophia Mahpiya Sapa. My traditional name is Flower Woman. I am from the Hunkpapa Tribe, Standing Rock Sioux, the great Lakota Nation. I just quickly want to start with saying that on my way in, I wanted to pick up some of the local sage, and I pulled over to grab some to have with me while I spoke. And right in that bush of sage was this turtle shell from Edgemont here in the front of your city. And so it looked like it hadn't been -- there was still some fresh flesh on it. And so I filled it with the sage from the bush that I found it in and want it tested. I want to know if this turtle died of natural causes, things like that. This is exactly what we're here to fight for today, is to make sure these four-legged relatives of ours don't go unspoken for. So I have a lot that I want to say. I have been here for the last four days of these hearings, and I've heard everywhere from scientists, doctors, teachers, people from Rapid City, reservations, other states, and anywhere from our four-legged friends and in between.
7642 (Hot Springs hearing)		I think if we all stop and take a look at the impact it will have on our families, our future generations, the impact is great. And I think we need to look at it from the perspective that we are all in connection with one another, and we are all indigenous to this planet, and it's all of our responsibility to ensure that not only our lifespan, but the lifespan of our children, our great-grandchildren are always looked after and always put first and foremost. Thank you. (Speaking in indigenous language.)
7642 (Hot Springs hearing)		I value the land and the ecosystems around the area that are risked and in all probability irreversibly damaged in preparation for mining, during mining, and after the mining, and especially the uranium mining.
7642 (Hot Springs hearing)		And I just wonder, if the D-B is allowed -- which I wouldn't be surprised at all, even though I've heard this wonderful testimony -- if they go ahead and get their permits granted, if they're allowed, are they going to issue Geiger counters and teach people how to use them? Are they going to issue chemical suits so people can put them on? Are they going to teach them how to -- how to -- sorry. [...] MR. BATES: Okay. I hope they also teach them how to decontaminate their neighbors and their family. Thank you for your time.
7642 (Hot Springs hearing)		This kind of stuff would also disturb cultural and historic sites, wildlife, and our ranching and tourism economy. Handling uranium in any form produces radioactive and toxic waste that threaten people's health and our food chains.

Notes

discuss NRC risk assessment, back-up monitoring systems, automatic shutoff systems

address waste fluid, treated and untreated, leaked on the ground

Ex. 5 Deliberative Process (DP)

is there data on recently restored wellfields?

references are to the SD Large Scale Mine Permit
the bleed is not the aquifer restoration process
look at Table 3.4-10
read section 5.4.1.1.3 about lead & thorium

Does the USGS paper say the soil has not been returend to baseline?
Review USGS paper
Is there recent wellfield restoration data that I can ID the ACLs?

Get explanation from NRC about how ACLs are set. Protective of human health and environment? Refer to modeling done to show how far contaminants travel.

Are there EPA studies about the safety of deep injection wells disposing of waste fluids.
Look up her Lustgarten, 2012 reference
Lustgarten, A. (2012, September 19). Injection Wells: The Poison Beneath Us

for info about the proposed GWDP...see DENR website

pick up here

Response

Refer to Fact Sheet discussion on automated monitoring...automatic shut-off mechanisms

Refer to NRC risk assessment document
NUREG/CR-6733
A Baseline Risk-Informed, Performance-Based Approach for In Situ Leach Uranium Extraction Licensees

The EPA evaluated impacts of leaks and spills in the CEA...

The EPA reviewed potential impacts to soils in the CEA...discuss mitigation measures

The EPA reviewed potential impacts formm leaks and spill in the CEA
conclusions

The EPA evaluated potential impacts from spills and leaks in the CEA...

The EPA has reviewed the potential impacts from spill and leaks in the CEA...

		# pages	%
1.	Comments outside the scope of being addressed by the Region 8 UIC program	233	24.7%
2.	Comments Related to Tribes (consultation, treaty rights, trust responsibilities, NHPA)	186	19.7%
3.	Impacts to USDWs	168	17.8%
4.	Permit requirements – Class III/V	120	12.7%
5.	Comments supporting project	54	5.7%
6.	Proposed aquifer exemption.	49	5.2%
7.	General Environmental Impacts	33	3.5%
8.	Comments about EPA as an agency	26	2.8%
9.	Environmental Justice Analysis	24	2.5%
10.	General questions about the EPA permitting and public review processes.	20	2.1%
11.	Concerns for contamination of surface water and the Cheyenne River.	17	1.8%
12.	Cumulative Effects Analysis	12	1.3%
		942	100%

Letter ID	Commenter Name	Text
18	Ex. 6 Personal Privacy (PP)	Subject: Formal comment on South Dakota UIC permits and ISR aquifer exemption Formal comment under the authority of the Safe Drinking Water Act and UIC program regulations, regarding: • Proposed two Underground Injection Control (UIC) Draft Area Permits • Proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR site near Edgemont, SD Dear Ms. Shea, I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
47		Subject: Dewey-Burdock Uranium ISR Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without more uranium but not without clean water and soil.
70		Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
82		Subject: No uranium permits please! Dear Ms. Shea, Please accept this email as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the DeweyBurdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
100		Subject: Uranium mining and our groundwater Dear Ms. Shea, Please accept this email as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I strongly urge the EPA to deny both of these permits and stand up for the American people. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico.
116		The continued pollution of the Cheyenne River will continue to impact the Wild Horse Sanctuary and other lands that border the Cheyenne River as well as the town of Edgemont.
121		6). The mine sight is already radioactive as are the creeks that flow into the Cheyenne River, thence to the Wild Horse Sanctuary, Angostora reservoir and on to the Missouri River
121		11). The slope of the eastern mining area is a decline of a few degrees rom NE to SW and any flowing from surface spraying, rainfall or other spills, which are endemic to the operation will simply flow in that direction to the creeks and rivers not to mention leaking piton the underlying aquifers. The western reacts the same as the east but runoff and drainage decline from NW to SE. If this operation is allowed, then it will only be a matter time before all surrounding waters will be unfit for consumption
124		First: 5.6.2.1 of the application states that the slope of the permit area is 2 to 6 degrees to the SW. Due to the location of Pass Creek and Beaver Creek, this slope will force any drainage from leaks and spills and land applications of contaminants plus precipitation to flow SW into these creeks and thus to the Cheyenne River and to Angostora, the Pine Ridge and the Missouri River. This is especially true during heavy downpours such as we experienced this summer which created a 4 foot wall of water that derailed dozens of RR cars and the damaging flooding in the Boulder area which released gallons and gallons of contaminants. These floods will happen again. When they do, there will be precious little to prevent damage to the mining area, not to mention a flooding of the contaminants on the ground. As indicated in 3.39 of the application, and I quote, " the hazard for wind and water erosion... varies from negligible to extreme" "to extreme"! This obviously should be of "grave concern" to quote the Rapid CIty Council. And if the rainfall from our own downpours can cause a train derailment then it can cause other erosion as well. This indicates that the promises of safe containment should be considered questionable. [...] Third: Figures 3.4-17 and 3.4-20 show the open pit mines, the number of well holes and the down gradient and how the ore bodies on the east will flow directly into Pass Creek, and thence to Beaver Creek while the ore bodies on the west side will flow directly into Beaver Creek. In 34.5.3.9 P/Ts plans will account only for a 100 year flood. This plan does not take in account global warming, mega storms, floods, tornadoes, droughts etc. and plan to stop the flooding with a few well placed hay bales and ditches and berms. A 4 foot wall of water will not be controlled by these meagre efforts. In 5.4.2.3.2 PT simply states that the runoff will be managed with no indication of how they will actually do it beyond the attempts mentioned. [...] There are several situations that require the Mining Board to deny a permit of this kind:

		[...] (2) Substantial disposition of sediment in stream or lake beds ,landslides or water pollution cannot be feasibly prevented THIS HAS BEEN ADMITTED AND APPLIES. THE PERMIT SHOULD BE DENIED
149		Subject: Underground Injection Control (UIC) Draft Area Permits Dear Ms. Shea, Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
150		Subject: Underground Injection Control (UIC) Draft Area Permits Dear Ms. Shea, Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
203		Subject: Deny both permits please Dear Ms. Shea, Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoffffffff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without more uranium but not without clean water and soil.
218	Ex. 6 Personal Privacy (PP)	The Dewey-Burdock Project will transmit the applied and/or injected waste directly into the area of the Beaver Creek Watershed within the Upper Cheyenne River Watershed of the Cheyenne River to flow eastward throughout the State of South Dakota and into the Missouri River affecting the entire Missouri River Basin. (see exhibit G_map Beaver Creek Watershed and exhibit H_source_of_missouri_river_missouri_basin_map-1200).
249		Subject: please deny permits Dear Ms. Shea, Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
251		Anyone who is familiar with South Dakota's recent history knows that uranium mining has caused radiation poisoning on the Pine Ridge Indian Reservation since at least the 1960s. The Cheyenne River that runs through the reservation is dotted with radiation warning signs that say "Caution – Nuclear Radioactive River." The uranium waste has not been cleaned up from the last spate of uranium mining. Why should the EPA permit this again? Uranium tailings and wastes pose a significant health risk for thousands of years into the future. Today, key water supplies dotting the Pine Ridge reservation carry arsenic, alpha radiation and other contaminant levels up to 18 times the legal limit, according to water tests conducted by Energy Laboratory, an independent, EPA-certified analytical laboratory in Rapid City, S.D. Fifty-eight percent of the private wells, springs and soils tested on Pine Ridge in June and July 2009 showed positive results for contamination by arsenic, lead and/or various forms of radiation. [...] "The portion of the Cheyenne River Basin that lies in southwestern South Dakota drains about 16,500 square miles within the boundaries of the state. The area in this basin includes part of the Black Hills and Badlands, rangeland, irrigated cropland, and mining areas. After traversing the western half of the state from southwest to northeast, the Cheyenne River flows into Lake Oahe, a reservoir on the Missouri River. "Previous efforts remove the radiation in the water at Red Shirt have been unsuccessful. Drinking water is piped in, or residents must drive 25 miles to the little town of Hermosa to buy water. The Cheyenne River has dried up approximately one mile from Red Shirt and tests of the river bottom soil by Defenders of the Black Hills are pending. Initial tests using a Geiger counter revealed more than double the amount of normal background elevations for radiation." Uranium Mining Poisons Native Americans, article by Jeff Gerritsen, 25 Feb 2009. http://www.culturechange.org/cms/content/view/336/65/ [ATTACHMENT: "America's Secret Chernobyl"]

		All responsible Americans must oppose additional uranium mining in South Dakota, especially injection mining. The United States has already polluted hundreds of thousands of acres of Indian land, hundreds of miles of waterways, and the air and wind above them. Not only cattle, but also wildlife and HUMAN BEINGS drink the polluted waters and suffer illness and death as a result. I urge the EPA to deny these mining permits being applied for. Thank you for the opportunity to comment. Ex. 6 Personal Privacy (PP) Bloomington, Minnesota
258		Subject: Formal Comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under... Dear Valois Shea: Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants (including chloride, sulfate, sodium, radium, arsenic and iron) are in ISR wastewater ponds. Accidents and leaks in this kind of operation are inevitable, raising concerns about run-off into the Cheyenne River and Angostura Reservoir. As you are well aware, the most serious radiation release in the U.S. came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium, but not without clean water and soil. Please protect us. Best regards,
286		Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without uranium but not without clean water and soil.
00306, 00307		Subject: Dewey Burdock Aquifer Mining I am writing to you to express my concern regarding the proposed uranium mining in Colorado. Allowing a company, any company to mine in an area where they know beforehand that any runoff or debris will effectively go right into the river is not only irresponsible, it could be deadly!
325		Accidents and leaks in this kind of operation are inevitable, raising concerns about runoff into the Cheyenne River and Angostura Reservoir. As you are aware, the most serious radiation release in the US came from a tailings pond spill at a uranium mine in New Mexico. We can live without more uranium but not without clean water and soil.
380	Ex. 6 Personal Privacy (PP)	Dear EPA Region 8 Administrators, I wish to submit this email as a public comment in opposition to the proposed Dewey-Burdock Class III and Class V Injection Well Draft Area Permits to be located near Edgemont, South Dakota. I was born and raised in Pierre, SD and grew up with the Missouri River in my backyard. I drank, cooked with, and bathed in water from wells tapping the Missouri River. I learned how to catch walleye, bass, and salmon that swam in its waters and relished the meals they provided for my family. I even worked as a life guard on the banks of the river while working for Mark Hollenbeck when he was the mayor of Ft. Pierre. Mark is a good man, but this is a bad idea. The Cheyenne River is one of the biggest tributaries of the Missouri River and this proposal puts the Cheyenne and the Missouri on a collision course for pollution from not only groundwater migration, but from surface water pollution as well. To say this water will all be contained "on-site" is a bit like trying to catch a rain storm with an ice-cream pail. To further say that Powertech/Azarga will inject cleaner water back in the ground than what came out is even more ridiculous when one looks at the stratified nature of the underlying aquifers in the area. Yes, there are underground water formations that are not fit for human consumption, but interspersed at varying depths are formations that are comprised of pristine water that thousands in Rapid City and throughout the Black Hills and beyond depend on for drinking, for farming, and for ranching. It is these formations that could be at risk that must be considered
387		Subject: Uranium mining in the Black Hills [...] The water that comes into the Cheyenne River is polluted from the Lead/Deadwood mines - and they have been closed for a long time - the pollution continues. This could be the condition of all west river South Dakota
419		-The Mnilusa groundwater aquifer (where the in situ leach mining will take place) runs straight to the Cheyenne River which then flows into the Missouri River, a water source for over 20 million people downstream and if radon or radium leak from the sites, all of my reservation's water will be contaminated
00461		It is my professional opinion that Powertech's proposed mining and activities surrounding such will have a detrimental impact in the immediate area, as well as downstream of the Cheyenne River and beyond. I am opposed to this activity the way it has been presented.
464		Why even consider allowing a company to spread contaminated effluent onto hundreds of acres of land that slopes 2 to 6 degrees into Pass Creek and Beaver Creek and thence to the Cheyenne, Angostora, Pine Ridge and the Missouri? [...] 5.6.5.1.3 Should the board be concerned that PT accepts the potential for accidents, leaks and spills which could release pollutants; bulk chemical products, uranium loaded resin, dry yellow cake, solid by-product material. PT says it will simply remove the contamination. That they admit that the consequences of these spills range from minor exposures to "significant"? That these spills and leaks and accidents can result in runoff into the watershed?
470	[Name blank]	Have you even been to Evans Plunge? It is a water park. If you mine the uranium it can poison water so water parks will close.
470		<surface water> no protection
493	Ex. 6 Personal Privacy (PP)	My husband and I put our life savings into our sustainable build at Glen, NE, near the headwaters of the White River. The Nuclear Regulatory Commission's ASLB hearings made it clear to us what has been allowed on the landscapes of Nebraska's "Garden Beyond the Sandhills". We believe we can contribute to the recovery of the Pine Ridge White River basin but our community needs help. Decision makers need to stop the denial and start to take action against an industry that exploited our rural environs. We need a safe and stable water supply. High pressure injection and extraction mining of uranium, oil and gas is happening in the Nebraska Panhandle as we speak.

499		*Should there be leaks and contamination to the environment. The run off will drain into the Cheyenne River and Angostura Reservoir. Angostura is a recreational manmade lake for boating and, swimming and fishing. It was created for irrigation to crop lands and for watering cattle mainly. It is bad enough there is radiation in the water. Letting Powertech\Azarga mine the Black Hills is a catastrophe waiting to happen. And I believe in "Murphy's Law.* *[Handwritten note] Contains radiation already.*
502		I strongly object to both of these proposals. I urge the EPA not to permit these activities in the counties of Fall River and Custer located in the south western South Dakota. My concerns are with the health and well being of the ecology of the area, the Cheyenne River and all waters downstream of the proposed injection well sites. Please Do Not issue permits for these projects
527		Next, the various types of ponds should not be built where there are old drillholes. Best practices should be followed for all ponds to avoid leakage either through the bottom or through flooding. This includes at least the following: thick, high-quality double liners, clay liners, leak detection systems, procedures for frequent checking of leak detection systems, and the maintenance of substantial empty space in the ponds to accommodate flood events. It is not wise to build ponds in the 500-year floodplain, especially given the increase in flooding incidents in the area, and this practice should be proscribed. Similarly, the design of sediment control structures should protect from events larger than a 5-year, 24-hour precipitation event – especially because the mine and the ponds will be present for up to twenty years. This is a set-up for four spills from the ponds! This also goes to the EPA's finding that surface water impacts "should be minimal." They will not be minimal if a flood washes out sediment structures or over-tops a pond containing hazardous materials even once.
532		**Artesian water** **(Exhibits TRT44, ELT4)** Artesian water is water that flows under pressure exerted by connected waters at higher elevations. The presence of artesian water in the licensed area clearly demonstrates such connections, and that there is communication of water between the aquifers on site and offsite. Artesian flow allows the rapid transfer of water along the subsurface conduits through which it flows, and greatly increases the likelihood of large amounts of highly contaminated subsurface water reaching the surface and contaminating it. In my expert opinion, artesian flow demonstrates a lack of containment at the site and poses a significant risk of unexpected, serious contamination of the Cheyenne River and its tributaries.
546	Ex. 6 Personal Privacy (PP)	This actual risk posed to water quality in the Cheyenne River watershed is likewise discounted in EPA's *Draft Cumulative Effects Analysis.* The analysis fails to calculate the cornbined impact of the risk posed by the Dewey-Burdock wells with the impoundment of the Cheyenne River at the Bureau of Reclamation Angostura Unit. Angostura Dam dirp_inishes the water flows of the Cheyenne River on the Pine Ridge Indian Reservation. It interrupts the high spring flows needed for cottonwood regeneration, diminishing the abµndance of important plant species µsed by the Lakota people in ceremonies. Operation of the dam also degrades wildlife habitat on the Pine Ridge Indian Reservation. The return flows from irrigation contain pesticides, heavy metals, and sodium.
546		According to the South Dakota Department of Environment and Natural Resources: The Cheyenne River water quality continues to be generally poor, due to both natural and agricultural sources ... During normal or lower flow periods, the upper Cheyenne often exceeds irrigation water quality standards for specific conductance and sodium absorption ratio. (SD DENR, 2016 Integrated Report for Surface Water Quality, p. 89). Dewey-Burdock imposes additional risk to an already-impaired Cheyenne River watershed. The cumulative impact of the risk posed by the injection of waste from in situ Uranium extraction with the degradation caused by the Angostura Unit is necessary. However, the EPA *Draft Cumulative Effects Analysis* fails to do so. Moreover, the accumulation of heavy metals and radionuclides at Angostura must be taken into account by EPA. According to Sharma, et al: Delta sediments of Angostura Reservoir were markedly enriched in V, Zn, and U. Uranium was also elevated from the mine spoil and drainages at near U mines sampled near Dewey ... Generally, elevated heavy metal concentration existed in both the upper and lower reaches of the Cheyenne River catchment, with higher concentration in the upper reaches indicative of rapid sedimentation processes. Rohit Sharma, et al, *Stream Sediment Geochemistry of the Upper Cheyenne River Watershed within the Abandoned Uranium Mining Region of the Southern Black Hills, South Dakota, USA,* ENVIRON. EARTH. SCI. (2016) 75:823. Thus, researchers from the S.D. School of Mines and Technology have uncovered that uranium and mining waste have contaminated the upper Cheyenne River. Contaminants have migrated to Angostura Reservoir, and the active transportation process threatens the Pine Ridge Indian Reservation downstream. The EPA fails to give adequate consideration to the combined risk posed by this pollution with the proposed injection of mining waste at Dewey-Burdock. As a result, the *Draft Cumulative Effects Analysis* fails to accurately describe the risk posed to the Oglala Sioux Tribe. Ultimately, the proposed Dewey-Burdock injection wells pose a risk of potential migration of injectate, through faults and secondary porosity in areas connecting with artesian springs. As a result, the proposed waste injection project directly jeopardizes the waters of the Oglala Sioux Tribe. EPA must deny the Dewey-Burdock permit.
555		The EPA acknowledges that there is downward flow from the Minnelusa formation into the Madison formation, but discounts the potential for migration upward. (EPA, Dewey-Burdock Class V Draft Area Permit Fact Sheet, p. 30). The Madison aquifer is the source for artesian springs in this area. Contamination of the Madison formation potentially impacts surface water through artesian springs. According to USGS, Aquifer interactions can occur at artesian springs, which discharge about one-half of average recharge to the Madison and Minnelusa aquifers in the Black Hills area. Various investigators have hypothesized that the Madison aquifer is the primary source for many artesian springs. (Naus et al, Geochemistry of the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota, Water Resources Investigations Report 01-4129, 2001, p. 2).

565		The old uranium mines to the northwest - in the immediate area where Powertech wants to re-start mining - leach contaminants into the Cheyenne River, which crosses the corner of our reservation. The Cheyenne River was the scene of a 1962 accident. One hundred square meters of uranium mill tailings ended up in the River at that time, and the old mines steadily leach into the River. Recent studies by a South Dakota School of Mines professor and others found that uranium levels are elevated at the mouth of Angostura Reservoir (between the old mines and the reservation). So we have reasons not to trust uranium companies when they say that modern technology and corporate responsibility will protect us.
7457		Please don't let "money" be the biggest factor. Water is getting very precious, and the chance of losing it is not worth the risk!! The land they will drill is in the Cheyenne River drainage and it will run into the river.
07459 (Valentine hearing)		This is our evidence, Pine Ridge Reservation. Our tribe keeps water tests, and they know it's coming. And Cheyenne River, my dad lives in Red Shirt. One of the first communities that -- and you know what, we all go swimming in Angostura. And just like Whitney dam, Angostura dam is full of uranium, and no one talks about it.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Water is incredibly vital, and the Black Hills are incredibly important to me. I've grown up in them, and I spend lots of time in them. And I'm also concerned as a scientist. I have a paper from 2016. It was done in collaboration with researchers, Dr. James Stone and Dr. Sharma at South Dakota School of Mines and Technology, also with Dr. Putirka, who I am not as familiar with. The paper is called, "Stream sediment geochemistry of the Cheyenne River" or watershed within "the abandoned uranium mining region of the southern Black Hills, South Dakota, U.S.," and it was published in 2016 in Earth Environmental Sciences [sic]. And I want to read some sections from it. First of all, they concluded that bottom sediments collected from Angostura Reservoir generally consist of suspended loads from the Cheyenne River basin, in which the mining locations are -- are housed in, I guess. And they said that -- they determined that there was generally an increase of pollution load index as one travels downstream from the Cheyenne River and appears to coincide with sediment pollution transport from the upper catchment mine sites. Contamination factors for uranium is elevated for all sites, including the Dewey uranium mines and the Cheyenne River and Angostura delta. These findings further support that Angostura Reservoir uranium loading appears to be attributed to suspended transport from the upper Cheyenne River catchment, including areas region. They use trace mineral signatures to determine origin, and they found that the highest uranium concentrations were found in the abandoned uranium mine sites and within the -- the Angostura Reservoir delta samples. And anthropogenic activities, such as historic uranium mining, appear to be a significant contributor to contaminant loading within this historical mining area catchment. And the one thing that I found very concerning in this is that they found the mining sites had a lot of uranium and also that the -- the river delta in Angostura did. And what they found was that episodic flooding events appeared to transport contaminated sediments from the mine sites surrounding the areas effectively, with very little accumulation or contaminant signature existing along the intermediate water courses. So it might even be that these mining sites are contaminating areas, but because of the episodic flooding events that are common in the area, we're not really seeing a direct correlation for the areas that are contaminating impacted by historical uranium mining in the as -- as a result of this mining. So it's very concerning for me. I've printed off an extra copy of the paper for you guys to take look at because I think that this is important.
7460 (5/8 Rapid City hearing)		The first-order, second-order streams, the artesian water flows through this where they want to take the water up from whenever, you know, in the process of the uranium and bringing it back in, supposedly cleaning, putting the water -- clean water back in. But this also flows into the Cheyenne River, White River, and the Hat Creek alluvium. And so those would expose the water, the trees, the humans, everybody to those contaminants. Is that being considered? Thank you.
7460 (5/8 Rapid City hearing)		Three areas of the proposed project that most concern me are, first, the fate of contaminated mine waste materials; secondly, unrealistic aquifer restoration plans following ISL uranium mining; and third, the choice of uranium as an energy source. My first concern is the toxic waste produced by ISL uranium mining. According to Azarga/Powertech, the proposed radium settling ponds lie at the base of the Beaver Creek basin and the Pass Creek sub-basin, watersheds that drain approximately 1,400 square miles. Three miles downstream from the proposed ponds, these basins empty into the Cheyenne River. Radium is a dangerous waste material, and little information is provided about how pond leaks, spills, and potential flooding will be dealt with.
7461 (5/9 Rapid City hearing)		I believe -- let's see. Regardless of what the company is called, the process of extracting this uranium out of Mother Earth, then allowing them to shoot their radon-tainted wastewater into her, into the Inyan Kara in Fall River County would put our livelihood in danger from here all to the way to the Missouri River, because these -- the aquifer waters come through the Cheyenne River to Angostura, back to Cheyenne River, and all the way down to the Missouri River. So, I grew up on the Cheyenne River. I swam in the Cheyenne River. I fish out of the Cheyenne River. I also grew up around the Little Missouri, too -- or lived along the Little Missouri, and my kids swam in there. These waters need to be healed. They are not being allowed to be healed. So no to this uranium mining, no to any of this pollution that's going on.
7461 (5/9 Rapid City hearing)		Who cleans up any leaks or excursions from waste disposal ponds? Who pays for it? Once stirred up, this process continues, leaching forever into the groundwater, around the project area, into Beaver Creek, which flows into the Cheyenne River, which flows into Angostura Reservoir, where people swim, fish, and enjoy the outdoors.
7461 (5/9 Rapid City hearing)		And you're going to see, if that dam that they're building down there and will build to hold nuclear waste and water, before they process it, whatever -- once in a while, we get terrific storms, piles of rain. And especially lately in the last several years, it's getting worse. I could just see what would happen when that water hits the Cheyenne and into Angostura. And my friends and some of my relation who raise cattle on that river, and the word goes out, don't buy any of these beef, shut them down, fence them off.

7461 (5/9 Rapid City hearing)		The sturgeon chub, which is a fish in the Cheyenne River, was petitioned for listing in August of 2016. And when Linsey McLean -- she's a member of ours that we're very proud of -- when she talks to you about adequate testing for speciation analysis of chemicals and concerns about -- when -- the ion exchange, the glorified water purifiers are going to have a hard time with elements and metals that are organic. I hope you'll listen to Linsey. Thank you.
7461 (5/9 Rapid City hearing)		So I was praying about this this morning. And you know, I've had cancer. My daughter has cancer. My grandmother died from cancer. The Cheyenne River is already polluted. And you guys monitor. You monitor. You know it's polluted. You watch it. But you don't do anything about it. It's not cleaned up to this day. It's not cleaned up at all, you know. [...] Is there any cleanup happening on the Cheyenne River? No. And you guys want to continue putting more and more contamination in, and everyone is just collateral damage so a company out of Hong Kong can make a buck. That's un-American, that's unhuman, and that's indecent. And all we're asking is that you just be decent human beings and deny these permits and allow us to have our kind-of contaminated water so it isn't really contaminated later. Thank you.
7462 (Hot Springs hearing)		[...] besides the inadequate standards for the settling pond waste that could potentially contaminate the river, the Cheyenne River, and the much-utilized Angostura Reservoir, which is what the lady was -- before me was just talking about.
7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Surface water flow in channels is ephemeral, except for perennial Beaver Creek. [...] The Dewey-Burdock Project will transmit the applied and/or injected waste directly into the area of the Beaver Creek watershed within the Upper Cheyenne River watershed of the Cheyenne River to flow eastward through the state of South Dakota and into the Missouri River, affecting the entire Missouri River Basin. Refer to Exhibits A through L. I actually prepared overheads. Pictures are worth a thousand words, if I might. Exhibit A is the Dewey-Burdock location, within the four-state -- Wyoming, South Dakota, Nebraska area. Exhibit B is the Dewey-Burdock project in relationship to the national forests. Exhibit C is the Missouri River Basin, and I wish to point out Rapid City, South Dakota. This is the Dewey-Burdock in relationship to the Cheyenne River. Exhibit D is the Beaver Creek watershed within the Upper Cheyenne River watershed. Within that context, this is the Cheyenne River. This is the Upper Cheyenne River watershed. This is the Beaver Creek watershed, the Beaver Creek and the Pass Creek. This is Dewey-Burdock. Exhibit E, this is the actual boundaries of the project, Dewey-Burdock Project, showing the -- excuse me, Beaver Creek coming through the Chilson wellfield and the open pit Burdock. These are all the tributaries, et cetera. In addition, I have for you Exhibit F, which is a Google shot, a wide-angle shot of the Beaver Creek. Please bear in mind the relationship of these features with the Chilson wellfield. In addition, Exhibit G -- I apologize, I did have this in overhead. We're technically disabled right now. This is the drainage coming off of the Black Hills across the Chilson wellfield. In addition, this is a closer shot in relationship to the Beaver Creek and the Chilson wellfield. Again, a closer shot of that with the Beaver Creek and the Chilson. Exhibit J is the close-up shot of the actual Chilson wellfield. You can see the pock marks with the fact that it is a drainage area for the Black Hills themselves. What I have given as Exhibit K is the relationship between the Burdock open pit mines and the Chilson wellfield -- [...] -- Burdock, et cetera. [...] KATHLEEN JARVIS: If I might continue. The Dewey-Burdock Project will transmit the applied and/or injected waste directly into the area of the Beaver Creek watershed. Within the Upper Cheyenne River watershed of the Cheyenne River to flow eastward throughout the state.
07463 (Edgemont hearing)		This water is for 16 million people. Beaver Creek, Pass Creek, they flow into the Cheyenne, which is 30 minutes from my home, which flows into the Missouri, which I drink from.
07463 (Edgemont hearing)		Surface water flow in channels is ephemeral, except for perennial Beaver Creek. [...] The Dewey Burdock project will transmit the applied and/or injected waste directly into the area of the Beaver Creek watershed, within the upper Cheyenne River watershed of the Cheyenne River to flow eastward through the state of South Dakota and into the Missouri River affecting the entire Missouri River Basin.
07463 (Edgemont hearing)		Because when it leaks and it contaminates this -- the aquifers underneath, it will go right into the Cheyenne River, which then goes into the Missouri River, which 20 million people downstream rely or for drinking water, these are facts we're looking at. Not opinions. We need to go by facts.
07463 (Edgemont hearing)		They don't tell you -- they don't tell the public about their evaporation ponds and their leaks and their spray mists. And those blow right into the Cheyenne River. And you know what? I live in this range where my dad lives right here by Red Shirt by Cheyenne River, and my mom lives in Oglala, and we get exposed to this uranium.
07463 (Edgemont hearing)		And you know, we stand against this uranium because, you know, we come from people that drink out of these rivers. That's why the Cheyenne River people are called Cheyenne River, you know. It's not this town that's Cheyenne River, it's these people that were forced out of here that migrated that way, were forced onto the reservation, and they are Cheyenne River. So let that sink in. Okay. There's a whole nation, a reservation that -- that gets direct impact from this river. And that tells so much. It connects us to this land, you know.
7642 (Hot Springs hearing)		This area also has the Angostura Dam, which is the largest freshwater irrigation and recreation dam in western South Dakota. This dam is under siege. Because we have the Dewey-Burdock area, which now has over 200 open pit mines left from the 1950s and 1960s, this area is draining into Pass Creek and Beaver Creek and ultimately into the Cheyenne River, where it ultimately ends up in Angostura Dam, which then drains into the Missouri River. This is a critical water source, and it's a critical water source as identified by the Environmental Protection Agency.

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Text
Subject: Opposition to the UIC Permits and Aquifer Exemption I am writing to submit my resounding opposition to these careless acts of environmental injustice. Dump uranium into aquifers??? How is this policy even possible with all the water quality problems in places like Flint, MI and Hoosick Falls, NY? How do we know if the EPA will properly monitor the treatment of this highly contaminated water if these misguided permits are issued when your Administrator has time and again shown that he sides with business interests first and American Public Health last? You must withdraw these permits for the sake of residents impacted by the injections and the slippery slope you will create by even considering such reckless activity. I urge this agency to reject both activities immediately. (Denver, Colo. – March 6, 2017) EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. EPA will conduct information sessions combined with public hearings on April 27th and on May 8 through May 11 at the times and locations detailed below. EPA will accept public comments on the draft permits and a proposed aquifer exemption associated with the project through May 19, 2017. The draft permits issued today include a UIC 'Class III' Area Permit for injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class III injection wellfields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected. EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur.
It is my belief that these permits should be rejected. It is my expectation that the EPA will ensure the safety of drinking water. Even though I do not live in the area, I find the fact that industry is so eager to compromise the safety of America's drinking water supplies disgusting and would not want these actions to affect the integrity of my drinking water.
Subject: Class III, Class V, Dewey Burdock Comment I am a landowner and rancher who lives 30 miles from the proposed uranium site. My wells use the Madison and Minnelusa aquifers and other shallow wells to support our cattle and our own water consumption. If Azarga is allowed to use this water supply there is no guarantee that it could sustain 10 years if in situ mining and our wells. This is the only sustainable water we have for livestock. Livestock is the economic driver in Western South Dakota. If you take our water, you risk a much larger industry for South Dakota in exchange for 10 years of uranium mining. [...] And IF these wells leak to our water supply there is no restoring it back to a safe drinking water state which I am sure you are well aware of. The entire western half of South Dakota relies on the Minnelusa and Madison for its water supply. We can't haul water from anywhere else if the Madison or Minnelusa gets contaminated. [...] Facts: http://projects.propublica.org/graphics/underground-injection-wells. From 2008 to 2010 there have been 6,723 that have tested positive for major leaking and 60,467 wells with violations. And 859 unauthorized injections!!!
The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. Groundwater has never been returned to its original condition at any In-Situ leach uranium mine in the U.S. These permits should not be issued until it can be demonstrated that groundwater resources will be protected. DISGUSTED VOTER
Subject: Re: Dewey-Burdock templates This letter is in reference to the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells. History tells us that uranium mining cannot be done without creating and leaving contamination. In the past, groundwater has never been returned to its original condition at any In-Situ leach uranium mine in the U.S. [...] Considering these issues, it would be impossible to contain mining fluids and waste liquids. The likelihood of contamination of groundwater is extremely high. Additionally, liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells is highly likely to be insufficient; again this raises the probability of groundwater contamination.
Subject: Powertech permits [...] "The Inyan Kara, Minnelusa, and Madison aquifers are the principal sources of ground water in the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. The aquifers are exposed in the Bear Lodge Mountains and the Black Hills and are about 3,000 to 5,000 ft below the land surface ... The direction of groundwater movement is from the outcrop area toward central South Dakota." Please stop this. If it were happening to you or your family you wouldn't want it either. Please show some compassion and simple human decency.
Subject: FW: Comment on Uranium extraction and aquifers in South Dakota I am opposed to the extraction of Uranium in South Dakota. If Ivanka Trump is going to drink the test water in front of a live audience, I might be convinced to change my mind. I would want her and her children to return weekly and drink and bathe in the water to prove it is safe. Write that into the agreements.
5. Consideration of scientific argument

In addition to the cultural consequences, the scientific ramifications of the project must be taken into consideration. While research and modeling has determined that the flow rates between the 3 Black Hills aquifers is minimal, flow between aquifers ultimately occurs. While this flow rate has been deemed minimal a technological control failure could result in the tribe being exposed to an extremely dangerous radioactive material that has serious health implications associated with both short term and long term exposure. The EPA has drafted permits for Powertech that include a UIC 'Class III' Area Permit for injection wells for the in situ recovery of uranium in the Inyan Kara Group aquifers, as well as a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of recovery process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. These terms establish treatment requirements for the waste encompassed under the 'Class V" Area Permit that must meet all radioactive waste and hazardous waste standards. In addition, the permits establish monitoring of the sites prior, during, and after the operation to ensure concise data records of the process. Finally, the EPA is also considering an aquifer exemption rule for Powertech in combination with the UIC 'Class III' Area Permit. This would exempt Powertech from complying with the Safe Drinking Water Act in all uranium-bearing portions of the Inyan Kara Group aquifer. While it has been determined that water flow out of and between the aquifers is minimal, omitting a key step in the cleanup process is a counterproductive decisions of which the consequences must be taken into consideration.

Subject: U.S. EPA Region 8 Mail Code: 8WP-SUI
In regard to the permits to allow for the waste fluids to be injected, I do NOT think it should be allowed. If there is ANY chance at all for the contamination of the aquifers, and I do not think anyone can give a 100% guarantee that it wouldn't. There could be earthquakes and water moves. As good as those engineers and scientists are they cannot be 100% sure that our aquifers and water would be completely protected

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Some of my questions would be: You are using water to make money. That is the public's water.

Subject: draft permits and aquifer exemption for uranium mining project in southwestern South Dakota

This activity will poison the water supply. People cannot live without clean water. I oppose granting these permits.

Subject: Comments on EPA permits for Uranium mining in South Dakota
The potential contamination of drinking water should be avoided at all costs. Our water is a limited resource. The monitoring of the water will not prevent contamination and once contaminated the water will be undrinkable and taste bad. How did uranium become more valuable than our drinking water? Stop all drilling and other activities that will or has the potential to contaminate our water supply.
[...]
No to any and all drilling, mining, pipelines with the slightest potential to contaminate water.

Subject: No!
No! No! No! Radioactive waste in the Aquafier!!! No! No! No!

Subject: Say No to Dewey Burdock uranium aquifer mining in the Black Hills of South Dakota
Please except my written comments into record regarding the Dewey Burdock uranium aquifer mining project in South Dakota.

• Don't allow Powertech/Azarga from Canada to treat our homeland water as a scientific experiment for their monetary gain. In situ leach uranium mining must be done directly in a water-bearing aquifer. The mining solution is injected into the aquifer under pressure in order to leach the uranium out of the ground. This is not safe. Our aquifers are not safe.

[...]
• Uranium mining has a sordid past and present. Current and modern in situ leach mines have spilled and leaked hundreds of thousands of gallons of contaminated water both above ground and underground. These leaks have entered both above ground and underground water bodies
[...]
Protect our aquifers! Say No to the Dewey Burdock uranium project! No uranium mining in Treaty Territory! Keep it in the ground! People before Profits!

Just one proposed mine – the Powertech Uranium project near Edgemont – would consume over two and a half billion gallons of water during its lifetime. This according to the company's own figures. This water use is a bad idea for our rural communities that continually suffer from drought.

Subject: RE: Powertech permits
I'm writing to you today to oppose the issuance of permits to Powertech allowing the drilling of thousands of wells within the 14 different fields through the aquifer. We don't want disposal wells - - we don't want Uranium mining! There is no part of uranium mining that is lifesustaining. Uranium mining devastates our land and water. It makes water poisonous for all living beings. Water is a finite resource - - all the water that is on earth today is all the water that we will have for all of time.

In my opinion any state or federal agencies approving such a scientific proven water contaminating operation IS WATER SUICIDE! I believe each of you know in your heart of hearts that uranium mining is BAD. It's already been scientifically proven that uranium is dangerous when brought to the surface, and is hundred times more dangerous to our water systems. Uranium needs to be keeping in the Ground. Wantonly contaminating our groundwater will leave thousands of people and their livestock without a viable water source. There are also millions of wildlife species, sacred species that depend on the aquifers and these tributaries too; what happens to them?

I say NO to the uranium mining in the Southern Black Hills. I say NO to granting deep well injection permits to use the Minnelusa and Inyan Kara underground aquifers. I say NO to granting this uranium mining company with an permit to be "exempt" from the Safe Drinking Water Act so that they can polluted this water and it will never be used for drinking water in the future.

The U.S. Geological Survey reported that the Madison and Minnelusa aquifers are vital water source for Rapid City and the surrounding areas and a uranium mining company wants to dump uranium waste in the aquifers, which opens that door of nuclear waste storage in the future, since they would already be dumping their waste fluids. And where does this mined uranium go? I'm guessing to the highest bidder in some foreign country like China, Russia, or somewhere unknown? So while they get the revenue, South Dakotans get the highly toxic wastewater. this is a asinine Idea that will hold catastrophic results.
I believe it's an outright sacrilege to pollute our water systems for the all mighty dollar. Let's remember that future generations are counting on us to protect these precious aquifers and the air. Let's leave a legacy that future generations will be proud of – one that will keep them healthy – Water Is Life.
Mni Wiconi means WATER IS LIFE.

Subject: [SPAM] Do not allow uranium waste on Lakota land

In March of this year the EPA issued two draft permits to Powertech, a multinational corporation and division of Azarga Uranium Corporation of Canada. Together these permits would allow the drilling of thousands of wells within 14 different fields. These wells would bore hundreds of feet into the ground and pierce the Inyan Kara system of underground aquifers. The second of the two permits is to allow the disposal of hazardous waste materials resulting from uranium mining. Both permits would needlessly expose the Lakota Oyate to the devastation of uranium mining and continue america's war against Red Nations' peoples. "The Inyan Kara, Minnelusa, and Madison aquifers are the principal sources of ground water in the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming... The direction of groundwater movement is from the outcrop area toward central South Dakota." [USGS Study, https://pubs.er.usgs.gov/publication/wri864158] The proposed authorization would allow uranium waste to endanger Lakota water supplies and must not be allowed. Please rescind both of these permits.

Subject: South Dakota aquifer exemption

Please do not permit Powertech an exemption to dump uranium into the aquifer system in South Dakota. Water sources must be protected from contamination.

Subject: Aquifer exemption for uranium mining project in SW Dakota

I strenuously object to the exemption requested by the uranium mining company to permit uranium mining waste disposal in a SD aquifer. Aquifers are pristine sources of water, and contamination cannot be reversed.. The regulations already in place to prohibit this need to be followed. Our health takes priority over the financial interests of this company.

Subject: Power Tech/Azarga aquifer contamination concerns

I write to you regarding my concern for our drinking water supply, which I believe may be in jeopardy if the Dewey Burdock Uranium project is approved. I am attaching my personal well report along with just a small sample of others that I am aware of. According to Hollenbeck, Power Tech/Azarga plans on re-injecting the solution they use to extract uranium, back into the Minnelusa Aquifer. That is were so many of us get our drinking water and this is unacceptable!! I feel an urgent need to provide you with the link and person who is my 'go to pro' at the SD DENR to verify and answer any questions you have while trying to determine whether this project should be allowed. Please do your due diligence and throughly research the aquifer use.

Even the most successful in-situ mining operations have left the water worse than it was before they started and we are not willing to run any risks with our drinking water! Hollenbeck keeps saying we have nothing to loose, but he is wrong! Thank you!

the link is

SD DENR Wells Completion Reports

You can contact Ken Buehler at 605-773-3151

[ATTACHMENT: “Our Well report; Well Report, Plat Map and Aerial Map.pdf”; “Well Report for Reynars.pdf;” “Brown Well Report.pdf”]

Subject: Fw: Well Log Data for Fall River County SD

Here are only a few of the Fall River County Well Reports that were recorded in Pierre, SD. This is only a list of the domestic wells and does not include municipal wells. I have not had enough time to thoroughly analyze the reports, but I can assure you that The Minnelusa aquifer provides water to this region and cannot be jeopardized by injecting waste water from the in-situ mining process. I am also attaching the well report for our new State Veterans Home, which is also in the Minnelusa aquifer. We cannot allow anyone to jeopardize our water supply by injecting anything into our aquifers or by depleting our, already limited supply, of water for this process. Our water is finite and must be protected!

[...]

They claim that In-situ mining is safe, there is no safe, clean in-situ mining. Crawford, NE had violations that were discovered by their State oversight.We can assume, from past experience, that our State of SD will not be actively involved with monitoring this project. By the time we realize there is a problem, it will be too late. The water will never be returned to its current state. The EPA standards are merely lowered to make it OK once the water is contaminated. I understand that the EPA is already proposing to exempt the portion of the Inyan Kara aquifer in the project area from the Safe Drinking Water Act, something that is necessary for mining to occur!!!!!!!!!! 2 If the EPA decides to grant these permits, they will be responsible for the outcome. There will be no way to restore or replenish our water supply and that will be a sin.

[...]

I understand that the EPA is already proposing to exempt the portion of the Inyan Kara aquifer in the project area from the Safe Drinking Water Act, something that is necessary for mining to occur!!!!!!!!!! 2 If the EPA decides to grant these permits, they will be responsible for the outcome. There will be no way to restore or replenish our water supply and that will be a sin.

[ATTACHMENT: “WellLogsSearch_20170509023905.csv”; “State Veterans Home Well Report.pdf”]

Subject: Uranium mine permits and exemption -public comment re: Dewey Burdock and Region 8

As a citizen of South Dakota, a former scientist in the area of cell biology, a medical health professional, and more recently a mother of five young adults, I beg you to think beyond corporate business interests, and other parties who hope to benefit financially from the two Underground Injection Control Area Draft Permits and the aquifer exemptions in Region 8. The Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, is requesting an exemption from the authority of the Safe Drinking Water Act and UIC program regulations. The Dewey-Burdock site is located in southwestern Custer County and northwestern Fall River County, on the Wyoming/South Dakota border.

I hope that you will strongly consider the facts being presented by the opposition to these permits and exemption, especially as they contain the contamination risk to the region's most valuable resource: water. As an area not unfamiliar to drought, our water is our gold, our life. The risk, even if infinitesimal per the so-called experts, is not worth the benefit, which to date, has been under much debate that I need not reiterate.

Radioactive contamination of our water would not be able to be contained in an aquifer that has nondescript boundaries. That is more than obvious! And the half life of the contaminants is much longer than anyone today should consider acceptable. History has proven this fact.

Enact the will of the majority of people, for your children, and your grandchildren, and leave our earth below the surface, the one that contains the roots of all grasses and all plants, that all livestock depend on, alone, AND refuse ANY exemptions to guarantee our permanent source of clean non-radioactive water.

You hold a very, very, important power in your hands. It is more important than nuclear power, believe it or not. Please, do not abuse it. Hear us today, as tomorrow's voice will be drowned out by dollars.

It is a matter of moral outrage that the lands were taken to begin with; poisoning the water there with mining waste which is inevitably left after "restoration" is unacceptable. Thank you for your time and attention to this matter.

Subject: OPPOSE Dewey-Burdock Uranium Mine project

I am writing to voice my opposition to the Dewey-Burdck Uranium Mine project in the Black Hills, South Dakota. This project is harmful and destructive to the land, the Lakota people, and all other people who live in the Black Hills area and depend on the aquifer. Clean freshwater is essential for ALL people, and this mining project would likely contaminate this resource for not only the Lakota but EVERYONE in the vicinity. Please DO NOT allow this mining project to proceed. Thank you for your consideration.

Subject: Uranium mining permit for Powertech/Azarga
Yesterday I saw this article in our local newspaper. So, I wanted to give you the link, thus the email.
http://rapidcityjournal.com/news/local/ranchers-face-tough-decisions-as-dakotas-remain-mired-indrought/article_c43f5807-2b32-5a1c-82be-1df586c745d2.html#utm_source=rapidcityjournal.com&utm_campaign=%2Femail-updates%2Fdailyheadlines%2F&utm_medium=email&utm_content=2D51DB1195DBB4FF137F8663195C78196DEF84B9 I wanted you to have a better understanding of why our water resources in South Dakota are so very important. Ranching and farming are our number one economic source. Along with Tourism, which is number two. Our economy suffers greatly when our agriculture operations are compromised. I have lived here for 15 years and many of those years have been during droughts. Stock dams dry up, wells need to be dug deeper, many into deep aquifers, or water must be hauled.
We cannot afford to take a chance on contaminating our water resources and we certainly cannot afford to give away 9,000 gallons of water per minute through 4,000 wells to mine uranium for ten years. That's equivalent to the water used by the second largest town in South Dakota, Rapid City. To give away that water is just down right criminal. Even if it wasn't contaminated.
I want to share this local article with you also:
http://rapidcityjournal.com/news/opinion/forum-coming-to-south-dakota-bring-your-own-drinkingwater/article_4d2d4783-6635-5b18-8c0d-b07229e1dda8.html
Not only would ranchers suffer, but the second economic source is Tourism. If the perception of tourists is," that it's not safe to go there." They will take their vacations somewhere that hasn't been compromised.

We have a healthy real estate market in the Black Hills as well. If the water in the Angostura Recreation Area is compromised more than it already has been, due to run off from old mines. Those people would stand to loose all they invested. They would end up with real estate prices, like you find in Edgemont. Not to mention the health risks.

It just doesn't make economic sense to risk so much water. Especially in an area that suffers from extreme droughts. I hope the EPA uses their common sense to tell Powertech/Azarga that it cannot allow this operation to happen. it cannot take the risk for the extraction of uranium, and all the other harmful elements it extracts with it. The recovery rate is NOT 100%, so pumping this contamination down into lower aquifers only gives the company time to make their money and leave the mess for others to deal with, if they can. Contaminating a whole area of South Dakota, and risking severe health risks to innocent people is again criminal.

Subject: Uranium waste disposal
My opinion - NO, Never this shouldn't even be a question. At what point would you think that an element that renders large swaths of land unlivable (plenty of examples to research) would be okay to dump into an underground aquifer where most people are probably living on well water. Just to reiterate my answer is NO

Subject: Draft Permits for UIC
I am writing to you as a concerned American regarding the proposed Draft Permits to allow UIC a permit for injection wells for the in-situ recovery of uranium in the Inyan Kara Group aquifers and a permit for deep injection wells that would be used to dispose waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. As we have seen in the past, while all precautions claim to be taken, what happens when the monitoring of the underground sources of drinking water become contaminated? It's too late then.

Subject: Protect Out Aquifers!
Please do not provide an exemption for the uranium mining project in South Dakota. Aquifers are a water resource that many rely on for clean water. Protect the aquifer!

This project seems as if it could endanger important aquifers that supply water.

Subject: Uranium mining in South Dakota
Please don't destroy the aquifer in South Dakota with uranium mining waste disposal.

Subject: Uranium Mining Waste Disposal
Are you people out of your goddamn minds? No it is not okay to dump that kind of waste into an aquifer that people use to wash their clothes, cook their food, brush their teeth and serve to their families.

Subject: Aquifers
Please do not allow the aquifers to be injected with this waste. We cannot continue to contaminate resources needed for our survival.

Subject: Uranium Mining and Disposal Permit in Black Hills
I'm [redacted] and reside on my small ranch/farm near Spearfish in the beautiful Black Hills. It is dismaying to know that our precious aquifers are being considered as a source for uranium mining and subsequent contaminated waste water disposal. My well accesses the drinking water for my family, friends and livestock from the Minnelusa, the same formation being targeted for the deep disposal injection wells.

I totally disapprove of in situ mining. However, if you are to go forward with approval, I highly encourage you to only authorize disposal into the Deadwood formation below the Madison aquifer to minimize any risk to our water supply

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It would be a travesty for an outside agency to decide that a foreign corporation can come in and pollute our supply. South Dakota regulations declare the water belongs to the residents of this state.

Tell the EPA to deny permits to pollute Black Hills water

Injection wells for disposing of waste fluids into aquifers is a bad idea be it trested or not.
(...)
The companies that dispose this way have not been overly forthright in listing the chemicals that are used in their processes. Slow moving aquifers would not be able to cleanse toxics for decades or more endangering those that rely on the water for life. Removing these aquifers from the safe drinking water act just exasperates the problem. We need more safe water not less.

Subject: Uranium Mining in SD
Hello, please enter my formal comments as NO! I do not think it's ok for mining waste to be injected into underground aquifer's.
Thank you.

Subject: Inyan Kara Aquifers
I would like to comment on exemption request to inject uranium-bearing waste water into Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. I object and wonder how can this even be considered. What in the world is gong on with EPAULETS to even consider this.

Subject: Black Hills Uranium Mining
Dear Valois

I have read that I can email comments about the EPA's plan to allow Azarga/Powertech to mine Uranium near the Black Hills of SD to you such that they will be considered during the approval process. While serving in the Air Force many years ago, I worked in a radio lab collecting and detecting information on who was doing what around the world as far as developing nuclear arms. It was exciting and fascinating work. While I understand that this proposed mine would be to gather material for peaceful means, it is painfully obvious to me that doing so puts clean water at risk.

(...)

I am very against the proposed Uranium mining and disposal of waste in this area. I do not feel that government currently has the power to protect the American people and our unrecoverable resources such as fresh water. I hope that the EPA will do all it can to deny any and all proposed Uranium mining and waste disposal projects that would affect such aquifers as the Inyan Kara and the Minnelusa or any other water source. I value clean water more then off shore profits of off shore mining companies. Politicians may be swayed by payoffs and the promises of jobs in the area, but I expect the EPA to decline these permits because they clearly cannot monitor them therefor should not allow them to proceed. If the waste that is to be pumped into the Minnelusa aquifer is so safe, let the owners and shareholders of Azarga/Powertech pump it into the ground in their own backyard for their children to enjoy.

Subject: permits and aquifer exemption for uranium mining

I am writing in regards to the draft permits and aquifer exemption for uranium mining project in South Dakota (https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uraniummining-project) Clean and safe drinking water need to be the preeminent concerns. The proposed mining could do irreparable harm to the drinking water and should not be granted an exemption.

Subject: Opposition to Powertech Aquifer Exemption

Hello,

I'm sure your inbox has been inundated since the story went on twitter, so I'll keep this brief.

I am a citizen of the United States and the State of California. I feel that drinking water is going to grow significantly in importance in the near future, so I oppose any measures that threaten the safety and cleanliness of said water. I request that you deny any aquifer exemptions requested by Powertech.

Thank you for your time.

Subject: Dewey Burdock Azarga Project Permitting

Dear Ms. shea,

As a former council woman for the city of Hot Springs, and as a current resident of Fall River County, I strongly oppose anything that would pose potential harm to our water. Insitu mining of uranium and the depositing of toxic mining waste into our aquifers and ground would contaminate our water.

Subject: No uranium

Please no uranium in the Black Hills . They have the most pristine aquifers in the world . We can't afford to kill them it's not right!

If water is allowed to be reinjected back into the ground there is a very good chance my water will be contaminated and unusable. I beg you to not allow any uranium mining in Fall River County in South Dakota.

Subject: My comments on Uranium mining in the Black Hills.

Dear EPA, Region 8:

Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells:

"The Madison and Minnelusa aquifers are two of the most important aquifers in the Black Hills area because of utilization for water supplies and important influences on surface-water resources resulting from large springs and stream-flow-loss zones." – United States Geological Survey: Geochemistry of the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota

(...)

The Black Hills are a semi arid area prone to regular drought. The vast quantities of ground water needed for 2 the mining and the potential for contamination are unacceptable. Aquifers are not replenished overnight. Water IS life! Please do not risk it just for money.

We do not inherit the earth from our ancestors, we borrow it from our children and our grandchildren. Let us leave the Black Hills as a safe, enduring, beautiful area for those who follow us without risk of contamination in our water supply. Once this contamination is present, it can never be removed. The purity of our water can never be resolved. Is this to be our legacy to our children and our grandchildren?

Subject: Comment on Dewey-Burdock Class III and V Injection Wells

I voice strong opposition to this uranium mining project. As a private landowner I incur extra expense to comply with strict septic regulations that protect our water sources in the Black Hills. Our homeowners association encourages water conservation for the longevity of our well source. But I understand the premise - clean water is that vital - and such a basic right. And all this effort by state and local governments to protect water sources could be negated quickly and tragically if the federal government permits PowerTech to proceed with this project. Please don't allow it to proceed. Thank you for the opportunity to comment.

The future cost of poisoning aquifers is beyond calculation.

(...)

Once injected, those poisons are at the mercy of geologic forces which humans cannot control and will eventually contaminate clean water.

(...)

No method of containment can insure protection.

Subject: Reject Permits for Dewey-Burdock Uranium Mine

Dear EPA,

I am commenting on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells.

[...]

Uranium mining cannot be done without creating and leaving contamination. Groundwater has never been returned to its original condition at any existing leach uranium mine in the U.S.

I urge you oppose these permits until it can be proven that groundwater resources will be protected.

Subject: Dewey-Burdock ISL uranium mine (SD)

Dear Ms. Valois,

As a Black Hills resident and retired pathologist, I am strongly opposed to any attempt to mine local aquifers for uranium. I have carefully reviewed as much data as I can find on the reliability of prevention of cross-aquifer contamination by lixiviant and liberated heavy metals using current techniques. I find no assurance that a mined aquifer can be returned to a pre-mining condition. I'm also concerned by the vast volumes of water required by this process, considering that we live in a semi-arid environment.

I am alarmed by their expansion of a plan to drill 4,000 in situ leach mining wells instead of the original 1,500. These toxic wells would be drilled into the Inyan Kara aquifer on the southwest edge of the Black Hills, which is used by families for their drinking water. After mining, the company's plan is to pump uranium mining wastes back underground into the Minnelusa aquifer through as many as four deep disposal wells, endangering yet more communities water and well-being.

Subject: Dewey-Burdock Class III & V Injection Wells

Dear Madame, We are writing to ask you to REJECT the two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations.

While we understand uranium is naturally occurring in our environment and that waste products generated from extraction, etc needs highly effective containment, we shudder to think the EPA would allow any risk of contamination of our finite water resources with said waste fluid injection. Even a slight risk of contamination to the aquifer at the Minnelusa Formation is too much of a risk.
WATER IS LIFE and its purity must be protected at all costs.

Thank you for placing my comments into the record opposing these permits to Powertech (USA) Inc..

Subject: uranium injection
I strongly oppose injecting, any material, into or around any aquifers. Particularly waste materials from uranium clean up projects. I request public hearings on this issue before any funds are diverted to those ends.
Thank you

Subject: NO mining in the Black Hills
I am writing to submit my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells:

I deeply oppose mining in the Black Hills for a number of reasons. I am from Pennsylvania, where the water on my parents' property is still undrinkable, 40 years after the strip mining contaminated the water supply. They have been actively remediating the water and soil for my entire life, and it is much improved over the surrounding areas which have not been remediated in any capacity, but it is still unsafe for drinking, and unsafe for growing food.

It is impossible to mine -- especially uranium -- without contaminating the water. Even if someone chooses to disregard the importance of native and settler relationships and the criticality of leaving sacred spaces unmolested, geological impacts of mining are extremely widespread.
Thank you for your consideration

As a resident of Rapid City, I am concerned with the impact this project will have on my family's well being, on our drinking water, air quality and my children's future

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Subject: Aquifer exemption for uranium mining
RE: EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota.
Ms. Shea,

I am writing as a concerned citizen regarding the recently announced application for exemption from what can only be called sensible guidelines for the protecting of a water aquifer. The potential for water contamination by uranium must be taken very seriously, particularly given the long term threat posed to not just human life, but all life, such as the increased rates of cancers due to increases in mutation rates. As I am sure you know, this potential for environmental damage is exacerbated by the presence of nitrates, which are practically ubiquitous in just about every region of the US.

I strongly urge the EPA, the guardians of our environment, not to approve such a blatantly dangerous exemption.

It is sad enough to consider uranium mining when there is no profit available, no safety from radiation exposure and no protection from drainage into surrounding watersheds. To purposely ruin usable, potable and important local aquifers and state water supplies is mindless at best.
Now we learn that there will be no uranium mining in the foreseeable future but rather the foreign company plans on accepting toxic wastes from outside the area to make their profits at the expense of local population and necessary water supplies.
Please. Please. Protect our environment from these profit mongers.

Thank you for your time and consideration.

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8). The injection of contaminants will further the process of ruining the area's aquifers (such as the main four in the area: Inyan Kara, Deadwood, Minnelusa and the all important Madison) for human or animal usage unless The EPA requires Super Fund designation

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7). The water requirement exceeds the water usage of Rapid city at no cost to the company. The desire to use upwards of 9000 to 15000 gem could also water tens of thousands of cattle

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Thank you for your response regarding deep well injection into usable and used aquifers. It is disheartening to realize how simple it is to save the water from contamination yet witness the refusal of those responsible for that water to safeguard it.
[...]
I look forward to the hearings.

One of the reasons for Azarga giving up on the mining was it's inability to clean up the waste from the mining effectively and intentioally poisoning the underlying aquifers and land surfaces. The injection wells will create the same problems of toxicity except in the injection scenario, the toxins will be forced into already necessary and utilized aquifers as opposed to the ruination of aquifer quality by transmissivity. The injection directly into these usable aquifers will simply accelerate the contamination of the aquifers.
3. Professional geologists and chemists from the South Dakoata School of Mines, Chadron State and private practice have testified most effectively as to the danger of this plan for all the residents in the area due to the irreparable damage done to the water supply including the Deadwood, Minnelusa, Inyan Kara aquifers and the most important aquifer of all, the Madison. The misuse or contamination of the aquifers in the Black Hills flies in the face of good judgment due to the increasing importance of
usable water not just in drought affected South Dakota but the nation and the world. We are depleting our water supplies by allowing the very kind of destruction envisioned by Azarga and the EPA. With the demand for water ever increasing due to continued world population increases, it is imperative that the protection and careful usage of our water supplies be our guiding light. To actually embrace the opposite behavior is to violate the EPA stated purpose of actually protecting the environment. It is no longer possible to deny the threats to our remaining water supplies driven by In Situ mining and water ruination. Recent articles in several scientific publications have clearly demonstrated the danger to our water quality and supply posed by this mining and bore hole toxicity.

Second: PT will tell you that there is no communication between aquifers because of confining layers. However, in 3.4.1.4 it states that the Madison aquifer is 200 feet thick in the southern Hills up to 1000 feet regionally and could be connected to or communicate with the Minnelusa and the Deadwood aquifers which are the chosen repositories for the contaminated waste water, which will be injected under pressure. This communication could prove to be unsafe for obvious reasons. Additionally, in 3.4.1.7, P/T states that "no evidence of karsting has been observed". (erosion due to dissolution producing fissures and sinkholes) This is a below ground phenomenon and simply because something has not been observed at this time does not mean it will not occur later or that it is not there now. As the cave system in the Hills is known to be everywhere, it is only logical that there are fissures everywhere which will allow for "communication" between aquifers as stated above
[...]

There are several situations that require the Mining Board to deny a permit of this kind:
[...]
The proposed mining operation will result in the loss or reduction of long range productivity of an aquifer, public and domestic water wells, watershed lands, aquifer recharge areas, or significant agricultural areas AS A RESULT OF THE BILLIONS OF GALLONS OF WATER USED AND CONTAMINATED, THIS IS HIGHLY PROBABLE AND THIS PERMIT SHOULD BE DENIED.

There are several issues that could interfere with the ability of P/T to actually perform this requirement not the least of which is that no ISL mining operation has ever remediated the land, waters and aquifers to baseline. Exemptions are asked for and usually given. This just provides the excuse to contaminate and not remediate. This obviously does not a safe operation make. If P/T actually cleans up and remediates the land and waters to a clean uncontaminated state, it will be the first operation to do so in the history of in situ mining. This is well known and incontrovertible.

There are four main aquifers in the southern Hills and all of them are at risk of contamination by radioactive nuclides. This will come in the form of deep injection wells and transmissivity of the waters in the aquifers.PowerTech denies any risk of contamination despite the reality of all other ISL mining operatoins. The EPA has been denied access to the mining area which precludes being able to actually inspect the site which precludes EPA's actual approval for obvious reasons. PowerTech has refused to reveal the constituents of the Lixivient or the actual cleaning process of the Lixivient. The EPA cannot possibly approve this mining and water contamination because of EPA ignorance of PowerTech operation. This is more than enough reason to deny the final permits.

There was mention of the NRC not finding any reason to deny the mining, meaning that the operation will be safe and nonpolluting. This is true depending on how one defines "safe". The NRC, and states where In Situ mining is active or ended, have received complaints by the mining companies that they cannot meet the clean up requirements set by the NRC and the states and asking these entities to lower the required standards of clean up, which those entities have allowed. Power/Tech along with the State of South Dakota, the NRC and the EPA know that the clean up of the radioactive waste created by this mining is impossible and therefore has no intention of trying to do any clean up beyond getting the toxins "As Low As Reasonably Achievable, or ALARA. With this level of cleanup, the NRC can dismiss the danger of not being able to clean up the poisons and declare that the operation meets all requirements. It is common knowledge that there has been no ISL return to baseline by any mining companies. Each one has been and is being contaminated. One can see that there is no safe level of contamination. Reason enough to deny the final permits beyond repair.

I noticed at the recent hearings that the EPA provided handouts explaining the ISL process but had little to say about the dangers, the leaks, the incursions or the contamination of aquifers. Your presentations represented only half the truth. Yet another reason to deny thes permits.
I want to thank you for your efforts in presenting these venues for public input. I leave you with a question. Would you want to allow known contamination into your water supply?
Sincerely yours,

PS: The Hot Springs city council passed a resolution against PT and its excessive use of water. The Conservation District did as well. The County Commissioners, with one or two recusals because of ownership of PT stock and one or two not voting at all because they were "not scientists" and had not even tried to listen to the evidence on both sides, did not even entertain a vote.

Do not allow this to go through. Unless you all are willing to drink the potentially at risk water that is subject to contamination by this would be effort. It reminds me of a scene from the Erin brokovich film where the folks from PG&E were given the water they sweared was not contaminated in mediation to drink but once that little detail was mentioned, nobody wanted to touch let alone drink the water.

Dear Ms. Shea:

Thank you for making the trip to Rapid City in May to speak to concerned citizens. What I learned from your presentation, comments made by Mr. Douglas Minter, EPA staff person, and comments of the members of the public make me even more concerned about the proposed ISL uranium mine in Custer and Fall River Counties in South Dakota.

At the beginning of the first hearing in Rapid City, I chatted with Mr. Minter about the proposed mine. While he was explaining the project he said since the Minnelusa aquifer is not used for drinking water, there are no concerns about waste injection into the Minnelusa.

Your presentation gave me the impression that the EPAthinks that the Minnelusa aquifer is not used for drinking water.

As I mentioned in my spoken testimony in Rapid City, the Minnelusa aquifer is a drinking water source for many people according to our state Department of Environment and Natural Resources. I recall hearing one member of the public standing at the podium and saying that said her grandson is drinking Minnelusa water.
It is appalling to realize that EPAstaff members are unaware of the indisputable fact that the Minnelusa aquifer is indeed a drinking water source for many South Dakotans.
This part of South Dakota is particularly dry. How dry? Cacti, sage and yucca thrive in our sunny, dry climate. We cannot afford to risk contamination of the Minnelusa aquifer. Please do not issue any further permits to Powertech/ Azarga for any portion of their proposed project, including permission for other companies to inject their waste into Powertech/Azarga's proposed injection wells.
Thank you for the opportunity to comment.

Subject: Protect the aquifer!
Please don't allow uranium waste to be injected into the aquifer. Don't we have enough environmental problems already? Isn't it bad enough that Scott Pruitt is now head of the EPA?

If passed, this invasive and potentially toxic mining project has the potential to permanently contaminate the aquifer.

Subject: Comment: uranium mining permit in SD
Good evening:
I am writing to oppose the proposal to allow infection of waste products from uranium mining near underground aquifers in South Dakota. This proposal is dangerous and threatens clean drinking water for a large number of people. The benefit from the proposal is negligible.

Please find a alternative that does not put FRESH WATER and HUMAN LIFE in harm's way. In closing, if you can't find a place to put this uranium, then we as a society should not be using uranium AT ALL. Please remember that human life and our water sources are in your hands.

Subject: Uranium in Aquifer
I oppose the EPA proposal that would allow for depositing uranium waste in drinking water. It is dangerous.

Furthermore, injecting radioactive materials into the earth near a source of clean water leaves room for potential contamination. Clean water is a resource that should not be taken for granted.

Subject: Disposal of uranium mining waste in SD aquifer
Hello:
I just wanted to express my opinion on the above subject.
I think it would be a horrible idea with an adverse impact on the ground water. I also believe it would be detrimental to the environment of Black Hills.

Please do not permit this and thank you for being interested in the public's opinion.

Subject: EPA draft permits to Powertech, a division of Azarga Uranium Corporation of Canada
"The Inyan Kara, Minnelusa, and Madison aquifers are the principal sources of ground water in the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. The aquifers are exposed in the Bear Lodge Mountains and the Black Hills and are about 3,000 to 5,000 ft below the land surface ... The direction of groundwater movement is from the outcrop area toward central South Dakota." USGS Study, https://pubs.er.usgs.gov/publication/wri864158

Three public hearings were held, one each in Rapid City, Hot Springs, and Edgemont. This is a FACT. The USGS advises against going ahead and yet you issue these permits to endanger the public. You have been found out. Cease and desist.

Thank you for your attention

This proposed mining project is likely to contaminate aquifers of the Black Hills and put the health and safety of those drinking that water at risk.

Subject: comment on permits for Powertech

Dear Ms. Valois,
Please do not move forward with the granting of permits to Powertech and Azarga Uranium Corporation of Canada. The Inyan Kara aquifers are too important and the risks are too high. All over the United States fresh water sources are at risk of contamination and pollution. The purity of our water must be made a top priority.

Subject: Uranium injection disposal
I am writing to comment on this proposal. I am a tax paying citizen who works hard as does my husband to provide a safe living environment for out children to grow. It is not much of a stretch to infer that there are thousands of others just like us in the area where you propose to inject radioactive waste near the fresh water aquifers. Yes, I know the mines are required to treat the waste & continue to monitor it after its disposal, but that is absolutely unacceptable. Absolutely, 100% UNACCEPTABLE. The material in question will certainly impact the groundwater as well as all the living things in the immediate area.

Subject: Uranium mining by PowerTech

Dear Ms. Valois,
I am writing to express my concern about allowing PowerTech to drill for uranium mines in the Black Hills area. These mines could put the aquifers in the area at extreme risk for the entire region.
We need to do everything possible to protect our waterways for the protection of our citizens.

Please reconsider this permit.

Thank you

The half-life is 4.5 BILLION years--really, you want to pollute/contaminate the land & water for the next 4.5 billion years? The world has some really innovative scientists who, I am sure, can come up with better ideas which won't destroy our Blue Planet. Next , you want to force the ugly waste back into the earth where it can devastate the aquifers--boy, you are just full of great ideas.
Would you take that water back to your family & friends to drink or wash in or swim in or water your plants in? If you don't want this kind of stuff for your neighborhood, WHY, do you think it is a good idea for others?
Please re-think this, it is NOT good for the land or people.

I understand that Azarga has increased their water permit request from 9,000 to 15,000 gallons per minute to accommodate the huge amount of toxic waste and they intend to haul in from out of area locations and dump into the well sites. These actions would result in contamination of the aquifers.

Indeed, they also want a permanent exemption for the Inyan Kara aquifer from the Safe Drinking Water Act. This aquifer is a drinking water, household water use, and livestock water source in the immediate area. This should not be allowed.

Subject: Inyan Kara Group aquifer injection wells
I strongly oppose the proposition to allow injection of "process waste fluids" into the Inyan Kara Group aquifer. I am not confident in the safety of such an action under ideal circumstances. Our current administration's lack of interest in environmental issues only deepens those concerns.
[...]
Drinking water is one of our most valuable resources. There are already too many dangers facing our current sources. Deliberately and consciously endangering these resources any further is simply ludicrous. The dangers are too real and too costly. This cannot be allowed to happen.

Dear Ms./Mrs. Shea,
My name is Ex. 6 Personal Privacy (PP) and below you can find my comments on the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits. On paper, the Dewey Burdock project seems like a reasonable idea that could create potential benefits for particular groups of individuals, but not the common good. This Dewey-Burdock project is a multi-faceted issue that can threaten the environment and groundwater, take control of tribally significant lands, and create an unnecessary potential for an accident.
The EPA should not move forward with the Underground Injection Control permits and exemptions for the Dewey-Burdock site. The potential costs and consequences that could arise from this project are simply not worth the benefits it claims to produce. It seems that groundwater continues to pop up as a reoccurring theme that can be found at the center of many environmental conflicts these days.
[...]
There are issues that arise when evaluating the safety and potential consequences of tampering with uranium, especially within/close to these aquifers. One major concern is that these deep injection wells are supposed to place this wastewater into the Minnelusa Formation where it will hopefully continue to remain and prevent any harm, but the threat is still there (EPAa, 2016). The water isn't guaranteed to stay within the Minnelusa Formation as the USGS has identified that, "Fracturing from folding and brecciation near the outcrop may have increased the permeability of the lower part of the Minnelusa a considerable, but unknown, amount" (Kyllonen, D. P., & Peter, K. D., 1987). This is obviously concerning to know that this wastewater may not remain within the Minnelusa Formation and permeate through, especially considering how many other aquifers are in the surrounding areas. It even states on EPA's UIC website that, "This disposal can pose a threat to ground water quality if not managed properly," and "The different types of Class V wells pose various threats" (EPAa, 2016). While precautionary measures can be taken, there is absolutely no guarantee that Powertech will be able to properly manage and avoid potential accidents/threats from occurring.
[...]
The Dewey-Burdock project is not a reasonable investment to move forward with because of all the different issues and threats that it creates. Red flags continued to appear the further I researched these plans to allow ISL uranium mining, and the implications that would arise as a result. Groundwater is a resource that should be conserved instead of wasted to allow for mining and the storage of the wastewater afterwards.

Especially, as climate change continues to advance and makes issues such as drought more prominent; water (particularly potable groundwater) has become a valuable resource that shouldn't be compromised. Surface water continues to be polluted, rain is becoming more infrequent and unreliable as a source of drinking water (particularly in arid regions), and this has created a further need for these groundwater sources and reserves.

Subject: Dewey-Burdock Permits

Please deny exemptions and permits to Powertech Inc. for uranium mining in Custer County.
1. The Inyan Kara aquifers hold viable drinking water. While not pristine, the water is usable as is. A local rancher was using the water for his livestock until Powertech bought him off and closed his well so they could meet the requirement that no one was using the aquifer. We need to protect all viable drinkable water.
[...]
The Madison aquifer which lies below Inyan Kara is the source of water for residents in multiple states. This aquifer should NEVER be put at risk.

Subject: Permission request to contaminate aquifer?

EPA:

I am appalled that anyone would think this is a good idea. I am almost speechless that it would be considered by the EPA. Please do not foul any aquifers. I would go so far as to BEG you to reject this idea. Aren't we supposed to be protecting this planet? Isn't this, in fact, our only home? Do not permit this disastrous proposal.

[...]

"(Denver, Colo. – March 6, 2017) EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. EPA will conduct information sessions combined with public hearings on April 27th and on May 8 through May 11 at the times and locations detailed below. EPA will accept public comments on the draft permits and a proposed aquifer exemption associated with the project through May 19, 2017.
The draft permits issued today include a UIC 'Class III' Area Permit for injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class III injection wellfields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected.

EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur.

Under its obligation to comply with the National Historic Preservation Act and under EPA's Tribal Policy on Consultation and Coordination with Indian Tribes, EPA has been consulting and coordinating with several interested Tribes to identify the potential effects of the proposed project on traditional cultural places, historic and sacred sites. EPA will continue to consult and coordinate with Tribes as necessary throughout the public comment period concerning these proposed permitting actions.
The public is encouraged to provide comment on these draft permits and the aquifer exemption by midnight mountain time, May 19, 2017. EPA's final permit decision will be based on an evaluation of comments received and a determination of whether underground sources of drinking water are protected. The draft permits can be found at the EPA Region 8 UIC Program website: https://www.epa.gov/uic/uic-epa-region-8
How to Comment: Written comments must be received by email, fax or mail sent to: Valois Shea (shea.valois@epa.gov); Fax: 303-312-6741"

Intro: My name is Ex. 6 Personal Privacy (PP) 17 year resident, raising kids in the black hills. I own property along the Cheyenne River, I have animals that drink from it, I have an Inyan Kara domestic well that supplies household water and drinking water for livestock. I haul my family's drinking water from a minnelusa well. (see attached well log data from Ferguson well adjacent to Belitz 320 ft well. Belitz well log is missing) (note flowing cave in Ferguson well).

Yes, I understand the interest a mining company would have in ISL at the Dewey / Burdock location . I do, however, feel that my water and the water of my community could be irreversibly harmed. Besides inadequate standards for settling pond waste that could potentially contaminate the river and the much utilized Angostura Reservoir, today we are talking about Aquifers. The Inyan Kara and Minnelusa.
UIC (Underground Injection Control) Class III Area Permit for Inyan Kara Group Aquifers.
These proposed mining activities pose a risk to my Inyan Kara water by undetected or late detected excursions as I am down gradient from the mining activity.
UIC Class V area Permit for deep injection wells that would be used to dispose of in situ mining waste fluids into the Minnelusa Formation.

The Minnelusa aquifer is a high quality and well utilized aquifer in the southern black hills. In addition to the domestic Minnelusa well that we haul drinking water from, this aquifer sits approximately 1000 ft below my property making it a potential drinking water source for my family and livestock for generations to come. According to "Atlas of Water Resources of the Black Hills", the Minnelusa Aquifer flows from the proposed ISL site to my property. The contaminates injected are likely to pollute this potential drinking water source sometime in the future.
When I spoke with 4 Hydrologists at the USGS on March 29 th 2017, I learned the following. Yes, the flow model (Fig. 114, pg.103 Atlas of Water Resources of the Black Hills) does indicate the Minnelusa flowing from Dewey / Burdock to the south east. However, you can not just look at this model. The water in these aquifers, can be really hard to track their flow. In cave environments such as the Minnelusa , underground water almost flows like a river. There are local and regional impacts on the flow systems that are not indicated on Fig. 114.
According to a National Water Data Base, there are a minimum of 125 wells drilled into the Minnelusa Aquifer in Fall River County. I believe there are more. My Families Well was drilled approximately 20 years ago and there is no record of it in the current State DENR Well log data site. Speaking with a DENR employee May 9 th ,2017, I was told that many well logs were not submitted especially those during or before the 1980's. We know that the Minnelusa and the Madison (a highly utilized and extremely important aquifer) mix.
The USGS Atlas of Water Resources of the Black Hills, Pg 109 Table 13 indicates Cascade Springs is mostly Madison with dissolved Minnelusa minerals. Cascade Springs is also a utilized drinking water source, Cascade falls is a highly visited swimming area attraction, and the 1880 irrigation system from this source provides water for over 1000 acres of hay, fruit and vegetable production and livestock watering ponds for area land owners including my own pond, hay fields, and apple orchard.
The Minnelusa Formation is overlain by the Opeche Shale, which separates the Minnelusa aquifer from the Minnekahta aquifer. The Minnelusa aquifer often is hydraulically separated from the underlying Madison aquifer by shales in the lower portion of the Minnelusa Formation. However, in many areas the Minnelusa aquifer is in hydraulic connection with the Madison aquifer.
(https://pubs.usgs.gov/ha/ha745c/ha745cIntro.html Potentiometric Surface of the Minnelusa Aquifer in the Black Hills Area, South Dakota
By Michael L. Strobel and Joel M. Galloway, U.S. Geological Survey; and Ghaith R. Hamade and Gregory J. Jarrell, South Dakota School of Mines and Technology
U.S. GEOLOGICAL SURVEY
Hydrologic Investigations Atlas HA-745-C

Prepared in cooperation with the South Dakota Department of Environment and Natural Resources and the West Dakota Water Development District)
Information on Deep Well injection in North Dakota State geologist Ed Murphy says injection wells are required to be drilled into the Dakota Group zone, a layer about 5,000 feet down where the Inyan Kara sandstone formation provides a porous container for the liquid.
(LAUREN DONOVAN Bismarck Tribune Mar 31, 2016)
Other requirements for the permitting process:
● SWD's over shallow aquifers require a geotechnical analysis by a qualified, independent contractor before a proposed location will be considered. This is to determine the suitability of the shallow subsurface geology to protect the shallow aquifer.
● Injection must be into a formation with an upper and lower confining zone to prevent migration of fluids into other formations or fresh water zones. In North Dakota, the disposal zone is typically one half mile to one mile below the surface, into the Dakota Group.
(https://www.dmr.nd.gov/oilgas/undergroundfaq.asp#mr10)
Because of this scientific data, I believe the EPA should not even consider permitting a UIC Class V area Permit for deep injection wells that would be used to dispose of in situ mining waste fluids into the Minnelusa Formation. The Minnelusa is too shallow, it is unconfined, it is known to mix with a very important aquifer, and is itself is an important and currently used aquifer.
Thank you for protecting our water,

Subject: U.S. EPA Region 8 Mail Code: 8WP-SUI
The long term (permanent) disadvantages of this proposal far outweigh the limited short term advantages. Please consider the future safety of Americans and our water supply before bowing down to mining companies.
The disadvantages of the in-situ leaching technology are:
the risk of spreading of leaching liquid outside of the uranium deposit,
involving subsequent groundwater contamination,
the unpredictable impact of the leaching liquid on the rock of the deposit,
the impossibility of restoring natural groundwater conditions after completion of the leaching operations.
Impacts of Uranium In-Situ Leaching
http://www.wise-uranium.org/uisl.html

Subject: Fwd: Underground Injection Control (UIC) Area Permit
Ms. Shea,

I am taking the time to voice my opinion that underground injection should NOT be allowed. Water is precious and the continuing pollution of our aquifers by corporations is criminal. This practice affects all of us and we have a right to be protected from harmful acts of a few. Please deny this practice, protect water because none of us can survive without it!

Finally, although I do not live in the Edgemont area, I am a resident of the Black Hills and my business is dependent on clean water. I have heard (and acknowledge that I may be mistaken) that should the permits be granted for this project that Powertech would like to expand its operations to other areas of the Black Hills. If this is the case I would have a great concern over how this could affect my livelihood should something happen to contaminate the groundwater in my area.
Thank you for incorporating my comments into the public record.

Subject: Uranium injection into S.D. aquifer
I am adding my voice to state that the above subject is unconscionable! No, to permits to inject Uranium into aquifers. Water for the future but be kept safe!

Subject: Permits for Dewey-Burdock Uranium Mine
[...]

It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is very likely

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Subject: Permits for Dewey-Burdock Uranium Mine
[...]

The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. Groundwater has never been returned to its original condition at any In-Situ leach uranium mine in the U.S. These permits must not be issued until it can be demonstrated that groundwater resources will be protected.

Subject: Opposition to Dewey Burdock Uranium Aquifer Mining
I am writing with my public comment.
RE: Dewey Burdock Uranium Aquifer Mining, specifically permits in the area of the Inyan Kara groupof aquifers (in the Black Hills of Custer & Fall River counties) for uranium mining using deep-injectionwells.
We cannot put water - an essential resource - at such risk.
My key points:

- The Unci Maka are some of the most pristine aquifers in the world
- [...] Contamination, if it happened, would be radioactive and effectively permanent. This is a serious consequence.

Based on these concerns, I strongly oppose this proposal.
Thank you for taking my comments.

Subject: Proposed Dewey-Burdock Injection Wells
Dear Valois Shea:
I am writing to express my strong opposition to Azarga Uranium's permit application for two Underground Injection Control wells in the Black Hills
[...]
There are many reasons to reject the Azarga permit request. First, the threat posed by injecting waste into aquifers (the out of sight, out of mind approach to a difficult problem) is unacceptable. There is no good reason to pollute deep aquifers just because they are not currently used by man, and there is no way to assure that vital aquifers would not be polluted

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Subject: public comment on uranium mining in southwestern South Dakota
Valois Shea,

If there is a risk of contaminating underground drinking water, even if it is a minimal one, I think it is too BIG of a risk to take. Is there anyway the waste can be taken where there is no drinking water to contaminate? Consider trucks or pipelines like the one used to move oil across our country. Our natural resources are being depleted and if there is a contamination of drinking water, that would be a bad thing. I was unable to make it to the hearing in Valentine, but I would have liked to go and learn more about this process and issue. It is a good idea, even with the risk involved, right up until the point when something precious and irreplaceable is damaged or lost. It is at the point (and sometimes not until that point), the point of no return, that it becomes very clear that it was a mistake

[...]

There are so many EPA regulations that I do not understand, that are made in order to "protect the environment". How is possibly contaminating such a valuable resource as fresh drinking water any less offensive than "damaging a wetland", when someone simply wants to clean out a ditch that runs through their property so it can drain more efficiently? How is contaminated drinking water any less offensive than the idea of adding pollutants to our air by building an oil refinery closer to the Canadian border, rather than spending all the money, time, and resources to ship the product by truck or pipeline across the country to an already running refinery?...

These two proposed permits are not by any means perfect. These two permits have problems associated with them because of the dangers uranium in water can have. Most people wouldn't drink bottled water or "purified water" if they knew it contained uranium or even nitrates. There are already two aquifers in the United States that contain uranium levels that exceed the U.S EPA maximum containment level (MCL) (Tasch, 2015). These aquifers are supposed to be proving clean water to almost 6 million people, with 2 million living nearly less than a mile from these aquifers (Tasch, 2015). It has been proven by the EPA and scientists that drinking high levels of uranium in which exceed EPA standards can lead to increased risks for cancer, liver damages, and reproductive complications (Tasch, 2015). These two aquifers are in the High Plains and Center Valley (Tasch, 2015).

The High Plains aquifer is the largest in the United States spanning in over eight states but is also very contaminated with uranium (Tash, 2015). The High Plains aquifer exceeds the EPA's MCL limit for uranium by 89 times, but it is also contaminated with nitrate levels that fall at 189 times the EPA's MCL (Tasch, 2015). Then the second aquifer is in Center Valley where the contamination level is even higher with uranium concentrations 180 times the MCL and nitrate concentration levels 34 times the MCL (Tasch, 2015). Science has proven that uranium and nitrate intake for humans as said above can pose many health problems

[...]

This March, the EPA issued these two draft Underground Injection Control Permits. These two permits have the ability to change how we consider dumping mining waste throughout the rest of the current Trump administration, or for far longer than the next four years. These permits do not only have the potential to further have a negative impact on health, but also on the limitations of drinking water. A population of concern is the indigenous people who live near these aquifers. It is important to not allow these permits to be put into place not only for the safety of drinking water quality but also because people depend on the natural underground water supply

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Dear Valois Shea,

Attached for your review, please find comments on the EPA Region 8 UIC Program is issuing two Draft UIC Area Permits to Powertech (USA) Inc., Suite #140, 5575 Denver Technical Center Parkway, Greenwood Village, Colorado 80111, for injection activities related to uranium recovery.

Many know the Black Hills region of South Dakota as Mount Rushmore, but these mountains are endangered. Currently, the U.S Environmental Protection Agency (EPA) has publicized two Underground Injection Control (UIC) Area permits to company Powertech (EPA, 2017). The two pending permits that will be under review both endanger the purity of the aquifers in these mountains. The first permit is a UIC 'Class III' which would allow injection wells for the in-situ recover (ISR) of uranium in the Inyan Kara Group aquafers (EPA, 2017). In order to ensure the safety of drinking water sources, the aquifer will be monitored of before and after ISR operations (EPA 2017).

Subject: Powertech in situ mining in SW South Dakota

Dear Valois,

I am writing to express my opposition to the proposed Powertech uranium mining project near Edgemont, South Dakota. I am out of town and was unable to attend the hearings held in Rapid City at the Ramkota motel on May 8 and 9 or I would have been there in person to express my opposition.

I live in a subdivision near Blackhawk, South Dakota which depends on the Madison and Deadwood aquifers for our water supply. Given the history of mining companies in South Dakota leaving a huge mess for state and federal government to clean up does not inspire my confidence in the Powertech proposal. I don't want to take a chance on polluting our drinking water for a few bucks in uranium mining.

If the wastewater produced by Powertech's "in situ" process is safe let's have the executives of Powertech drink a glass of that slop every morning and then I'll be convinced it really is ok for the mine to proceed. Until that day I am adamantly opposed to allowing Powertech to proceed.

Subject: Public Comment for Dewey-Burdock Injection Wells 8WP-SUI

I can't get on the USGS site to find the geologic maps of the relevant area; however, can you please comment on the potential for connectedness between the proposed injections into the Minnelusa Formation and the Madison formation which provides a prolific source of clean drinking water for the nearby City of Gillette.

Subject: SD aquifer

Absolutely NO uranium mining waste disposal in aquifer!

Subject: no uranium in treat territory

I am writing to express my opposition to uranium mining in the Black Hills. We need to protect sacred spaces and our water and environment. I strongly oppose any mining or other activities that could harm the land or aquifers.

Subject: Uranium Dump

To: Valois Shea

No uranium near aquifers, anywhere and certainly not in SD

Subject: No Uranium in treaty territory

Dear Ms Valois,

The EPA is proposing draft permits for in-situ recovery (ISR) of uranium using deep injection wells within the Inyan Kara group of aquifers (southern Black Hills region of Custer and Fall River counties).

Part of this proposed draft is to exempt the project from the Safe Drinking Water Act. Such an exemption would have to be in place for ISR activities within the aquifer to take place.

As a retired environmental sciences teacher I must emphatically warn against granting such status for a number of compelling reasons.

[...]

2. This region faces extremes in weather now worsened by climate change and such extremes could hamper the safety and efficacy of the operation. Safe water is a necessity to future generations given the hazards they will face from rapid and abrupt climate change. We cannot take this chance of contamination for their sake

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Subject: draft permits and aquifer exemption for uranium SD

This is without a doubt the worst idea ever! You put scores of thousands of people at risk without clean drinking water. The contamination of those aquifers will result in another Chernobyl in human loss. Please do not grant exemptions.

Subject: Uranium Mining Project

To whom it may concern,

I read an article that stated the EPA is potentially approving uranium mining waste to be injected into an aquifer which contains drinking water. This is one of the most absurd things that I've ever heard. This is a topic that even Commedia dell'arte would think too odd to even be considered in comedy.
Uranium eventually (over a very long term) degrades into lead. Do you remember what happened with Flint, MI? I know that Pruitt is in charge of the EPA now, but have a backbone and say no. Or, make him drink that water after waste injection.
Seriously, who thinks that this is a good idea? Is it worth it for someone to rape the earth for their own profit?

Subject: Dewey Burdock Uranium Aquifer Mining
To whom it may concern...
The proposed mining of uranium in treaty territory will do irreversible damage to the aquifers. We all know this. This will hurt people and hurt the earth. We all know this.
You have the power to protect people and the water. Please act honorably and help the people put an end to this

---

Dear Valois Shea,
I moved to the Black Hills of SD because of clean water, air and a wonderful place to recreate outdoors. Now a foreign holding company is seeking three EPA permits to pollute the precious water tables underlying the Black Hills of South Dakota, which is the recharge area for our streams and lakes, municipal supplies, private wells, and agricultural use in the entire western state.
I have a problem with this. My house and well are not that far as the aquifer flows AND I do not want to see the beautiful Black Hills known for the tourism money that the qualities I listed above to be ruined by a number of dirty and polluting uranium mines

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Subject: Azarga Uranium/Black Hills, South Dakota
As a resident of Rapid City, SD and an American citizen, I implore the EPA to deny Azarga Uranium company the rights to establish an ISL uranium mine and to build a processing plant in South Dakota. This denial request is based on many reasons, the foremost being the integrity of all aquifer water supplies in the area. Clean drinking water should be nothing less than a national security issue that needs utmost protection and monitoring. No company can guarantee the safety of water supplies after in situ mining has taken place, and based on that fact alone should be cause enough to stop this project.

Subject: Public comment on Draft Permits and Aquifer Exemption for Uranium mining project in Southwestern South Dakota
Please don't dump waste where people get their drinking water. This could hurt our environment or kill someone and bring about preventable suffering. It's supremely irresponsible and shortsighted. This kind of treatment of our water and lands makes the United States look barbaric and ignorant.
I don't support these draft permits and exemptions.

Subject: EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota
I would like to comment on the draft permit. I believe once an aquifer is impacted by uranium it is near impossible to clean it up. The idea that as it is in the same area as the uranium-bearing portions will lead to a legal fight that the permit holder will argue was the same levels prior to any potential release. The contamination does not Naturally attenuate at any rate that will be successful to not have long term impact on health and human environment. Further, the type of contaminant is uniformly excluded from insurance policies that often insure these types of projects. Hence, if there is any release, the company will have to pay for the clean up and they will likely not have the financial resources to do so.

Subject: I oppose the UIC Area Permits and Safe Drinking Water Act exemption under consideration for Powertech Inc.

Ms. Shea,
I was distressed to see that the EPA is considering issuing UIC Class III and Class V permits to Powertech, as well as an aquifer exemption approval. Describing this permission as "ludicrous" doesn't seem sufficient. The EPA should protect the right of people to have clean drinking water and uphold the legal protections like the Safe Drinking Water Act put in place to do this. No corporation should be given an exemption to these rules, and I oppose the granting of these permits and the exemption.

Regarding the request to place ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment, please consider this a request to absolutely not allow this type of activity here or anywhere else in the country.
We know, regardless of the type of process used, that the threat to ground water is not worth the risk. The resulting contamination may be low level and long lasting. We should not be putting residents at risk and with no option but to prove some sort of poisoning after years of drinking the water.
Protect us! We need to be able to rely on our ground water!

Subject: Comments on proposed uranium mining and storage plans on Lakota lands
"The Inyan Kara, Minnelusa, and Madison aquifers are the principal sources of ground water in the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. The aquifers are exposed in the Bear Lodge Mountains and the Black Hills and are about 3,000 to 5,000 ft below the land surface ... The direction of groundwater movement is from the outcrop area toward central South Dakota."
Thank you for your courage and ethical decision NOT to approve this permits.

Subject: Uranium Mining in the Black Hills
Good day Shea,
My family & I live in beauitful, rural southern Black Hills. We haul water for our home & animals from a nearby source. We do not want uranium injection wells to contaminate our Madison water aquifer or the lower Inyan Kara. We would like those abandoned drill sites cleaned up at the expense of those companies responsible & not tax layers. We are concerned for the health and safety of all living beings, land, air & water affected by this destructive mining and storage practices. Please help us. Stop uranium mining in the Black Hills.

Subject: Uranium waste
Allowing this into a South Dakota aquifer -- or into groundwater anywhere is pure insanity. Poisoning the earth to enrich extractive industries should be punishable by jail. Think, EPA, think!

Furthermore, Dewey-Burdock Project experts propose land application areas on river terraces and deep well injection into aquifers within the project boundaries under the sanctions of EPA permits to be exempted from the **Safe Drinking Water Act** (SDWA 1977 & 1986).
[...]
Water Quality
Other areas are dealing with primary and secondary water quality issues refer to Southern Black Hills Water System Appraisal Report (see exhibit C_SoBlackHills.pdf).
For example, the town of Edgemont has quality concerns with primary drinking water standards relative to some category(ies) of radionuclides (e.g., alpha particles that can result in increased risk of cancer).
Edgemont has shown a test of 17 milligrams per liter (mg/L) on alpha particles, and the U.S. Environmental Protection Agency (EPA) limit is 15 milligrams per liter (mg/L).
The problem of artesian flow

Artesian springs act as a “relief valve” for the aquifers and are an important mechanism in con¬trolling water levels in these aquifers. Springflow of many large artesian springs changes very slowly in response to long-term climatic conditions. Arte¬sian springflow could be diminished by large-scale well withdrawals near springs, thus impacting surface-water resources. Large-scale development of the aquifers has the potential to influence the balance of the unique and dynamic “plumbing sys¬tem” in the Black Hills area that controls interactions between ground-water levels and artesian springflow (see exhibit D_The_Black_Hills_Hydrology_Study.pdf).
Artesian flow occurs when there is a hydrologic connection, through faults or highly permeable strata, between groundwater sources high on the landscape and the land surface lower down. The weight of water in overlying strata exerts pressure downward into water within the uranium-bearing strata, which can then be released as artesian water flow (like a fountain) where the topographically lower uranium-bearing strata is exposed at the surface, or where it is punctured by drilling. Artesian flow was observed or predicted by Powertech in their Dewey-Burdock Project proposal, and was observed directly at the Black Hills Army Depot less than 10 miles to the south (U.S. Army Corps of Engineers 1992).

Subject: Aquifer changes

In response to request for public comment regarding dumping into an aquifer, I suggest that the book, "Living Downstream" be required reading. We cannot return to the days of having our water systems polluted and damaged for the sake of corporate or personal gain. I have lived in an area wherethe rivers and water systems were polluted due to chemical dumping from byproducts of manufacturing and the long term effects remain for decades.

Please do not let this happen, I am sending a resounding no.

Subject: Uranium
Please do not allow waste disposal in Sout Dakota's aquifer. That is ridiculous to consider contaminating the water supply with nuclear waste. Please stop!!

Subject: proposed Dewey-Burdock Uranium In-Situ Recovery Site located near Edgemont..SAY NO!!!
I am against this proposal, as all the caring neighbors in the Custer Highlands subdivision. We are close to the site and dont agree with the pollution associated with the mine. It would permanently contaminate the water and make surrounding properties unlivable. Most of the residents here have come from another place and gravitated toward this area because of the natural beauty and healthy wildlife. Bringing toxic waste to the surface is not what this beautiful area is all about. Please reconsider and SAY NO!!!

Subject: no to black hills mining and milling..not worth the risk!
A foreign holding company is seeking three EPA permits to pollute the precious water tables underlying the Black Hills of South Dakota, which is the recharge area for our streams and lakes, municipal supplies, private wells, and agricultural use in the entire

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Subject: Please don't allow Black Hills uranium mining
Dear EPA staff:

I’m writing to urge you not to permit uranium mining in the Black Hills. Such mining would have potentially devastating effects on the region’s aquifers. I urge you to adhere to the high standards of your agency and refuse this permission.

Subject: Comments on Dewey Burdock proposal
Clean water is nearly nonexistent in our nation, and the situation is becoming worse each year.
It has been well established historically that this type of project will (not could, but will) cause environmental contamination
[...]

You won't see this in the modern 24/7 media, but you don't have to look far to find that unfortunately this is already happening. Documented cases of cancer and other toxicity related illnesses - affecting not just older people, but young children, babies born with birth defects - are happening and are correlated with environmental impacts.

Scientists and engineers draw these maps to define boundaries. "Here is one aquifer, here is another." "Here is where they are connected", or, "they are not connected at all." As a scientist, I will say that while these analyses have their purposes, they are still only approximations of reality. This is the earth we are talking about - everything, everything, everything is connected, as multiple speakers at the hearings have already stated. The idea of containing contamination is only an optimistic dream, not reality.

Subject: Public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota
Dear Ms. Shea:

Absolutely no exemptions for groundwater contamination, whether from uranium, or any other foreign (non-H20) substance. We (U.S. EPA) must prohibit any contamination of water, whether they are ground water or surface waters.

https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uraniummining-project

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Subject: Azarga Uranium
[...]
We have had 2 new leaky oil pipelines forced on us. Between the oil pipelines and Azarga we fear for our ground water and the deep aquifers. We hope you will reject Azarga's application.
Please help us protect our state,

Second, the mining will undoubtedly adversely affect aquifers.

Subject: Uranium/Aquifer
I'll keep this simple. Don't do anything to contaminate the aquifer in South Dakota. Nevada's water issues with surface level fallout is bad enough.

Subject: Powertech/Azarga Black Hills
Good Morning,

While the EPA might be gutted financially, my hope is there are people there that still understand the important of keeping our waterways, and airs clean of all pollutants. This project would be an unbelievable hazard, contaminating the Inyan Kara aquifer which is being used for agriculture, as well as contaminating other aquifers. Mining wastes are often radioactive and would create a permanent hazardous waste dump site in the Black Hills. One needs to only look at what happened in Brazil with the Doce River to understand the potential calamity a project like this represents.

I would appreciate if you officially include my comment - while I may not live in South Dakota I have relatives that do. I also spent some time reporting from Standing Rock in the last year. Furthermore the pollution of waterways effects all of us directly. Every body of water is connected to another, to our soil where we need food to grow so we can survive.

Thank you,

Subject: Comments on Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

I ask that you reject the two draft Underground Injection Control (UIC) Area permits and aquifer exemption to Powertech, Inc. for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota.

Together these permits would allow the drilling of thousands of wells within 14 different fields. These wells would bore hundreds of feet into the ground and pierce the Inyan Kara system of underground aquifers. According to the USGS, the Inyan Kara, Minnelusa, and Madison aquifers are the principal sources of ground water in the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. The second of the two permits is to allow the disposal of hazardous waste materials resulting from uranium mining. The proposed action would expose the aquifers to dangerous contamination, therefore an aquifer exemption to the Safe Drinking Water Act is inappropriate and should be rejected

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Subject: Dewey-Burdock proposal public comment

To Whom It May Concern,

I strongly encourage the Environmental Protection Agency to protect the public's interest in clean, abundant, safe water in the southern Black Hills by denying the Dewey-Burdock project the required permits to mine uranium.

Water is always a precious commodity in this semi-arid region, and this proposed uranium mining project will utilize far too much of it for daily operations. Overdraw of the aquifers in question is a real concern. The Dewey-Burdock project is requesting access to far too large a quantity of water in comparison to the annual recharge of these formations. If severe, prolonged drought comes to this region, as it has in the past, that water will be needed to serve the people, livestock and agriculture of area.

Overdraw is one concern, and when combined with the sizable potential for contamination of the local aquifers, it becomes clear that this project should not be allowed by the EPA.

[...]

I ask that the EPA put aside all other concerns associated with this mining project, and focus on the facts that the Dewey-Burdock proposal asks for far too much access to public groundwater, and seems little concerned about the large potential for toxic contamination across several aquifers in question. The small amount of potential economic benefit this project could bring the Edgemont region is nothing when compared to the large hazard posed to our water supply. Stop this proposed project once and for all!

Thank you.

Subject: No Uranium in Treaty Territory

Dear Sir/Madam:

I want to submit a public comment regarding the Dewey Burdock Uranium Aquifer Mining. I say “No" and ask that your protect these most pristine aquifers in the world - the Black Hills Aquifers.

Thank you for your time and attention to this matter.

Sincerely,

Subject: Powertech permits

As a US citizen, I do not want Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota to be approved because of the impact on water quality in the region.

Subject: Black Hills

Please stop the Dewey Burdock uranium aquifer mining in the Black Hills. It's wrong, dangerous & makes water unsafe. Just Stop.

“EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur.”--News Release from EPA Region 8

Local wells that tap into the Inyan Kara aquifer already have levels of alpha radiation above the EPA’s Maximum Contaminant Level.

Subject: comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota

PLEASE WITHHOLD NAME AND CONTACT INFORMATION BY POSTING AS ANONYMOUS

I am adamantly opposed to this project and do not feel the U.S. should allow ANY company to mine uranium as it cannot be done safely, despite industry assurances to the contrary. Uranium is lethal to humans, fish, wildlife, birds and the environment and no safe level of uranium exposure exists, period. The EPA's proposed aquifer exemption approval in connection with the draft UIC Class III Area Permit would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. That proposed exemption clearly indicates EPA's prior knowledge that uranium mining is unsafe and will most certainly contaminate drinking water for millions of Americans. Such approval would give the mining company legal cover, but the EPA is charged with protecting Americans and the environment -- not corporate interests.

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this is stupid. would you inject this into water you plan on drinking? Sincerely,

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If the the Class 3 permit is approved, the EPA should include a detailed analysis of current leaking abandoned mine impacts on groundwater, as well as locating and proper reclamation of all the open boreholes to repair the previously damaged confining layers, as the NRC has done. • There is no description of the kind of wastes that might be injected in the Class 5 injection wells, nor toxic metals, so that correct monitoring for potential contamination of downstream private wells could be done. Currently, no documentation is required for incoming wastes, from other areas or countries, destined for the deep injection wells. This needs to be done as all of Powertech's wastewater will contain heavy metals, including unrecoverable organified uranium and other unrecoverable and un-filterable toxic and heavy metals, along with radioactive metals. Powertech's waste water does not qualify as non-hazardous. If it could be considered non-hazardous, then it would most certainly be used for agriculture or other purposes in this semi-arid climate (where clean water is always in demand). The “airing out” of radon from the waste water via evaporation ponds should not qualify as a corrective treatment for Class 1 radioactive and heavy metal waste into Class 5 deep injection wells. The lack of information in the Powertech application, with so many blanks to be filled in later, says to oversight regulatory agencies “Just give us the permit and we will fill in the blanks later”, which was also advised by the corrupt DENR, of whom, who many are stock holders in Powertech. EPA should be where this buck stops. • Additionally, Powertech did its measurement of groundwater flow from East to West (from Dewey-Burdock to Dewey-Burdock Terrace on the Wyoming side of the Black Hills) while the water, according to USGS maps, actually flows from West to East. Powertech and the state of South Dakota seem to entirely disagree with hydrological flows in the application area. EPA should require Powertech to do the correct water flow analysis, from West to East as the correct direction of water flow, and to monitor plumes from the Class 5 wells. https://pubs.usgs.gov/wri/wri024094/pdf/wri024094.pdf

[...]
The 4,000 foot Madison well at Igloo is already showing increased levels of arsenic, radioactivity and other heavy metals. Since the U.S. Army insists that the Black Hills Army Depot was not a nuclear or atomic site, I feel that the increased levels of heavy radioactive metals and arsenic are from the older uranium mines in the area from the 1950s has begun to enter the aquifer. • If we disturb the area with injection wells, bore holes etc., and force toxic sludge under pressure into the underground areas riddled with the massive Wind Cave structure, we will get the BHAD contaminants moving in the plume. These are soluble in oil and water. Deep injection wells will unleash a catastrophic moving lethal torrent underground that will kill everything it touches, borne by oil and water wells. That plume will flow directly towards the city of Hot Springs, poisoning the local Minnelusa wells, of which 22 on the west side are now under Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) 9 monitor for possible class action suites. • The plume will also contaminate the municipal water of that city which is a mixture of all the aquifers, according to the water engineer of Hot Springs, and Evans Plunge - the 100 yr old natural hot springs swimming pool that is a local and tourist attraction. The state shows anywhere from over 100 to a possible 1000 Minnelusa wells in the Hot Springs area and Fall River County, where the plume will flow, and possibly to Custer County as well. The state of SD only began keeping records of wells in the recent past, so there are many undocumented domestic wells where people do not even know what aquifer their wells are in or how deep they are. They will not know that they are drinking hazardous waste until their cattle all die and they get cancer. Poisoning a whole city and county should be fresh on the minds of the EPA from the Flint, Michigan fiasco, my home town. • The 22 domestic wells recently tested all showed very low uranium levels and low to very treatable TDS, and all families but one were drinking the water, with only one using a softener and several just a sediment filter. Nobody was using an RO. • If the TDS elevates, the water will not be treatable and will contain high levels of organified uranium from the wastewater plume, an obvious tracer to the deep injection wells, since a baseline has now been established. Powertech/Azarga and the EPA will be the targets of a massive lawsuit, with the mining co undoubtedly filing bankruptcy, as they are known to do, and leaving EPA holding the bag for monetary claims. • The wastewater from Dewey Burdock mines will undoubtedly contain an even higher level of organified and unrecoverable uranium than that already documented from other ISL mine sites, because of the open boreholes contaminating the aquifers with micro organisms that are known to organify metals. Other organified toxic metals will also be elevated, increasing the toxicity of such by increased bioavailability and biochemistry in the living body.

In Conclusion No ISL mines have ever have proven to be safe and free of excursions, or been able to be properly decommissioned with the mined aquifer restored to baseline chemistry levels, so that the water is drinkable and safely usable. The high dry area we live in cannot afford this sacrifice. ISL mining has been banned in other countries for that reason. Humanity has continuously failed to clean up our mining messes throughout history, as evident from all the superfund sites of total and complete loss of any use all over the country and the world, not to mention the over 10,000 other old uranium mines that should be super funds and are not, due to lack of funding for remediation/burial. If ever there was a case for your first rejection of a permit, it is most certainly, here and now. Oh, and I have a Minnelusa well.

Subject: Powertech UIC permits

Hello,

I'm writing to oppose the Underground Injection Control permits to Powertech as well as the aquifer exemption.

I'm relatively new to this concept and am no environmental scientist - but is injecting uranium recovery waste near a source of drinking water common practice? Seems like a really bad idea. And the request for exemption from the Safe Drinking Water Act suggests that Powertech thinks it may not work out so well, too. Please don't approve this.

Subject: U.S. EPA Region 8 Mail Code: 8WP-SUI / Underground Injection Control in EPA Region 8

Hello

I believe this proposal is reckless. I understand there are monitoring for ground water, but there are never any guarantees the water won't get contaminated. I am sad that protecting the environment seems to no longer be the focus of the EPA. I hope you do the right thing here and reject this proposal.

Subject: Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc.,

I am writing to state my opposition to the draft Underground Injection Control Area Permits issued to Powertech Inc. for injection wells for the in-situ recovery of uranium in Inyan Kara Group aquifers. I am also opposed to the approval of an aquifer exemption, which would exempt portions of this aquifer from protection under the Safe Drinking Water Act.

This exemption would set a dangerous precedent by exempting drinking water protections at the federal level. I am concerned for the health and safety of the citizens of South Dakota and Wyoming that utilize this aquifer; and for the tourists that visit the Black Hills and Mount Rushmore. Deep injection wells have the potential to leak.

ProPublica completed a review of more than 220,000 well inspections from October 2007 to October 2010, finding that structural failures were routine. More than 17,000 integrity violations were handed out and more than 7,000 of these wells were found to be leaking (https://www.propublica.org/article/injection-wells-the-poison-beneath-us).

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the water should be protected from contaminants at all cost. No mining should be allowed. Mining in and of itself is not a guarantee of safe clean water no matter how many precautions are made.

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the water should be protected from contaminants at all cost. No mining should be allowed. Mining in and of itself is not a guarantee of safe clean water no matter how many precautions are made. I am against any mining permits or aquifer exemptions for uranium mining in the Black Hills or anywhere.

Subject: No dumping uranium in aquifers

Please do not make these permits permanent. Dumping uranium in aquifers is a bad idea. (Just so we're clear, I'm talking about the draft permits in the portion below.) Access to safe, clean, inexpensive water is a human right. Do not allow these companies to poison our planet!

Subject: Uranium waste

This is a no brainer! Don't allow dumping uranium waste in an aquifer.

Granting these exemptions would also take properly from other people living in the area. It would take the homes, ranches and farms from these people because their home would not be habitable without water and their ranches and farms, their livelihoods, could not support them without water.

The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. Groundwater has never been returned to its original condition at any In-Situ leach uranium mine in the U.S. These permits should not be issued until it can be demonstrated that groundwater resources will be protected.

Subject: Azarga Uranium mining permits

Please do not give these permits to this foreign company that would have any chance of contaminating our water sources. We are thankful for our pure water and want that for our children and all those who live down the line from us.

Hello, my name is [redacted] and attached for your review, please find comments on the proposed policy on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota released by the EPA on March 6, 2017. It is important to take careful consideration into the Underground Injection Control (UIC) proposal before taking action because of the numerous entities that could be potentially impacted. This proposal could be of concern because of the potential risk of contamination of water, disturbances of Indian tribes and their land and detrimental environmental hazards. Underground injections have been a controversial topic for several years because of the potential risks that are entailed. The issuance of two draft Underground Injection Control permits for the allowance of dumping waste from a mining company into a local aquifer is currently under review. I strongly believe the permit should not be approved.

A geological survey of the geohydrology and water quality of the various aquifers in the area was conducted in 1987 and stated that, large amounts of groundwater are from the Inyan Kara, Minnelusa and Madison aquifers in Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming (Kyllonen and Peter, 1987). This proposal focuses on the Inyan Kara, therefore, being that this aquifer is a principle source of ground water in the area, providing permits to move forward with UIC of mining waste could be hazardous to the water quality and the surrounding soils. The possibility for water leaks to occur between aquifers is apparent. This can happen due to numerous reasons including through semi confining layers, wells completed in more than one aquifer and wells with deteriorating casing (Kyllonen and Peter, 1987). Because of this possibility, it poses a risk for the contamination of other surrounding aquifers causing more harm to the environment as a whole. Furthermore, according to the 1987 geological survey of the Inyan Kara aquifer, the principal source of water from the aquifer is used for domestic and livestock supply (Kyllonen and Peter, 1987). In comparison, more recent research shows that the aquifer is still a major source of water for livestock and domestic uses such as drinking water (Powertech (USA) Inc., 2012). Therefore the water from the aquifer is still being used for the same purposes as in 1987. Overall, contamination from the UIC of mining waste can be hazardous to not only the environment but human health as well.

Also, the EPA states that more fluid is extracted than injected in solution mining processes in order to prevent the contamination of drinking water by Class III wells (EPA, 2017a). Therefore, with the Inyan Kara aquifer, there would be more water extracted than there is mining fluid being injected. This would be in attempt to prevent the aquifer from reaching its capacity and contaminating other water sources. However, this statement is very vague and doesn't completely eliminate the risks that could occur from the UIC of the mining waste.

Subject: Uranium Mining!!!

I am writing you today because of concern about mining of uranium in the Black Hills.

I see many issues with this mining project:

1. Its uses a lot of water. 551 gallons per minute, totaling 94 billion gallons of water during a 20 year period. That uses up all of the resources of the people who actually live and love this place. The long term effect of water availability cause a drought and forcing people to buy their water from the else where, and cause a drought.

Please help us protect our water from Uranium. Once water is gone....that is it. And if it is proven about the chemicals left behind, much must be done. Thank you for your service and I feel you have people over you that quite possible have a financial stake in all of this. Take courage and know that in the end of it all,we must be able to say,"I did my best

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Subject: Uranium injection in South Dakota

Are they insane? Let's pollute the aquifer that drinking water comes from? Ummmm no way.

Subject: No uranium waste water disposal

Please protect our water! I live in Spearfish, S.D. where my town and other municipalities withdraw drinking water from the Minnelusa aquifer. It's not possible to guarantee that it will not become polluted by Azarga's uranium waste water. PLEASE don't allow this!

Subject: in situ Uranium mining and waste disposal in the Black Hills

I am writing to register my alarm at the prospect of in situ Uranium mining and waste disposal from such mining in the Black Hills.

This is a semi-arid region. As such, aquifers are precious resources, and this kind of mining would use a LOT Of water, diverting it away from drinking and agriculture.

Please do NOT allow this project to go forward. The financial and health consequences in Flint due to water quality is a cautionary tale for all. Perhaps it was preventable but their residents *needed* to have water. We do not need to have uranium mining.

Subject: Black Hills Uranium Mining Permits

I'm writing to encourage the EPA to deny permits requested by Azaraga/Powertech for injection drilling and exemption to Clean Water Act provisions at the Dewey Burdock site for the purpose of uranium mining. Even if there were a significant market for uranium (and there isn't), it would be a paltry sum in the face of possible clean up on site or, worse, contamination of fresh water aquifers in the surrounding area.

In coming decades, access to clean, fresh water will be one of the greatest problems we face as a nation and a planet. Aquifers across the US are being drained at unsustainable rates while many states neglect to pass legislation and regulations to conserve water now, before problems are widespread. One need only look at the Ogallala Aquifer that supplies the majority of plains states along with parts of TX and NM to see that a crisis involving water availability is a reality in some regions and is coming for other areas. One need only look at Flint Michigan in order to see that the affects of contaminated water are real, serious, and difficult to reverse. There is no reversal to brain damage from lead poisoning from pipes, so the idea that we play at contamination of fresh water aquifers with radioactive materials sounds naive.

There is no scientific certainty in the Powertech/mining lobby's claim that there is no way in which the wastes from this injection drilling and extraction process could contaminate other local aquifers. We have a nation dotted with oil and gas spills, with Superfund sites, and no company acting in its own financial interest admitted beforehand the risks. Instead, we the people pay with our health, our lives, and our communities. And when it comes to water, what affects one community can affect all communities. TX--my home state—is planning on piping in water from other states (and Canada) should we continue as we are and finish draining off our aquifers. Other states have similar attitudes and lack of regulation. While one aquifer, one river contaminated may seem like a local problem, these things compound over time. We must treat water like a public resource--an entitlement that we owe to future generations. We want our great grandchildren to be able to grow food, to be able to live in the proud states and towns that we live in today. We want our children to not have to worry about cancer down the road due to uranium mining waste contaminents. And with climate change and the long term effects of poor water conservation today, some states or communities may require others to step up and share water. So, every fresh water aquifer counts. Every community matters. Respect local tribal peoples and their right to water to sustain their community. Respect all local people's right to clean water now and in the future, their right to access water without fear of finding out that it has at some point been contaminated. Respect the rights of all Americans to visit the Black Hills years from now. And respect all generations of future Americans who will need water. Water is life.

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3. Position

My position on this issue is in opposition of allowing there to be any kind of in-situ underground injection of uranium and uranium wastes. Injecting waste from uranium, which is radioactive and horrible for human health cannot be a good idea (Kyllonen, 1987). Even if the water is treated and has to be tested before, during, and after the mining, radioactive materials within a water supply is still potentially harmful to the environment (Mudd, 2011).

Subject: UIC Area Permits to Powertech, South Dakota -- Public Comments
As a US citizen, a mother of three US citizens, and a human, I vehemently object to allowing Powertech to dispose of ISR waste fluids into the Minnelusa Formation.

Subject: Underground Injection Control in EPA Region 8 (CO, MT, ND, SD, UT, and WY)
Hi. Please know that Ossining these permits is a bad idea and I am formally against this plan as it would further threaten underground water sources and drinking water.

Given that the injection wells for these draft permits are occurring IN an aquifer, it would seem obvious that no matter what precautions the applicant has indicated, they will not be sufficient enough to prevent these aquifers and waterways from being polluted with nuclear and toxic wastes. I again state my objection to these draft permits being approved.

Subject: Uranium waste
I am contacting you to voice my opposition to allowing uranium mining waste disposal in SD aquifer.

Subject: Uranium mining waste
I believe that there should be no Uranium mining waste injected anywhere near a aquifer. Bad idea! Don't do it.

Subject: Dewey-burdock site
Do you drink water?
Why do you want to poison ours?
What should be a no brainer is a money issue, big money!!!!!
Please do not sell us out, no one will be happy unless everything is poisoned.
PLEASE, NO

Subject: Dewey Burdock uranium Mine proposal
I'm writing in opposition to the proposed Dewey Burdock class V and class III injection well draft area permits.
I've studied this proposed mine since it's original proposal. I also hold a degree in geology from the South Dakota School of Mines & Technology.
I believe both the inyan Kara aquifer and Minnelusa aquifers are much more complex and the company is letting on. I don't believe this company can safely mine at this site.

Subject: Uranium Mining Project in Southwestern South Dakota
I am writing to comment on the proposal to inject uranium waste into the Inyan Kara Group of aquifers as part of a proposed uranium recovery project. I would like to say that I am opposed to allowing uranium to be injected in these areas even after treatment.
I believe the risks to drinking water are too high. We cannot live without water. That is a biological fact. It is one of our most important resources. If there is even a slim chance that it will impact drinking water and people's health negatively, I believe it is not in our best interests.

Subject: Re: Uranium Mining in the Black Hills
Please don't allow uranium mining to pollute our water. We have a right to clean water as do our children and grandchildren.

Subject: Dewey Burdock Permit
I am begging you say no to this. I tried to do some research into this and I did find that only 2% of the injector wells requiring an exemption to the Safe Drinking Water Act are these kind of wells. I am assuming there is a reason for this due to the forever contamination, recharge lengths and public safety. I also researched the issue relating to the exact science which seems to be changing with time since your rules were developed. Our area is so special here. We are drought prone.

Subject: Mine waste injection in aquifer
The words in the subject line for this message should never be found in the same sentence!!!
Of course it is wrong to put mine waste, which is usually a higher concentration of natural materials, into any area from which water is drawn for use by humans and animals!
Please do not allow this proposal to be permitted. Those who produce these waste materials need to devise better methods of disposal.
Ex. 6 Personal Privacy (PP)
Registered voter, educator, mother, and former resident of Wyoming where water is recognized as precious.

Subject: FW: Draft permits
The draft permits should be denied for the aquafir in South Dakota. Uranium mining waste should not be allowed anywhere near any kind of water source and dumping allowing the permits is highly irresponsible.

Subject: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits
I urge you to reject these permit applications. We can not afford to put water sources at risk by storing mining waste near aquifers. Protecting our nation's water supply must be of highest priority as it faces increased demand from climate change, population growth, and industrial uses.
While I recognize the risk of contamination may be low, but they aren't non-existent. There are always the potential for human error, unexpected seismic events, or unforseen weather events that could alter the expected outcome by altering the water table or damaging the encapsulation of the waste. Under other circumstances, these risks might be acceptable but we must reconsider them in view of the increasing value of clean, usable water in this time of droughts and increased demand.

Subject: South Dakota PowerTech draft permits and aquifer exemption for uranium mining project in southwestern South Dakota
The risks to the aquifer for a private corporate enterprise are too high risk to be permitted. If the aquifer is contaminated there is no method to remove the damage. As water is required for public consumption and agriculture uses that also evolve into public consumption this is an unacceptable risk.

Subject: Opposition to SD draft permits and proposed aquifer exemption
I would like to voice my opposition to the draft permits and proposed aquifer exemption associated with the work to be done by Powertech, Inc. Further, I would oppose any work that threatens to contaminate our aquifers or otherwise alter them from their natural state.
Thank you for taking public opinion on this matter.

Subject: EPA Region 8 UIC Program
As a concerned US citizen I would like to voice my opposition to the aquifer exemption being requested by Powertech. There is evidence that these measures would contaminate drinking and ground water and are a bad idea. As Americans we rely on the EPA to protect our citizens and environment, so please do your job.

Overview of Position

The class III permit is a request to create wells that would be used for the recovery of uranium from underground (Dewey-Burdockb, 2016). This permit should not be granted in order to project the Inyan Kara aquifers that are located where the wells would be placed (Dewey-Burdockb , 2016). The placement of these wells put the aquifers at risk of contamination from a number of possibilities that are associated with in-situ recovery. Some of the risks include groundwater contamination, leakage of chemicals, contamination of local drinking water sources, etc. (Lustgarten, 2012). The class V permit is a request to inject waste fluids into the ground after proper treatment (Dewey-Burdocka, 2016). This should also not be permitted in order to protect the Minnelusa Formation, located below the Inyan Kara aquifers. For similar reasons to reject the class III permit, the class V permit should be rejected as well. The risk of groundwater contamination, of which groundwater is the primary source of drinking water within this area, puts the people living among the Inyan Kara aquifers at risk of consuming polluted water (Kyllonen & Peter, 1987).

Research of Position

The creation of wells in general requires copious amounts of labor, materials, and time (Injection Wells, 1989). All of this would be for the creation of wells that could potentially harm the environment and human health. Allowing Powertech Inc. to create these wells would not only put the environment at risk, but it would also continue our world's dependence on removing and injecting materials form earth. The United States is one of the top nations that contributes to copious amounts of drilling into the planet. With the current administration, this is likely to increase in the next few years. An article from The Virginia Pilot talks about a study conducted by The National Research Council of the National Academy of Sciences on the dangers of uranium mining. Specifically, the article talks about how research has found increasing activities of this type, near bodies of water that serve as sources of drinking water, often results in increased risk for contamination (Bartel, 2011). Powertech Inc. is requesting permits for well sites located within the area containing the Inyan Kara aquifers. These aquifers are the primary sources of drinking water for the "northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming" (Kyllonen & Peter, 1987). For the safety and health of U.S. citizens and the environment, injection wells should not be allowed in this area.

The Underground Injection Control (UIC) program was created under the Safe Drinking Water Act (SDWA) for the application of safe injection wells that cause as little damage as possible to the environment and human health. However, the creation and use of injection wells innately contain high risks that may not be worth the reward. In the instance of this situation, the people of the Inyan Kara aquifers would be the ones that are being put at risk (Lustgarten, 2012). The health of their drinking water supply is directly impacted by the proposed permits of Powertech Inc. The impacts of these permits include the potential contamination of groundwater from leaks, contamination of surrounding subsurface and surface soil from leaks, and contamination of drinking water sources (Lustgarten, 2012). Even in conjunction with regulations under the SDWA, there are many inherent and potential risks associated with injection wells. Along with discouraging this type of activity, rejecting these permits would ensure the safety of the environment and the people of Wyoming and South Dakota (Injection Wells, 1989).

Conclusion

As a senior Integrated Science and Technology major at James Madison University, I believe that both the class III and class V permits should be rejected by the EPA. The specific focus of my major is on the environment, but in general my major is an interdisciplinary study that includes manufacturing. From an economic perspective, these wells would provide a great profit for Powertech Inc., but this would come at a high environmental price. Furthermore, these wells present the possibility of contaminating the groundwater from the underlying aquifers.

[...]

It is a human right to have access to clean, safe drinking water and accepting these permits would potentially inhibit that right. In this situation, I believe that the risk is not justified by the reward. The EPA should reject these permits from Powertech Inc. in order to protect the environment and the U.S. citizens that live in the area of concern. If you have any questions or responses to this contact, please do not hesitate to contact me. My email address is Ex. 6 Personal Privacy (PP) look forward to seeing the EPA's decision on this matter after the comment review period.

[...]

Sources

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Lustgarten, A. (2012, September 19). Injection Wells: The Poison Beneath Us. Retrieved March 28, 2017

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Subject: Powertech

I strongly oppose the desecration of groundwater and Indian lands by drilling, nuclear waste, and any other form of contamination. The draft permits issued to Powertech must be revoked.

Subject: No aquifer exemption for powertech usa

Please do not grant an aquifer exemption for the UIC area permits to Powertech USA. We must protect our aquifers from contamination. They are a non-renewable resource, and contaminating them would likely have long-term consequences for humans. I object to risking a public resource that belongs not only to this generation but to future generations to come. Allowing the aquifer to be contaminated short sighted and inexcusable especially if it is for private profit.

Subject: Draft proposal in SD

Hi, I am Pam Rasmussen, High School Science teacher. I wish to express my concern for the proposed uranium extraction in South Dakota. My fear is once again money is trumping the environment! We can't keep putting our aquifers in peril for the sake of some companies bottom dollar. Our children will pay the price. Thank you for the chance to express my concern.

Subject: No mining permits for the proposed Dewey-Burdock Uranium. Stop this utter stupidity of threatening water.

Water is life!

Subject: NO on Aquifer exemption for uranium mining in SD

Water is quickly becoming our most valuable natural resource. The potential damage to the aquifer will be irreparable.

Subject: Fw: Stop uranium mining near Mt. Rushmore
EPA
cc: Bernie Saunders
Uranium mining near Mt. Rushmore puts water at risk.
Tell EPA: Protect South Dakota drinking water!
Dear Cave,

Mining company **Azarga/Powertech is proposing to mine for uranium just 50 miles from Mount Rushmore** – threatening drinking water for families and ranchers. If this mine is built, it will be the first in-situ leach uranium mine in South Dakota. This type of operation pumps a chemical solution into a groundwater aquifer that contains uranium ore. The chemical solution picks up the uranium, and the solution is pumped back to the surface for processing.

Groundwater has never been returned to its original condition at any in-situ leach uranium mine in the U.S.
We can't afford to pollute clean water.
TAKE ACTION: Tell the EPA to protect South Dakota's groundwater from uranium mining!

Subject: Comments on Dewey-Burdock UIC permits, aquifer exemption
Greetings,

Thank you for the opportunity to comment. I am opposed to issuing the permits and the aquifer exemption. Waste water should not be pumped back into the ground. Aquifers should not be compromised or reduced in size. The Safe Drinking Water Act was very important for the United States, and should not be weakened. Our good water is precious and must be protected, not used up. Putting bad water back into the ground compromises additional water and resources.

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2) the documentation of the Geo Hydrological department states that Inyan Kara and Minnelusa's water usable for human and animal consumption. So I guess that PowerTech is not honest in their testimony.
Also, the tests were conducted by Scientist employed by PowerTech.
3) there of course is the geological survey of the greater surrounding area from Dr Hannan LaGarry-, Which has mostly been ignored!
3) Use Of Bedrock Aquafirs For Water Supply In The Black Hills Area-
4) attachment from an Australian study which very much applies to us and our concerns.
South Dakota's #1 industry is agriculture- #2 industry is Tourismn. I believe if this permit for ISL is granted we will both of these revenue incomes.
We already having shortages of water here and are on water rationing in the summer; and now you want to give an foreign controlled uranium company a permit to squander our prescious resources for a mineral that is in over abundance, is more expensive to mine than what it sells for;

Subject: Comment against the proposed Dewey - Burdock UIC Project
We are now entering another of many severe periods of severe drought in South Dakota; Governor Dugaard just declared a emergency measure for ranchers and farmers.
It seems that issuing a permit to use precious waster recourses for a project like ISL uranium mining is most irresponsible, considering that the use and construction of nuclear power plants is in decline as we speak. Uranium energy is in decline!
The Inyan Kara water is usable if need be, with filtering, and so is the water in the Minnesula Aquafur . We cannot afford to squander this precious resource on a venture that surely will have irreversible negative devastating results for a large Area and population. Not mentioning the overall health of the environment.

Subject: Tabular Data Archive
I attached this site about the South Dakota droughts over the last years, it might give you an idea, that we really don't have much water to spare for frivolous use; especially when it contaminates the little supply (even if it not the best)we have.
[...]
http://droughtmonitor.unl.edu/MapsAndData/DataTables.aspx?state,SD

Subject: U.S. Geological Survey Water-supply Paper - Google Books
I guess, the more you look the more you find. Here is another report of droughts in the last 60 years in South Dakota by the USGD.
[...]
https://books.google.com/books?id=8DxSAQAAMAAJ&pg=PA501&lpg=PA501&dq=drought+declarations+in+the+last+20+years+in+south+dakota&source=bl&ots=xErXxPl6TB&sig=97p8kugUCWFpdNGlSeRL1sS2pR0&hl=en&sa=X&ved=0ahUKEwjo0bz8scfUAhVD9mMKHYPKAQUQ6AEIQzAl#v=onepage&q=drought%20declarations%20in%20the%20last%2020%20years%20in%20south%20dakota&f=false

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Subject: Comments on Dewey-Burdock Class III and Class V Injection Well Draft Area Permits
I object to EPA's granting of Class III and Class V Injection Well Area Permits to Powertech-Azarga in the Dewey-Burdock area of South Dakota.
I object to allowing them to install up to 4,000 injection wells to mine uranium and to your potentially exempting parts of the Inyan Kara aquifer from the Safe Drinking Water Act, meaning that it can be polluted and will never be used for drinking water in the future.
I especially object to allowing them pump wastes into our underground aquifers.

Please do not allow compromise of our water aquifers for the short term benefits of mining. Water pollution is for eternity. Thank you for your attention.

Subject: Public Comments Regarding Proposed South Dakota Aquifer Exemptions
I read this proposed change and assumed that whomever sent this to me was pranking me. Surely the United States government would not be proposing permitting, among other things, the disposal of uranium mining materials into areas that are anywhere drinking water sources. This is unacceptable.

Subject: Injecting waste in aquifer
I am against allowing companies to inject uranium mining waste into the aquifer. They say it is cleaned, but what if it isn't? You can't clean it up after it has been injected.

Subject: comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota

Good morning, Shea;
Thank you for the opportunity to comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota.
Although there may be perceived financial and "safety" reasons the corporation is proposing the Black Hills (the most sacred place to the Sioux people, I am sure you know) for this project, I implore the permit to inject radioactive waste near clean water (a rapidly diminishing resource) be denied. From my understanding, plans and development are only now in process in case there is a catastrophic contamination of the water source. This project is a gamble we should not take.
There are many renewable energy resources available. Please feel free to contact me for more information.

Finally, there is a reason the first thing we look for on other planets is fresh water to sustain human life. Let us not take the gifts we have here on Earth for granted.

Subject: deposit of uranium mining waste in S.D. aquifer

To Whom it May Concern:
Have you lost your minds? If your goal is to poison the citizenry, I suppose depositing these materials into an aquifer would be a good way to accomplish that. Do you know what an aquifer is? Do you know that ground water from many sources ultimately reaches and recharges aquifers? In the South Dakota region, almost everyone I know drills deep wells into aquifers for drinking water.
Question 1: precisely what is the identity of the designated aquifer?
Question 2: what makes you think any aquifer can be protected from any material that might be deposited into the ground?
Definitely oppose this plan.

Subject: No uranium mining on the Inyan Kara aquifers

Hello Ms. Shea,

I'm writing to express my opposition to the offering of draft permits to Powertech in the Inyan Kara aquifer system. These permits will allow Powertech to mine uranium by drilling fourteen wells into the underground water system.

Subject: Re: Thank you for your comments
Thank you. WHat will we drink in the end, if mining, dredging, leaky pipelines, and general thoughtless pollution reign unimpinged? THANK YOU EPA for protecting us!!!!!

I found several links of the usgs.gov some all the way back from 1931, regarding both the Minnelusa and Madison aquifers. two of the most important aquifers in the Black Hills, . This is good information provided by Experts : A U.S Department of the Interior , U.S. Geological Survey, 123 page document which they titled : Geochemistry of The Madison and Minnelusa Aquifers in the Black Hills area, South Dakota which was prepared in cooperation with the South Dakota Department of Environment and Natural Resources and the West Dakota Water Development District.

https://pubs.usgs.gov/wri/wri014129/pdf/wri014129.pdf

For example on page 27 " Table 1. Saturation indices for selected samples from wells completed in the Madison and Minnelusa Aquifers " Beginning on Page 65 discusses the Interactions between the two Aquifers. Page 68 discusses the Interactions at Artesian Springs. On Page 75 the use of Dye testing is discussed , and this brings me to discuss my comments to the NRC at the Mueller Center at Hot Springs, South Dakota. Thanking you in advance for your time and consideration. Professor Daniel Noble, retired, from the School of Mines and Technology, Rapid City, accompanied me to the hearing. So much expert testimony is already on record for the EPA to draw on. All of these water systems are connected and need to be kept as clean as possible. " the Madison Aquifer which affects an entire Region, which includes: South Dakota, North Dakota, Wyoming, Nebraska, Kansas, and Southern Canada. " My comments were taken from this conversation which I made into a FB Note.

Organic safe green dye, proves beyond ALL doubt that " in situ "mining, WILL permanently destroy the Madison Aquifer.

April 15, 2014 at 12:48am Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

This is my disclaimer : I, Ex. 6 Personal Privacy (PP) take full responsibility for this FB Note as I have permission from noone but my Creator/ God and this still needs some revisions~~ April 15th, 2014This is CRITICAL INFORMATION. The thread is Robb's and his FB friends, which I am still one of~~

Ex. 6 Personal Privacy (PP) of

Ex. 6 Personal Privacy (PP) Hello Friends. Below is a photo of my former neighbor, Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) the bottom of Wind Cave at 'The Lakes", which IS the Madison Aquifer. We have spent countless hours discussing this. He was my neighbor by pure coincidence in Hot Springs, SD.
I never dreamed that relationship would become so critical at this hour. Seen in the photo attached, is a SUCCESSFUL test that used organic safe green dye, and it proves beyond ALL doubt that Power-Tech WILL permanently destroy the Madison Aquifer. At your service, Ex. 6 Personal Privacy (PP)
http://www.nps.gov/wica/historyculture/lakes-dye-tracing-project.htm{ addendum: Caving Narratives Caving narratives are short summaries of caving trips into Wind Cave. Most describe exploration trips, but some deal with significant finds or locations, science projects in the cave, or even trips where photography is the main goal of the trip. These trips are organized by the zone in the cave where the caving activity takes place and date. The zones are: Historic, Colorado Grotto, the Lakes and Half-Mile Hall Zones (which includes the Club Room Area), North Zone, Silent Expressway and Southern Comfort Zones. Clicking on the link will take you to the zones listed. The section at the end of the list are the significant finds or locations that led to new discoveries or a better understanding of the cave. Many of these involve several trips to an area. http://www.nps.gov/wica/historyculture/caving-narratives.htm { Scroll on down for Significant Finds: " "

We cannot allow this to be destroyed for we are destroying ourselves {{{ (A subsequent cave radio test determined that the top of this dome is 3-feet below the sidewalk and the bottom of Wind Cave Canyon). }}}
We know so little ~~ http://www.nps.gov/.../historycul.../waterfall-discovery.htm 4

sisR: 04/17/2014 { I am working on my notes/drafts and because of the deadline to send comments, being April 30th; I feel this one is my priority~~ { The Bear Lodge Critical Rare Earth Project } and I need to expand some of the links in Ex. 6 Personal Privacy (PP) FB Note, as, the narratives of the folks who explored the Madison Aquifer, in the Wind Cave National Park, over a one year time frame, 2007, which included Jason's Organic Green Dye Test the later part of the year~~ for this Bear Lodge Project, is The Devil's Tower area of Wyoming and will greatly affect both the MINNELUSA and the MADISON AQUIFERS. In Gratitude, NAMASTE'~~ I am sorry, please forgive me, I Love you~~ bye for now~~ } " "

Shuttlesworth Fine Art: There are several interviews available, if you discover them, please post below. One was with a PBS crew. They cannot destroy this overwhelming evidence AGAINST PowerTech, let's finish this friends. Thank you, Ex. 6 Personal Privacy (PP) Respectfully submitted.

Subject: Uranium mining in the Black Hills

Dear EPA:
Please do not allow Uranium Mining in South Dakota including the Black Hills. The pollution from drilling will be forever in our underground water - we are a semi-dry region, and we depend on all of our limited sources of water. Just like now - we are in a protential multi-year drought - our people, our animals, or crops depend on undergroud water - and if it is forever polluted, we will die

Subject: Oppose uranium mining waste disposal in aquifer

I vehemently oppose the release of the waste from uranium mining into the SD aquifer. Providing an exemption for such action endangers the water supply and public health. I urge the EPA to refuse the requested. permission.

The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.
Even one death or illness as a result of uranium mining is totally unacceptable.
The Black Hills are a semi arid area prone to regular drought. The vast quantities of ground water needed for the mining and the potential for contamination are unacceptable. Aquifers are not replenished overnight.
Water is indeed life! Please do not risk it just to line the pockets of a private corporation.

Subject: Proposed Dewey-Burdock Uranium Mine project
Aloha Valois Shea
I am writing to request that the EPA deny the permits for the proposed Dewey-Burdock Uranium Mine project. This proposed mining project is likely to contaminate aquifers of the Black Hills and put the health and safety of those drinking that water at risk

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Subject: Object to proposal to inject uranium waste under aquifer
This is not safe. There are no guarantees this will not contaminate the water. So let's not go there. Previously they were told no, the answer should still be no.

Subject: public comment: PROTECT BLACK HILLS WATER
Dear Valois,
I am a Black Hills land owner and concerned citizen writing with regard to the pending permits that benefit the company Powertech at the expense of land, health and water.
Please DO NOT grant the proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota OR the two Draft UIC Area Permits to Powertech for injection activities related to uranium mining.
I encourage you to heed common sense. Make a sane and honorable decision which respects life and the future generations. Say NO to Powertech!
We who call the Black Hills home will not stand idle if you take the side of corporate exemption and high risk contamination. Water is more valuable than uranium, the costs of which are far too high and will inevitably fall on the people, not the corporation, through illness and long term pollution.
May the EPA protect clean water!
Thank you for listening.

Subject: Permit and exemptions
Hello, I am concerned that permitting uranium extraction and allowing ANYTHING from this process to be put into a clean water supply will contaminate it and make it dangerous for people to drink. Water is becoming scarce and we must keep what we have safe and protect it from dirty industries. I and many other environmentalists will be extremely disappointed if you allow this to occur.

Subject: Uranium Mining Waste
Dear Shea Valois,
The EPA must not allow Uranium mining waste to be disposed of in a South Dakota aquifer, or any aquifer for that matter.
We cannot risk the further contamination of our underground water systems.

Subject: Uranium waste
Please do not allow a uranium mining company to dispose of waste on a way that could polute a SD auqifer.

Subject: Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc.
Please do not allow Powertech or any company to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara.
Putting waste, especially this type of toxic waste, into aquifers makes no sense and will lead to pollution that will have effects for generations to come.
Putting short term industrial gain ahead of clean water is poor public policy.
Thank you.

Subject: Do not grant an aquifer exemption for the UIC permits to Powertech
Please do not grant an aquifer exemption for the UIC area permits to Powertech USA. We must protect our aquifers from contamination. They are a non-renewable resource, and contaminating them would likely have long-term consequences for humans. I object to risking a public resource that belongs not only to this generation but to future generations to come.
Allowing the aquifer to be contaminated short sighted and inexcusable especially if it is for private profit.

Subject: Uranium in SD aquifer
No it's not OK to dispose of uranium in an aquifer - in South Dakota or anywhere else. That is our water.

VI. Protecting Water For The Future:

I have previously advised that these permits can be sold. I question whether Powertech/Azarga really intends to mine uranium. I am unable to see how with the current price of uranium this can be a profitable endeavor, except and unless the clandestine market for uranium fueled by our enemies intends to pay an unholy premium for yellowcake.

That aside, the wells they have asked for can be used to dump hideous toxic waste into our aquifers. I am aware that several states now do not want to dump oil and gas fracking waste or uranium waste in their production locations because of environmental concerns.
This project if permitted opens the way to make a dumping ground out of Fall River and Custer Counties and will over time have profound effects on the water quality in the entire area. I remind you that the EPA and the NRC in the past have granted "exemptions" to the Safe Drinking Water Act and have allowed the reinjection of contaminated and radioactive waste water into aquifers near project sites. Please refer to the excellent study done by the Natural Resources Defense Council called "The Dirty Little Secret of Uranium Mining". This report examines all of the uranium mining projects in the American west. There is no project in which the water in the mining areas has not been dangerously contaminated and ruined.
Huge areas of our vital underground water supplies are now being contaminated and will soon be forever ruined.
Without good water, we cannot run agriculture in this country.
[...]
Please protect our water...

II. Effect on Agriculture:
Fall River and Custer Counties are primarily rural in nature. The principal business is agriculture, followed by tourism, hunting, and a very small amount of government based activities such the county courthouses, and the VA Hospital in Hot Springs.
Our area is semi-arid and has periods of severe drought. Over the years, ranchers, and Angostura Dam irrigation farmers have developed underground water wells or rely on some large pipeline projects which bring water from Madison springs or wells in various parts of the area. The loss of the underground water of the purity levels it is now would be catastrophic for the agriculture producers.

I have a Minnelusa Spring and an Inyan Kara (Lakota Sandstone) deep water well on my ranch and I can buy some water from the Madison Well nearby at Provo. Without these water sources, I could not run reasonable numbers of cattle on my ranch.
Indeed, this project which will contaminate huge amounts of water will destroy most of the ranch operations in the two counties.
Powertech /Azarga has now amended its original water permit request from the State of South Dakota from 9,000 gallons per minute to 15,000 gallons per minute, to run indefinitely. This water right, if granted, will be the largest water permit ever granted in South Dakota.
We do not have enough water now and can ill afford a project which will consume and squander these huge amounts of water.
It is my understanding that both the EPA permits and the water permit from SD can be sold opening up the potential loss of an irreplaceable commodity, water

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Subject: Uranium mining waste
Please do not allow an exception to regulations and let companies dump uranium mining waste in an aquifer in SD. Please protect our clean water supplies.

Subject: No uranium in treaty territory
Dear Ms. Valois,
I understand that the EPA is considering permits for in situ recovery of uranium using deep injection wells within the Inyan Kara group of aquifers in the Southern Black Hills region. Part of this Proposed draft would exempt the project from the Safe Drinking Water Act. There are no guarantees that the mining would not contaminate the aquifer. As a concerned citizen, I ask that the EPA not grant this permit.

Subject: Aquifer Exemption South Dakota
Dear Shea,
I am writing to strongly oppose injecting uranium mining waste into an aquifer! I oppose the aquifer exemption. People depend on clean water for life! Until this current administration, the EPA mandate was to protect the environment, not pollute it. Please reconsider.

Subject: Powertech/Azarga Dewey Burdock proposal public commentary
[…]
I believe despite assurances that public water sources with not be safe and will propose grave danger to all of the people in the Black Hills and surrounding areas.
Please do no allow this to take place.
Thank you,

Dear Ms. Shea,
For your review, please find my personal comments on the draft permits and aquifer exemption for uranium mining project in southwestern South Dakota, as proposed by the Environmental Protection Agency on March 6, 2017 (EPA, 2017). This letter will address the background of the situation as well as potential issues that could arise from the uranium injections. Powertech (USA) Inc. is requesting a Class III Area Permit from the EPA for the injection wells for in-situ retrieval of uranium, a Class V Area Permit for deep injection wells to be used to dispose of the necessary process fluids into two aquifers, and approval to be exempt from Safe Drinking Water Act standards within the aquifers (EPA, 2017). I.
Background

The EPA is contemplating issuing Powertech (USA) Inc. permits to allow uranium waste injection and exempt a portion of the aquifer from the Safe Drinking Water Act in Custer County and Fall River County, South Dakota (EPA, 2017). The drinking water exemption would allow Powertech additional time in order to achieve compliance with regulation (EPA, 2017). Powertech has designed security measures to protect the aquifer, but even though these measures are in place, the risks are too great to grant Powertech the requested permits (EPA, 2017). Allowing these permits would contaminate two aquifers temporarily, as well as risk irreversible uranium contamination, could potentially expose the aquifers and surrounding areas to excursions, and violate the EPA's Safe Drinking Water Act exemption guidelines.
The two potential aquifers for injection are the Inyan Kara and Minnelusa Aquifers, which are the main sources of groundwater in the Northern Black Hills of South Dakota and Wyoming as well as Bear Lodge Mountains in Wyoming (Kyllonen & Peters, 1987). Municipalities are the primary users of this water source but both these aquifers are already in danger. The Inyan Kara has surpassed recommended levels of selenium, gross alpha radiation, dissolved solids, iron, manganese, and sulfate (Kyllonen & Peters, 1987). The Minnelusa Aquifer exceeds the recommended and permissible levels of fluoride, dissolved solids, iron, and sulfate (Kyllonen & Peters, 1987). Exposure to additional toxins like uranium will only add to these current unsafe chemical levels, putting people who rely on these aquifers for drinking water at high risk
[…]

Additionally, aquifers are frequently worse off after mining. Often times, the water is not restored to the pre-mining contaminant level (Lustgarten, Dec. 11, 2012). The Nuclear Regulatory Commission has even declared areas as restored even if contaminants within the aquifer are above natural levels (Lustgarten, Dec. 11, 2012). In a U.S. Geological Survey study, zero out of elven sites in the state of Texas had been completely resorted to pre-mining contaminant levels (Lustgarten, Dec. 112012). In the past 30 years, the EPA has granted over 1,500 permits to exempt companies from complying with the Safe Drinking Water Act (Lustgarten, Dec. 11 2012). It is clear that effective clean-up to restore aquifers is not occurring which puts the Inyan Kara and Minnelusa aquifer in danger during and after this project

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II. Scientific Issues
As mentioned above, the sources of the various pollutants currently found in the Inyan Kara and Minnelusa Aquifers are not thoroughly understood (Kyllonen & Peters, 1987). Additionally, the interconnectedness between these two aquifers as well as the nearby Madison Aquifer is also uncertain (Kyllonen & Peters, 1987). Because of how unclear the connectivity between these three aquifers is, it would be dangerous to expose two of them to uranium because it could lead to contamination of the unprotected Madison aquifer

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Powertech's response addressing these concerns greatly justified the design of the project, which includes measures to prevent the excursions of toxins (Simmons-Ritchie, 2013). An excursion occurs when water quality exceeds limits established in a license and is often a precursor to a wellfield, the land above wells that is drilled into the aquifer, imbalance (Marion County, 2017). Even though many preemptive measures are employed, if an excursion were to occur, Powertech's system is made to quickly detect and stop the excursion so it would not be able to infiltrate the groundwater (Simmons-Ritchie, 2013). A trained operator will also monitor the station 24 hours a day (Simmons-Ritchie, 2013). Additionally, the company is obligated to report the discharge of any chemicals to the Department of Environmental Quality within 24 hours of the spill (Simmons-Ritchie, 2013).

While these regulations and precautionary measures are ideal, there is still a risk associated with uranium injection. A majority of past complications at injection sites in South Dakota involved spills of injection fluids, broken pipes, or excursions of process fluid beyond production zone limits (Source 6). While Powertech has worked to make this site as safe as possible, uranium injection cannot be guaranteed to be safe and without errors. If a spill were to occur, it would not be contained to the protected area and could infiltrate the ground and groundwater outside the project boundary. This risk puts the people of South Dakota in danger by jeopardizing their right to safe drinking water

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Subject: Uranium waste dumping in aquifers

Hello, I am writing you to give you my opinion about dumping uranium waste from mining in South Dakota in aquifers. It would seem that common sense would answer this question for you and no poll would need to be taken. So I ask you this, would you drink a glass full of water with uranium mining waste in it? Would you give uranium waste to your children, or grandchildren to drink or wash in? Would you water your vegetable garden with it? Would you give it to your livestock? Would you eat meat, take eggs, or drink milk from livestock fed on uranium waste?

Water does not just sit idly and obediently by where you dump it, it seeps, moves, and goes where it wants. There is not a surface or substance on this planet it cannot wear its way through. What you are asking people for is permission to pollute drinking water for eternity for a few dollars in profit for corporate bosses, who don't have to drink the water they pollute.

The answer is no, don't do it. Don't exempt aquifers from the Clean Water Act. That you are even asking tells me you KNOW you will be polluting for generations to come, in which case, I say shame on you. Stand up for what is right here, for what is good, for what is best. Don't let corporate polluters make a disaster site for America. Don't kill people, don't give us cancer, don't hurt us.

Subject: Fw: ACTION NEEDED: Uranium Mining Black Hills

I am writing to let you know that not only is this a concern for the Black Hills area, but should be a concern of the whole SD state. Why on Earth are we letting others in to mine and drill on SD land who are not even from here? regardless though, This is horrible! Please know that myself and many others are against this Uranium mining and pollution of our water and lands. I am from Eastern SD but my husband and I have been seriously considering moving our family to the Hills in the near future (Preferably the Hot Springs area) If the water is polluted, there is

no way that will happen, we will just stay put! Please do not let big companies (or anyone for that matter) pollute our wonderful state! Without water, life dies.

Subject: Azarga Uranium Hazardous Waste Injection Application

Dear Ms. Shea, I am writing to request that the SPA reject Azarga Uranium's permit seeking to inject waste water into the aquifers below the Black Hills. Thank you.

Subject: Dewey-Burdock

On hearing of this proposal, I find it disturbing. If the water is treated safe enough to inject into water safe for human consumption than give it to livestock,irrigation, or dump right in nearest stream or river! If you haven't gathered I am totally against this idea as well as the proposed uranium mining operation. Thank you for your time and please think of further generations and not the interest of some corporate bottom line.

Subject: UIC Area Permits to Powertech (USA)

Dear Madam

My initial thought when I heard of the proposed permits was "are they out of their minds?"

Who in their right minds would risk the drinking water for tens of millions of people, and the irrigation water of millions of acres of land for uranium mining?

I've worked in industrial hygiene and I can tell you that there's no way to make a project like this safe enough, secure enough to risk water for.

Do you realize that around the world there are major droughts happening? On at least three continents? And that has included this continent? Water is our most precious resource right now and it is not worth one penny's worth of profit to risk permanently damaging an aquifer like the one in South Dakota.

Drop this insane plan.

Subject: uranium and deep well

Attached is my letter, which is self explanatory, to the local newspaper (Hot Springs Star).

I object to the proposed uranium mining and the deep well waste injection for the following:

Putting carbonated water (carbonic acid) and oxygenated water (hydrogen peroxide) into the Inyan Kara aquifer will dissolve toxic and radioactive heavy metals and these will travel horizontally in the aquifer and reach many existing wells. The uranium company claim that the liberated oxidized soluble uranium ions, will after being reduced cease to travel through the aquifer may be true, however the other heavy metals will travel in a plume indefinitely horizontally contaminating any wells in the pathway. (Oxidized and Reduced refer to the oxidation state of the cation.)

The deep well waste injection proposals in the aquifer just above the Madison will likely poison the Madison even over into Wyoming where there are many deep wells. New Castle, Wyoming gets its drinking water from the Madison. High pressure is required to inject waste toxic and radioactive waste.

A few years ago I put a questionnaire in the Hot Springs Star to determine those who oppose and those who favor uranium mining. 95% oppose and 5% favor.

Thank your for considering my comments.

[ATTACHMENT: "Hollenbeck1.docx"]

Subject: uranium mining project in south dakota

Allowing radioactive and other waste fluid into the aquifers sounds like a crazy idea. If there is any kind of mistake how would this be contained? I am against allowing this to happen.

Subject: Proposed uranium mine in South Dakota

Hello Shea,

I am writing you out of concern of the idea of putting a uranium mine that would be going directly through an aquifer. This is very risky and does not seem appropriate to put many people's water at risk. With all the environmental atrocities that are happening in this country and across the planet, due to human activity, it does not seem wise to put one of our most important resources at risk. With that being said this project appears to be putting the aquifer at risk twice over by mining through it and then returning the waste back below it. And also circumventing the clean water act in the process.

The Southern Hills are extremely dry. The climate is changing and the hills are becoming warmer and drier. The huge amount of water that would be used by Azarga would not be in the best interest of agriculture, tourism, residents or wildlife. We do not have the luxury of using that much water for uranium mining, even in the best case scenario. This alone could be devastating. Pumping waste into the ground is also a bad proposition when water is scarce. Nearly everyone at the hearings was against the uranium mining. I realize that these things are not "a vote" as such, but I heard many compelling reasons why this mining should not take place. Please deny all of Azarga's requests. Thank you. Ex. 6 Personal Privacy (PP)

Ex. 6 Personal Privacy (PP)

Subject: Comment: Uranium Mining in the Southern Black Hills

Importance: High

Dear Valois Shea:
Thank you for the opportunity to comment, and especially thanks to the EPA for holding so many hearings in the Black Hills about this proposed project. It was a rare chance for everyone to be heard. I attended many hours of your public hearings in Rapid City. I am a Black Hills agricultural landowner and I have many years of experience in managing both public and private lands. I am also a biologist. I don't claim to be a uranium expert, but I have extensive experience with energy companies and investors who try to behave like energy companies (as in this case). Please do not grant an exemption to the Safe Drinking Water Act for this project and do not allow either deep injection disposal wells or injection wells for the ISR of uranium. It is hard to believe that something like this would be proposed, let alone approved, in this area.

I am particularly opposed to Powertech's application which does not limit the amount of water the company can remove from the area; it does not provide any mechanism to prevent the company from selling the water to third parties; it does not provide for any payment to the landowners or the State for water removed...

Subject: Protect our water!
Destroying an aquifer in South Dakota to store uranium mining waste is insane when climate change is leading to water crisis around the world.

Subject: proposed uranium recovery project in the southern Black Hills of South Dakota
Dear Ms Shea,
How about NOT approving the mining of uranium? How about NOT approving an exemption allowing toxic wastewater to be injected into an aquifer? We already know how toxic uranium mining can be; I am from New Mexico, and am quite familiar with cases where people bodies and homes are forever contaminated by mining operations, so my vote is that we don't do that anymore.
Thank you!

Subject: Re: Uranium Mining in the Black Hills
My wife and I are totally against permits regarding the two underground injection control Draft area Permits and the associated aquifer exemptions for the Dewey Burdock (SR) near Edgemont SD. These experiments can damage the aquifers. Please reject the applications.

Subject: Uranium mining!!!

Hello my name is Ex. 6 Personal Privacy (PP) I am writing you today because of concern about mining of uranium in the Black Hills.

I see many issues with this mining project:

1. Its uses a lot of water. 551 gallons per minute, totaling 94 billion gallons of water during a 20 year period. That uses up all of the resources of the people who actually live and love this place. The long term effect of water availability cause a drought and forcing people to buy their water from the else where, and cause a drought.

(...)

4. Uranium mining has already leaked in these ares causing damage to the land, waters, and polluting the aquifers. Don't you want a place where you can eat the plants right from the ground and have water you can swim in?

There is also a great concern for the safety of the water supply if this project were to take place. A contamination by uranium would be permanent, rendering the local aquifer useless. The social and environmental impact of contamination would be profound.
The people, animals, and environment of the Black Hills deserve better. Please deny the permit for ISR activities in the area.
Thank you.

As a resident of Fall River County, South Dakota, I am opposed to the permit that would allow Azarga/Powertech to pump 8,000 gallon of water per minute through 4,000 wells to mine uranium for 10 years in the Dewey-Burdock Mine.

I am also opposed to the permit that would allow the above mentioned company to pump uranium mining waste liquids underground through four disposal wells. This waste would be pumped into the Minnelusa Aquifer which is adjacent to the Madison Aquifer.

The polluting of the Inyan Kara, Minnelusa, and Madison Aquifers with uranium mining procedures and waste liquids is unacceptable to all life in the counties of Fall River and Custer and several surrounding counties. The water in the affected aquifers is used for drinking water and ranch and farming in these counties by thousands of people.

The Black Hills region is considered semi-arid and every drop of water is precious and, at time, a rare commodity. The water in the Black Hills and everywhere should remain life-giving, not irradiated and life-taking.

The proposed money-making and life-destroying activities of the Azarga/Powertech company will imperil the lives of current and future generations of Black Hills residents. I request, nay I demand, that the permits not be approved.

Please read these quotes and ponder life with no drinkable water.
"Water is the lifeflood of our bodies, our economy, our nation and out well-being.
- Stephen Johnson
"Pure water is the world's first and foremost medicine."
- Slovakian Proverb
"Water is the most critical resource issue of our lifetime and our children's lifetime. The health of our waters is the principal measure of how we live on the land."
- Luna Leopold

I cannot believe anyone would advocate risking our water supply for a short term gain.

We are opposed to the permanent deposition of any mining wastes, including hazardous and radioactive metals and/or metal salts thereof into any aquifers in the Black Hills which would effectively render the Black Hills a permanent hazardous waste dump-site -and with the ability of the permit holder to take in mining waste from other regional sites, and also sell that permit to other polluters.
We are opposed to injection of chemical lixivients that would dissolve rock and free up toxic metals to pollute the groundwater aquifers in the mining process, that cannot be effectively cleaned up.
[...]
4.) Powertech/Azarga is asking for 4 Class 5 UIC deep injection wells for hazardous waste deposition, into the Minnelusa aquifer, with a reserve request for 4 more of the same "in case they find the they need them". They say they need 2 of these "right away". Powertech/ Azarga will operate 14 well fields total. The Minnelusa aquifer is a major drinking water aquifer in the Black Hills. To say that it is not, is not correct.
[...]

6.) The 4 hazardous waste deep injection wells in the area are destined for the Minnelusa aquifer, a drinking water aquifer in the Black Hills. Normally, UIC hazardous waste deep injection wells are drilled "below" aquifers, not "in" them. The hazardous waste injected into the aquifer will travel hundreds and even thousands of miles and contaminate other aquifers that are connected, and ultimately the huge Ogallala Aquifer that services the entire central US.

Today those of you from the EPA will be hearing or reading some good science, and some bad science. The good science will be from community members opposed to pollution of our precious Black Hills aquifers. The bad pseudo-science-let's call it alternative science--will be from Azarga. EPA, believe the community members. Follow up on the sources we provide to you and decide to stand for the truth, that the in situ leaching will allow poisons into Black Hills aquifers. Learn these truths-that Black Hills aquifers are permeable-they leak into each other, so there is no way to sequester the toxic byproducts of in situ leaching.

How about let's talk about the opposite of cowardice-courage. Let's look at what REAL environmental protection looks like. I think it looks like the Native American folks who stood tall at Standing Rock, defending the earth and the water against scum like the Dakota Access Pipeline, and those who stood against the KXL pipeline. We here in this room need to follow the leadership of those proud Native folks and their allies to defeat Dewey Burdock. We community members here in this room are all allies against environmental destruction. We invite you, the employees of the EPA, to stand for Mother Earth, to stand for clean water, to stand for the principles that probably caused you to seek employment there in the first place. Stand against these mining permits.

Dear EPA Region 8 representative,
I am writing to strongly urge you to deny the UIC Program Class V Area permits to construct and operate up to eight (8) deep injection wells within the Dewey-Burdock Project Boundary to be used for the disposal of treated uranium ISR process wastewater into the Minnelusa and Deadwood Formations.
My husband and I recently purchased property in Hot Springs & relocated here for the natural beauty, peace, clean air & water afforded to a less populated part of the country. This is intended to be our place of retirement. I am deeply concerned about the prospect of our final residence being degraded and devalued by the potential contamination of our water supply.

Our property, located at 2244 Minnekahta Ave, has a well in the Minnelusa Aquifer. The water is great and we currently use it extensively to grow organic vegetables, feed our animals as well as many other uses as needed outdoors. Since our property is 2 acres, it is large enough to sub-divide in the future if we so choose. Any additional structure we may build on our property could be tap into our well for potential household use. That is of course unless you approve this permit.

These proposed permits for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation is a real threat to our family, home & community. For numerous reasons including; 1) The mining industries recurrent inability to properly manage these materials safely, 2) The Black Hills geology is not static and the sheer movement of earth allows for the materials to flow into our aquifers, 3) Uranium is known to cause harm to human health & 4) The potential of increased seismic activity could result in our town losing it's greatest resource, our water

As a resident and citizen of Hot Springs, South Dakota, I have listened and read about the mining uranium using the in situ leaching process in the Dewey Burdock area, by Azarga/Powertech, Powertech/Azarga.
After careful consideration of both opinions I now think that the potential aquifer contamination by the in situ uranium mining is far, far too risky for the health of the citizens of Hot Springs, Edgemont, and Rapid City, and the children, and the pregnant women, and the wildlife and the environment.
Please do not allow it. Stop it!

TO WHOM IT MAY CONCERN: This is in regard to information I have just received today regarding the effort to prevent EPA permitting of proposed new mines and mills in the Black Hills. This is to go on record as a **"FRIEND"** of the Black Hills Clean Water Alliance.

The news from Rapid City, SD states "The Nuclear Regulatory Commission's release of a shortlist April 4 containing Homestake Mining Co.'s **"apparent violations"** of surface and groundwater requirements in uranium mill cleanup underscored the latest efforts to prevent EPA permitting of proposed new mines and mills in the Black Hills."

This is to comment on the EPA draft permits that would allow uranium mining and waste disposal to take place in the underground water tables at the Dewey Burdock site in the southern Black Hills. The Azarga Uranium Corp., formerly Powertech Uranium Corp., headquartered in China, wants an underground injection permit for 4,000 wells in the Inyan Kara Group of aquifers, so it can conduct in situ leach mining and milling of yellow cake on the 10,000-acre site it is leasing at the Cheyenne River headwaters 50 miles west of the Pine Ridge Indian Reservation near Edgemont. Further, the company also wants EPA to grant it a deep underground disposal well permit, allowing the mine and mill to pump its wastewater through four wells into the Minnelusa Aquifer for final disposition at a depth of 2,800 feet.

Hello, my name is Ex. 6 Personal Privacy (PP) a believe I speak for many that cannot be here today, they just simply could not take off work or have family obligations.
Having hearings during the week when people have to work, makes it very difficult.
I wonder if most of the frustration we hear is because people are frustrated that they have to fight for what is righfully theirs? Water is the most important ingredient to life.
We cannot survive without good water.
Everyone in this room knows the pitfalls and danger to our water this project possesses. The amount of water asked by this foreign company, for FREE, is ridiculous. City residents pay for thier water use, why should we give it away to a foreign company?
To give away so much water in a semi-arid region that suffers from drought more often than not, is a disaster in the making. We rely heavily on our aquifers. The Ogallala Aquifer is important to the plain states. It is a vital resource we cannot sqander. Human demands on this water that sprawls underneath parts of eight states from South Dakota to Texas. Landowners strive to conserve what's left, they face a tug-of-war between economic growth and declining natural resources. We should not give away so much to a foreign company.
[...]
If you should visit the shrine of democracy, Mount Rushmore, think about the people, the water people drink from the fountains there. This is water from one of our aquifers. What statement does it make if we allow Powertech Azarga to use and contaminate that same water? Thank you, and I hope you reach the conclusion that you must not further this permit. Thank you.

We drink water. If these water aquifers will be contaminated, then we will have no clean water to drink. As a licensed EMT, we will see more hospital visits. We will have more ambulance rides here to Rapid City. This means severe dehydration cases. We must prevent these cases, so the ambulance and personnel can be used for heart attacks. I will be quoting Emergency Care 12th Edition on how water is a part of the human body.
[...]
If our waters are contaminated, then our youth will not be protected. Our citizens will not be protected. Our future is at stake. We protect our youth and help our EMTs and first responders by leaving the uranium in the ground. As a candidate for City Council, and if I get elected, I will fight to protect our youth and citizens of Hot Springs. So I am asking you to stop the mining and the wells, to protect American citizens. I don't want to see the Black Hills become a third world country. I just helped with a 6K for water from World Vision to bring clean water to 22 kids and families overseas. So let's not turn the Black Hills into a third-world country. As candidate for City Council, if I am elected, I will fight to protect the City of Hot Springs, Black Hills and Reservations.
Note: the EPA needs to visit the Evans Plunge, water from the Madison aquifer.

A Resolution to Reaffirm a Citywide Commitment for Clean Water and Water Resource Protection

BE IT RESOLVED by the Common Council of the City of Hot Springs, South Dakota, that we are committed to preserving and maintaining the amount and quality of water for the citizens of Hot Springs and its surrounding environs, and

Whereas: The City of Hot Springs was first developed as a town in the late 1800's due to its proximity to the Fall River and the abundant natural warm mineral springs within the valley, and
Whereas: The City of Hot Springs has made long-term investments in stormwater management, potable water systems and wastewater management programs and infrastructure to reduce nutrients and pollution in our waters and to protect our vital water resources, and
Whereas: The Common Council is obligated to preserve and protect the public health, safety and welfare by preventing the pollution of, and maintaining the quality of the water entering in, held within and removed from aquifers serving as the City's water source, and
Whereas: The City of Hot Springs has stated in its water ordinance that our mission is to provide the City's water customers with a safe drinking water supply, water for fire protection and an adequate supply of water for our essential daily needs, and
Whereas: The City of Hot Springs Common Council finds that any pollution or contamination, willful or not, of our water supply to be a direct threat to our community and its health, safety and welfare, and

Therefore: Be it resolved that the City of Hot Springs will take necessary action to ensure the perpetual purity and quality of the waters available for use by the citizens of Hot Springs and those the City distributes water to, and

Therefore: Commit to support any action from the County, State or Federal Governments aimed at protecting the waters of South Dakota, both surface water and underground aquifers, as a critical natural resource necessary for life.

A deep disposal well in an aquifer, no matter how deep, is connected to other water sources and should not be considered a place of containment. Water is not stationary; surface water and ground water are interconnected.

[...]
Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated. Furthermore, the use of such large volumes of water would alone create great hardship for our ranching families and their livestock. Most of my life we have experienced year after year of drought in western South Dakota.

Simply because we can obtain uranium through in-situ recovery does not mean we ought. As I listened to each speaker, my horror of allowing the permits only intensified. I heard a South Dakota Legislator tell of the hasty way some state laws were crafted to allow for the work on the Dewey-Burdock project to proceed, a young Native American mother promise to pray for those making this decision and remind us all that monetary riches are fleeting, a woman rancher from the area describing how quickly in just a normal summer the wells might dry out enough to run toxic for the cattle, how the company in charge of this mine has already left a Colorado mine without cleaning it up, and a U.S. Veteran describe the chemical munitions stored at the Army Depot near the mining site, yet another threat to our water supply and life. Earlier in the day, my own father wondered just who would end up with the uranium should it be mined.
Thus for reasons of national security, the protection of the water supply for all the Black Hills and western South Dakota, the livelihood of area ranchers, and the health of the water we leave for our children and theirs, I once again beg you to please deny these permits.
Should the water permits be allowed and the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells project move forward, I fear for the life of the Hills, the land and its people.
Thank you for your kind consideration.

My name is Ex. 6 Personal Privacy (PP) Thank you for the opportunity to comment regarding the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells in South Dakota. I am grateful to have been able to attend some of the public hearings held at the Ramkota in Rapid City in May; grateful that some avenue is open to the people to have a voice in this important decision that will affect everyone. At the hearing, I was nonetheless surprised and encouraged to find that citizens from every walk of life, political stripe, age, race, and religion stood together in opposition to the threat that the proposed permits would bring to our land.

Not knowing what to expect at the public hearings, I went to show my opposition just by being there. Never did I anticipate rising to the podium to speak. Since time allowed and no other speakers had submitted their names, I too, stood before you to beg you to please deny these permits. Here I have taken some more time to formalize my thoughts.

As a concerned citizen and life-long resident of Rapid City and the Black Hills, I am opposed to any further uranium mining in this area and to the use of in-situ recovery of the uranium. The risk of irremediable harm to the water supply, the environment, and ultimately human life should any contamination by radioactive agents occur, far outweighs any economic gain or consideration.
My Bachelor's Degree is in Chemistry from the South Dakota School of Mines and through my studies I understand that radioactive waste must be thought of as forever, since the half-life of some of the materials might be hundreds, thousands, even millions of years. To disrupt the mineral deposits by insitu recovery and then return the spent water into the underground aquifers is simply too great a risk.
It is not possible to remediate nuclear waste, only contain it.
[...]
What science experiment ever has one-hundred percent efficiency? Since the history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination by radioactive and heavy metal pollutants, the text of the permits already includes exemptions to the uranium-bearing portions of the Inyan Kara Group aquifers. In my reading I have learned that if no exceptions or exemptions to existing environmental laws were granted, no part of this operation would be allowed.

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* Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible and NOT a SINGLE accident can be allowed.

In response to the two draft permits and future proposed Dewey-Burdock uranium mining plan, I would like to respond as follows:

First, as a Critical Care Registered Nurse, I have practiced nursing for 40 years. With all the most advanced technology available, in all practice, it is the basics of life that precedes all else -Airway, Breathing, Circulation -"ABC's of Life". So it is with this proposal, there is NO LIFE without WATER! Absolutely no water source should be purposefully contaminated.

[...]
This is not another "Not in my back yard" argument. This has the potential for severe disastrous consequences. I IMPLORE YOU to deny these permits.
[ATTACHMENT: “SOUTH DAKOTA WATER WELL COMPLETION REPORT” (image)]

[Comment is an image of a label on a bottle of Hotel Alex Johnson bottle water:
"The Hotel Alex Johnson bottled water is drawn from deep in the Madison formation at the base of the Big Horn Mountains, Wyoming.
Worland Aquifer #1 & 3,
Ten Sleep Aquifer #1."]

Tree rings throughout the West provide an historic record of droughts lasting as long as 30 years. This would drastically argue against proposed calculations of ground water recharge.
When tritium from nuclear fallout moved through groundwater in the Inya Kara Group at fifteen feet per day it indicated possible flaws in the rocks, or porous lenses. This data was either ignored or explained away. A recent paper said the 1963 tritium data showing much faster velocity is an unresolved issue. (South Dakota Academy of Science, Vol. 93 (2014) p. 28.)
Research experiments by Duke University published on October 26, 2010 showed placing CO2 underground for greater than 300 days, "could pose a risk to overlying fresh groundwater.,, They further said, 1>ofen1ially dangerous uranium and barium increased throughout the experiment in some samples." This showed underground storage of CO2 creates carbonic acid and is not harmless.
No exemption should allow placing nuclear waste in waters which could be used by agricultural animals and thus indirectly by humans-

A USGS study published by Otton in 2009 found "to date, no remediation of a ISR operation in the United States has SIICCt3fully returned the aquifer to its baseline."

THE SECOND REASON I SAY THAT SOME OF THE EPA HAS BEEN CAPTURED CAN BE FOUND ON THE INFORMATION SHEETS THAT HAVE BEEN PASSED OUT TO THE PUBLIC AT THESE HEARINGS. ONE OF THEM IS TITLED "HOW MUCH GROUNDWATER WILL BE LOST FROM THE INYAN KARA AQUIFERS?" THIS SHEET, AS WELL AS THE INFORMATION PRESENTED WITH THE POWER POINT, INDICATE THAT ONLY "A SMALL PERCENTAGE" OF INYAN KARA WATER WILL BE CONSUMED. THIS FOLLOWS THE COMPANY'S LINE, BUT IT DOES NOT FIT THE FACTS. THE INYAN KARA WATER THAT IS BEING USED FOR MINING WILL BE RUN THROUGH THE REVERSE OSMOSIS PROCESS. IT IS COMMON KNOWLEDGE THAT REVERSE OSMOSIS IS AN INEFFICIENT WAY TO PURIFY WATER, BECAUSE IT TURNS AT LEAST 30% OF THE WATER IT HANDLES INTO WASTE WATER. THIS MEANS THAT AT LEAST 30% OF THE INYAN KARA WATER USED BY THE PROPOSED MINE WOULD BECOME WASTE, NOT THE 1% OR THE 3% THAT THE COMPANY-AND THE EPA--CLAIM. THE EPA MAPS MAKE THE BARRIER LAYER BETWEEN THE MINNELUSA AND MADISON AQUIFERS UNNATURALLY LARGE -AND CONSISTENT AND MINIMIZE THE SIZE AND IMPORTANCE OF THE MADISON AQUIFER.

My primary concern with this project is the willful contamination of the pristine Minnelusa aquifer which is the water source for me and most of my neighbors.
[...]
Back to my primary concerns: the injection of "treated water" into the Minnelusa aquifer. Mr. Hollenbeck stated the solution injected as a waste stream into the aquifer would be a saltwater solution. Let's talk about this. The Romans, after the conquest of Carthage in North Africa, spread salt (NaCl) into the fields of Carthage to kill the soil thus starving the population into subjugation.
[...]

Mr. Hollenbeck stated that he would be willing to drink this waste salt water that's to be injected into our aquifer, which reminds me of a classmate of mine in school who worked at the sewage treatment plant in the summer. On a double-dog-date, he drank a glass of effluent from the plant and was immediately taken to the hospital to ahve his stomach pumped and given every injection they could think of. He did not die, but he did not receive awards for intelligence.

I am not willing to take a double dog dare!

But, the term "salt" is a chemically generic term. Like the generic terms "dog," "flower," or "bug." There are many and varied examples within each category.
The most commonly known salt is table salt - NaCl, which was illustrated previously. In chemistry a salt is the result of the chemical reaction of an acid and a base. Thus salts are a combination of all sorts of elements that have the opportunity to react under the right conditions.
The process that is described by Powertech is the injection of H2O, O2 and CO2. This is really the injection of an oxidizing agent (H2O2) and an acid (carbonic acid). Carbonic acid is made by adding CO2 to H2O under pressure. Think Coca Cola. Pour Coke on the sidewalk and it will fizz, with continued application it will dissolved the concrete, along with the other minerals present.
What Powertech is after is uranium oxide (yellowcake). After the uranium oxide is removed from the solution that is pumped from underground, the remaining mineral salts that are not money-makers need to be disposed of. These are the salts that are to be disposed of in our drinking water.
The chemical nature of these waste salts has not been defined and considering the mineral complexity of the ore body, I suspect there are mineral salts that are deleterious to life.

All of the aquifers in this proposal are presently being used for potable water by local residents, thus no exemption to the safe drinking water act of 1974 should be allowed. Both domestic and agriculture wells are in use. The NRC has prohibited the in-situ mining operation in this area until the 7600 plus abandoned bore holes are properly sealed. Geologically this is part of the Black hills uplift area, which is still rising, causing the rock to be highly fractured and constantly changing. Both of these conditions allow flow between all area Aquifers. This will make containment of mining and waste fluids impractical or improbable. Aquifer flow data as presented is inconsistent. In the mining application a flow rate of feet per year is cited, yet in the next paragraph a pump test showed a drop in a test well 1500 feet away in less than 5 minutes, pressurized injection would certainly move faster than pump suction head values. USGS Aquifer data shows tritium levels which would infer high flow rates from the known recharge sources. This was assumed to be caused by an unknown recharge source. TVA driller notes (Initially suppressed by Powertech) show that at least one bore hole went into an underground cave. This could be due to the Jewel Cave and/or Wind Cave structures extending under this area. USGS Aquifer data also concludes that flow rates through such structures is similar to surface flows in the area. This could easily explain the deviation between well data and tritium data without the need to identify an inferred new recharge source. I am concerned that this project has a high probability for rendering my water unusable forever in the next few years. I do not understand how radioactive waste is acceptable for injection into an actively used Aquifer which sits above another Aquifer which is also actively used. Present Ion exchange technology will not remove organified heavy metals, including uranium. Disposal of this waste fluid should require permitting for a class 1 well and continuous independent monitoring of the waste. Since no mining operations are occurring, no need is shown for disposal wells at this time.

This hearing is all about the water. That is the heart of this matter. Because the water will be polluted, contaminated, radioactive, marginalized and made unusable, this permit application is not in the public interest.

State law says that all surface and ground water belongs to the people. To the public. Not miners, not corporations, not polluters. Polluters should have no rights to the people's water. Ever. We all know that the world is warming. We all know that our climate is changing. We all know that we have had dangerous droughts, tremendous storms with massive flooding and hail damage. We all know that the world's supply of fresh water is being depleted faster than it can regenerate by overuse from an ever expanding population. We all know that we cannot waste what water we have, that we must conserve it, use it wisely and conservatively in order to provide for the following generations. To do otherwise is irresponsible in the extreme.
I have a series of questions to ask this board in the hopes that they will be spurred to answer them and find therein the courage to deny this permit application.
[...]

Why allow a company to contaminate three of the four aquifers in the area and risk the contamination of the fourth?

Why risk contaminating of the best source of water in the Black Hills; the Madison?

[...]

How can this board allow the withdrawal of millions, no, even billions of gallons of water and still be able to state that it would be in the public interest? Why allow this permit when PT admits that millions of gallons of water in the Inyan Kara will be contaminated?

Why think that 551 gpm from the Madison, which is almost 800 thousand gpd is possibly in the public interest?

Why consider that the use of this water which will allow PT to mine is socioeconomically valid when the funds garnered by the counties and the state will in most scenarios provide only $30 or so dollars a year for the citizens affected?

Why allow mining if PT cannot clean the water for human or livestock or wildlife use but rather has to inject it into the ground, into existing aquifers so it will not contaminate anything other than that aquifer, which of course, makes it totally unusable, possibly forever? or until our sun goes red giant?

How many heads of livestock could be watered with 250,000 gallons per day? 25,000 maybe? How many gardens could that amount of water serve?

How much food could be grown utilizing this amount of water? How much hay? How much does water cost and why should millions, no, billions of gallons of water be given to PT at no charge at all? Is this in the public interest?

Why allow aquifer injection when it is known that the aquifers can communicate, moving water between them? How can this board allow a permit if a table in the application, Table 3.4-1 0 of the NRC applicatioin, shows that the water quality in the formations includes such poisons as thorium, uranium, arsenic, cadmium, mercury, thallium, polonium, radium, and radon all of which are dangerous and all of which will be released by the mining and released to the air or into solution into aquifers or spread upon the ground to blow away or seep into ground waters? Why allow a company to mine if it has only planned for one 100 year 24 hour precipitation event when we can expect at the very least a 1 00 year event every ten years and not just for 24 hours but for 72 or more as recently experienced by eastern Colorado? Will a 72 hour downpour cause dangerous erosion and contamination of the flood plain and the watershed?

Can this board approve a permit when it is impossible for PT to remediate an aquifer to an original state, as made clear by the NRC and it's minimum standard of ALARA 'hich means AS LOW AS REASONABLY ACHIEVABLE?

(Is anyone going to be comfortable with PT having taken the samples with no independent oversight by DENR, EPA or NRC? In fact, as we cannot depend on the DENR or the EPA or the NRC to protect our water, is it not up to this board to do so?)

[...]

5.5.1.3 I am concerned that in referencing ground water restoration that PT has admitted that this will contaminate millions of gallons in the 1/K and make a large area of the aquifer unusable for many of the existing users? Is it not worrisome that the Minnelusa and Deadwood are the two injection sites and therefore wholly contaminated leaving only the Madison with the hope of remaining clear but overused?

As PT has no idea of the total available space for aquifer injection or an appreciation for aquifer regeneration, how can this board approve of the practice without acknowledgement that the aquifer may be overfilled, and therefore over pressured producing the real risk of leakage, earthquake and external contamination? Why take any water from the Madison, why 551 gpm? Why not use all the Inyan Kara 100% again and again? If the water is treated, why must it be injected or sprayed? Why is it not clean from the treatment? How is it treated? Is this waste drinkable? Why not?

The USGS clarifies that there are no ISL operations that have ever cleaned or remediated or treated returned the mining back to baseline or original condition, none that have not contaminated the mining area and none that have not left ruined aquifers and other waters. The Dewey/Burdock area will not be cleaned. It may never be safe.

Professional geologists and chemists from the South Dakoata School of Mines, Chadron State and private practice have testified most effectively as to the danger of this plan for all the residents in the area due to the irreparable damage done to the water supply. The misuse or contamination of the aquifers in the Black Hills flies in the face of good judgment due to the increasing importance of usable water not just in drought affected South Dakota but the nation as well. We are depleting our water supplies by allowing the very kind of destruction envisioned by Azarga and the EPA. With the demand for water ever increasing due to continued world population increases, it is imperative that the protection and careful usge of our water supplies be our guiding light. To actually embrace the opposite behavior is to violate the EPA stated purpose of actually protecting the environment. It is no longer possible to deny the threats to our remaining water supplies driven by In Situ mining and water ruination. It is the EPAs responsibility to make sure the water and environment remain safe. The Black Hills Hydrology Study availble from the USGS is a fine and revealing scientific paper available for your review.

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4. How am I to explain to my granddaughter how her government decided that it was safe and reasonable to exchange her healthy drinking water for a few pieces of silver in the pockets of a few profiteers?

Thank you for your attention.

Good afternoon, My name is Ex. 6 Personal Privacy (PP) and I've been a homeowner in Rapid City for the past 11 years.

I oppose ISL uranium mining in Custer and Fall River counties because I am very concerned about contamination of our groundwater. This area is prone to drought, so water conservation is a priority. South Dakota's two largest industries, agriculture and tourism, depend on adequate supplies of clean water.

[...]

- I urge you not to exempt a portion of the Inyan Kara aquifer from the Safe Drinking Water Act. The Inyan Kara is used by many people and livestock and given the aforementioned risk factors, water contamination is likely. I've heard that the Minnelusa aquifer contains 125 drinking water wells -please verify with the South Dakota Department of Environment and Natural Resources.

The United States Geological Survey also known as USGS has found that no ISL uranium mining operation has been able to return water quality to pre-mining cleanliness. The U.S. Nuclear Regulatory Commission has been quoted saying that "the restoration of an ISL-mined aquifer to pre-mining water quality is ... an impossibility.

My name is Ex. 6 Personal Privacy (PP) and I live in Rapid City. I'd like to clarify a comment I made yesterday about the number of drinking water wells in the Minnelusa aquifer after speaking with Ken Buhler of the South Dakota Department of Environment and Natural Resources (or DENR).

In November 2014 the DENR started identifying which aquifer a well draws from on the permit forms. This means that for many wells in use, it is unknown which aquifer they drawn from. Mr. Buhler said there are hundreds to thousands of domestic wells using water from the Minnelusa aquifer. The exact number is unknown at this time. However, Mr. Buhler said it is known that there are 196 appropriated water rights permits in the Minnelusa which include municipal, commercial, industrial and housing use.

In addition, the USGS Water Resources Investigations Report 01-4119 Abstract starts with this statement *"The Madison and Minnelusa aquifers are two of the most important aquifers in the Black Hills area of South Dakota and Wyoming."*

The USGS Water Resources Investigations Report 01-4226 Abstract begins with *"The Black Hills are an important recharge area for aquifers in the northern Great Plains. The surface-water hydrology of the area is highly influenced by interactions with the Madison and Minnelusa aquifers, including large springs and streamflow loss zones."*

In Valois Shea's presentation yesterday she mentioned that a Class V injection well permit could not be issued for an aquifer that is an Underground Source of Drinking Water. The Minnelusa is being used as such, so I think it is safe to say it is considered an Underground Source of Drinking Water.
The EPA's website defines an Underground Source of Drinking Water as following:
1) it supplies any public water system, which the Minnelusa does, 2) the source of water contains a sufficient quantity of ground water to supply a public water system which the Minnelusa does, 3) it currently supplies drinking water for human consumption which the Minnelusa does, 4) it contains fewer than 10,000 mg/L total dissolved solids which according to USGS tables I've found online applies to most parts of the Minnelusa, and 5) the source of water is not an exempted aquifer which the Minnelusa is not as far as I know.
Thank you for listening

Background information: https://www.epa.gov/uic/general-information-about-injection-wells

Definition of underground sources of drinking water

An underground source of drinking water (USDW) is an aquifer
aquifer is a geological formation or group of formations or part of a formation that is capable of yielding a significant amount of water to a drinking water well or spring. or a part of an aquifer that is currently used as a drinking water source. A USDW may also be ground water needed as a drinking water source in the future. A USDW is defined in the Code of Federal Regulations (40 CFR 144.3) as:

an aquifer or its portion: (a)(I) Which supplies any public water system; or (2) Which contains a sufficient quantity of ground water to supply a public water system; and (i) Currently supplies drinking water for human consumption; or (ii) Contains fewer than 10,000 mg/l total dissolved solids; and (b) Which is not an exempted aquifer.

My name is Ex. 6 Personal Privacy (PP) and I live in Rapid City. Yesterday I mentioned a Resolution passed by the Rapid City Common Council. Today I'd like to read the full text for the record:
RESOLUTION NO. 2013-083

A RESOLUTION EXPRESSING GRAVE CONCERN ABOUT THE IN SITU MINING OF URANIUM BY

POWERTECH IN CUSTER AND FALL RIVER COUNTIES.
WHEREAS, Powertech Uranium Corp. has submitted applications to the South Dakota Water Management Board for permits to use water from the Madison and Inyan Kara Aquifers to conduct in situ mining of uranium in Custer and Fall River Counties in the Black Hills of South Dakota; and

WHEREAS, In situ mining, or in situ recovery involves pumping solutions incorporating water from the aquifers into an ore body through wells which will then circulate through the porous rock and recovering the minerals from the ground by dissolving them and pumping the solution containing the ore to the surface where the minerals can be recovered.

WHEREAS, hearings on Powertech's water permit applications will be held by the South Dakota Water Management Board in Rapid City at the beginning of October of 2013; and
WHEREAS, the City of Rapid City obtains a majority of its drinking water from the Madison Aquifer; and
WHEREAS, the safety of the water in the Madison Aquifer is of utmost importance to the City of Rapid City; and
WHEREAS, due to the unanswered questions regarding the safety of the community's water supply, the Common Council of the City of Rapid City believes that the proposed in situ mining of uranium in the Black Hills poses an unacceptable risk to the primary source of Rapid City's drinking water.
NOW THEREFORE, BE IT RESOLVED, by the City of Rapid City that due to the potential risk to the Madison Aquifer the City expresses grave concern about the proposed in situ mining of uranium in the Black Hills. Dated this 19th day of August, 2013.

We are present at today's meeting because we have deep concern over the proposed Dewey-Burdock uranium mining in Custer and Fall River Counties of South Dakota.
We bought our home in Fall River County in 2015. One of the main reasons for purchasing this particular home was the fact that it had it's own well. To our knowledge our well is 400 feet deep and likely in the Minnelusa aquifer. If we had known at the time of the proposed uranium mining and the pumping of the waste into the Minnelusa aquifer, we would not have purchased this property and have concern for it's resale in the future.
It makes no sense for any kind of waste to be pumped into the drinking water supply of an aquifer let alone possible radioactive and or toxic waste.

The only other alternatives for our water supply would be to hook up to rural water which is very expensive or put in a cistern and haul in water which is also expensive. This is why we wanted to purchase a property with an established well which currently has safe and good drinking water. We are not even sure where rural or hauled water comes from and if it may also me affected. We don't need another "Flint Michigan" in the Black Hills. We don't want to wait for children and adults in the area to become ill in future years due to this incomprehensible proposal.

It appears to us that the EPA has more concern to protect gophers, toads and mice than people.

We pay taxes for you to PROTECT US the PEOPLE.

WE ARE OPPOSED TO THIS PLAN, WE WANT OUR WATER SUPPLY LEFT ALONE!

• Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.

• The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.

Also my well is in the Minnelusa aquifer. I would like to keep it pure.

As stated in literature & facts – there is NO guarantee of safe potable water. Too many lives & livelihoods are at stake to take a chance. No amount of money (for the clean-ups or buy-offs) is worth any of this bull-crap!

…when will foreign companies be held accountable for restoration of water, groundwater and aquifers?

Why the use of water? If this proposed area was next to Rapid City would it still get the green light from EPA?

No uranium mining. No deep disposal of waste. We need clean drinking water please. Thank your.

Stand up to the corporate interests. Water is precious and unreplaceable. Save the water for our residents; don't pollute it for generations.

We want to have pure water no contamination

I oppose Powertech plans to use groundwater to replace the groundwater removed from the Inyan Kara aquifers.

Please explain why a mill tailings pile must be sequestered forever to prevent leaching into the groundwater, yet it's acceptable to create the same pile inside the aquifer.

I am against the mining discharge into the water supply. We have so little water out here as it is, and we do not want toxins discharged into our water, especially for those who benefit without having any relationship to western South Dakota. You are dumping your externalities(?) on us.

My family depend on well water from this area. It's outrageous that our water safety, and that of future generations, is being put at risk for short-term gains by a few.

We're gonna all be walking dead soon enuf, esp. if we drink sick water.

Against in situ mining because of water quality and geologic stability issues.

Water is Life, Stop polluting!

I feel that our water needs to be clean. I am not wanting mining. We need clean water. Please don't do any mining. Thank you. Jeff Iron Cloud

I am against uranium mining. We need to protect our waters. We cannot stand to lose any of our aquifers. We need to protect our land & environment.

In what part of extracting water to get uranium and then putting the contaminated water back into the aquifer safe? Our landscape and wildlife is what makes the Black Hills and surrounding area beautiful. By poisoning our water, you are poisoning our plant life, wildlife, crops, cattle, and the people. Water is our first medicine, and without it there can be not life. It does not take a lot of common sense to say not to this proposed project. Please take into consideration All of the comments opposing this. Money is not more important than our lives.

We get our water from a well. The underground water is a treasure and a necessity for our life. The southern part of the Black Hill's water needs to be protected. The EPA should be protecting us form the many corporations that would take advantage of our resources and use our area as their toxic waste dump. Do not allow this permit or any others for Powertech. Kendra Wright 5/9/17

NO MINING! The risk to the water is far too great!

Let me get this straight – For a few temporary jobs we risk losing our most precious resource? Worldwide there are problems due to tracking. Haven't you learned a thing? Follow the money!!
Do not force us to move away from the beautiful Black Hills if you contaminate our water.

What will climate change do to the supply of water in the future? Population changes will change the need for water. This does not seem like a good business decision so I wonder what else might be in store if this venture doesn't work out. Is this going to be like the Hanford site in WA state, (I known it's not that type of waste) where a generation or so people will look back on now and think "what morons." This will not affect me or any of my family, but I'm concerned for the others who will be affected.

There is no way you can give a 100% guarantee that nothing bad will happen to the water. If this goes through, you will mine, take you money, and then leave. Local residents will be left holding the bag.

Deny the exemption, deny the injection, deny the mining. The water cannot be restored. NRC can draft requirements, but cannot ensure restoration. Do not use any water for extraction.

Do Not pollute the water – No uranium? Protect our Lands-Waters-Habitat

NO! NO! NO! I am a republican and say NO! No risk to water – none. It is too precious here - delicate geology. We the people have a say!

EPA & other scientific studies can only go so far to predict results. No one knows what shifts in the earth structure might lie ahead. As a country, we are slow to learn from history. Our water is too precious to experiment with.

The potential damage to our aquifers is too great to let this project continue.

Veteran, deployed to Afghanistan & Kyrgyzstan – Kyrgyzstan & the base water (ground & tap) were contaminated with uranium. Azarga's holdings are in Kyrgyzstan & the U.S. Kyrgyzstan does not heavily regulate uranium. Most there don't even know all the water is contaminated –> crops, animals, drinking water. World Nuclear Association (world-nuclear.org) discusses this. Business intelligence-wise "Azarga uranium spills" google search brings up Azarga's website 3 times & articles of this hearing/project. That is a controlled search (i.e., Ararga is controlling their media news). Uranium can stay in bodies (bones & kidneys) for years. It doesn't always leave visible signs until it is too late. Why now, ,why expedited by Azarga? Consequences for a quick business deal are always more costly.

I am opposed to the proposed uranium mining in the Black Hills. We cannot afford to allow this to happen to our land, people, animals. It is common sense to deny this permit. Do the right thing – we must protect the water and the future. This is an issue that crosses all races and boundaries. Please protect us.

I live within the proposed area. I am old, I am a landowner. This is all about the money. The land, the water is priceless. Money cannot bring back the clean water or pristine land. Money is useless when the water is not good. The land is no good for ranching or growing.

Don't grant a permit for extracting uranium. I few up close to the Grand Junction vanadium facility. The tailings there proved to have radon. They had been used under my relative's house. Radon causes lung cancer. The tailings had to be removed & my relatives may get cancer. Our water is at risk. Don't take a chance with the aquifer. Likely bad pollution will result.

Uranium mining pollutes groundwater. While the water in a uranium deposit may have high levels of uranium, the surrounding groundwater may be good quality. In fact, six dozen wells are found directly in the aquifer a company wants to mine in the southern Black Hills --and within 1-1 /4 miles of the planned mine site. Many of these wells are used for livestock and for homes, and they need protection.
[...]
The Black Hills are a special place to all of us. Water is sacred to all of us. The Lakota people say, mni wiconi -water is life. Water is our first medicine and common sense should prevail in this water protection issue.
Please deny this permit.
Pilamiyaye. Thank you for listening to the people.

If this water will be so safe after treatment, why is the EPA planning to exempt the Inyan Kara aquifer from the Safe Drinking Water Act? This seems to me like another example of a private, for-profit, and in this instance global corporation ramming their resource extraction down the throats of the caretaker of the land. According to the World Nuclear Organization, "The USA legislation requires that the water quality in the affected aquifer be restored so as to enable its pre-mining use. Usually this is potable water or stock water (usually less than 500 ppm total dissolved solids) and while not all chemical characteristics can be returned to those pre-mining, the water be usable for the same purposes as before. Often is need (sic) to be treated by reverse osmosis, giving rise to a problem in disposing of the concentration brine stream from this...After termination of a in-situ leaching operation, the waste slurries produced must be safely disposed, and the aquifer contaminated from the leaching activities, must be restored. Groundwater restoration is a very tedious process that is not yet fully understood. Even after considerable processes, "various problems remained unresolved: contaminants that are mobile under chemically reducing conditions, such as radium, cannot be controlled; if chemically reducing conditions are later disturbed for any reason, the precipitated contaminant are re-mobilized; the restoration process takes very long periods of time, not all parameters can be lowered appropriately.....The restoration scheme applied included the first two steps mentioned above (in the document). It turned out that a water volume of more than twenty times the pore volume of the leaching zone had to be pumped and still several parameters did not reach background areas...Relaxed groundwater restoration standards have been granted at these and other sites, since the restoration criteria could not be met."

Hello members of this hearing on the proposed mining and dumping site in the Dewey Burdock area. Thank you for givining me this time to express my concerns with the mining and dumping proposal.
My name is Ex. 6 Personal Privacy (PP) I hold a Bachelors of Science degree from Black Hills State University. and I am opposed to the EPA granting any license to not only mine uranium but also to permit dumping of toxic waste into the Minilusa aquafer or any place here in the Black Hills or the world for that matter.

Your reports claim that there is no potable water in the Minilusa aquifer is untrue, if what our well driller told us about our well over 20 years ago, here in the outskirts of Hot Springs which was, was water from the MInilusa aquifer and more importantly that our water from the well was deemed the best in the county when tested. then I have a major concern about your proposed license to mine and dump toxic and radioactive waste into any aquifer. We have been living on this water for many years and it taste delicious. Our live stock, plants and anything living on our property benefits from this clean .nourishing water.

Members of this hearing, we all are living in a symbiotic relationship with all living beings on this planet, be it microscopic or macroscopic. Our actions have an effect on all. it is important that any action made should benefit all. not just the majority or not just the the minority, but all concerned. Any decision to pollute the water, anymore than you claim it already is, will affect the balance of life on this planet. You can not control radioactive material which typically has a half life of 4.5 billion years and there are many such sites that have failed and lead to birth defects and illness in humans and animals alike.

After reading research of hazardous waste water purification treatments and the effect of Heavy metal salts and other hazardous chemicals on biological systems from Linsey McLean, I learned that Heavy metal poisoning affects the the hormonal balance by not only acting as hormone disruptors but also creating xenohormones which can and does lead to cancers and other severe illnesses.

Water is essential to all living organisms and should be protected not polluted. If you allow any dumping of toxic and radioactive waste here int he Black Hills or anywhere you will have to endure the Karma for such actions. The law of karma is exacting and no one has the right to pollute the water in which we all must partake in to survive.

My name is Ex. 6 Personal Privacy (PP) We own and operate a cattle ranch in eastern Fall River County.
We are against the proposed mining and injection wells in the Dewey-Burdock area.
The water for our ranch comes from the Madison Aquifer by way of pipeline. We cannot afford to take a chance on polluting the water that sustains our livelihood.

I wish to state two additional alarming facts:
What the EPA also won't tell you is that uranium in-situ recovery mining has consistently resulted in contamination. And per the US Geological Survey (USGS), to date there has been no successful mitigation of the contamination resulting from uranium in-situ recovery mining. So your current status of future source of drinking water will be permanently lost if this exemption is approved.

My second concern has to do with the aquifer restoration plan.

According to the Powertech report on both the Inyan Kara and Madison Water Rights Permit applications:
Powertech proposes to restore the contaminated aquifers by treating water pumped from production wells using reverse osmosis membranes under high pressure, thus removing 90% of dissolved constituents. Restored water will then be returned to injection wells and the RO reject (brine) will be disposed of in Class V wells.

Powertech has concluded that minimal benefit, if any, is derived from the groundwater sweep prior to deep well injection and suggests eliminating groundwater sweep as an unnecessary, ineffective and consumptive step in the restoration process. (Section 6.2.2.2 of the Powertech

According to the EPA "High pressure reverse osmosis can only be *employed* after groundwater sweeping, because the high concentration of contaminants during the initial stages of the restoration process tend to disrupt the RO membranes".
(Appendix III. Occupational and Public Health Risks Associated with In-Situ Leaching, in: Technical Report on Technologically Enhanced Naturally Occurring Radioactive Materials from Uranium Mining Volume 2; EPA 402-R-08-005; 2008)

I am a resident of the Hot Springs area in Fall River county. I am very concerned about the proposed draft permits to Powertech/Azarga for the Dewey-Burdock Uranium Mine and Deep Disposal Wells. The area for the permits is in itself a very sensitive area It is in proximity and downstream from major recharge areas for all three aquifers, the Madison, Minnelusa and Inyan Kara.
[...]

Injection wells putting hazardous waste into the Minnelusa and Inyan Kara could have other far reaching and serious effects. Many ranchers and other residents of Custer and Fall River counties use the Minnelusa water for drinking, watering livestock and irrigation. The Inyan Kara water is also used extensively for livestock and irrigation in many areas. This was reported in a US Dept of Interior, US Geological Survey study "Hydrology of the Black Hliis /Vea, South Dakota" by Daniel G. Driscoll, Janet M. Carter, Joyce E. Williamson and Larry D. Putnum, Water-Resources Investigations Report 02-4094. This information is in contrast to what Powertech/Azarga reports.

The USGS report states the extent of the aquifers describing the vast area of distribution of the water and the varying water qualities. In most areas the water is usable and meets quality standards for most uses. The Powertech excuse that these aquifers are already contaminated is not a valid reason to dump wastewater into them. This report also describes that the amount of transmission between the aquifers can vary from undetermined to significant One can make the assumption that heavy contamination of one aquifer could therefore contaminate other aquifers and have a wider effect not only in damage but in cleanup efforts.
[...]

The artesian springs from these three aquifers are important water supplies for recreation, livestock use, wildlife and irrigation. They add water to all the streams and rivers in the surrounding area. The whole region relies on this supply of clean water, It is a major factor in our economies. If the clean water supplies fail then the economies that depend upon them fail. Our tourism, ranch, retail, and hospitality businesses and livelihoods would all be affected.

I live here. This is my community. I depend upon a rural well water source. What happens if that water source gets contaminated and is condemned? Where do I turn to? Will a government agency be available to help out? Will they supply us with clean water and at what cost? This is the gamble; allowing permits to inject hazardous wastewater into the Minnelusa and Inyan Kara and risk the possibility of massive contamination or refusing Powertech/Azarga the permits to do this. I would not take that risk. I lived in Milwaukee, WI as a child when lake Michigan was so contaminated with industrial waste all recreation, fishing and use were restricted. I know what can happen. I hope we don't follow the path that caused that pollution because that mistake will not be as easy if not impossible to remediate. It will affect generations.

[ATTACHMENT: “Hydrology of the Black Hills Area, South Dakota”]

It is painful to realize that some people will not be satisfied until they have turned this area of Fall River County into a wasteland with poisoned water.

Our water must be protected at all cost. Those who are for the mining of uranium are for the money. Those against are for our protection of water for now and future generations. The possibility of dumping toxic waste into these boreholes is ludicrous!! We are in the Minnelusa aquifer (our water) and it is pure and wonderful.

Having just come on board to save our water, will will in the next few weeks be going to Doctors offices, and well as contacting as many people as I can to help you see how important this case is. I am having my water tested at $750.00 to prove it is good and not unpalatable at those in favor of Powertech/Azarga.

You will be sent the results of these tests plus any other information. Also it will be sent to President Trump, Vice-president Mike Pence, Rick Perry, Tom Price, our Senators and Congress people and anyone else I can think of. It will be sent by both email and snail mail.

Protect our environment!!!

[ATTACHMENT: photograph of the earth from space (image)]

This is all we have. Our water and air is only so much. Once gone it is gone forever. It is our responsibility to protect it.

This is a very dry area of the country, even of western South Dakota. We can't lose 8,000 gallons of water per minute for the next ten years. It would not only affect the Inyan Kara aquifer, but the Minnelusa and Madison aquifers. These are all used in this area. We can't afford to lose that much water or have them pollute any of these aquifers. These aquifers are known to communicate.
[...]
New information in yesterday, all of the wells north of Hot Springs are in the minnelusa. According to Ken Buhler of the South Dakota Department of Environment and natural resources (or DENR), said there are hundreds to thousands of domestic wells using water from the Minnelusa aquifer. 196 appropriated water rights permits in the Minnelusa which include municipal, commercial, and industrial use.
I don't consider living a lifetime anywhere starting in my teens.

We are protesting the use of the minnelusa aquifer for dumping of haz waste ... and we are questioning the ability of Powertech/azarga to be able to detoxify the radioactive metals of vanadium, thorium, strontium, uranium, thallium and lead (which has radioactive forms) down to the levels of purity of stormwater that is required to be injected into a class 5 well that sits between and in two drinking water aquifers. (the Minnelusa is used for good quality drinking water in the area and the Madison). No such plan has been demonstrated by Powertecch/Azarga. And if such was even possible, that water would be worth gold in a high dry area of the country, and used for irrigation of crops and farm animal use, and treated with conventional water softener and RO at the sink for household drinking water, as the minnelusa is now in that area for TDS. It is the radioactive metals that are of concern. If that water was going to be so pure, then it would not have to be disposed of in a deep injection well int h e first place.

[...]

Poisoning the Well: How the Feds Let Industry Pollute the Nation's Underground Water Supply

Federal officials have given energy and mining companies permission to pollute aquifers in more than 1,500 places across the country, releasing toxic material into underground reservoirs that help supply more than half of the nation's drinking water.

In many cases, the Environmental Protection Agency has granted these so-called aquifer exemptions in Western states now stricken by drought and increasingly desperate for water.

EPA records show that portions of at least 100 drinking water aquifers have been written off because exemptions have allowed them to be used as dumping grounds.

"You are sacrificing these aquifers," said Mark Williams, a hydrologist at the University of Colorado and a member of a National Science Foundation team studying the effects of energy development on the environment. "By definition, you are putting pollution into them. If you are looking 50 to 100 years down the road, this is not a good way to go."

As part of an investigation into the threat to water supplies from underground injection of waste, ProPublica set out to identify which aquifers have been polluted.

We found the EPA has not even kept track of exactly how many exemptions it has issued, where they are, or whom they might affect.

What records the agency was able to supply under the Freedom of Information Act show that exemptions are often issued in apparent conflict with the EPA's mandate to protect waters that may be used for drinking.

Though hundreds of exemptions are for lower-quality water of questionable use, many allow grantees to contaminate water so pure it *J* would barely need filtration, or that is treatable using modem technology.

The EPA is only supposed to issue exemptions if aquifers are too remote, too dirty, or too deep to supply affordable drinking water. Applicants must persuade the government that the water is not being used as drinking water and that it never will be.

Sometimes, however, the agency has issued permits for portions of reservoirs that are in use, assuming contaminants will stay within the finite area exempted.

In Wyoming, people are drawing on the same water source for drinking, irrigation and livestock that, about a mile away, is being fouled with federal permission. In Texas, EPA officials are evaluating an exemption for a uranium mine - already approved by the state – even though numerous homes draw water from just outside the underground boundaries outlined in the mining company's application.

The EPA declined repeated requests for interviews for this story, but sent a written response saying exemptions have been issued responsibly, under a process that ensures contaminants remain confined.

"Aquifer Exemptions identify those waters that do not currently serve as a source of drinking water and will not serve as a source of drinking water in the future and, thus, do not need to be protected," an EPA spokesperson wrote in an email statement. 'The process of exempting aquifers includes steps that minimize the possibility that future drinking water supplies are endangered."

Yet EPA officials say the agency has quietly assembled an unofficial internal task force to re-evaluate its aquifer exemption policies. The agency's spokesperson declined to give details on the group's work, but insiders say it is attempting to inventory exemptions and to determine whether aquifers should go unprotected in the future, with the value of water rising along with demand for exemptions closer to areas where people live.

Advances in geological sciences have deepened regulators' concerns about exemptions, challenging the notion that waste injected underground will stay inside the tightly drawn boundaries of the exempted areas.

"What they don't often consider is whether that waste will flow outside that zone of influence over time, and there is no doubt that it will," said Mike Wireman, a senior hydrologist with the EPA who has worked with the World Bank on global water supply issues. "Over decades, that water could discharge into a stream. It could seep into a well. If you are a rancher out there and you want to put a well in, it's difficult to find out if there is an exempted aquifer underneath your property."

Aquifer exemptions are a little-known aspect of the government's Underground Injection Control program, which is designed to protect water supplies from the underground disposal of waste.

The Safe Drinking Water Act explicitly prohibits injection into a source of drinking water, and requires precautions to ensure that oil and gas and disposal wells that run through them are carefully engineered not to leak.

Areas covered by exemptions are stripped of some of these protections, however. Waste can be discarded into them freely, and wells that run through them need not meet all standards used to prevent pollution. In many cases, no water monitoring or long-term study is required.

The recent surge in domestic drilling and rush for uranium has brought a spike in exemption applications, as well as political pressure not to block or delay them, EPA officials told ProPublica.

"The energy policy in the U .S is keeping this from happening because right now nobody - *nobody* - wants to interfere with the development of oil and gas or uranium," said a senior EPA employee who declined to be identified because of the sensitivity of the subject. "The political pressure is huge not to slow that down."

Many of the exemption permits, records show, have been issued in regions where water is needed most and where intense political debates are underway to decide how to fairly allocate limited water resources.

In drought-stricken Texas, communities are looking to treat brackish aquifers beneath the surface because they have run out of better options and several cities, including San Antonio and El Paso, are considering whether to build new desalinization plants for as much as $100 million apiece.

And yet environmental officials have granted more than 50 exemptions for waste disposal and uranium mining in Texas, records show. The most recent was issued in September.

The Texas Railroad Commission, the state agency that regulates oil and gas drilling, said it issued additional exemptions, covering large swaths of aquifers underlying the state, when it brought its rules into compliance with the federal Safe Drinking Water Act in 1982. This was in large part because officials viewed them as oil reservoirs and thought they were already contaminated. But it is unclear where, and how extensive, those exemptions are.

EPA "Region VI received a road map - yes, the kind they used to give free at gas stations - with the aquifers delineated, with no detail on depth," said Mario Salazar, a former EPA project engineer who worked with the underground injection program for 25 years and oversaw the approval of Texas' program, in an email.

In California, where nearly half of the nation's fruits and vegetables are grown with water from as far away as the Colorado River, the perennially cash-strapped state's governor is proposing to spend $14 billion to divert more of the Sacramento River from the north to the south. Near Bakersfield, a private project is underway to build a water bank, essentially an artificial aquifer.

Still, more than 100 exemptions for natural aquifers have been granted in California, some to dispose of drilling and fracking waste in the state's driest parts. Though most date back to the 1980s, the most recent exemption was approved in 2009 in Kern County, an agricultural heartland that is the epicenter of some of the state's most volatile rivalries over water.

The balance is even more delicate in Colorado. Growth in the Denver metro area has been stubbornly restrained not by available land, but by the limits of aquifers that have been drawn down by as much as 300 vertical feet. Much of Eastern Colorado's water has long been piped underneath the Continental Divide and, until recently, the region was mulling a $3 billion plan to build a pipeline to bring water hundreds of miles from western Wyoming.

Along with Wyoming, Montana and Utah, however, Colorado has sacrificed more of its aquifer resources than any other part of the country.

More than 1,100 aquifer exemptions have been approved by the EPA's Rocky Mountain regional office, according to a list the agency provided to ProPublica. Many of them are relatively shallow and some are in the same geologic formations containing aquifers relied on by Denver metro residents, though the boundaries are several hundred miles away. More than a dozen exemptions are in waters that might not even need to be treated in order to drink.

"It's short-sighted," said Tom Curtis, the deputy executive director of the American Water Works Association, an international nongovernmental drinking water organization. "It's something that future generations may question."

To the resource industries, aquifer exemptions are essential. Oil and gas drilling waste has to go somewhere and in certain parts of the country, there are few alternatives to injecting it into porous rock that also contains water, drilling companies say. In many places, the same layers of rock that contain oil or gas also contain water, and that water is likely to already contain pollutants such as benzene from the natural hydrocarbons within it.

Sinillarly, the uranium mining industry works by prompting chemical reactions that separate out minerals within the aquifers themselves; the mining can't happen without the pollution.

When regulations governing waste injection were written in the 1980s to protect underground water reserves, industry sought the exemptions as a compromise. The intent was to acknowledge that many deep waters might not be worth protecting even though they technically met the definition of drinking water.

"The concept of aquifer exemptions was something that we 'invented' to address comments when the regulations were first proposed," Salu.ar, the former EPA official, said. 'There was never the intention to exempt aquifers just because they could contain, or would obviate, the development of a resource. Water was the resource that would be protected above all."

Since then, however, approving exemptions has become the norm. In an email, the EPA said that some exemption applications had been denied, but provided no details about how many or which ones. State regulators in Texas and Wyoming could not recall a single application that had been turned down and industry representatives said they had come to expect swift approval.

Historically, they have been fairly routinely granting aquifer exemptions," said Richard Clement, the chief executive of Powertech um, which is currently seeking permits for new mining in South Dakota. "There has never been a case that I'm aware of that it has been done."

In 1981, shortly after the first exemption rules were set, the EPA lowered the bar for exemptions as part of settling a lawsuit filed by the American Petroleum Institute. Since then, the agency has issued permits for water not "reasonably expected" to be used for drinking. The original language allowed exemptions only for water that could never be used.

Oil companies have been the biggest users of aquifer exemptions by far. Most are held by smaller, independent companies, but Chevron, America's secondlargest oil company, holds at least 28 aquifer exemptions. Exxon holds at least 14. In Wyoming, the Canadian oil giant EnCana, currently embroiled in an investigation of water contamination related to fracking in the town of Pavillion, has been allowed to inject into aquifers at 38 sites.

Once an exemption is issued, it's all but permanent; none have ever been reversed. Permits dictate how much material companies can inject and where, but impose little or no obligations to protect the surrounding water if it has been exempted. The EPA and state environmental agencies require applicants to assess the quality of reseivoirs and to do some basic modeling to show where contaminants should end up. But in most cases there is no obligation, for example, to track what has been put into the earth or - except in the case of the uranium mines - to monitor where it does end up.

The biggest problem now, experts say, is that the EPA's criteria for evaluating applications are outdated. The rules - last revised nearly three decades ago - haven't adapted to improving water treatment technology and don't reflect the changing value and scarcity of fresh **water.**

Aquifers once considered unusable can now be processed for drinking water at a reasonable price.

The law defines an underground source of drinking water as any water that has less than 10,000 parts per million of what are called Total Dissolved Solids, a standard measure of water quality, but historically, water with more than 3,000 TDS has been dismissed as too poor for drinking. It also has been taken for granted that, in most places, the deeper the aquifer - say, below about 2,000 feet - the higher the TDS and the less salvageable the water.

Yet today, Texas towns are treating water that has as high as 4,000 TDS and a Wyoming town is pumping from 8,500 feet deep, thousands of feet below aquifers that the EPA has determined were too far underground to ever produce useable water.

"You can just about treat anything nowadays," said Jorge Arroyo, an engineer and director of innovative water technologies at the Texas Water Development Board, which advises the state on groundwater management. Arroyo said he was unaware that so many Texas aquifers had been exempted, and that it would be feasible to treat many of them. Regarding the exemptions, he said, "With the advent of technology to treat some of this water, I think this is a prudent time to reconsider whether we allow them."

Now, as commercial crops wilt in the dry heat and winds rip the dust loose from American prairies, questions are mounting about whether the EPA should continue to grant exemptions going forward.

"Unless someone can build a clear case that this water cannot be used - we need to keep our groundwater clean," said Al Armendariz, a former regional administrator for the EPA's South Central region who now works with the Sierra Club. "We shouldn't be exempting aquifers unless we have no other choice. We should only exempt the aquifer if we are sure we are never going to use the water again."

Still, skeptics say fewer exemptions are unlikely, despite rising concern about them within the EPA, as the demand for space underground continues to grow. Long-term plans to slow climate change and clean up coal by sequestering carbon dioxide underground, for example, could further endanger aquifers, causing chemical reactions that lead to water contamination.

"Everyone wants clean water and everyone wants clean energy," said Richard Healy, a geologist with the U.S. Geological Survey whose work is focused on the nexus of energy production and water. "Energy development can occur very quickly because there is a lot of money involved. Environmental studies take longer."

RESOLUTION NO. 2013-083

A RESOLUTION EXPRESSING GRAVE CONCERN ABOUT THE IN SITU **MINING** OF URANIUM BY POWERTECH IN CUSTER AND FALL RIVER COUNTIES.

WHEREAS, Powertech Uranium Corp. has submitted applications to the South Dakota Water Management Board for permits to use water from the Madison and Inyan **Kara** Aquifers to conduct in situ mining of uranium in Custer and Fall River Counties in the Black Hills of South Dakota; and

WHEREAS, In situ mining, or in situ recovery involves pumping solutions incorporating water from the aquifers into an ore body through wells which will then circulate through the porous rock and recovering the minerals from the ground by dissolving them and pumping the solution containing the ore to the surface where the minerals can be recovered.

WHEREAS, hearings on Powertech's water permit applications will be held by the South Dakota Water Management Board in Rapid City at the beginning of October of 2013; and

WHEREAS, the City of Rapid City obtains a majority of its drinking water from the Madison Aquifer; and

WHEREAS, the safety of the water in the Madison Aquifer is of utmost importance to the City of Rapid City; and

WHEREAS, due to the unanswered questions regarding the safety of the community's water supply, the Common Council of the City of Rapid City believes that the proposed in situ mining of uranium in the Black Hills poses an unacceptable risk to the primary source of Rapid City's drinking water.

NOW THEREFORE, BE IT RESOLVED, by the City of Rapid City that due to the potential risk to the Madison Aquifer the City expresses grave concern about the proposed in situ mining of uranium in the Black Hills.

Dated this 19th day of August, 2013.

CITY OF **RAPID** CITY

sf Sam **Kooiker**

ATTEST:

s/ Pauline Sumption

Finance Officer

Newspaper article title: In-situ mining will foul the waters

by Rick Bell

I have worked for more than 40 years in the environmental cleanup field for industrial companies and consulting firms on many projects globally where accidental discharges - leaks and spills, etc. - have occurred and resulted in the contamination of groundwater systems.

During my work on these various clean-up projects, pollution control agencies have typically insisted that not enough was known about how and where the ill-fated contamination was moving in the subsurface. Well after well needed to be installed in an effort to try to prove the improvable regarding subsurface fate and transport of contaminants. And it is one thing to clean up an accidental spill or other legacy environmental problems when laws governing the handling of hazardous materials were not as stringent as they are today, but it is quite another to allow a company to inject these materials into the subsurface and thereby purposely create a huge contamination problem.

[...]

It is shocking that the EPA is willing to consider issuing such permits. If the shoe was on the other foot and the EPA was responsible for the cleanup rather than in the position of issuing these permits, they would be much more discerning and demanding.

If Powertech/Azarga is allowed to proceed, it is a near certainty that this facility will become a Superfund site and therefore the company should be required to place millions of dollars into a reserve account to pay for an inevitable cleanup.

So this is a terrible idea. Why would we risk our precious groundwater resource for a mining operation that is guaranteed to contaminate these aquifers in exchange for a handful of jobs and large profits made by a foreign corporation?

We should keep our water pure to support our local economy and the sustainable growth that is happening in the Black Hills. Common sense dictates that this type of uranium mining should not be allowed to proceed.

Please attend the EPA hearings on the proposed Powertech/Azarga ISL uranium mine to be held from 1 to 8 p.m. on May 8 and 9, at the Best Western Ramkota Hotel, 2lll Lacrosse St. in Rapid City.

Richard Bell is the president of Sustainable Environmental Energy Engineering, LLC in Rapid City and chairperson of Black Hills Chapter of Dakota Rural Action

Letter to the Editor Title: Chance to fight toxic waste in S.D.

The U.S. Environmental Protection Agency has issued two draft underground injection permits for the Dewey-Burdock project near Edgemont. If obtained, the EPA permits would allow for injection mining wells in the Inyan Kara group of aquifers and disposal of treated waste fluid into the Minnelusa formation, below the Inyan Kara. An "aquifer exemption" could also be granted to exempt the mining area from the Safe Drinking Water Act. This is not EPA protection; it's EPA devastation.

No more toxic in-situ uranium mining; nor do we want western South Dakota to become a dump site for local, national and possible international toxic waste.

Please visit the Black Hills Clean Water Alliance website for more detailed information as well as dates and places for upcoming public hearings. The website also includes where you can mail or email written comments.

In Rapid City, public hearings will be from 1 to 8 p.m. on Monday, May 8, and Tuesday, May 9, at the Best Western Ramkota Hotel. Please come. Let your voice be heard. No more toxic waste in South Dakota.

This **week,** you will hear testimony that our western South Dakota porous aquifers and coves ore intertwined and leak into each other. In-situ mining potentially contaminates a great deal of our drinking water, as well as our top soil lands where the animals and birds get their food and water. I urge you to require the necessary research before giving any more permits. Check out the cancer rotes in Edgemont and Crowford, Nebraska. Require the water testing that several organizations wont to do. And remember, we ore volunteers and water testing is expensive. EPA should help us with the funds. We hove been in this fight for a long time. In closing I wont to submit to the record, a 2013 resolution by the City Council of Rapid City expressing GRAVE CONCERN.

Proof states contamination will absolutely be a problem – no guarantee of safe consumption of water for humans, animals and farm land. Knowing the facts would you be willing to subject your water to this?

Save our water!! This project must be stopped.

My well is in the Minnelusa Formation and is good drinking water.

Who will be responsible to try to clean up the mess down the road? Taxpayers again. Why would we want to give up our clean water? And way too much of it. You can't fix contaminated water.

This [contamination of groundwater] is a risk that is unacceptable!

[History of groundwater contamination from uranium mining] terrible track record - do not permit the mine!

This would jeopardize the safety of our water supply. Must NOT happen.

How can we put our water at risk? This project should be stopped.

If you proceed to allow this, at least make them pay for the water they use. Thank you.

Save our water. This project should be stopped.

Water is life! Common sense. This project should be stopped.

Groundwater will be contaminated…contamination of our groundwater will happen! Uranium in NOT SAFE!

We cannot risk ruining our water supply to provide uranium. We don't need uranium to be mined here or anywhere else. Save out water. It's important.

Please do not adulterate my aquifer.

We need out water left alone & clean. There is no need for more drilling or retrieving of uranium. Focus on wind and solar to create jobs.

I am writing regarding Azarga-Powertech's request for two underground injection control draft area permits and an associated aquifer exemption request so they can mine uranium via the ISR method at the Dewey Burdock site near Edgemont, SD, and one permit is a UIC Class III permit in the area for up to 4,000 injection wells to pump chemicals called lixiviant into bore holes, the other is UIC Class V are permit for four deep injection wells to dispose of ISR process waste fluids.

My request is" Do Not allow Azarga Powertech the permits they request as it will likely put radioactive and hazardous waste into the existing wells in the area as well as the rest of the entire environment. Thank you!

Surface remediation is one thing, but the repair of damage done to aquifers is another. Yes, contaminants from mining or processing uranium can be superficially removed from the surface of such sites, albeit with great expense and effort, but radioactive contaminants in surface waters or aquifers can be nearly impossible to remove fully. Once again, as in the Riverton case, dilution becomes the solution to industrial pollution that private enterprise initiates and profits from. And my goodness, we are considering allowing a foreign entity, with no local interests, to actually add contaminants to our Black Hills aquifers—it is unthinkable. Please deny the related permits and exemptions.

Dear Valois Shea and Others:

Greetings, I am a concerned citizen writing to convey my objections to the Dewey- Burdock ISR and waste water injection projects proposed by Azarga Uranium in southwestern South Dakota. I am a permanent resident of the Black Hills and live near Argyle, SD, just a few miles (about 8 miles) east of the proposed site. I am opposed to the project: 1) I know from personal experience, and historical records, that uranium extraction and processing has resulted in the on-site and off-site contamination of land, property, and water —both surface waters and ground water; 2) and while the short-term profits associated with these projects is always private, the long-term costs and liabilities are public, as cleanup activities are difficult and expensive, and the half-lives of radioactive pollutants extend many generations beyond those that receive any benefit from the products.

No uranium mining in the Black Hills! No! Do not allow mining operations to inject mining waste into the underground aquifers in South Dakota! Protect our land, protect our air, protect our water. That's what the EPA does best.

No mining permits in the Dewey-Burdock, Edgemont area of the black Hills of SD---no permits should be awarded to the uranium mining company Powertech/Azarga. ISL will not benefit the Black Hill nor protect the groundwater. Thanks

Regardless of Powertech's pledge to protect the land and water even a less than 1% chance of pollution is too much to our precious water resources. One only has to see what issues exist in the west when water becomes short(?) and in jeopardy. Radiation lasts forever.

The Madison Aquifer. The drainage will eventually leach into the Ogallala Aquifer which reaches down to Texas. There are thousands of wells that draw water from the Ogallala Aquifer through eight states. Nebraska has the most abundant well water available. Should Powertech be allowed to utilized this source of water from the Madison Aquifer. There are many repercussions. Wells are already depleted across several states. More water is being pumped out of the aquifer then being replenished. This hurts the tamers who depend on these wells for their crops and safe drinking water. Cattle operations are vast and many across these eight states. The United States depends on these states to produce the food we eat and export.

[…]

Conclusion:

The economic benefits to the state of South Dakota will be minimal compared to the cost of health care and cleaning up the environment. According to The Dakota Rural Action organization; Azarga is requesting an exemption from the EPA Safe Drinking Water Act. They have a good argument. Azarga expects to receive this water for free. They plan on using 12.96 million gallons of water per day. Multiply that by 20 years and at some point all water will be unfit for drinking in the local wells and possibly the Ogallala Aquifer. That is a lot of water being contaminated and pumped back into the bore holes already there from past mining.

This letter is concerning the Powertech proposal to use groundwater from the Madison aquifer, and to utilized deep well injection methods to dispose of waste associated with uranium mining.

I strongly object to both of these proposals. I urge the EPA not to permit these activities in the counties of Fall River and Custer located in the south western South Dakota.

My objections are based on the probable contamination of the Madison & Inyan Kara aquifers.

I have been the organizer of a group of citizens in the Southern Hills, working to educate the people of Fall River and Custer County about radioactivity, uranium, and the inSitu Leach mining process.

I am handing a copy of Dr. Moran's hydrology testimony for the NRC Hearings in 2013 and my test of radioactive elements as well as heavy metals.

Please protect me and the other residents of Fall River County [illegible].

You have the power to protect us from more radioactive and heavy metal.

You have the power to keep our water pure. That is why the EPA was founded. Please prevent our water from becoming toxic.

[ATTACHMENT: "SUPPLEMENTAL DECLARATION OF DR. ROBERT E. MORAN"]

The Proposed In-situ Uranium mining project in west South Dakota:

Cost - Benefit Analysis:

Cost:

Thousands of gallons of water from aquifers in a drought prone area.

Benefit:

1. Lots of money to companies, Canadian, Chinese and in the future, likely others.

2. A few local jobs.

Result: The benefits are not worth the extensive costs.

[...]

EPA stands for Environmental Protection Agency:

You need to do what we taxpayers pay you to do:

Protect our Water from this contamination!!

According to a June 15, 2015 Washington Post article, new NASA satellite data indicates that fresh water aquifers are being depleted at alarming rates. Much of this depletion is the result of various kinds of mining. They all use water-intensive processes.

Powertech/Azarga's mining activities include pumping 9,000 gallons of water per minute from area aquifers, including the Inyan Kara. This demand on the Inyan Kara aquifer competes with other local uses, reducing the water level while at the same time putting it at risk of contamination.

Powertech has also requested permits for a number of extra wastewater wells in the Minnelusa aquifer. The risk of contamination of this water source from this waste is obvious, but the danger is greater than that. The Minnelusa communicates with neighboring water sources through naturally occurring breaks in the structure of the rock. One of these nearby aquifers is the Madison, the major source of Rapid City's drinking water.

Powertech speaks with scientific certainty about the safety of its technology. Other mining companies have said the same. Then the unanticipated happens. Drilling itself disturbs the geology, causing unexpected breaches and fractures. Water gets polluted, often without remediation. There is no perfect understanding of underground geology, no mining technology that can anticipate and prevent every possible problem, and no effective methodology for cleaning up a toxic mess deep in the ground. So why risk the inevitable failure with our precious water?

But if the danger of poisoning our water doesn't stir you, then why allow the more obvious and certain outcome of Powertech 's project? I am speaking of allowing a foreign company seeking only its own profit, to dominate so much of a public good, even as that good, our precious water, is steadily dwindling away as we meet here today? Please deny Powertech's permits for the good of our community.

[ATTACHMENT: "New NASA data show how the world is running out of water"]

Dear EPA, Region 8:

Please take into consideration the concerns I have about the proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells in the Black Hills. My concerns center on the dangers of cumulative radiation exposure.

Those who stand to profit from the in situ mining at Dewey Burdock would like us to believe that the mining risks are minimal and that the contaminated water would be fully contained, even though our region is full of faults in the rock strata. We often hear the well-worn talking point about how one glass of this water is still within "acceptable limits". Seriously, who drinks only one glass of water in their lifetime? It is curious that with all the "expert testimony" about the supposed safety of the mining techniques and "minimal" contamination to the water, the issue of cumulative radiation exposure never is mentioned.

The Mayo Clinic and most other major health care organizations in the USA are taking great measures to minimize the impact of radiation exposure to their patients. This is because they recognize the fact that the human body accumulates radiation that it is exposed to. This radiation is not expelled, but stays in the tissues. As the radiation accumulates in the body, so does the risk for cancer and other diseases. The EPA studies have shown we already have some naturally-occurring radiation in the environment. It makes no sense to add to those naturally-occurring risks with the exposure from mining contamination that will inevitably leach into our water supplies.

Have we learned nothing from history? Historically, most mine owners and investors do not live onsite. When things go bad, they cut and run, leaving the mess for others to suffer from and to clean up. Few, if any of them would be willing to daily drink the water polluted by their mines. Yet they expect others to do so, while the owners and investors pocket the profits.

Unless science can come up with a way to safely extract the uranium AND leave the water in as good (or better) condition than it was before, why would any rational and unbiased person support in situ uranium mining? Our society at large has little to gain from this, but much to lose. Please do not allow this uranium mining project to proceed.

Thank you for your attention in this matter.

The permit allows for information to be confidential. Why would there be a need for confidinetiality at all in regards to these activities and the communal water supply?

The permit is showing that the class V waste wells will be at the 2,800 ft level which is the same as the depth of the Edgemont drinking water wells. How could this be a good thing?

[...]

My well is in the Minnelusa Aquifer, What is the potential for waste or mining contamination to my well?

Who will pay the damage if it can be corrected at all?

I am writing regarding the application for InSitu uranium mining in the Dewy-Burdock area of Fall River county and Custer County in South Dakota. I Have grave concerns for giving an aquifer exemption for the Minnelusa to deposit waste in Class V deep injection wells, or Class III wells for InSitu mining of Uranium. My well is in the Minnelusa Aquifer and waste with any radioactive or other chemical allowed in the drinking water on purpose, or by accident would possibly contaminate my well.

While we know a lot about what happens underground we certainly do not know the extent and variables of the geologic forms below the surface to guarantee how water moves or will move.

Please consider this letter from the 7 50 plus members of American Legion Post 22 to be in opposition to the proposed uranium mine which is to be located in Fall River County.

The members of American Legion Post 22 believe this mine could and/or would endanger both the Inyan Kara and the Minnelusa aquifers. The possible endangerment of these two aquifers is totally unacceptable.

We would urge the EPA to deny the requested permits. Your attention to this letter is appreciated.

BE IT RESOLVED by the Common Council of the City of Hot Springs, South Dakota, that we are committed to preserving and maintaining the amount and quality of water for the citizens of Hot Springs and its surrounding environs, and

Whereas: The City of Hot Springs was first developed as a town in the late 1800's due to its proximity to the Fall River and the abundant natural warm mineral springs within the valley, and

Whereas: The City of Hot Springs has made long-term investments in stormwater management, potable water systems and wastewater management programs and infrastructure to reduce nutrients and pollution in our waters and to protect our vital water resources, and

Whereas: The Common Council is obligated to preserve and protect the public health, safety and welfare by preventing the pollution of, and maintaining the quality of the water entering in, held within and removed from aquifers serving as the City's water source, and

Whereas: The City of Hot Springs has stated in its water ordinance that our mission is to provide the City's water customers with a safe drinking water supply, water for fire protection and an adequate supply of water for our essential daily needs, and

Whereas: The City of Hot Springs Common Council finds that any pollution or contamination, willful or not, of our water supply to be a direct threat to our community and its health, safety and welfare, and

Therefore: Be it resolved that the City of Hot Springs will take necessary action to ensure the perpetual purity and quality of the waters available for use by the citizens of Hot Springs and those the City distributes water to, and

Therefore: Commit to support any action from the County, State or Federal Governments aimed at protecting the waters of South Dakota, both surface water and underground aquifers, as a critical natural resource necessary for life.

On the topic of drilling, the Class V Fact Sheet says that the draft permit allows the company to "drill deeper in order to evaluate deeper sandstone units within the Minnelusa" (p. 15) and to drill to the Precambrian basement when drilling Well 1 (p. 41). These processes should not be allowed. The Madison aquifer is directly below the Minnelusa aquifer, and the upper portion of the Madison aquifer is porous, containing many caves, fractures, and solution openings (Class V Fact Sheet, p. 18; USGS. 2002. *Atlas of Water Resources in the Black Hills Area, South Dakota,* pp. 24-25). If the company was careless or drilled just a bit too far, here would be no separation between the aquifers and potentially no containment of materials pumped into the deep disposal wells, and a major drinking water aquifer could be contaminated.

My name is Ex. 6 Personal Privacy (PP) and I live in Rapid City. Yesterday I mentioned a Resolution passed by the Rapid City Common Council. Today I'd like to read the full text for the record:

RESOLUTION NO. 2013-083

A RESOLUTION EXPRESSING GRAVE CONCERN ABOUT THE IN SITU **MINING** OF URANIUM BY POWERTECH IN CUSTER AND FALL RIVER COUNTIES.

WHEREAS, Powertech Uranium Corp. has submitted applications to the South Dakota Water Management Board for permits to use water from the Madison and Inyan Kara Aquifers to conduct in situ mining of uranium in Custer and Fall River Counties in the Black Hills of South Dakota; and

WHEREAS, In situ mining, or in situ recovery involves pumping solutions incorporating water from the aquifers into an ore body through wells which will then circulate through the porous rock and recovering the minerals from the ground by dissolving them and pumping the solution containing the ore to the surface where the minerals can be recovered.

WHEREAS, hearings on Powertech's water permit applications will be held by the South Dakota Water Management Board in Rapid City at the beginning of October of 2013; and

WHEREAS, the City of Rapid City obtains a majority of its drinking water from the Madison Aquifer; and

WHEREAS, the safety of the water in the Madison Aquifer is of utmost importance to the City of Rapid City; and WHEREAS, due to the unanswered questions regarding the safety of the community's water supply, the Common Council of the City of Rapid City believes that the proposed in situ mining of uranium in the Black Hills poses an unacceptable risk to the primary source of Rapid City's drinking water.

NOW THEREFORE, BE IT RESOLVED, by the City of Rapid City that due to the potential risk to the Madison Aquifer the City expresses grave concern about the proposed in situ mining of uranium in the Black Hills.

Dated this 19th day of August, 2013.

CITY OF RAPID CITY

s/ Sam Kooiker

Mayor

ATTEST:

s/ Pauline Sumption

Finance Officer

(SEAL)

Thank you for listening.

In this document, I will briefly outline my concerns with respect to this inevitable loss of containment: existing flow direction and water quality within the Minnelusa Aquifer.

Flow Direction in the Minnelusa Aquifer

During the hearings there was much discussion about whether or not groundwater within the Minnelusa Aquifer flowed west, east, or not at all. Based on groundwater flow mapping by the United States Geological Survey (Driscoll and others 2002), water in the vicinity of the Dewey-Burdock site flows S/SE along the southern edge of the Black Hills, and once into greater Fall River County, groundwater flow is due east (Figure 70 – black arrow showing dominant flow direction was added by me). This report makes no mention of a groundwater divide or other circumstance that would indicate isolation of groundwater within the Dewey-Burdock vicinity.

[ATTACHMENT: "Figure 70, Subareas, generalized ground-water flow directions, and flow zones for the Minnelusa aquifer. Estimated transmissivities and flow components for flow zones also are shown (from Carter, Driscoll, Hanmade, and Jarrell, 2001)." (image)]

Figure 70 shows that while groundwater flow north of Dewey-Burdock may initially be to the SW into Wyoming, this flow path quickly corrects to southward and then eastward flow. The flow from north of Dewey-Burdock to the SW has been measured at 591 feet/day, but flow south of the site has been measured at 7,393 feet/day. Once eastward flow is established, its been measured at 4,349 feet/day to the east at the SD-WY state line, then 1,463 feet/day to the east in northern Fall River County and 732 feet/day to the east in central and southern Fall River County. On average, flow from Dewey-Burdock towards Edgemont, Hot Springs, Buffalo Gap, Oelrichs, and the western border of the Pine Ridge Reservation is about 3,484 feet/day. The Pine Ridge Reservation (Oglala Lakota County) is 46 miles from the Dewy-Burdock site, which means contaminated water from Dewey-Burdock could travel to the Pine Ridge Reservation in 70 days. Edgemont would be affected in weeks, and Hot Springs would be reached in as little as 35 days.

Water Quality in the Minnelusa Aquifer

I've attached a recent groundwater test from Minnelusa Aquifer from the Hot Springs area (see following pages). Based on EPA's criteria for aquifer exemptions:

[...]

Concluding Remarks

If the injection permits are allowed to forward, its very likely that there will be leaks, and contaminants will adversely affect drinking water supplies in Fall River County

References

Driscoll, D. G., J. M. Carter, J. E. Williamson, and L. D. Putnam. 2002. Hydrology of the Black Hills Area, South Dakota. United States Geological Survey Water-Resources Report 02-4094, 150 pp.

Signature

The information contained herein is true and correct to the best of my knowledge at the time of this writing on 19 June 2017.

The administrative record fails to support the contention that the Dewey-Burdock injection wells will not result in the release of injectate into the Minnelusa formation, or to surface water in the project area. Available data demonstrates that there is potential communication between the Minnelusa and Madison aquifers, and with the surface water.

The U.S. Geologic Survey has explained:

Ground and surface-water resources in the Black Hills area are highly inter-connected. The quality of the surface water can affect the quality of ground water, and vice versa ... The Madison, Minnelusa, and Minnekahta aquifers are especially sensitive to contamination, because of secondary permeability and potential for streamflow recharge.

(USGS, *Atlas of Water Resources in the Black Hills Area, South Dakota,* Water Resources Investigations Atlas HA-747, 2002, pp. 59, 71).
The EPA acknowledges that there is downward flow from the Minnelusa formation into the Madison formation, but discounts the potential for migration upward. (EPA, *Dewey-Burdock Class V Draft Area Permit Fact Sheet,* p. 30). The Madison aquifer is the source for artesian springs in this area. Contamination of the Madison formation potentially impacts surface water through artesian springs. According to USGS,
Aquifer interactions can occur at artesian springs, which discharge about one-half of average recharge to the Madison and Minnelusa aquifers in the Black Hills area. Various investigators have hypothesized that the Madison aquifer is the primary source for many artesian springs.
(Naus et al, *Geochemistry of the Madison and Minnelusa Aquifers in the Black Hills Area, South Dakota,* Water Resources Investigations Report 01-4129, 2001, p. 2).

The potential pathway for migration of injectate into the Madison aquifer (per EPA) and then into surface water (per USGS) is improperly discounted by EPA. The agency has failed to given proper consideration of the potential existence of pathways resulting from unidentified faults or future seismic activity. The EPA finding that "the nearest potential pathway for fluid movement out of the injection zone in the Dewey area is the Dewey fault," is not supported by adequate data, in light of the regional seismology. (EPA, *Dewey Burdock Class V Draft Area Permit Fact Sheet,* p. 26).

[...]
The directional flow of the groundwater confirms our concern with the migration of pollutants. Horizontal flow has been confirmed for the Inyan Kara formation, and is possible for the Minnelusa aquifer. The recharge area from outcroppings flows toward the Cheyenne watershed. There is an interconnection between surface and groundwater in this area, especially at artesian springs.

Similar gaps in the analysis exist in the failure of the EPA analysis to assess a plan to review groundwater restoration only for a period of 12 months. There is no support of basis for this time period, nor any discussion of the basis or effectiveness of such a time period. Further, no alternative time periods were analyzed.

---

3. WHEREAS, all aspects of Uranium mining have adverse environmental consequences and, the main proposed mining method for Black Hills sites in-situ and open pit mining that are known to contaminate groundwater (aquifers) and surface water resources with heavy metal and traces of radioactive uranium, and
[...]
5. WHEREAS, safe drinking water is a key pillar of public health, and
6. WHEREAS, water is in short supply in South Dakota to include the Black Hills and contaminating this natural resource can be an irreversible disaster to communities that depend on that aquifer, therefore be it

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(3) The draft permit will jeopardize groundwater and surface water in the Black Hills. The administrative record lacks adequate information to demonstrate that the affected aquifer formation and surface waters will be protected from contamination.

---

3. The UIC Permit will Jeopardize Groundwater and Surface Water in the Black Hills
The administrative record fails to support the contention that the Dewey-Burdock injection wells will not result in the release of contaminants into the Minnnelusa formation, or to surface water in the project area. Available data demonstrates that there is potential communication between the Minnelusa and Madison aquifers, and with the surface water.
The U.S. Geologic Survey has explained:

Ground and surface-water resources in the Black Hills area are highly inter-connected. The quality of the surface water can affect the quality of ground water, and vice versa ... The Madsion, Minnelusa, and Minnekahta aquifers are especially sensitive to contamination, because of secondary permeability and potential for streamflow recharge.

(USGS, Atlas of Water Resources in the Black Hills Area, South Dakota, Water Resources Investigations Atlas HA-747, 2002, pp. 59, 71).

Our concerns include both surface and ground water. The Pine Ridge Reservation has a history of both ground water contamination and river contamination. We are currently threatened by an existing uranium mine to the south and by historical uranium mining and the Dewey-Burdock project to the north. The mine to the south, the Crow Butte ISL mine, has had 85 license violations and reportable incidents, including a leak that was not reported or stopped for over two years.

Thunder Valley Community Development Corporation is a non-profit organization based on the Pine Ridge Reservation. Our mission is to empower Lakota youth and families to improve the health, culture, and environment of our communities through the healing and strengthening of cultural identity. To accomplish this mission, we are challenging the status quo to develop new approaches to food, housing, youth, social enterprise, Lakota language, and workforce development. This includes building a sustainable community around the principles of People, Planet, and Prosperity.

We are concerned about the proposal to permit the construction of an in situ leach (ISL) uranium mine and deep waste disposal wells in Lakota territory, because water is central to our culture, to community development, and to Lakota existence. Without a consistent supply of healthy water, our community and our people cannot continue to develop spiritually, economically, or socially.

Subject: Fw: Stop uranium mining near Mt. Rushmore
EPA
cc: Bernie Saunders
[...]
On Monday, May 15, 2017 8:36 AM, "Bonnie Gestring, Earthworks" <action@earthworksaction.org> wrote:
Uranium mining near Mt. Rushmore puts water at risk.
Tell EPA: Protect South Dakota drinking water!
Dear Cave,

Mining company **Azarga/Powertech is proposing to mine for uranium just 50 miles from Mount Rushmore** – threatening drinking water for families and ranchers. If this mine is built, it will be the first in-situ leach uranium mine in South Dakota. This type of operation pumps a chemical solution into a groundwater aquifer that contains uranium ore. The chemical solution picks up the uranium, and the solution is pumped back to the surface for processing.

Groundwater has never been returned to its original condition at any in-situ leach uranium mine in the U.S.
We can't afford to pollute clean water.
TAKE ACTION: Tell the EPA to protect South Dakota's groundwater from uranium mining!
Thank you,
Bonnie Gestring, Earthworks Northwest Circuit Rider

Subject: Black Hills

I am respectfully asking that you stop the Chinese mining company from ruining the black hills. The uranium mining is something we need to stop doing to our planet and we have learned too much about the damages to our fresh water sources and the damage we can cause with these practices. Thank you very much.

Subject: COMMENTS ON Dewey Burdock Class 3 and Class 5 injection Well Draft Area Permits

and on Aquifer Exemption Approval

Comment submitted by --

Marguerite Matera, 6 Birch Grove Heights, Gloucester, MA 01930, an interested party who is a US citizen, taxpayer, and user of the natural resources of the state of South Dakota, including but not limited to drinking water and consuming food while in South Dakota for travel and recreational purposes.

The permitee(s) should NOT be granted a UIC permit or permits that exempt them from applicable regulations that protect human health and the environment, and that protect the quality of the aquifer in the southern Black Hills region in Custer and Fall River Counties of South Dakota, and that protect this aquifer from contamination and deterioration in quality from the disposal of mining waste into or adjacent to the aquifer.

The EPA should not grant permits or exemptions from aquifer protection network to Powertech USA that would allow disposal of uranium mining waste in or adjacent to the aquifer in the southern Black Hills region in Custer and Fall River Counties of South Dakota

Disposal of uranium mining waste in or adjacent to the aquifer will result in the release of Radioactive substances including Selenium, that will posion the animals and other life in the area. The people of the United States, including its children, need this aquifer to be uncontaminated and protected by vigorous application of criteria and regulations applicable to clean water. The EPA should determine that the aquifer is subject to safe drinking water standards and should not approve an aquifer exemption.

Thank you for your serious consideration of this comment. Please weigh this comment in your deliberations.

My research is focused on finding a solution to the water contamination by uranium, arsenic, sulfates and a number of other metals/elements of concern. Uranium chemistry is very complicated and it is difficult to imagine the environmental impacts by this proposed project. Though I feel optimistic that we are closer to solving a portion of the problem, it will cost more to remediate a contaminated sites in the future which is inevitable.

I am deeply saddened of this news and I sincerely hope that this project is not allowed to move forward.

RE: Dewey-Burdock uranium mining proposal

Dear Ms. Shea:

Telephone: (605) 519-5128

Fax: (605) 355-9319

As a long-time resident of the Black Hills, I am writing to express strong opposition to PowertechAzarga's proposed permit for an in situ uranium mining operation in the Dewey-Burdock area north of Edgemont, South Dakota.

Western South Dakota is a semi-arid region, much of which is Indian Country, whose primary industries are agriculture (both farming and ranching) and tourism. We depend on our underground aquifers for domestic use, livestock, wildlife and recreation.

If Powertech-Azarga obtains the uranium mining permits that they are seeking, they may well transfer this valuable property right to a different corporation. It is a major concern that one facet of the proposed uranium mining operation is the disposal of in situ uranium mining wastes into underground aquifers. Radioactive wastes from elsewhere, notably Nebraska and Wyoming, could be disposed of at the Dewey-Burdock site.

My well goes 300' down and will be ruined by radioactive waste.

Please! Please!

Don't let this happen! Please!

DANIEL BEAR SHIELD: Yes.

Hello. My name is Daniel Bear Shield. I am a member of the Oceti Sakowin. I belong to the Santee Sioux Tribe of Nebraska. I didn't have a chance to really look at some of this stuff that's being proposed, so.

But irregardless to that, I just want to say that on behalf of the Santee Sioux Nation, I have a resolution that was passed by our tribe in opposition of these permits. So I would like to share that with you guys. I'd like to give that to you.

[...]

DANIEL BEAR SHIELD: And in regards to these permits and these applications, you know, we would request that a denial be made not only because of -- of the threats of contamination to the aquifers, so I really strongly believe that, you know, our -- our precious water, you know, is not really being looked at here.

To me, it's more valuable than this uranium that you guys are proposing to extract. So today, on behalf of my tribe, Oceti Sakowin, we ask that these permits be denied.

Thank you.

And just like the lady that spoke about her mother, my mother moved home, and I told her, "Be careful with the water because we don't know what's in it." We don't know if it's contaminated because of the drill holes that were not covered. My mother also has cancer now. I don't drink the water, and I am well and healthy.

DOROTHY ROWLAND SUN BEAR: My name is Dorothy Rowland Sun Bear. I'm from Wounded Knee, South Dakota, on the Pine Ridge Indian Reservation. And I know that the uranium is in our waters and that really concerns me, because I know about the horses that died.

And so, you know, I -- I can say a million things about water and treaties and, you know, everything. But I think all we really need to remember is that we have a lot of children that are depending on these aquifer waters and on us to make the proper decisions so that they have something to drink. It's very simple.

We need a safe and stable water supply. High pressure injection and extraction mining of uranium, oil, and gas is happening in the Nebraska panhandle as we speak.

[...]

NANCY KILE: We in Sioux County are at the gateway of Wyoming's movement to dump out-of-state waste from these operations into Nebraska soils. Who is accountable when tectonic stability is changed and movement occurs that allows poisoned production water to further contaminate our regional groundwater?

PAULA ANTOINE: Good afternoon. Thank you.

(Speaking in indigenous language.)

Good afternoon. My name is Paula Antoine, and I'm a member of the Sicangu Lakota, which is part of the Oceti Sakowin. I am also a grandmother, a mother, and a relative to many.

I'm a resident of South Dakota, and I'm also very proud to be part of a growing movement of environmentalists who -- who stress the importance of clean water.

And I'd just like to remind the EPA of one of the most important portions of your mission statement, which states: All Americans -- that the EPA is to protect all Americans "from significant risks to human health and the environment where they live, learn, and work."

[...]

But most importantly, I just would also like to add that the future generations are depending on what we say today and what we do today and how we protect the water and how we come together to protect that water.

And water is life. And the point of all of us coming together throughout the past few years to protect the Black Hills and the area that is -- that is affecting the Dewey-Burdock case, we just want to have clean water for our people and to have healthy people.
Thank you.

Therefore, you always hear the term "water is life" on the -- and in a deeper meaning, I say water is alive. Water is alive. Mni kiniya lo. And that's why I'm standing here before you with my relatives of the Oceti Sakowin to ask the EPA to oppose this and anything that has to do with uranium mining or injection wells or anything that will be -- affect our environment. We call it Unci Maka, Mother Earth.

ROBERT WHITE MOUNTAIN: Good evening. I didn't know that I'd be talking this soon. I thought I signed up last. I know I've only got five minutes, so I'll try to keep it brief and to the point.
I'm glad that you -- whoever is doing this is holding this public forum so people can voice their opinions. Whether they are heard or not remains to be seen.
But I would like to voice mine. I feel that, you know, we -- my people have been stigmatized with a label, and they labeled us, you know, dumb, stupid, incompetent, and just drunk Indians. Said we are so dumb that we can't take care of ourselves. But you know, that's not true.
I know that no matter -- no matter which way you look at me, you know, it doesn't take a scientist or anybody with any kind of amount of common sense to understand that if you look around, you'll see that we only have so many amounts of freshwater supplies here in the world.
And it just seems so foolish to me -- even though I'm supposed to be dumb and stupid, it just seems so foolish to me that we would poison what little of the freshwater supplies that we do have.
And do we have -- we have a growing amount of people coming into this world, like right there. And it doesn't make sense to me, you know, that we would poison this water that we need to survive.

You know, we can survive without food, survive without almost anything, but we can't survive without water. Our bodies just need it. We are made up -- everybody knows we are made up with whatever percentage of water, and we need it.

[...]
I look at the test sites, you know, that leak. Just -- they are big, big holes. And I don't know, our people were taught that we don't go underneath the -- underneath the earth for anything.

To me, I think -- I look at the Bible, and you talk about the forbidden fruit. To me, I think what they are talking about is that we don't go and do -- touch things that we're not supposed to touch, which in that case was an apple.

But I think it's more of we're not supposed to touch things that were created by God. That means that everything was given to us above land. We don't need to go underground because that's supposed to stay there. That is made in a certain way so that it could create life and sustain life.
But if we disturb that, and we create these holes that create poisons, like going into the aquifers, poisons our water systems, you know, we all lose.
It's not a matter of whose land or what land. It doesn't matter, you know. We just all lose. You know, I -- my sister showed me -- she has documentations of Pine Ridge already. The levels of uranium in their waters that they've been drinking for years is unbelievable. But it's supposedly safe.
Then I saw a commercial the other night on TV, and these guys were asking people to drink this good, clear water, but it had a small level of lead in it. You probably don't see that commercial.
And it looked pretty good, clean water, but they said it has, you know, a safe amount of level of lead in this water. And everybody stepped back, you know. All the people in that commercial, they stepped back.
It was like the water would contaminate them if they even got close, much less drink it. But yet the people, my relatives at Pine Ridge have been drinking this water even worse than that in this commercial for years.

And then to poison it even more? You know, especially when we have so many alternative energies at our disposal. Like the Creator gave us everything above ground to survive, and we still have enough above ground to survive.

[...]
We have to take a look at that, I think, a very serious look, you know. Because if we run out of this water, that's it for all life. I don't mean human life, but animals, plants.
I work with kids back home. We have a high suicide rate. We have gardens and orchards and brought back life to these kids, you know. We finally got some water that's coming from the Missouri River. We finally -- after our elders, you know, our people have fought for water for -- since the '50s.
They said, when they built the Oahe Dam, it's going to be free electricity, free water. Never happened. Finally, all of a sudden, we get good water, gotta get pumped in.
Now we got the pipelines that are going to poison the water. We got uranium going to poison the water. We finally got some sort of quality of life to our people after we survived genocide and all the things that have happened to our people. I don't need to go into that one.

SAMUEL STANDS: Hi. My name is Samuel Stands. Mni Wiconi. No uranium. Mni Wiconi. Black Hills.

TONIA STANDS: What does it mean?

SAMUEL STANDS: Water is life.

REGIONAL JUDICIAL OFFICER SUTIN: Would you like to say anything else, Samuel, or are you done?

SAMUEL STANDS: Yeah, I'm done.

SCOTT KILE: My name is Scott Kile. I live west of Crawford, Nebraska, along the White River, about 10 miles from an in-situ leach mine. And we're going to hear a lot of things about in-situ leach mines and exempting aquifers. They are not a contained system. They will leak. It's a fact. They will leak, and people downstream are going to feel the hazards of this.

I'm here to oppose this. It's wrong. It's criminal to exempt any aquifer. It's -- I just don't have enough words to say how criminal this is. The EPA should not be exempting any aquifer. Water is life. And if we ruin it, we waste it, we're going to die.

And you know what, those aquifers, there's leaks under there. So we're getting it right from White River and underneath in the aquifers.
Can you time me out? I'm going to give my baby to my spouse over there, staring at me.
(Pause.)

And I wish I could hang this sign up, but -- our banner we made. And this says, "Keep uranium out of the sacred He Sapa aquifers." And we really mean that, especially the Oglalas from the Pine Ridge Indian Reservation and as the Rosebud people, because they get White River -- there's a town here that's called White River. And nobody knows that.

[...]
And they want to keep bringing aquifer mining into our area? Those are like five -- five pristine aquifers. And you know what, three of them are in Lakota.
[...]
And then, what, you want to bring that into the Black Hills? Pristine waters. And they do dye tests, and they leak out into our creeks and our rivers.
It's a natural way of life, and there's no way this -- those evaporation ponds, spray mists, and those reinjections into the aquifers is going to keep it safe.

WANIYA LOCKE: (Speaking in indigenous language.)
I am from Standing Rock, and we are protecting the Missouri River. I'm a part of the Oceti Sakowin of the Hunkpapa Mdeakantonwon bands. And I'm standing here because there's only 2.5 drinkable water in the world, and 1.7 is groundwater. We have 7.5 billion people in the world.
So even though I'm a part of the Oceti Sakowin, I'm also a human being, and I know how much water is going to be used and how contaminated it will be and what the effects are going to happen medically, physically, spiritually to the people in the surrounding areas.
[...]
Think about the future. Think about what uranium is going to do to our water. And remember that you are making a decision for many generations to come.
Only 2.5 for the whole world; 1.7 groundwater is drinkable. Think about how much has already been contaminated from corporations that are protected by EPA law, that are protected by NAGRPA.
And we, as the people, are standing here and pleading and begging you, please reject it and deny.
(Speaking in indigenous language.)

DREY WILLIER: (Speaking in indigenous language.)
My name is Drey, and I'm from the Cheyenne River Sioux Tribe. I'm here to stand up for the water and for all living things that drink this water.
And it's obvious that you guys don't know the value and how important this water is to, not only the people, but to all living things on this earth.

FLORENCE THOMPSON: I'm just a citizen, but this is personal to me. I'm a grandmother, and my little grandson is six years old, is drinking water out of the Minnelusa and out of their well. And their place, I'm hoping that someday it will be his place, so maybe his whole life will be spent there.

GENE TYON: My name is Gene Tyon. I grew up on the Pine Ridge Indian Reservation, live in Oglala. And I've been living up here in our hills for the last 30 years. And I'm here to represent our youth, our unborn, and all living things that are on here on Mother Earth.

[...]

Because of this uranium, in the last 30 years what's been going on in our hills here, I've been -- I know that -- I know in time there's going to be a natural shift in the earth here, and that's just going to go right into the water. It happens, you know? And with that, why -- why do this? Why do this, what you are doing, you know? You know this is going to happen. You know this is bad for the environment, for all.
[...]
I don't have no data or no expert research reports, but just common sense telling us that we need our water, and we will be here to stop anything that comes in contact that you bring.

And another thing is, you know, I think just this one proposed mine, the Powertech uranium mine near Edgemont would consume over two and a half billion gallons of water during its lifetime.
And that's really concerning, especially regarding with historical treaty claims, but also just, you know, the water use in South Dakota and how will that impact our agricultural and livestock communities.
And this is according to the own company's figures. So that's something I really want to stress.

Someone said, Oh, that's just an easy saying. They chanted it earlier, you know, "Mni Wiconi." That's what we know. It's a philosophical belief that we have. Water is life. And without it, none of us are going to be able to survive.

And South Dakota, we're kind of a crazy state, right? We're red and we're blue and we're whatevers, but I'm really happy to see that today we can come together as South Dakotans and as Lakota people and as humans, come together and say we need to protect our water.

MARY ANN FAKLER: I'm Mary Ann Fakler. I'm a resident of South Dakota for 80 years. And I've always known that water was our most valuable product.
It bothers me to think that we would jeopardize our water source for a foreign entity to take our uranium. It might be different if we saw that as something that we needed to defend and protect for ourselves, but to play with the aquifers is a very dangerous thing.
Thank you.

This week you will hear testimony that our Western South Dakota porous aquifers and caves -- and we've got to really include the caves because they are all intertwined and leak into each other. In-situ uranium mining potentially contaminates a great deal, not only just underneath, but the topsoil and where our animals and birds are.

[...]

We've been in this fight for a long time. And I just want to -- it's already been mentioned, but I do want to put in the record for the -- about the City of Rapid City, who came out with the resolution. And it said, in essence, "Be it resolved by the City of Rapid City that due to the potential risk to the Madison aquifer, the City expresses grave concern about the proposed in-situ mining of uranium."

Another use is -- another issue is water consumption, where the water is poisoned beyond any future use, although according to EPA reports, that might be kept to a minimum in the mining process by stripping the lixiviant by reverse osmosis and reinjecting the water. The restoration phase might be another matter, though.

[...]

RODNEY KNUDSON: I will just finish up with my line.
We have made a Faustian bargain with the Devil by creating problems no one will be able to solve, and in the process, engaged in a collective death wish.

I have been told by noted hydrologists from the School of Mines, particularly one Dr. Perry Rahn, that taking some 9,000 gallons a minute of water out of our watersheds would probably dry up a significant portion of the 2500 wells and it might make a number of them extremely toxic.

[...]

I know that using that much water will destroy agriculture. And you have to realize that these aquifers are close together down there. The Minnelusa, the Inyan Kara, the Madison are all relatively close together in that area. It will be just a short matter of time before we have polluted all of those.
If you look at the water that comes, supposedly, out of the Madison as a flowing spring in Hot Springs, at about 70 degrees, you'll find that that also has contaminants from the Inyan Kara and the Minnelusa.

And the Rapid City Council, as you've heard, related to has passed a resolution stating that they have grave concerns about uranium mining and its affect on water.

I've worked in the nuclear industry. I understand what kind of radiation you're talking about, and you can't take a shower or wash your clothes with that kind of protective gear on. You're supposed -- you know, how do you protect yourself? How do you protect your children?

Your water will be ruined. It's going to communicate. We all know that. The water is going to mix. Then you're talking about having these pools to clean up contamination when radium has a half-life of 1,600 years. So, what, it just evaporates off, and we breathe it in? How does that work?
[...]
They want to drill 17 boreholes out there so they can bring in more radioactive water and put them in the boreholes, and it will seep into the water source.
And you guys are going to monitor it, but how are you going to clean it up? In the fracking solution, two drops of benzene in fracking makes 30 gallons of water into a carcinogen.

ALAN MCCOY: I'm Alan McCoy. I'm on the executive committee of the Black Hills group of the South Dakota Sierra Club, and we're opposed to this uranium mining project primarily because of the water issues that many people have already talked about.
We're concerned about both the extraction of the amount of water that's necessary for this project, but also the injection of the contaminated water back into the aquifer.

Environmental Protection Agency, you know how these aquifers move. And you mentioned the movement of one aquifer, the pressure, and the other one you was mentioning, not so much pressure. To me, you are open-invitation for contamination by these corporations to do whatever they want to pollute the water and say, Well, it was polluted. That was my take on your little presentation there.

[...]

And when will foreign companies be held accountable for restoring water, groundwater, and aquifers?
[...]
So I think that the best public interest would be to look at the health of not only the people, but the health of everything, the water itself. It appears like we're being under attack, a constant attack.
[...]
We're drinking alpha emitters where I'm from, the Cheyenne River Sioux Tribe, in the water. There was barium in it the last -- two years ago, and now the barium is gone and the alpha emitters are back. So it is going to be a major health issue 10, 20, 30 years.
[...]
You know, that is -- there's some kind of deceit here and movement. When you're dealing with something like water, that's actually medicine, and then you're turning something to what we're drinking now into alpha emitters 100-some miles from here.
So the Cheyenne River Sioux Tribe stands opposed to this, and we'll be making some more comments before the 19th. But you got our initial resolution, and I'd like to thank you.

EPA, believe the community members. Follow up on the sources we provide you and decide to stand for the truth, that the in-situ leaching -- not recovery, in-situ leaching will allow poisons into Black Hills aquifers. Learn these truths, that the Black Hills aquifers are permeable, despite the testimony of the woman today.

They leak into each other, so there is no way to sequester the toxic byproducts of in-situ leaching.

[...]
CAROL HAYSE: Protect our water. Mni Wiconi. Protect our water. Mni Wiconi.
(Group chanting.)

CHERYL ANGEL: Good afternoon. My name is Cheryl Angel. I was born here in the Black Hills. I was raised in South Dakota. The past year I've been standing with people who wanted to defend land, who stood in defense of land and water at Standing Rock.
We didn't do it for nothing. All these people here who came, they didn't come here for nothing. We have expectations. We have needs. And we're going to stand to make sure that the EPA doesn't approve this permit.
Everything that I've heard, if I was sitting in your shoes, I would have already decided to not grant that permit. And that's just using my common sense. That's not using the scientific facts. That's not listening to the evolution of mankind and all the geography that -- you know, that Creator made to keep water clean for us.
For tens of thousands of years, those aquifers have kept this land beautiful. It's sustained all plant life, all animal life, all humanity for tens of thousands of years.
Drilling into the Black Hills now is only going to result in the same thing that has already happened: Contamination. That alone speaks volumes. This area has been contaminated already -- already -- by allowing uranium mining. What part of that doesn't the EPA get?
The people here know it. They know it. They understand it. They are living it. Why are we going to condemn -- why is the EPA going to condemn the rest of the people who are going to live here? Because that's what's going to happen if that permit is approved.
You're condemning, and you're allowing the contamination of the one thing that sustains us all, and that's water. It's a scientific fact. Water is life. I mean, who is the EPA and all of these people? Who are they to say that, okay, money is more -- better? Money is more powerful? Money is more influential than life? Than -- water sustains life. That's a scientific fact. There shouldn't be any -- any question at all.
Just look at the history. There shouldn't be any question at all of what the uranium mining does to water, to the aquifer, to the people, to the landscape, to the future. There shouldn't be any question.
So I'm glad you're having this hearing because it falls upon you to use your common sense and to do the right thing and to use the facts to deny this permit.
Because that's the only result that makes sense. That's the only thing that we're asking you to do. That's the only thing that's needed to protect the Black Hills.
My people have been here for tens of thousands of years. We didn't contaminate this place. This place was stolen from us. It's been occupied by people who want to protect it. They're standing with us now. We're standing as one, for all humanity, for all plant life, for all life. We're standing up for you.
So don't be afraid to deny that permit. Whatever courage you have, remember you're not standing alone. You're standing up with thousands of people who want that water and who will back you up. So we're asking you to do the right thing.

That shouldn't be too hard to do with all of the facts that have been presented and all the testimony that's been given. Do what's right. You already know what it is. Don't fail us now. Do not fail us now. Because we'll stand behind you.

And we'll stand like this because we're here to protect the land and the water for the future.
(Speaking in indigenous language.)

DON KELLEY: Good afternoon. My name is Don Kelley. I'm a retired pathologist living in the Black Hills.
I'd simply like to report to you that in 2014, after discussion of the ISL uranium mining technique and the potential risks to South Dakota aquifers, the South Dakota Medical Association adopted a resolution opposing uranium mining in the state.

It was felt that the risks outweighed any potential benefits to the residents in the state. In this action, South Dakota followed the example of the Colorado Medical Society, which also went on record to oppose uranium mining.

I think physicians in the region are concerned about the public health consequences of any prolonged increase over background radiation exposure, even if small, experienced by humans or food animals, and are concerned as well about the chemical toxicity of uranium and other heavy metals freed during the ISL procedure.

Proven and potential cross-communication and cross-contamination among aquifers pose a significant risk to health, which the proponents of ISL uranium mining have no way of providing absolute protection against.
That's basically my comments. I do have a copy of the resolution adopted by the medical society. I would be happy to leave that with you. It's got all the references about health risks.

GENA PARKHURST: My name is Gena Parkhurst, and I've been a homeowner in Rapid City for the past 11 years. I oppose ISL uranium mining in Custer and Fall River Counties because I am very concerned about contamination of our groundwater.
This area is prone to drought, so water conservation is a priority. South Dakota's two largest industries, agriculture and tourism, depend on adequate supplies of clean water. Excuse me.
[...]
There are a number of factors that indicate a mine in the Dewey-Burdock area would likely result in contaminated groundwater. There are old uranium mines in the Dewey-Burdock area that are not fully reclaimed, enhancing the risk of groundwater contamination.
[...]
I've heard that the Minnelusa aquifer has 125 drinking water wells in the southern Black Hills. That can be confirmed by the South Dakota Department of Environment & Natural Resources.

With uranium mining, we need to keep in mind the fact that the half-life of uranium is 4.5 billion years. Yes, that is "billion" as in B, like in boy. Untold numbers of people living now and those yet to be born could be affected.

[...]

As a person with birth defects caused by exposure to toxic water while in my mother's womb at Camp Lejeune, North Carolina, while my father served in the Marines, I had no choice about what kind of water I was exposed to.

In my case, the brew of toxins resulted in birth defects that will forever affect my quality of life in significant ways.

[...]
I am not alone in my concerns. As you've heard earlier, the South Dakota State Medical Association has stated their opposition to uranium mining in the Black Hills in direct response to Powertech, now known as Azarga's proposed ISL uranium mine, making it the second statewide medical association to publicly oppose uranium mining in response to a Powertech ISL uranium mine proposal in the past nine years.
And in 2013, the Rapid City Common Council passed a resolution expressing grave concern about the effect that this project might have on the Madison aquifer, a major source of drinking water for Rapid City.
[...]
In closing, is the reward of a few dozen short-term uranium mining jobs worth the risk of 4.5 billion years of water contamination in this drought-prone part of South Dakota?
Thank you for your time.

JULIE LANTIS: Good afternoon. I'm speaking in opposition to granting the permits. My family has been involved in ranching interests in western South Dakota for many years. And we've been through more than one drought cycle, as Mr. Kammerer referred to.
Every drop of water, every acre of grazing land is so important to us. We get our drinking water from the Madison formation. So these matters affect several generations. We are hoping that our grandchildren will be able to continue to ranch. But there, again, they need water and they need grazing land.
Mr. Hollenbeck says that when the water is cleaned up, it's basically like saltwater that they will put back into the aquifers. Why would we want to put anything back into our aquifers that isn't pure water?
The amount of water they are taking out, 9,000 gallons per minute, is a huge, huge amount of water. And if you've ever stood day after day looking at the sky waiting for it to rain, that amount of water is very scary to us.
So that's the reason I am opposed to granting these permits. Thank you.

KIM KELLEY: My name is Kim Kelley. I've lived in western South Dakota for 55 years, and I appreciate the opportunity to express my concerns about Azarga/Powertech's plan to mine uranium at the Dewey-Burdock site.
I don't believe that ISL uranium mining is a beneficial use of our groundwater or that disposal of wastewater via land application or in Class V disposal wells is in the public interest.

This threat to our health is invisible. It seeps into our water. It contaminates the livestock. It is carried in the wind for hundreds of miles. And there is no dose of radiation that is harmless.

MARVIN KAMMERER: I hope my time didn't start back there because I've gone past the age of 80 years in this great land, this beautiful land, this drought area land that you people are trying to spoil.
You people don't look old enough to begin to understand the relationship of water in our heritage. The heritage of the Wasicu came later than the Native American. I am a Wasicu. I'm a cowboy, used to be.
But don't ever sell our water or the use of our water to a foreign corporation or a foreign entity. That's our water. And by God, we'll fight for it. We send people over to Iraq. We send people around the world to fight for corporate interests. To hell with them. Bring them back right here. We will fight for what is ours.
The amount of water that is maybe being permitted here, it's a tremendous amount of water. 9,000 gallons a minute for 20 years, 24 hours a day if they want. At 15 gallons a cow, will water 860,000 head a day.
And we, who live in a drought-stricken area, our dams are dry or almost dry. Several years ago at the last drought, we had to dig a hole 2,260 feet deep into the Inyan Kara, the one they want to pull out of now.
And it waters our stock in wintertime. And when the dams were dry and empty, we had to put in miles of waterline. But the Inyan Kara is a blessed gift.
And every other one of these bodies of water under there, we don't know what's going on under there. It's a suggestion. It's a gimmick. The upheaval of the hills is still going on, and when you stick poisoned water back -- and don't tell me it can be cleaned up. It's never been cleaned up. And I don't want it.
That water you're drinking right there right now, when they get through cleaning it up, can I bring you up a gallon of it and have you sit there and drink it while we're giving testimony. You know better.
It's our water. It's God's gift. We have to be careful with it. Look how we're poisoning water all around the world, simply for the method -- mode of profit to somebody. It's our water. It doesn't belong to the damn Japanese or Chinese. It doesn't belong to a corporate interest anywhere. It belongs to us.
My Native American brothers and sisters and us ranchers, we're sitting here trying to survive. All of you eat steak once in a while, I'm sure. We produce it. We produce good ranch kids who can go to your cities and their leaders, they'll pick things up and get things done, and they do the same at home.
If you put a bucket of water and a bucket of gold out in the middle of a pasture, and in a cage we lock somebody up for about four days, five or six, I know where he's going when he gets out. Because he hasn't been fed or watered or anything. Gold don't amount to much when you're thirsty. And I've drank some sour water.
That Inyan Kara is not all that they try to -- and you people are trying to say it is. And off to the -- near that area, when they force this damn injection back in and they're wanting extra wells? I question seriously why..
In that area there's a munitions dump. There's mustard gas and others still laying under there. They don't know how much. We brought it in here at -- in World War II and after. When we force this pressurized water in there, we move it, either it goes into another aquifer, and it migrates. And if it gets into this area, it saturates where all these poisons are laying. You'll have the damndest boom you ever saw.
[...]

MARVIN KAMMERER: I'm going to give you a written sheet, and I don't write well and I don't type. I'm an old man, and I'm not going to learn. But I'll give you a handwritten sheet on the -- by the 19th, and I hope you'll read it because it comes from me in here.
Granddad walked in here in 1880 with a freight train, when the -- when the homestead had opened up, he filed. And we're still here. And by God, we're not leaving, and you're not going to poison our water. Thank you.

Yeah. So now, Powertech/Azarga wants to come in and open up their own project. Powertech has no experience and hasn't drilled or mined anything, according to the sources I've read on the internet. They own over $10 million in uranium reserves. To give Powertech access to one of the main water supplies for the Black Hills, the Madison aquifer, sounds dangerous and ridiculous.

There are so many people that live in these areas that they can't go anywhere. This is their land. This is their home. Like, they have nowhere to go. They have no way to get there. Like, if this water, you know, goes bad, they have to stay. They have to deal with that.
You know, I see it back home, you know. I watch people from Flint. They have to go all over the place to try and start new lives because of what's happening there.
It's just a bit of a touchy subject, but... Four things. I was also asked to discuss, let's see here -- oh, yeah. That's kind of out the window at this point.
I just hope that you listen to all these people that have put forth all this evidence, and, you know, listen to how passionately they speak about this. Because these are the people that have to deal with the choices that you make here today.
That's all I have to say. Thank you.

But what else was I asked... Sorry. It's just a lot to think about. You know, I mean, like, if you look at the oceans and stuff from the last time something happened in this, it's not exactly like we're talking about oil or something that can be cleaned up a little bit easier.
We're talking about something that's polluting mass amounts of water from one spill of something, you know, radioactive. So there's just so much, like, evidence that says that we shouldn't keep moving in this direction.

So it's my opinion that it's pretty well guaranteed that if this final permit is granted, a huge groundwater contamination problem would be created. And despite permit conditions that requires Azarga to restore to preoperation conditions, we've already heard today it's not possible. No operation has ever been able to do that.

We have 2.5 drinkable water for the whole world. We are currently fighting pipelines, copper mines, uranium mines. Out of that 2.5 drinkable water for the whole world, 1.7 is groundwater. Our water aquifers are precious because there's no way to refill them once they have been dried up or contaminated.

And speaking of sacred sites, if you look at the aquifers, there is a whole precious ecosystem within these aquifers. There's microorganisms that are down there, and when they get disturbed by trying to inject this tainted water, that's going to disturb the whole process, the whole whatever is down there that's needed.

[...]

So I say, you know, them wantonly wanting to contaminate our groundwater will leave thousands of people and their livestock without valuable water sources. They will also leave millions of wildlife species that depend on the aquifers that nobody talks about, you know, the deer, the antelope, the eagles, everything. Everything depends on this.

[...]
So when we say water is life, no radiation in my water, just say no. I mean, this is it. It's game over. You know, people, young people got up here and spoke today, and I was so proud of them because, you guys have to understand this, we are protecting everybody's water. Everything on this earth depends on water.

I was at the bank one day, and I sat there, and this woman who had her window open and I had my window open, only she was in a convertible. She sat there, and she was telling on the phone, "I just washed my car and" --

[...]
CARLA RAE MARSHALL: Okay. So she's standing there, you know, "I just washed my car and now I have to go do the dishes. Then I'm going to do the laundry, and then I'm going to water the lawn." You know, everything she said she was going to do that day involved water.
So thank you for your time. Appreciate it.

It doesn't make any sense to me how anybody could be considering these deep, heavy metal mining projects when we're already dealing with wildfires and contaminating bursts from all the oil pipelines that have been installed. There have been hundreds of leaks and explosions within the past few years. Many people have died on the site of these explosions.

Why are we trying to drill more holes? It doesn't even matter if the small bits of proposed leakage might not cause any damage.
[...]
Hello? I think that the microphone went off. On, no, it didn't. Maybe Mercury is in retrograde. It's not, though.

Anyway, say if all of this radioactivity could be hypothetically neutralized. When it comes down to it, all of the water is shared by a collective water table. There might be pockets of geographical boundaries, but the water all eventually seeps into all the other water, whether it's underground or whether it's from the rain falling down; right?

[...]
So this is really serious business here, and it doesn't -- we can't point at any individual person or any individual group and -- because we're all sharing all of these things; right? We and everybody that's here in this room, I'm assuming, was born on this planet, born on this land.

It doesn't make any sense to me. I feel like -- sometimes I feel like this whole -- the government and these companies that are trying to do this are like school yard bullies sitting the little ones down and saying, Okay, you have to play by these rules now, you have to bring me this, you have to do this, or I won't provide this for you.

But you know what? When it comes down to it, once there's only a very small amount of clean water left, it doesn't matter who's the bully and who's not the bully, because we're all just going to have one little cup of water to share. I really hope that's not going to happen.
What I'm hoping to see from the EPA or anybody that has the ability to make unilateral decisions is, instead of bickering over whether or not we should dive into the earth for these radioactive materials, we should start figuring out, How do we clean up what we already messed up?

Water is the most important ingredient to life. We cannot survive without good water. Everyone in this room knows the pitfalls and dangers to our water this project possesses. The amount of water asked for by this foreign company for free is ridiculous. City residents pay for their water use. Why should we give it away to a foreign company?

To give away so much water in a semi-arid region that suffers from drought more often than not is a disaster in the making. We rely heavily on our aquifers. The Ogallala aquifer is important to the plains states. It is a vital resource we cannot squander.
Humans demand -- human demands on this water that sprawls underneath parts of eight states from South Dakota to Texas, and landowners are striving to conserve what's left, they face a tug of war between economic growth and the declining natural resources. We should not give so much away to a foreign company.

They claim there is no connectivity between the aquifers and their project is completely contained. Spelunkers thought they'd reached the end of the third largest cave in the world, Jewel Cave, which is north of the project. The spelunkers were thrilled when they squeezed through a very tight space and found yet more huge caverns.
We are not confident that Powertech or Azarga's claim of knowing what lies beneath. Dr. LaGarry has done extensive research, and his work was submitted during the NRC hearing, and I beg you to look at his findings.

I don't understand why you want to go play with your aquifer. The Ogallala aquifer belongs to the Lakota people, and they will defend it. It's the last fully functional aquifer in this country. All the oceans are going to rise 5 to 10 feet in no time. You're going to be evacuating your coast just to come inland. This is all you have left.

Okay. So you go pollute these two aquifers. You got two separates aquifers; they all go to the same place. In fact, Ogallala aquifer is being purified by the mountain ranges in the -- in the -- almost going to be exploding volcano if you allow it to get to this point.
All that radioactivity will travel north, what I have learned by watching the Mississippi rise and fall and rise and fall over a decade of living there.
[...]

So since the eclipses have occurred, something has happened in the Mississippi causing the waters to rush north. This is south of the Ogallala, is it not? What if the waters here go north? The whole aquifer will be contaminated.

All these people live off the land. They belong to the land, so do you. We all belong to the land. You cannot put a boundary, a barrier in between water. Water knows no boundary.
[...]
I've traveled the country many times with the Rainbow Family. I have seen the creeks, the red sulfur at the bottom of the creek. You have to go upstream or you have no clean water. You can't drink from the bottom. But now the top is the bottom. You want to put something in here, it's going to go that way.

"Whereas, hearings on Powertech's water permit applications will be held by the South Dakota Water Management Board in Rapid City at the beginning of October of 2013;

"And whereas, the City of Rapid City obtains a majority of its drinking water from the Madison aquifer;

"And whereas, the safety of the water in the Madison aquifer is of utmost importance to the City of Rapid City;
"And whereas, due to the unanswered questions regarding the safety of the community's water supply, the Common Council of the City of Rapid City believes that the proposed in-situ mining of uranium in the Black Hills poses an unacceptable risk to the primary source of Rapid City's drinking water.
"Now therefore, be it resolved by the City of Rapid City that due to the potential risks to the Madison aquifer, the City expresses grave concern about the proposed in-situ mining of uranium in the Black Hills.
"Dated this 19th day of August, 2013, City of Rapid City. Signed by Mayor Sam Kooiker, K-O-O-I-K-E-R. Attest: Pauline Sumption, S-U-M-P-T-I-O-N, Finance Officer. Sealed."
Thank you for listening.

JANE ROSELAND: Thank you.
I have a master's degree in analytical chemistry. I have worked for two large corporations. I have been on the faculty at the School of Mines. I am currently a chemistry teacher at Stevens High School in Rapid City. I have been a member of this community for 37 years.
I am here to plead with you to deny these permits. You are here considering whether to allow known contaminated wastewater to be injected into our aquifer.
[...]
There is no 100 percent guarantee that there will be no leak, that there will be no mistake, that there will be no accident. Please protect our water. Thank you.

You know, one of our state senators told you yesterday that South Dakota is not a nuclear waste dump. And it seems like with your knowledge of water shortage in Colorado, you would take into consideration the lack of water we have up here.

KELLY CORWIN: Hi. Thanks for giving me the chance to speak. My name is Kelly Corwin, and I live in Rapid City.
My comments are mainly to add to and support the other voices we've heard today. Clean water is honestly nearly nonexistent in the United States right now, and it's -- the situation is becoming worse every year.

It's well established historically that this project will -- not could, but will -- cause environmental contamination.

[...]
Unfortunately, we won't see this in the 24/7 media, but you actually don't have to look for and research to find that this is already happening. We've got documented cases and rates of cancer or other toxicity-related illnesses not just in older people, but young children, babies born with birth defects. These are all correlated with areas that have had environmental impacts similar to what would come out of this project.
Another thing I've been thinking about is that scientists and engineers draw these types of maps, the maps we've seen of the aquifers and the wells. We draw these maps to define boundaries. Here's one aquifer, here's another aquifer, here's where they're connected or here's the ways that they're not connected.
We've already heard some testimony on how we really don't know what's going on underground. None of us has lived underground where these things are, so we don't really know firsthand.
And I will say, as a scientist myself, that while these analyses have their purposes, they have their useful purposes, they are still only approximations of reality.

This is the earth we're taking about. Everything, everything, everything is connected, as multiple speakers today have already stated. The idea of containing contamination from a project is only an optimistic dream. It's not reality.

There are usable Minnelusa wells in the southern Black Hills downgradient from Dewey-Burdock. The state DENR says they know of thousands of current Minnelusa wells under use there; however, there are many older wells not registered by the state where the owners do not even know what aquifer they are in or how deep their water is.

They will not know they are sucking up hazardous waste, radioactive heavy metals until they get cancer and their cattle die.
Then comes the class action lawsuits to both EPA and Powertech, who will undoubtedly bail and file bankruptcy and walk away from the mess, leaving EPA holding the bag because you were informed of these private wells before these permits were even issued and did it anyway.
[...]
And regulations? IUC [sic] wells are required to treated waste acceptable -- to acceptable levels of toxicity or prove there is no migration of the waste. The wells are designed so that if they happen to fail, the waste would be confined to the injection zone.
No migration means the waste will not affect an underground water supply for 10,000 years or until the waste is not harmful.
To ensure this, the EPA mandates that there are no faults or other adverse geological features presents in the area, that the well injects into layers that do not currently hold water, but have the current features of porosity and permeability and that are below a confining layer.

In no way does the Dewey-Burdock site comply with these regulations. In this case, the metals are quite immortal. They do not break down and do not detoxify.

So if there ever was a case for your first rejection of a permit ever it is most certainly here and now. And -- oh, and I have a Minnelusa well. So thank you very much for hearing me.

This thing, when it gets away, puts it down underground, and there's people up here saying -- and there's some good scientists that's given evidence here. We don't know what's going on under there. It's a guessing game.

And if Azarga is the owner, then why -- it just doesn't make good sense to me that we're selling a foreign country 8- or 9,000 gallons a minute of water. And so we're not just selling them the rights to perhaps ISL mining as well as dumping toxic things, but we're also basically giving this foreign company the rights to water.

And I think if that's true, we shouldn't do it. And there should be some real safeguards about -- about this water.

[...]
I also wanted to talk about what Susan said yesterday is that, again, the selling. If there is selling, there really has to be safeguards about what -- this water, in terms of the amount that they have access to.

SAGE TRUDELL: Hello. My name is Sage Trudell. I'm Miniconjou Lakota from Cheyenne River. I was born and raised here in South Dakota. I was born in 1981. Prior to my birth, my mom and dad were both -- belonged to the Black Hills Alliance, fighting for this exact same thing.
I'm 36 years old. For many, many years you have been warned. We have told you repeatedly everything that you have been told today. And it feels like we're not being heard, we're not being listened to.
I grew up on waters that are polluted. Minor, you know, but to me it's like you're trying to pollute water and then clean it up, repollute water, clean it up, and give it back to us.
You know, you give us all these reasons about how you can guarantee this isn't going to happen, but there's never been an instance that it hasn't. When are you going to clean up what's already happened? What's going to happen when you run out of water, you know? We're -- we -- you may be doing this on indigenous land, but the water affects everybody. Water really is life. When you think about it, you're born from it, you go back to it.
[...]
There's a lot of times -- I haven't heard one reason come from the EPA in any of these hearings -- and I sat here, and I was here yesterday, and I followed the points and I listened to the people speak -- but you never one time gave us how it would be a danger to our environment or our water.
You told us how you could keep it from contaminating, but you've never been able to do that. And you can't control the earth. You can't control where it goes. You can't control what happens. That is something that is -- you can't control the power.
[...]
And then you guys are going to come in with the uranium mining? What about my children? You know, you may not care about my kids, but I care about yours. I'm going to stand on this side and defend the water for you since you seem incapable of doing that on your own.

STEVE MASSOPUST: Yeah. My name is Steve Massopust. M-A-S-S-O-P-U-S-T. I've been a physician in Rapid City for 35 years. I've practiced in emergency medicine, family medicine, and for the Veterans Affairs.
But I'm not here to give any expert testimony about the dangers of radiation and impeding fresh water. I mean, those things, I think, are quite obvious.
And I guess what bothers me the most about this is, I don't like people thinking I'm stupid, and I don't like people being unfair or dishonest. That's how this whole operation strikes me.
I do care about water and really hearing the Lakota concerns, very emotional, has been enlightening for me.

SYLVIA LAMBERT: Water has been a very important part to me all my life. I started out growing up in Pennsylvania, in the Peace Corps in Malaysia, Wisconsin, Minnesota, and the last 21 years here in South Dakota. My grandmother taught me about saving water, taking care of the water, not wasting it, and I will soon be 80 years old, and I still believe in it.

I have read a National Aeronautics and Space Association article. According to this June 15th, 2015 Washington Post article, new NASA satellite data indicates that freshwater aquifers are being depleted at alarming rates.

Much of this depletion is a result of various kinds of mining. They all use water-intensive processes.
Powertech/Azarga's proposed mining activities -- that's plural -- include pumping 9,000 gallons of water per minute from area aquifers including the Inyan Kara. This demand on the Inyan Kara aquifer competes with other local uses, reducing the water level while at the same time putting it at risk of contamination.
Powertech has also requested permits for a number of extra wastewater wells in the Minnelusa aquifer. The risk of contamination of this water source from this waste is obvious, but the danger is greater than that.

The Minnelusa communicates with neighboring water sources through naturally occurring breaks in the structure of the rock. One of these nearby aquifers is the Madison, the major source of Rapid City's drinking water.

Powertech speaks with scientific certainty about the safety of its technology. Other mining companies have said the same. Then the unanticipated happens. Drilling itself disturbs the geology, causing unexpected fractures and breaches.

Water gets polluted, often without remediation. There is no perfect understanding of underground geology, no mining technology that can anticipate and prevent every possible problem, and no effective methodology for cleaning up a toxic mess deep in the ground. So why risk the inevitable failure with our precious water?

But if the danger of poisoning our water doesn't stir you, then why allow the more obvious and certain outcome of Powertech's project? I am speaking of allowing a foreign company, seeking only its own profit, to dominate so much of a public good, even as that good, our precious water, is steadily dwindling away as we meet here today?

Please deny Powertech's permits for the good of our community.

You know, our area has been under attack for several years. They are out to destroy our water. You look at Dakota Access Pipeline, Keystone, uranium, nuclear waste test site in Haakon County. What have we done to cause this?

[...]

And I'll just close by saying, you know, remember that water is life. Someday you will understand. Hopefully it won't be too late. We need to understand the meaning of Mni Wiconi.
Thank you.

The second reason I say that some of the EPA has been captured can be found on the information sheets that have been passed out to the public at these hearings. One of them is titled, "How Much Groundwater Will Be Lost From The Inyan Kara Aquifers?"

This sheet, as well as the information presented with the PowerPoint, indicate that only, quote, "a small percentage," end quote of Inyan Kara water will be consumed. This follows the company's line, but it does not fit the facts.

The Inyan Kara water that is being used for mining will be run through the reverse osmosis process. It is common knowledge that reverse osmosis is an inefficient way to purify water because it turns at least 30 percent of the water it handles into wastewater.
This means that at least 30 percent of Inyan Kara water used by the proposed mine would become waste, not that 1 percent or the 3 percent that the company and the EPA claim.
The EPA maps make the barrier layer between the Minnelusa and Madison aquifers unnaturally large and consistent and minimize the size and importance of the Madison aquifer.

MOUNTAIN MAN SCOTT: My name given at birth is Scott Burt Putnick. My birth waters are along what they call Long Island Sound in Connecticut. I'm here because I was invited. I was asked to come.

I'm a water-protector, but more than that, I'm just a protector, as are all of us. It's the only true job I have in this world.

I'm a grandfather. I'm a father. I'm a son. I'm an uncle. I have a responsibility to my family and to all life, to protect those things that I know and understand to be sacred. Water is sacred. These lands are sacred. Each and every life on this planet is sacred.
Water is life. Without it, no life will exist.
[...]
You can't contain these poisons. I worked in the oil and gas industry for a number of years. My job title was cleanup and reclamation. It's a lie. You can't clean these things up. You can cover them up. They say that they can purify the water. The water was perfect before it was touched.
It was perfect. There was nothing that the hands of man have touched that we can make perfect ever again. I plead with you for the lives of these people, for the lives of all our relations out here, for their grandchildren's grandchildren, and more importantly to you, for your lives, for your children, for your grandchildren, because this affects you, too. It affects everyone on this planet. Do not allow this to happen.
[...]
Do not bring more into it. Do not bring more toxins in here. Do not pollute any more water.

WIYAKA LUTA: (Speaking in indigenous language.)
How many of you are supporting us on this water? These corporations, these ones that want to come in and dig, how many of them are for saving the water? I grew up traditional. I learned your guys' language, so I'm going to speak it today.
I want to know why you guys -- I mean, why they want to destroy everything, and why are they attacking our reservation? Is it because they used up all their resources? Why is it that they are attacking our reservation? I want to know. And up here, too, why are they trying to dump the wastewater on the reservation?
I mean, why are they doing this? Why are they doing this to the land? I want to know. I mean, you know, my grandparents, they fought so hard for this land so that I can grow up free. I mean, us Indians, we can dig up, we can build, and we can take it apart and put it back into the ground.
So now you want to come in with all these corporations and dig these holes that make all these buildings. Now you guys are polluting -- you guys -- is that why you guys -- is that why they poisoned our water, so they can come in and dig? If they kill me, then they kill my future generation now by poisoning the water.
So I'd like to say thank you to them for destroying the next gen- -- the next seven generations. What are we going to drink? What are they going to drink? And why do we have to pay for water when it's poison and it's not drinkable no more?
How many of these tribal workers here, how many of them are supporting the water? The ones supporting the water are sitting here, my oyate, my people. And then I got -- there's another room where they're all sitting.
[...]
This -- this thing right here just murdered the future generation. Our waters are poisoned.
[...]
WIYAKA LUTA: That's what I want to say. To my people that are here, remember that.
(Speaking in indigenous language).
They are in that other room, the tribal president.
(Speaking in indigenous language.)
They came and poisoned our waters. They can come and take the land and dig it up. Thank you for doing that, you know. Because one day it's going to all come back on these corporations. And one day it's going to be coming to me to try to live. I'll be waiting for you guys.

CATHY SOTHERLAND: Thank you. Thank you for coming. Thank you for taking the opportunity to give us the opportunity to share our concerns. We have many. And as my husband said, we have our well in the Minnelusa. We -- I sent you lists of all the wells in this area and all of the different aquifers they are in.

We're just uncomfortable with it.

[...]

Our water is precious. You can not undo the violation that will happen if there is a mistake. And it is a matter of time.

As the EPA, you know, you have seen that there are accidents. You have seen that there are violations that are usually caught by the states and the people overseeing those. We will not have that oversight, and we have no one to watch our backs, and we have got everything to lose if we lose the water. I thank you for your time.

CHAS JEWETT: Hello. Hi. My name is Chas Jewett. I'm a member of the Cheyenne River Sioux Tribe. I'm a resident of -- hey.
I'm a resident of Rapid City, and I grew up in -- on the Cheyenne River Indian Reservation along the Moreau River. And the Moreau River is in northwest South Dakota, and we had 103 abandoned uranium mines up there.
We can't drink the water up there -- well, we can, just not the women and the -- pregnant women and the children. Everyone else, go ahead.
So that's what you guys are looking forward to down here in the southwest because that's what these companies do. These companies aren't even from here. They come in here, they buy a few politicians, have some really well-spoken lobbyists that work for them. They say "organic," and I want to throw up in my mouth.
[...]
So you guys are the only people who can help us here. So help us, you know. You're here to listen to us, and we're telling you water is life out here. We need water to drink. We're all water drinkers in here, except for a couple of guys. Well, I don't know what they drink.
But, you know, we all need water. And we're not -- you know, this is -- you know, we've had a lot of different things that have come up here today.
[...]
But we the people, right here, are telling you we don't want it. 98 percent of the people in Rapid City said we don't want it. We don't want it. Listen to us. Hear us. Thank you.

CHRIS PANNILL: Thank you guys for coming all the way from Colorado. I love your guys' state. I have family there. So -- my name is Chris Pannill. I'm a candidate for Ward 4 city councilman, and I'm also a licensed emergency medical technician.
I just want to invite you guys, the EPA needs to come visit the Evans Plunge here in Hot Springs because that is part of the Madison aquifer.

And a lot of people come there to use that to swim, to soak, a lot of -- to heal and stuff. Our veterans in our community use that water to heal and stuff. So we need our aquifers to be protected. So let me just start.
We drink water. If these water aquifers be contaminated, then we will have no clean water to drink. As a licensed EMT, we will see more hospital visits. We will have more ambulance rides here to Rapid City. This means severe dehydration cases.
We must prevent these causes -- must prevent these cases from happening so that the ambulance EMTs and personnel can be used for serious emergencies, like heart attacks and stroke victims.

I will be quoting from the Emergency Care, 12th Edition on how water is used in part of the human body. About 60 percent of the -- of the body is made up of water, and without it, this fluid, the functions of the cells would cease.

Water is distributed throughout the body both inside and outside the cells and balancing the distribution is an important part of maintaining normal cellular function.
Normally water is divided among the spaces in the body, with the following percentages representing averages. Intracellular, 70 percent is water that is inside the cells. Intravascular is 5 percent; that is water that's in the bloodstream. Interstitial is 25 percent; this is water that can be found between the cells and the blood vessels.
We regulate the levels of water in our body by drinking fluids and making excretions like uranium. This allows us to constantly adjust our hydrations -- the hydration based on the levels of activity. Inside our bodies, fluid is distributed appropriately through a number of factors.
The brain and the kidneys regulate thirst and eliminate excess fluids. Large proteins in our blood plasma pull fluid into the bloodstream. The permeability of both cell membranes in the walls of capillary cells determine how much water can be held and pushed out of the cells and blood vessels. Each of these factors help us regulate the amount of distribution of fluid.
If any of these factors were to be interfered with, fluid levels and distribution can become problematic. Dehydration is the abnormal decrease in the total amount of water in the bo- -- in the body. This may cause, by decreased fluid intake, a significant loss of fluid from the body by one or more variety of means.
Remember, however, that maintaining a balance of water while in a healthy gastrointestinal system, severe vomiting or diarrhea can also become symptomatic. After the amount of water in the body, fluid can be lost as well as through rapid -- rapid breathing or a respiratory distressed patient and profuse sweating. Plasma protein in the body can be lost without injuries, like burns.
Dehydration from losing more fluid than the patient takes on is very common in hot weather, when the patient sweats a great deal of -- does not drink enough liquid to keep this fluid for this heat exhaustion. This is from Brady Emergency Care, 12th Edition from Daniel Limmer and Michael F. O'Keefe.

If our water is contaminated, then our youth will not be protected. Our citizens will not be protected. Our future is at stake. We must protect our youth and help our EMTs and first responders by leaving the uranium in the ground.

As a candidate for city council, and if I get elected, quote, I will fight to protect our youth and citizens of Hot Springs.

So I'm asking you to stop the mining in the wells to protect the American citizens. I don't see -- I don't want to see the Black Hills become a third world country. I just hope the --
[...]
CHRIS PANNILL: -- from water -- I'll finish real quick -- for World Vision to bring clean water to 22 kids and families overseas. So let's not turn the Black Hills into a third-world country.
As I stated before, as a candidate for city council, if I'm elected, I will fight to protect Hot Springs, Black Hills, and the reservations.

I want to talk about the water. We have Inyan Kara; that's what waters our whole ranch. And the master plumber is right, there should have been more ranchers here because the beef industry in this county would go by the wayside if there's no water.

[...]

The water, it might not be a high quality, but I guarantee you, without it, this ranchland would sit vacant, because there is no way you can run a ranch without water.
The ranchers that kind of got on board with this in the area, why, they offered them high-dollar leases. Ranching isn't profitable every year. You can go to the bank with this added income of this lease, and you can look a lot better on your balance sheet.
A lot of promises were made that, Oh, if we damage the water, we'll clean it up. And to my knowledge -- I have a veterinarian out of Crawford, Nebraska, where they have the uranium mining down there, and he said that his water is so bad that he cannot even stand to go down in the basement.
And he had a high quality, and they are supposed to stay with the water standards down there. So I hate to think what the Inyan Kara is going to look like or taste like or be like after you get done with this mining process.

DENNIS YELLOW THUNDER: How's that? Okay?
Good evening, everyone. My name is Dennis Yellow Thunder, and I'm a concerned member from the Oglala Sioux Tribe. I'm here tonight to make comment on the UIC draft permits that EPA is issuing.
But before I do that, I want to give you -- I want to have something for you. Is it okay if I give you just a handout? Okay. This -- if you look at this...
If you look on this sheet here, this handout that I gave you, it clearly states on there that this -- and the story that I bought a bottle of water from the Hotel Alex Johnson when we were testifying there. I was at -- there was some hearings going down there concerning the same case. I bought a bottle of water there.
Happened to read the label. On the back of that label, it clearly states the Hotel Alex Johnson bottled water is drawn from deep in the Madison formation at the base of the Bighorn Mountains, Wyoming.
That clearly -- that's proof that that water, those aquifers that we're attempting to contaminate are all connected. The Madison, the Arikaree, the Inyan Kara, the Minnelusian, the Ogallala, White, all those formations are interconnected. You contaminate one, the Minnelusian, you contaminate all of them.

I say again, if you contaminate one, you contaminate all of them. You pierce Mother Earth one time into that ground, into her system, and you inject this poison down there, you're going to affect millions of people. Not just this community here, not just the Black Hills area, but all the way down to Texas. That's a long -- the Ogallala aquifer covers all of that.

I'm sure you're all well aware of that. You probably have wells in Colorado that are connected. Mr. Hollenbeck is getting oil and water from his well because of the fracking that's going on in the Colorado Plateau. There's no difference in that.

I just wanted to go on record stating that I also have a personal stake in this battle, in the destruction and the poisoning that can occur to the human system. My daughter and I are faced with it every day.
When your child, when your granddaughter is born without an anus, without a kidney, and a heart on the other side, you have a personal stake in this. It affects us every day.
Would you -- I know you can't answer, but imagine, would you be -- would you -- how would you feel if your child, your grandchild was affected in that way by the poisoning of the water?
And that's just not my granddaughter. There's seven different reservations going down that way that water is going to flow through, every one of those reservations, everyone has a granddaughter, a grandson, daughter, sons that are going to be affected by this.
You have to look at the big picture. That's who's going to be affected by it, along with everybody else in here that has granddaughters and grandchildren and children and the future generation.

These new permits will allow Powertech to pollute the Inyan Kara and the Minnelusa aquifers directly, and the Deadwood and the Madison aquifers by transmissivity. Once these aquifers are contaminated, there will be no remedy.

[...]

They say the waste to be injected into the aquifers is just saltwater when the laws of chemistry refute that claim. The application to the NRC by Powertech shows that the waste will be impregnated with radium, cadmium, chromium, and arsenic, among many others poisons. These chemicals will absolutely be part of the so-called lixiviant.

[...]
Professional geologists and chemists from South Dakota School of Mines, Chadron State, and private practice have testified most effectively as to the dangers of this plan for all the residents in the area through the irreparable damage done to the water supply.
The misuse or contamination of the aquifers in the Black Hills flies in the face of good judgment due to the increasing importance of usable water, not just in drought-affected South Dakota, but the nation as well.

We are depleting our water supplies by allowing the very kinds of destruction envisioned by Azarga and the EPA.

[...]
The Black Hills Hydrology Study of 1990 and subsequent, available from the USGS, is a fine and revealing scientific paper available for your review about this transmissivity and the dangers involved. It's about a 400-page report, and you don't have to get to even page 50 before it's obvious that this is a bad deal.

GEORGIA HOLMES: Thanks for coming. My name is Georgia Holmes, and I am president of the City Council of Hot Springs in Ward 1. And I have a degree in medical technology, so I have a chemistry degree and a biology degree, and I want to make a statement, a very impressive one that was given to me recently that I'd like everyone in this whole place to take note of:
Bad things happen when good people do nothing. I have spoken two other times against issuing these permits at your hearings, and they were on my own personal items. My father was a mining engineer, so I know about the EPA, the bonding, the permits, and how they work.
Now again, I'm speaking to reconfirm the resolution by the City of Hot Springs. I've been on city council for five years, and it's taken us a while. But that was read earlier, and I do confirm everything that was said in that. It's impractical and extremely dangerous to deposit waste into the Minnelusa formation.
Our water wells for our own city here come from springs and Hot Brook Canyon, and I welcome you to come and look at them. It's a miracle, let me tell you. We have 117 wells in our city, and they are springs. Many of them are capped. Our county has no zoning.

My health means more to me than money. Your health means more to me than money. Clean water is our most precious resource. We drink it. We bathe in it. We cook it with it. We water our pets and livestock with it. We water our gardens. Water is life. And that single resource, clean water, is worth more than any amount of gold we receive from a short-lived, short-sighted mining program.
There's not many places that can claim to have the water resource we have. We are talking pristine, untouched, unspoiled, nonrenewable aquifer water which took thousands, if not millions of years to form.
We shouldn't even consider any project that could jeopardize this incredibly valuable resource, especially when the consideration is for the material wealth of a few.
I am here today to ask you to consider the future, when clean water is even more rare than it is today. I moved here for the water. I've met others who have moved here for this clean environment. There are people who live here for this clean environment.
Extreme conservation must be used. I know you'll take extreme care in making your decision, and I pray that it's the right decision.
I never in a million years expected to be before the Environmental Protection Agency of the United States and ask that you please not allow our water to be poisoned. But that is what I am doing here today. I am asking that you not allow our water to be poisoned.
Thank you.

JENNIFER BELITZ: Jennifer Belitz. I've been here for 17 years raising my two kids in the southern Black Hills. I own property along the Cheyenne River. I have animals that drink from it. I have an Inyan Kara domestic well that supplies household water and drinking water for my livestock.

I haul my family's drinking water from a Minnelusa well. I have well log data with me from a neighbor's well that is in the same formation as my family well. And on the driller's notes it says: Note the flowing cave formation at the water level, in the Ferguson well, which is in the Minnelusa formation, which is what we get our drinking water from.

I do understand the interest a mining company would have in ISL at the Dewey-Burdock location. I do however feel that my water and the water of my community could be irreversibly harmed
[...]
Today we're talking about the aquifers, the Inyan Kara and the Minnelusa. Both we utilize. For the Class III area permit for the Inyan Kara, I believe that these proposed mining activities pose a risk to my Inyan Kara water by undetected or late-detected excursion, as I am downgradient from the mining activity.
As far as the Class V area permit for disposing the in-situ mining waste fluids into the Minnelusa formation, the Minnelusa aquifer is a high-quality aquifer. It is well utilized in the southern Black Hills.

In addition to the domestic Minnelusa well that we haul our drinking water from, this aquifer sits approximately 1,000 feet below my property, making it a potential drinking water source for my family and livestock for generations to come.

According to the atlas of the Black Hills, the Minnelusa aquifer flows from the proposed ISL site to my property. The contaminants injected are likely to pollute this potential drinking water source sometime in the future.
When I spoke with four hydrologists at the USGS on March 29, 2017, I learned the following: Yes, the flow model in the Atlas of Water Resources of the Black Hills does indicate that the Minnelusa flows from Dewey-Burdock to the southeast, which is where I live. However, they tell me that you can't judge just from the model of the flow system in that figure. The water in these aquifers can be really hard to track their flow.
In cave environments, such as the Minnelusa, which our well log data did say that there was a cave, the underground water almost flows like a river. There are local and regional impacts on some of the flow systems that are not indicated in the figure, and some of them are unknown.
According to a national data -- national water database, there are minimum -- a minimum of 125 wells drilled into the Minnelusa aquifer in Fall River County, and I believe that there are more.
My own family's well was drilled approximately 20 years ago, and there is no record of it in the current state DENR well log data site. Speaking with a DENR employee May 9, 2017, I was told that many well logs were not submitted, especially those during or before the 1980s.
We know that the Minnelusa aquifer and the Madison aquifer mix. In the Atlas of Water Resources of the Black Hills, again it indicates that Cascade Springs is mostly Madison water but with dissolved Minnelusa minerals. The Cascade is a utilized drinking water source.
The Cascade Falls is a highly visited swimming area attraction, and the 1890 irrigation system from this water provides many acres of hay, fruit, vegetable production, livestock watering ponds for area landowners, including my own pond, hayfields, and apple orchard.

Another publication by the USGS indicates the Minnelusa aquifer is hydrologically separated by the underlying Madison aquifer by shales. However, in many areas the Minnelusa is in hydraulic connection with the Madison. .

Some information from deep well injection from North Dakota I found interesting because I grew up there, and I have witnessed a lot of the oil boom in that area. They are injecting waste into the ground, and I thought that maybe something we could compare to the Minnelusa here.
And I found it's very incomparable because they are injecting up to a mile down, well below any drinking water, and one of the requirements is that it has to be in a formation that is confined in the upper and lower zones.
[...]
JENNIFER BELITZ: Okay. Just my summary up, so because of the scientific data, I believe that the EPA should not even consider permitting that Class V permit in the deep -- for deep injection into the Minnelusa. The Minnelusa is too shallow, it's unconfined, and it is known to mix with a very important aquifer, and it itself is an important and currently used aquifer.
Thank you.

It is going to affect our water, and we heard that from the testimonies from today.

JOHN SIDES: My name is John Sides. I'm the chairman of the board of directors for the Fall River Conservation District. As a conservation organization, we are strongly opposed to the proposed uranium mining and injection wells at the site of Dewey-Burdock near Edgemont.
Conservation district boards are mandated to protect the land, air, and water quality. Because of this, the Fall River Conservation District board of directors wrote a resolution that went on to become the State of South Dakota's House Concurrent Resolution Number 1025.
This resolution reaffirms the value of South Dakota groundwater resources and recognizes the need for ongoing evaluation of our groundwater management. This resolution in its entirety is attached to this statement.
This uranium injection well project could have devastating effects on the lives and the economies of all the people in Fall River County. There are too many unanswered questions about this, about this project, such as possible earthquakes, contamination of the Minnelusa and Inyan Kara aquifers.
These two major aquifers supply water to at least 125 private wells, providing essential water to families and livestock. Chemical waste contamination would prove devastating to the many people who rely on the Minnelusa and Inyan Kara aquifers.
[...]
The population of this county cannot afford mistakes that could come with this project. The lack of clean, usable water could easily turn our towns into ghost towns, productive rangeland into wastelands. We need to protect our water source for the well-being of all livestock, wildlife, and human life. Thank you.

While I'm here, I'm also a private rancher, so I'll give my presentation on that. We own a cattle -- we own and operate a cattle ranch in eastern South Dakota. We are against the proposed mining injection wells in Dewey-Burdock area. The water from our ranch comes from the Madison aquifer by the way of pipeline. We cannot afford to take chances on polluting the water that sustains our livelihood. Thank you.

But my big concern is that if -- and most of the people who are proposing this are proponents of these wells. If they are wrong and their calculations -- because no one seems to be disputing them.
If they are wrong in their calculations and they ruin the aquifers, I live over in Oral. All my neighbors are ranchers. Some of them I know are third generation, there's probably some fourth generation over there. You're not going to be able to save the beef in this state.
No matter how good your marketing campaign is, you know, "Eat South Dakota beef; it glows in the dark" is just not going to cut it. So you're going to destroy the beef industry.
I really wish there would be more ranchers that would show up at this. I understand it's -- for Native Americans, I understand the respect for the earth and stuff.
But the ranchers, they need to get on board opposing this. Because if the Powertech is wrong and their data is wrong and they ruin that aquifer, the face of South Dakota will change. We'll no longer be a community where I live of ranchers. That's all going to go away. There's generations who have done that, and that's all going to go away. And so I have a real concern about those wells.

KARA HAGEN: My name is Kara Hagen. Christa Spillane and I are here on behalf of the City of Hot Springs. We're both city council members. I'm representative in Ward 1; Christa is Ward 4.
On May 17 out of eight council members signed a resolution for the city of Hot Springs to protect our water. And this is Christa Spillane. She's going to read that resolution to you.
CHRISTA SPILLANE: I have to have a light so I can read. Sorry. I didn't bring my glasses.
Resolution from the -- as Kara said, this is for the City of Hot Springs, Common Council. Resolution 2017-10: A Resolution to Reaffirm a Citywide Commitment for Clean Water and Water Resource Protection.

Be it resolved by the Common Council of the City of Hot Springs, South Dakota, that we are committed to preserving and maintaining the amount and quality of the water for the citizens of Hot Springs and its surrounding environs, and;

Whereas, the City of Hot Springs was first developed as a town in the late 1800s due to its proximity to Fall River and the abundant natural warm mineral springs within the valley, and;
Whereas, the City of Hot Springs has made a long-term investment in storm water management, potable water systems, and wastewater management programs and infrastructure to reduce nutrients and pollutants in our waters and to protect our vital water resources, and;
Whereas, the Common Council is obligated to preserve and protect the public health, safety, and welfare by preventing the pollution of, and maintaining the quality of the water entering in, held within, and removed from aquifers serving as the City's water source, and;
Whereas, the City of Hot Springs has stated in its water ordinance that our mission is to provide the City's water customers with a safe drinking water supply, supply water for fire protection, and an adequate supply of water for our essential daily needs, and;
Whereas, the City of Hot Springs Common Council finds that any pollution or contamination, willful or not, of our water supply to be a direct threat to our community and its health, safety, and welfare, and;

Therefore, be it resolved that the City of Hot Springs will take necessary action to ensure the perpetual purity and quality of the waters available for use of the citizens of Hot Springs and the City's -- and those the City distributes water to, and;

Therefore, commit to support any action from the county, state, and federal governments aimed to protecting the waters of South Dakota, both surface water and underground aquifers, as a critical natural resource necessary for life.

Furthermore, Powertech's experts propose land applications on river terraces and deep well injection into aquifers within the project boundaries under the sanction of EPA permits to be exempted from the Safe Drinking Water Act, SDWA 1977 and 1986.

[...]

Water quality: Other areas are dealing with primary and secondary water quality issues. See Southern Black Hills Water System Appraisal Report.

For example, the town of Edgemont has quality concerns with primary drinking water standards relative to some categories of radionuclides, example, alpha particles that can result in increased risk of cancer. Edgemont has shown a test of 17 milligrams per liter on alpha particles, and the U.S. Environmental Protection Agency limit is 15 milligrams per liter.

In Dewey-Burdock, waste injection wells will be sending plumes into the Minnelusa water as it flows south and east through Igloo, the Black Hills Army Depot, through Buffalo Gap, Oelrichs, and elsewhere and onto the Indian reservations that are already suffering contamination from the old pits near Edgemont, South Dakota.
Metals can bond with many different molecules which can then become completely different compounds with totally different chemical and biochemical personalities and activities. If they bond with inorganic substances, such as phosphate, oxide, sulfate, carbonate, et cetera, they will form inorganic compounds.
However, if they bond with carbon-containing compounds, they become organified and will then have different toxicities and different biochemical activity in the living body.
Organified metals have a significantly higher bioavailability in the living body and much more ability to travel to and target different organs and tissues of the body, interfering at the highest rate with normal healthy biochemical pathways than inorganic metals.
Organic metals are the substances of life itself. High levels of organified uranium have been studied and measured recently by the DOE, recent in old uranium mines. How did it get there when they're supposed to be extracting uranium? Well, let me explain.
Organified metals, including uranium, are known not to be recoverable by ion exchange method of ISL recovery, which is commonly used, since it's already bound organically and will not bind to the organic synthetic resins.
So the levels will build up as the mining waters are recycled over and over in the ISL mining process until the water has become too saturated and are disposed as waste.
Organically bound metal under the circumstance will continue to increase in the wastewater of the ISL mine, adding to the metal burden of the wastewater and also the toxicity of such beyond what it would be if the metals remained in an inorganic and ionic form.

MARK SPERLICH: Thank you for coming, and thank you for hearing us. My name is Mark Sperlich. I used to farm, eastern part of South Dakota. And I know of a guy who just moved here from Iowa, and he just said here a month or so ago that a town in Iowa about the size of Hot Springs was just informed that their drinking water has been contaminated by nitrates, probably because of surface runoff from all the hog confinement areas.
So I'm thinking, if surface water can contaminate an aquifer in Iowa, the injection into the -- into the ground certainly can contaminate it.

PERRY HOLMES: My name is Perry Holmes. I'm a resident of Hot Springs. I've lived here for over 30-some years and have been a resident of the Black Hills longer than that.

I am opposed to the Dewey-Burdock Class III injection wells and aquifer exemptions and Class V disposal wells. The absolute main reason I'm against this is I drink water. And I notice a lot of you have plastic bottles up here, but there's a water fountain out front. And I'm wondering if this goes through, we'll all have to carry plastic bottles around after a bit.

My wife's family have been miners in the Hills, and I know that most of them probably oppose using aquifers for getting rid of junk from your mines and stuff like that. I have children and grandchildren that I hope will be able to use this water.
The information about this stuff that you're dumping back into the wells proves basically it is dangerous and poisonous, otherwise they wouldn't be trying to get rid of it.
We have people coming to the Hills through the tourist agencies and stuff like that. That is a rather large business we have here. Will those people all have to be bringing a lot of bottled water with them to see Mount Rushmore and Crazy Horse?
And will they also have to -- will we have to close down Evans Plunge because of contaminated water that's coming into our system? This is something I know a lot of people haven't talked about, but that is a big business in our area, the recreation and tourism.
I think most people in mining and stuff that have been mining in this area even would agree with me that this is probably not the brightest idea of dumping waste material back into an aquifer area.
I hope to be able to live here and even be buried here with my children. And I hope it's not because of the water that I have to be buried.

DR. PETER M. SOTHERLAND: I'm Dr. Peter Michael Sotherland. My primary concern with this project is the willful contamination of the pristine Minnelusa aquifer, which is the water source for me and most of my neighbors.

[...]

Back to my primary concern, the injection of treated water into the Minnelusa aquifer. Mr. Hollenbeck stated the solution injected as a waste stream into the aquifer would be a saltwater solution. Let's talk about this.
The Romans, after the conquest of Carthage in North Africa, spread salt, sodium chloride, into the fields of Carthage to kill the soil, thus starving the population into subjugation.
But the term "salt" is a chemically generic term, like the generic terms "dog," "flower," or "bug." There are many and varied examples within each category. The most commonly known salt is table salt, sodium chloride, which was illustrated previously.
In chemistry, a salt is the result of the chemical reaction of an acid and a base. Thus, salts are a combination of all sorts of elements that have the opportunity to react under the right conditions.
The process that is described by Powertech is the injection of water, oxygen, and carbon dioxide. This is really the injection of an oxidizing agent and an acid, carbonic acid Carbonic acid is made by adding carbon dioxide to water under pressure.
Think Coca-Cola. Pour Coke on the sidewalk, and it will fizz. With continued application, it will dissolve the concrete along with the other minerals present.

What Powertech is after is uranium oxide, yellowcake. After the uranium oxide is removed from the solution that is pumped from underground, the remaining mineral salts that are not money-makers need to be disposed of.

These are the salts that are to be disposed of in our drinking water. The chemical nature of these waste salts has not been defined, and considering the mineral complexity of the ore body, I suspect there are mineral salts that are not -- that are deleterious to life.

Mr. Hollenbeck stated that he would be willing to drink this waste saltwater that's to be injected into our aquifer, which reminds me of a classmate of mine in school who worked at the sewage treatment plant in the summer.

On a double-dog dare, he drank a glass of effluent from the plant and was immediately taken to the hospital to have his stomach pumped and given every injection they could think of. He did not die, but he did not receive any awards for intelligence. I am not willing to take a double-dog dare.

ROGER PFEIFLE: My name is Roger Pfeifle. I'll read here what I wrote.
I've been trained as a chiropractic doctor; therefore, my concern is not just about the water, which is an immense concern, but also about the overall quality of life pertaining to the human condition. For example, the health of the humans and the environment in which we live.

WILL LEIGH: (Speaking in indigenous language.)

My name is Will Leigh, and I'm 21 years old. I'm from Virginia. And I would like to ask -- if you could imagine the laugh that your grandchildren are going to have or whose laugh they are going to have, whose eyes they are going to have, or maybe your child's grandchild, what little quirky saying they're going to keep living on that came from you or your sister or somebody that you love.
And then imagine looking into those same eyes that come from you or your husband and having to explain why the way things are with the water, why and how things weren't always this way.

I know that a lot of the people that came here are proud to bring up their children as water-protectors, as people who value the earth. And so I guess what it comes down to is there might be different versions of reality at play here.

And I know it's kind of weird to say that there's more than one reality or something, but when there's -- the biggest question I have is, Why? Why are you doing this? And why -- why are you taking, coming here and -- sorry. Just a little bit nervous.
You guys have control. You're in control of how this goes, how this is set up, and what becomes of all these people coming up here and saying these things. The reason you're in control is because of 500 years of genocide. And that's something that you're going to continue if you approve this.

Right now, you have the chance to be water-protectors, too. And I hope that you'll realize where the power that is invested in your Agency, it's -- what it came from. And when there's so many people involved in an agency and so many different decisions are broken up into so many different parts, it might be easy not to feel responsible, but you guys have the power. You set this up, and you're making this decision. So that means you have the responsibility.

And that's something that I'm glad that I can be able to look into my grandchild's eyes and say that I took that responsibility, whatever that I had, and I used it to protect the water.
(Speaking in indigenous language.)
Thank you.

Now, you heard about a hiccup. For us -- I mean, what happened in Hanford is not a hiccup. Fukushima is not a hiccup. At Cameco, their deep disposal wells leaked disposal waste for four years before they found that leak. Now, these mines up here, they leaked in the disposal wells, too.

I don't want you to approve a permit that's going to allow them to punch 4,000 holes through our aquifer. I don't want you to give them a permit that's going to allow them deep disposal wells. Because as much as the industry stacks the deck, bringing specialists here on the payroll, they are still not perfect science about uranium mining.

Ask the people at Fukushima, ask the people at Hanford, ask the people living nearby Cameco, and they'll tell you.

DON MATT: My name is Don Matt. I am currently living in Edgemont, South Dakota. I have a relative whose first wife grew up here. She died of cancer at 37. The only thing he will say is, "Don't drink the water."
[...]
A ProPublica website article dated December 26, 2012 on Wyoming in-situ mining notes, quote: "The Safe Drinking Water Act forbids injecting industrial waste into or above drinking water aquifers, but the EPA issued what are called aquifer exemptions that gave mine operators at the ranch permission to ignore the law. Over the last three decades, the Agency has issued more than 1500 such exemptions nationwide, allowing energy and mining companies to pollute portions of at least 100 drinking aquifers."
A USGS study published by Otton in 2009 found that, quote: "To date, no remediation of an ISR operation in the United States has successfully returned the aquifer to its baseline."
Tree rings throughout the West provide an historic record of droughts lasting as long as 30 years. This would drastically argue against proposed calculations of water recharge.
[...]
Recent experiments by Duke University published on October 26, 2010 showed placing CO_2 underground for greater than 30 [sic] days, quote, "could pose a risk to overlying fresh groundwater," unquote.
They further said, quote: "Potentially dangerous uranium and barium increased throughout the experiment -- throughout the experiment in some samples." This showed underground storage of CO2 creates carbonic acid and is not harmless.
No exemption should allow placing nuclear waste in waters which could be used by agricultural animals and thus indirectly by humans. Thank you.

I want to talk a little bit about the water. Water. You guys heard, water is life. Mni Wiconi. Water is more precious than gold or uranium or any -- whatever monetary value you have. It's keeps everyone alive, including you guys.

And I've seen what's happened with water, too. And to me, it's an issue with water. Everyone needs water. Water is precious. Why even take the chance? I -- I just don't -- I just can't understand.
[...]
And this is not just about us here. This will spread out. This water is not just this concentrated area here. This water supplies many millions of people. Every little tributary, every little thing is connected.
And I've seen what salt water does. They say salt water, you can't drink salt water. You can't drink brackish water either. Because where I lived, there was fresh and salt water, comes together, makes brackish water.

GARDNER GRAY: I was going to -- I had a list of what I was going to talk about, some of which I spoke yesterday, so I decided not to repeat that. And so these are not necessarily immediately connected except in the larger picture. And I just -- I won't take much time, I just want to briefly talk about some of those points.
I've been reviewing the Black Hills hydrology study, which I mentioned yesterday. And what it says is that the Madison and the Minnelusa are heavily utilized. The Minnelusa is one the largest aquifers in the area, and it's utilized heavily. It isn't a -- it isn't an aquifer that no one uses and is unusable. It's being used, and yet they want to put all this waste into the Minnelusa.
[...]
Apparently, because I'm opposed to this, I'm an irrational, emotional person, but I would take issue with that. I'm concerned for the water in the area, not just for east of here, but for here.
If you lose your water, you won't have to worry about raising cattle or growing grass because you're not going to be able to do it. There are ranchers in the Nebraska outfit that have sold their land, sold their cattle, and moved out of town because the contamination in that area from that ISL mining.
And it's been mentioned already that there is no ISL mine that has ever been cleaned up. It's just a fact. I don't make these things up. I read them, and if I -- if I honor the source, then that's what it means. That's what it says.
There's an ISL mine in Texas called -- I think it's the Texas Dome. Same old, same old. People in the area, they take their water out of the tap. Well, it's radioactive.
And I take issue with the statement that only -- that radium is the only solution, only toxin that is a result of this mining when the NRC clearly states in their application from this company, Azarga, that it's not true.
[...]
They want you to believe that irradiation is safer; all these X-rays we have, they are safe. Well, they are cumulative. Oh, I'm running out of time, aren't I? Well, I already talked a little bit more than I figured I would. So very quickly let me end with this.

The NRC says that Powertech only has to meet a standard that says A-L-A-R-A, as low as reasonably achievable. It doesn't say they have to clean it up. It says they only have to reach that measure of -- as whatever I said. I'm getting too old to do this.
AUDIENCE MEMBER: You said, "Reasonably achievable."
AUDIENCE MEMBER: "As low as reasonably achievable."
GARDNER GRAY: There you go, as low as reasonably achievable. It just kind of went out of there.
That's no guarantee at all. That's just not a guarantee. It's not enough. I will end with that, and thank you very much for your attention.

ISAIAH COX: My name is Isaiah Cox, and I am a student at Hot Springs Middle School.
And I see how mining the uranium would be good. It could open up some jobs, but it can also close some jobs, too. For instance, like ranchers and farmers, well, you need water, you know, and I've heard that this will poison the water. So that's not really good, so -- yeah.

My husband and I are learning about a lot of different connections with all of these issues. And as a matter of fact, all waters are connected, and we are all downstream when it comes right down to it. So this is everybody's issue.

[...]
For the sake of the land, for the sake of the water, to maintain the integrity of the Environmental Protection Agency, for your own and our own personal humanity, for the sake of your children, our children, future generations, I urge you to do everything in your power or influence to shut this project down immediately.

I wish to state two additional alarming facts. What the EPA also won't tell you is that uranium in-situ recovery mining has consistently resulted in contamination. And per the U.S. Geological Survey, to date there has been no successful mitigation of the contamination resulting from uranium in-situ recovery mining. So the current status as a drinking water source and a future drinking water source will be permanently lost if this is approved.

KATHLEEN BAILEY: Kathleen Bailey. I just wanted to respond, and I don't know if this was -- I am one of the people who are coming from outside of the state. And I wanted to assure you, this is not disrespect to the state, this is not disrespect to the citizens.
This is my personal concern for a rare commodity, our water. And I am a treehugger since the '60s. I was born in '49. So, yes, I am an environmentalist by heart. And all, from the amoeba on up to all life forms, I'm just focusing on this water, because this is the source.
I'm trying to stop an action that threatens an incredibly important aquifer that actually addresses more than just the state of South Dakota. So it is a huge, huge, important moment that this be stopped. Because this changes everything if it is approved, and it will impact many aquifers all over our country.
So it is also a selfish thing that I am doing, because I live, my children live, my grandchildren live, even though I'm not a South Dakotan. But I had to come up here because I feel so much about this, because I can't stand silent while it's happening anywhere.
So I'm not here to offend anyone, and I do have a different side than some of you, a different opinion. But I'm not here to offend you. I'm here to defend water, from my perspective. I don't mean for anybody to take it personally, as far as a citizen here. Thank you.

Furthermore, Powertech's experts propose land application areas on river terraces and deep well injection into aquifers within the project boundaries under the sanctions of EPA permits to be exempted from the Safe Drinking Water Acts, SDWA 1977 and 1986.
[...]
Water quality: Other areas are dealing with primary and secondary water quality issues. See the Southern Black Hills Water System Appraisal Report.
For example, the town of Edgemont has quality concerns with primary drinking water standards relative to some categories of radionuclides, example, alpha particles that can result in increased risk of cancer.
Edgemont has shown a test of 17 milligrams per liter on alpha particles and the U.S. Environmental Protection Agency limit is 15 milligrams per liter.
The problem of artesian flow: Artesian springs act as a relief valve for the aquifers and are an important mechanism in controlling water levels in these aquifers. Spring flow of many large artesian springs changes over slowly, very slowly in response to long-term climatic conditions.

Artesian spring flow could be diminished by large scale well withdrawals near springs, thus impacting surface water resources. Large scale development of the aquifers has the potential to influence the balance of the unique and dynamic plumbing system in the Black Hills area that controls interactions between groundwater levels and artesian spring flow.

Artesian flow occurs when there is a hydraulic connection through faults or highly permeable strata between groundwater sources high in the landscape and the land surface lower down. The weight of the water in overlying strata exerts pressure downward into water within the uranium-bearing strata, which can be released as artesian waterflow like a fountain.
When topographically lower uranium-bearing strata is exposed at the surface or where it is punctured by drilling, artesian flow was observed or restricted by Powertech in their Dewey-Burdock project proposal, and was observed directly at the Black Hills Army Depot less than ten miles to the source -- excuse me, to the south. U.S. Army Corps of Engineers, 1992.

I took home -- yesterday I went to Hot Springs. I took home all of your wonderful, wonderful pamphlets there. I can pick every one of them apart. Like the Class III area permit does not allow the Inyan Kara aquifer outside the aquifer exemption boundary to be impacted by any contaminates resulting from uranium recovery.
How are you going to guarantee that? Are you going to put your life on it? No.

NANCY KILE: My name is Nancy Kile. I live in Sioux County, Nebraska. I was born and raised in Crawford, Nebraska area. Please accept these as my comments to the formal hearing record.
Deceptive language is snake oil, descriptions like uranium recovery, and the use of simple soda pop solutions. Then to top it off, hiding radioactive waste in deep injection wells that pass through groundwater aquifers.

So I kind of -- I talked to a local resident here, and he informed me, you know, that there's -- okay. So, part of this process that you say is safe, that might be possibly safe. But the biggest thing, you know -- and everybody is talking about the aquifers and all this. That's important, you know.

I will start where I was going to start now. Going back. It was in 2013, the first hearing for the South -- the DENR, the South Dakota Water Board was held on this issue. The Atlas storm blizzard, the 150-year blizzard came and people barely got -- most people didn't make it.
But the judges were all there, and I -- Somebody's testimony was talking about the rancher that had their water disconnected. I think I know who that was because he was out in the hallway with Powertech signing the papers right before he came in and commented. And he said, Oh, yeah they are taking care of me. Oh, they are giving me such a good deal. They're going to bring me clean water.
And I also heard the young man who is the nuclear scientist, the young nuclear scientist that grew up here. He said this actually cleans the water.
[...]
I don't know, I was listening to all five days of the testimony and the judges were asking them about the water in this one aquifer that was going to be cleaned up as soon as they were done.

They talked about working on it and working on it and they -- they said, We've done the best we can. So they asked the NRC for an exemption to that aquifer. That's all they have to do.
It's messed up. Well, then we'll just exempt it from the Clean Water Act. And this is what I'm hearing. I can see this is what's going to happen here, too.
Mary Helen was talking about, this water will not go past a certain point, the contaminates. How can you do that? How can you do that? The EPA says after in-situ leach mining, the water can never be restored to baseline. Never. That's what your Agency says.
And I have been to hearings, the NRC hearings for this, and I'm scared because I see what happens when --
[...]
And this is what happens. And that kind of stuff just never is brought out. It's always exempted. They are called excursions because the companies -- the EPA does come up here to check things.

I also come before you as an endometrial cancer survivor, a very rare cancer, a new cancer that is not hereditary. And I actually had to go to Mayo Clinic for radiation, chemotherapy to kill the cancer. I have to get it cut out every time there is a tumor. And I've had four major surgeries to remove the tumor and any cancer margins.

We must think of our children. We must also protect those who are never given a choice, the wildlife and living creatures in the water. Uranium causes cancer. When the uranium leaks into the water, you will have no drinkable water here. Cancer rates and death rates will increase.

I am against the uranium mining and waste disposal. We all -- we all that come from Sisseton Wahpeton are against it. We come here to support all our people. I want all our children to have a future, to be with your loved ones. And think about what's going on here because our children are our future. And without that water, what future will they have?

So this uranium permit is huge. You have to factor in all the other water uses that are going on in South Dakota. And the fact that DAPL had a spill in Spink County after we stood out there for nine months protesting against a government system and our worst fears were confirmed.
And then you look at Washington at the same time again, Hanford, Washington has got evacuated, a small town like this. This is evidence. This is pure, 100 percent evidence.
This is not fact or opinion, nor does it have to do with race. An entire town was evacuated. So as an educator, I'm asking you to really think of the future. Why should we educate young children if I can't promise them drinking water or clean air?

The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. Groundwater has never been returned to its original condition at any In-Situ leach uranium mine in the U.S. These permits should not be issued until it can be demonstrated that groundwater resources will be protected.

So please, please don't allow these permits because it makes people sick. It's our water. We can't get it back. Thank you.

DEBORAH TOBACCO: (Speaking in indigenous language.)

My name is Deborah Tobacco, and I live in Pine Ridge. I'm a member of the Oglala Lakota Nation. And my main purpose in being here today is to, like all of you, have a say in the preservation and protection of our clean drinking water. And for me as an Oglala Lakota, it's simple. When there's a lack of clean drinking water, there's no peace or justice.

Short-term profits for the sake of short-term gratification is asinine. It's ecocide and genocide. People will have to move out of that area due to no drinking water. It will cause diaspora. Diaspora to the indigenous is genocide.

It's good to see all the people here that share the same ideals as clean drinking water as I do. I really appreciate that. For a long time as a Native person, an Oglala Lakota, we talk about and actually have to fight for clean drinking water, and I don't think that's the way it should be.

I am concerned that this project has a high probability for rendering my water unusable forever in the next few years. I do not understand how radioactive waste is acceptable for injection into an actively used aquifer which sits above another aquifer which is also actively used.

[...]

I understand the concept of putting a few rural residents at risk for the perceived benefit of a larger population base. However, you must accept that agricultural products grown on soil that you allowed to be contaminated, with water you allowed to be polluted, will end up in your grocery market shelves. It's called karma.

As we know, everything is connected, and uranium mining in this area would affect lots of other areas, especially at the level of the aquifers. No permit should be granted, no permit should be discussed until all previous mines are completely cleaned up.

[...]

We all know that water is the basis of life. Please do the right thing and deny this project as the risks are not worth it. Thank you.

JOHN DAVIS: Thank you for being here today and giving me an opportunity to speak. My name is John Davis. I hold a degree in -- a bachelor's of science degree from Black Hills State University, and I've used that to understand heavy metal poisoning.
Your reported claims that there's no potable water in the Minnelusa aquifer is untrue. What our well-driller told us about 20 years ago here on the outskirts of Hot Springs was our water from Minnelusa aquifer was the best in the county. Of course, you heard that from my mom. She was here.

You know, I don't -- hearing everyone's testimony today, I can't see why this would even be a question as to whether or not to do it or not, to dump this water in there, because it's toxic and you're going into an aquifer. Usually you go underneath it, right, from what I'm understanding. It just doesn't make sense. I mean, there's something else here.

[...]
I read some reports from Linsey McLean. She's an environmental microbiologist, biochemist, well-known, and she reports on the effects of heavy metal -- heavy metal poisoning and the ill effects that it produces.

This water is essential to all living organisms. We are in a symbiotic relationship with everything on this planet. And someone mentioned the law of karma. That's the law of cause and effect. What you sow, so shall you reap.

And other people have said you're not even in this town, so the people who are going to be making the money, they'll make the money and leave. So where does that leave us? And someone said we have to clean up the mess.
You can't -- you can't really say what the underground topography is. You don't know. We don't know. There's no instruments to tell you. So why not bet on the sure thing, don't deposit the nuclear waste and the heavy metals, and leave it alone and let nature take care of it.
You know, this concerns me because we were going to sell our place several times, but I said, No, we've got -- this is the greatest water here. And it supports life. If you damage it, you can't take that back. 4500000000.00 years is the half-life of uranium. That's a long time. And the law of karma is exacting.

So I guess I would just leave you with a question. I know you're not answering questions, but when you joined the EPA or -- what gave you the right to make decisions that affect our lives? What gives you that right? And you just think about that, because I love this place.

MARLENE AKHTAR: My name is Marlene Akhtar, and I'm also speaking for my husband, Dr. Hassan Akhtar. We put in a well about 15 years ago, and it was 640 feet down, but he said it was in the Minnelusa foundation. And the State came and tested it within a few weeks, came to our door, and said, "You have the best water in the county." This is our water. There's no salt in it. I don't want salt in my water.

Also -- and thank you for coming, by the way. We are a little blue marble in space. This is a little blue marble in space. All the water in the universe is within this blue water. All the good air is within this beautiful little blue marble.

If we contaminate it, it's gone. There's no more water coming. It is our responsibility to protect it, and it is your responsibility to protect it, too. Our water must be protected at all costs.

Those who are for the mining of uranium are for the money. Those against it are for our protection of water for now and future generations. I look out here, I don't see anybody fabulously wealthy, so we're not here because we're going to get money to protect this water. The ones that are going to receive the benefits probably do not even live in South Dakota, and we just can't let this happen. It's our responsibility.

MARY HELEN PEDERSON: My name is Mary Helen Pederson. I live here in Hot Springs.

When I was in the ninth grade, which we called freshman at that time, I went to school in Edgemont, South Dakota. I was there for only one semester, but even at that age, I could tell that there was something wrong in the atmosphere. So I paid attention to the uranium from then on and learned everything I could about them.

We need to protect our water, our economy, health, and way of life. Let's stop this bad idea right here. This is a very dry area of the country, even of western South Dakota. We can't lose 8,000 gallons of water per minute for the next ten years.

It would not only affect the Inyan Kara aquifer, but the Minnelusa and the Madison aquifers. These are all used in this area. We can't afford to lose that much water or have them polluted in any -- in any of these aquifers. These aquifers are known to communicate.

[...]

Hannan LaGarry also mapped the aquifers. They are flowing from the west to the east. That joint -- the most jobs that would be at the startup is 80 versus 350,000 people losing their good water.

In the government -- is the government going to send in contaminated bottled water for us? Go to the Uranium Cowboy on YouTube to see a lot of information on this subject. Crawford, Nebraska is the only area that now has a high rate of pancreatic cancer in Nebraska and United States.

[...]

These permits would allow the company to pollute our underground water, which we all rely on. Just across the western border in Wyoming, Cameco Resources has been hit with nine apparent violations on how they are shipping uranium products.

[...]

MARY HELEN PEDERSON: Okay.

New information in yesterday, all those wells north of Hot Springs are in the Minnelusa aquifer. According to Ken Buhler of the South Dakota Department of Environmental and Natural Resources, or the DENR, said that there are hundreds to thousands of domestic wells using water from the Minnelusa aquifer. 196 appropriated water rights permits in the Minnelusa, which include municipal, commercial, and industrial use.

RAJNI LERMAN: My legal name is Caryn Lerman.

I'm here to strongly urge you to deny both the UIC Class III area permit for injection wells for the ISR of uranium and the UIC Class V area permit for deep injection wells that will be used to dispose of ISR process waste fluids in the Minnelusa formation.

My husband and I have recently purchased property here in Hot Springs and relocated here for the natural beauty, peace, and clean air and water afforded to this less-populated part of the country. This is intended to be our place of retirement.

I am deeply concerned about the prospect of our final residence being degraded and devalued by the potential contamination of our water supply. Our property located at 2244 Minnekahta Avenue has a well in the Minnelusa aquifer. The water is pure and clean, and currently we use it extensively to grow organic vegetables, feed our animals, as well as many other uses that we need outdoors.

Since our property is 2 acres, it is large enough to subdivide in the future if we so choose. Any additional structures we may build on our property could actually tap into our well for potential household use. That is, of course, unless you approve of these permits.

The proposed permit in particular for deep injection wells that would be used to dispose of the ISR process waste fluids into the Minnelusa formation is a real threat to my family, home, and community for numerous reasons, including, one, the mining industry's recurrent inability to properly manage these materials safely; number two, the Black Hills's geology is not static, and the sheer movement of the earth allows for the material to flow into our aquifers; number three, uranium is known to cause harm to human health; and number four, the potential of increased seismic activity could result in our town losing its greatest resource, our water.

In my letter here that I'll be submitting today, I have researched and noted specific scientific articles showing evidence to support each of the reasons I just listed, and that is why I'm asking you to deny these permits.

As a yoga instructor, a health and wellness advocate, and the director of the new Hot Springs Farmers Market, I spend a considerable amount of my time and money to educate myself and others how to live a long and healthy life.

Pumping our aquifer with the fluids containing uranium puts me, my family, and our community at substantial health risks. Is the EPA going to pay for our long-term health care bills due to uranium exposure? Are you going to provide me, my family, and our community with clean drinking water for the rest of our lives?

Is the EPA going to reimburse our city for possible losses to our main economic resource if Fall River was to dry up as a result of the proposed mining activities? I doubt it.

But it is your main responsibility to protect the public's access to clean water, per the Safe Drinking Water Act. No exemptions of this law should be made nor any permit be issued to mine uranium or dump toxic chemicals into our critical aquifers which are necessary to sustain life. Please use your conscience and your legal obligation to the American public and deny these permits.

And so they will be making the money, and after about 10, 20 years, they'll be gone, and the contaminated water will still be here.

And my other concern is about the sulfate, radium, and iron that's going to be injected -- supposedly supposed to be clean water being injected into these wells. And Powertech is getting free water and not paying for it? I don't agree with that. That's it.

I ask you, please protect us. Protect me and all the people here. I don't want any more uranium or radioactivity or heavy metals in my body. I have enough. And I don't want to have to move. This is my home. And I moved here because of the spring water. It's beautiful, beautiful water.

SOPHIA BLACK CLOUD: Thank you again. My name is Sophia Mahpiya Sapa and Hunkpapa Lakota, the Great Sioux Nation.

I spoke at yesterday's hearing, and I was unable to speak on certain matters due to my nerves and emotions. They are rooted in these Black Hills. But I'm here again to speak regarding protecting our waters and the oath that you took to protect my children and uphold my entire family's treaty rights.
The problem we have here today is that uranium contaminates water with nuclear waste and poses a direct threat to our drinking water. Uranium mining only profits private companies' pockets, disregarding human life, our resources, and the health of the people who oppose uranium mining in the Black Hills of South Dakota.
Water is the main source of life for all living things, and we cannot afford the risk of contamination. Do the right thing. And in your hearts, clear your mind, smudge yourselves, and look into my daughter's eyes, my three-year-old daughter -- I have four daughters and one son.

SUSAN HENDERSON: Good afternoon. My name is Susan Henderson. I am a cattle rancher. I was born on the property that we now own south of Edgemont. We have owned and operated that as a family since 1902. We know a great deal about this area, and we know a great deal about water.
It is my considered opinion, after having looked at this for a long time, that we cannot afford this project. This project will destroy the water in this area. When we do that, the cattle ranches will not be able to survive. 98 percent of us now use underground sources of water to augment our water supplies. Without steady water, we cannot run these ranches, period.
[...]
I submit to you that many, many, many wells exist in Fall River and Custer Counties. I am aware of at least 2500 that are registered with the State of South Dakota.
I myself have an Inyan Kara well of extremely good quality on my cattle ranch just south of this project. Without that well, my ranch would be basically worthless.
We have an opportunity to put a stop to this. We need to put a stop to this. We need to do whatever it is going to take to put a stop to this because our livelihood depends on this. We will not get another chance.
Once these aquifers are polluted, there is no going back. There is no fixing. There is no taking the arsenic out. There is no taking the radiation out in sufficient quantities to make it okay to use.

SUSAN SUGZDA: Pretty close.

Good evening. I'm Susan Sugzda from the western Custer County area. I've done a little basic cost input analysis, and the costs of this project would be thousands of gallons of free water from aquifers in a drought-prone area.

Benefits: One would be lots of money, I guess, to the companies, which I understand are Canadian and Chinese, and in the future likely others will want to also have the chance; and a few local jobs, which I believe will turn out to be fewer than we've been led to believe probably, possibly.
So the result is that the benefits simply, in my opinion, don't -- are not worth the extensive cost. In the past around here, companies that have done mining have simply gone bankrupt and disappeared.
[...]
The EPA stands, obviously, for the Environmental Protection Agency, and we ask that you do what we pay -- we taxpayers pay you to do, and that is to protect our water from contamination. Thank you.

Now, this is about water here. This isn't about uranium ore. It's about water. This corporation -- and you and I know both know, you're learned people. You've been doing this a while. You've seen the international community and how it works.

So you and I both know that if you give these people that water -- and it's not 8,000 gallons a minute. I understand that they just increased the request to 8 billion gallons a year; is this correct? If I'm wrong, tell me I'm wrong.

That equivocates closer to 15,000 gallons a minute. Now, this is a free gift. This is not anything that these people are going to be charged for. This is free to them. They do not even have to mine uranium there.
They can open up a water bottling plant out there, and they can sell that water to whomever they choose. Once they have this permit, that's all they have to do. They never have to mine uranium out there. The water is a gift to them, free. They can do with it what they want. So I'm definitely against this. I hope you can see that.
I know Mark knows that. Him and I, we sat -- we eat lunch together sometimes, so we understand each other. We both have families. He's got a family. I got a family. We respect each other in this way.

URIAH LUALLIN: Good afternoon. Sure appreciate what everybody has said at this point. I'll keep mine short.
In regards to the in-situ uranium mining in the Dewey-Burdock area of Fall River County and Custer County, South Dakota, I have grave concerns for giving an aquifer exemption for the Minnelusa to deposit waste in Class V deep injection wells or Class III wells and the in-situ mining of uranium.
My well is in the Minnelusa aquifer, and waste with any radioactive or other chemical allowed in the drinking water on purpose or by accident would possibly contaminate my well.
While we know a lot about what happens underground, we certainly do not know the extent and variables in the geological forms below the surface to guarantee how water moves or will move.

Letter ID	Commenter Name
174	Ex. 6 Personal Privacy (PP)
470	
7460 (5/8 Rapid City hearing)	
7460 (5/8 Rapid City hearing)	
7461 (5/9 Rapid City hearing)	

Text
Subject: Opposition to Dewey Burdock Uranium Aquifer Mining [...] This area already experiences severe weather, and the weather is likely to be much more extreme going forward due to climate change. The proposal does not address what are likely to be seriously dangerous weather conditions
Not control over 'bleed production;' manmade disasters; corporations monitoring corporations; no oversight; abandoned uranium mines; Can you put your 'Climate Change' site back up? Actions to address: abrupt climate change involving water;
So with that, we cannot deny climate change, like many of the people who are in government are choosing to do.
Just a couple questions: You said no questions, but can the -- can the -- can the EPA put your website on climate change back up and actions to address climate change involving water? [...] And all these things that are coming, like this abrupt climate change. Best scenario, I guess, would be on top.
CHRISTOPHER JOE RUEBNER-MALROY: I am a Shawnee native. I don't need to use the microphone because I know how to speak loud enough. That's what I learned by being Shawnee. You guys are about to see your water rise. Your caps are melting. Antarctica is about to lose its shelf. The Mississippi just flooded. All the rivers stemming from the Mississippi are rising. [...] The southern winds have increased up the Gulf of Mexico. Emissions is energy with a mission. It goes somewhere. [...] So you got the Great Lakes. You got all the coast. Did you see the hurricane come through Florida? Did you hear about the flooding in the southeast? [...] These are clues to tell you that the entire southeast portion of the country could be underwater soon. All those people are going to come here, and you're going to put that in the ground?

Letter ID	Commenter Name	Text
200	Judith McDermott	Subject: Dewey Burdock Comment To Shea Valois, I am writing to express my concern over the permits and aquifer exemption decision requested by PowerTech for the Dewey Burdock ISR site. In an area such as the southern Black Hills, with so little drinking water resources, I feel that granting an aquifer exemption would be a very poor choice on the EPA's part, and not in the best interest of the area's current & future citizens. Along with the inherent drinking water risks, the increased risk of earthquakes associated with deep injection wells must also be considered. Deep injection sites in Oklahoma have exponentially increased the occurrence of earthquakes in that state. It is the responsibility of the EPA to take into consideration lessons learned from previous situations that have endangered human safety and apply them to current decisions that are being made. It is for these reasons that I strongly feel that the EPA should deny the aquifer exemption request along with the two UIC permits. Thank you for the opportunity to express my opinion on this matter.
231	Kenneth Hargens	Subject: Uanium etraction project in western South Dakota. Dear Environmental Protection Agency, At the recent hearing held in Rapid City I referenced a study conducted by the U.S. Geological Service. This study was in reference to a series of earthquakes instituted by the injection of nuclear and hazardous wastes mixed with water into bore holes in the area of the Rocky Mountain Arsenal in Colorado. These incidents were in the 1960's. Although these were deep bore holes, this unfortunate process illustrates that, in spite of any geological knowledge we have attained, we still do not have an understanding of the far-reaching effects of any possible damage we can do to the structure of the Earth
261	Linea Sundstrom	Subject: comments on Dewey-Burdock permit application Comments on Dewey-Burdock ISM Disposal Well Permit Application The permit application fails to address the reasonably foreseeable event of a natural or induced earthquake along the Dewey fault, which lies only a mile from the project area. The geologic study prepared for the permit application does not employ best current science. To be specific: 1. The study does not classify the Dewey fault as a capable fault. As nearly as I can determine, the Dewey fault meets at two of the four criteria for a capable fault, only one of which is needed for a fault to be classified as capable. It may meet all four criteria; however, this is difficult to determine because local seismic data are not available to me. (Definition of capable fault can be found here: https://www.nrc.gov/reading-rm/doc-collections/cfr/part100/part100-appa.html Earthquakes of greater than 3.0 magnitude have occurred in the immediate area on July 17, 1920, December 30, 1924, and May 3, 1996. A 3.5 magnitude earthquake east of the town of Custer that occurred on December 12, 2013, may have been associated with the Dewey fault. Please explain how it was determined that the Dewey fault is not capable. 2. The permit application assumes that movement along the Dewey fault, which is already estimated as having experienced a 440-foot vertical displacement, cannot disrupt "confining" shale strata that are only 20 to 80 feet thick. This assumption is clearly wrong. Nowhere does the permit application address this scenario. 2 Source: https://www.nps.gov/parkhistory/online_books/geology/publications/bul/1063-G/sec2.htm What is the basis for the assumption that the movement of the Dewey fault will not cause displacement of the so-called confining strata and mixing of aquifers? 3. The application does not address the possibility of induced earthquakes from the waste-disposal wells needed in the proposed uranium extraction process, nor does it address the likelihood of eventual hydraulic fracturing to extract oil and gas in western Fall River County. According to USGS studies, deep wells used to dispose of wastewater from fracking can cause earthquakes as far as 10 miles from the location of an injection well: "Earthquakes can be induced at distances of 10 miles or more away from the injection point and at significantly greater depths than the injection point." Note that the Dewey Fault is only two miles from the proposed well sites. (USGS website, accessed 5/22/2017.) http://rapidcityjournal.com/news/local/seismic-crews-want-to-test-up-to-acres-northwestof/article_2d670e86-f90b-5db4-8bd6-19075034e04e.html What is the reason for assuming that neither natural nor induced earthquakes can happen in or near the project area and create disruption of confining strata and mixing of underground water bodies? 4. Further, the USGS studies demonstrate that injection wells can cause such earthquakes even without the presence of high-pressure injection. "In operations where engineers pour fluid down the well without added pressure at the wellhead still increase the fluid pressure within the formation and thus can induce earthquakes." (USGS website, accessed 5/22/2017.) Please explain why it is assumed here that the proposed wells cannot induce earthquakes, given the presence of relatively soft rock strata and geologic faults within and adjacent to the project area. 5. The USGS has developed methods to estimate the risk of such wells causing earthquakes. These methods have not been applied here. (USGS website, accessed 5/22/2017.) 3 Please clarify whether earthquake risk evaluation methods have been applied here and state the results of such evaluations. [...] 7. I also notice that the permit application makes no mention of a fault lying within the project area, which is described in Stratigraphic and Structural Controls of Uranium Deposits on Long Mountain, South Dakota, by William A. Braddock, US Geological Survey Bulletin 1063-A, 1957, page 51. Why was the presence of this fault omitted from the application?

262	Ex. 6 Personal Privacy (PP)	Injection-Induced Earthquakes A July 2013 study by US Geological Survey scientist William Ellsworth links earthquakes to wastewater injection sites. In the four years from 2010-2013 the number of earthquakes of magnitude 3.0 or greater in the central and eastern United States increased dramatically. After decades of a steady earthquake rate (average of 21 events/year), activity increased starting in 2001 and peaked at 188 earthquakes in 2011. USGS scientists have found that at some locations the increase in seismicity coincides with the injection of wastewater in deep disposal wells. Injection-induced earthquakes are thought to be caused by pressure changes due to excess fluid injected deep below the surface and are being dubbed "man-made" earthquakes. http://people.uwec.edu/piercech/HazwasteWebsSp04/ DeepWellInjection/DeepWellInjection.htm Ex. 6 Personal Privacy (PP) om 6 References: High-rate injection is associated with the increase in U.S. mid-continent seismicity Barbara A. Bekins, and Justin L. Rubinstein Abstract An unprecedented increase in earthquakes in the U.S. mid-continent began ... in 2009. Many of these earthquakes have been documented as induced by wastewater injection. We examine the relationship between wastewater injection ... and U.S. mid-continent seismicity using a newly assembled injection well database for the central and eastern United States. We find that the entire ... increase in earthquake rate is associated with fluid injection wells. High-rate injection wells (>300,000 barrels per month) are much more likely to be ... Induced Earthquakes The primary cause of the recent increase in earthquakes in the central United States. Wastewater disposal wells typically operate for longer durations and ... injection wells induce earthquakes. Most injection wells are not associated with felt earthquakes. A combination of many factors is necessary for injection to ... induce felt earthquakes. These include: the injection rate and total volume injected; the presence of faults that are large enough to produce felt ... earthquakes; stresses that are large enough to produce earthquakes; and the presence of pathways for the fluid pressure to travel from the injection ... Injection-induced earthquakes Abstract Earthquakes in unusual locations have become an important topic of discussion in both North America and Europe, owing to the concern that ... and underground mining, withdrawal of fluids and gas from the subsurface, and injection of fluids into underground formations. Injection-induced ... production of oil and gas from previously unproductive formations. Earthquakes can be induced as part of the process to stimulate the production from tight ... associated with industrial activity, with a focus on the disposal of wastewater by injection in deep wells; assess the scientific understanding of induced ... A Century of Induced Earthquakes in Oklahoma? related to oil production, particularly disposal of wastewater in deep injection wells, are known to potentially cause earthquakes. Prior to the ... Release Date: October 26, 2015The rate of earthquakes has increased sharply since
277		In addition, research has linked deep injection wells to local earthquakes. These earthquakes have the potential to cause damage to the wells and may also cause structural damage that will impact local populations. Sincerely, Ex. 6 Personal Privacy (PP)
00306, 00307		The simple fact of the matter is that big oil and fracking have been running amok and the result of that is an increase of seismic activity from coast to coast which has been scientifically proven! The other fact of the matter is that there is a volcano, a supervolcano in fact, laying dormant under the entire Midwest that is long overdue for an eruption and if the fracturing of the Earth's mantle - let alone mining for Uranium - is allowed to continue, the seismic activity stands to increase and intensify to the point of triggering said eruption!
312		Subject: Uranium aquifer exemption public comment I do not support these draft permits. In one regard, the energy sector has apparently learned nothing from the geological destabilization that has occurred in Oklahoma and other locations that have allowed injection wells as part of fracking activities. Additionally, there are no studies or details indicating what has actually BEEN placed into injection wells. However, we do know that earthquakes have occurred and toxic materials have appeared in the water sources after these injection wells have been allowed.
352		Considering what injection well technology has done to the relatively stable geology of Oklahoma and other states, I would think that special consideration would be given to an area that has already shown earthquake activity and that is so directly linked to water supplies throughout the southern Black Hills.
415		Subject: Powertech/Azarga Dewey Burdock proposal public commentary I am against the Dewey Burdock proposal for injection wells and hazardous waste disposal. First of all it is too close to Yellowstone caldera. We do have earthquakes in this area with one being a year or two ago in Ardmore.
423		In addition, research has linked deep injection wells to local earthquakes. These earthquakes have the potential to cause damage to the wells and may also cause structural damage that will impact local populations. Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP)
445		**Injection Wells Don't Just Pollute** ***1.)*** They are well known to cause earthquakes, as hazardous wastes are continuously being pumped into the aquifers at high pressure, and the wastes are meant to stay in the ground forever. The pressure that the wastes exert in the aquifer forces the wastes to move vertically and horizontally in all directions, mixing with the local waters there and traveling with the flow underground. The pressure also causes more fractures and fissures in the rock layers, causing earthquakes, and further mixing of the wastes into the aquifers. Fracking is a similar principle. Oklahoma has been the site of numerous tracking areas and have increased a record number of earthquakes and contaminated drinking water wells, and the earthquakes continue even after two years of a tracking ban. **INJECTION-INDUCED EARTHQUAKES** A July 2013 study by US Geological Survey scientist William Ellsworth links earthquakes to wastewater injection sites. In the four years from 2010-2013 the number of earthquakes of magnitude 3.0 or greater in the central and eastern United States increased dramatically. After decades of a steady earthquake rate (average of 21 events/year), activity increased starting in 2001 and peaked at 188 earthquakes in 2011. USGS scientists have found that at some locations the increase in seismicity coincides with the injection of wastewater in deep disposal wells. Injection-induced earthquakes are thought to be caused by pressure changes due to excess fluid injected deep below the surface and are being dubbed "man-made" earthquakes.
448		According to studies published on the USGS website, "An unprecedented increase in earthquakes in the U.S. mid-continent began in 2009. Many of these earthquakes have been documented as induced by wastewater injection." from Journal article 'High-rate injection is associated with the increase in U.S. midcontinent seismicity' Science By: Matthew Weingarten, Shemin Ge, Jonathan W. Godt, Barbara A. Bekins, and Justin L. Rubinstein. Source link: https://pubs.er.usgs.gov/publication/ll0161978

		Earthquakes have been know to cause springs to dry up. According to U.S. Geological Survey Fact Sheet 096-03 By Michelle Sneed, Devin L. Galloway and William L. Cunningham, "Hydrogeologic responses to earthquakes can create a variety of hazards. Water supply may be disrupted if wells go dry or become too turbid to pump, and infrastructure damage may result from ground motion." Source link: https://pubs.usgs.gov/fs/fs-096-03/
462	Ex. 6 Personal Privacy (PP)	This area is also seismically active, with known faults in close proximity. Given the known occurrences of induced seismicity from injection well operations, containment of hazardous materials cannot be guaranteed.
470		Will there be seismic events with the pumping like there is with fracking?
479	Ex. 6 Personal Privacy (PP)	Denver earthquakes 40 years ago were caused by Uncle Sam, not Mother Nature Article in Westword by Patricia Calhoun published Wednesday, August 24, 2011 at 6:54 a.m. Despite yesterday's earthquake that hit the Trinidad region, "Colorado is considered a region of minor earthquake activity," according to the U.S. Geological Survey. But forty years ago, a series of quakes rocked the Denver area -- quakes caused not by Mother Nature, but by Uncle Sam. How? The Army was dumping dangerous chemicals into a deep injection well out at the Rocky Mountain Arsenal. The Rocky Mountain Arsenal was created out of farmland on the eastern edge of metro Denver during World War II to arm the U.S. Army. After the war, it became a bustling center of industrial activity -- a top-secret center that created a lot of dangerous waste. Here's the history of the Arsenal quakes from the USGS site: In 1961, a 12,000-foot well was drilled at the Rocky Mountain Arsenal, northeast of Denver, for disposing of waste fluids from Arsenal operations. Injection was commenced March 1962, and an unusual series of earthquakes erupted in the area shortly after. It was 32 minutes after 4 a.m. on April 24 when the first shock of the Denver series was recorded at the Cecil H. Green Geophysical Observatory at Bergen Park, Colorado. Rated magnitude 1.5, it was not strong enough to be felt by area residents. By the end of December 1962, 190 earthquakes had occurred. Several were felt, but none caused damage until the window breaker that surprised Dupont and Irondale on the night of December 4. The shock shuffled furniture around in homes, and left electrical wall outlets hanging by their wires at Irondale. Over 1,300 earthquakes were recorded at Bergen Park between January 1963 and August 9, 1967. Three shocks in 1965 -- February 16, September 29, and November 20 -- caused intensity VI damage in Commerce City and environs. The Denver series was forgotten, however temporarily, in October 1966, when a southeast Colorado tremor rocked a 15,000 square-mile area of that State and bordering New Mexico. Minor damage, in the form of broken windows and dishes and cracked walls and plaster, occurred at Aguilar, Segundo, Trinchera, and Trinidad. Another strong shock rumbled through the Denver area on November 14, 1966, causing some damage at Commerce City and Eastlake. Slighter rumblings (below magnitude 3.0) occurred throughout the remainder of 1966, and through the first week of April 1967. Then, on April 10, the largest since the series began in 1962 occurred; 118 windowpanes were broken in buildings at the Rocky Mountain Arsenal, a crack in an asphalt parking lot was noted in the Derby area, and schools were dismissed in Boulder, where walls sustained cracks. Legislators quickly moved from beneath chandeliers in the Denver Capitol Building, fearing they might fall. The Colorado School of Mines rated this shock magnitude 5.0. Boulder sustained minor damage to walls and acoustical tile ceilings on April 27, 1967, as result of a magnitude 4.4 earthquake. Then a year and half after the Rocky Mountain Arsenal waste dumping practice stopped, the strongest and most widely felt shock in Denver's history struck that area on August 9, 1967, at 6:25 in the morning. The magnitude 5.3 tremor caused the most serious damage at Northglenn, where concrete pillar supports to a church roof were weakened, and 20 windows were broken. An acoustical ceiling and light fixtures fell at one school. Many homeowners reported wall, ceiling, floor, patio, sidewalk, and foundation cracks. Several reported basement floors separated from walls. Extremely loud, explosivelike earth noises were heard. Damage on a lesser scale occurred throughout the area. During November 1967, the Denver region was shaken by five moderate earthquakes. Two early morning shocks occurred November 14. They awakened many residents, but were not widely felt. A similar shock, magnitude 4.1, centered in the Denver area November 15. Residents were generally shaken, but no damage was sustained. A local shock awakened a few persons in Commerce City November 25. Houses creaked and objects rattled during this magnitude 2.1 earthquake. The second largest earthquake in the Denver series occurred on November 26, 1967. The magnitude 5.2 event caused widespread minor damage in the suburban areas of northeast Denver. Many residents reported it was the strongest earthquake they had ever experienced. It was felt at Laramie, Wyoming, to the northwest, east to Goodland, Kansas, and south to Pueblo, Colorado. At Commerce City merchandise fell in several supermarkets and walls cracked in larger buildings. Several persons scurried into the streets when buildings started shaking back and forth. During 1968, ten slight shocks were felt in Colorado. Only one, on July 15, caused minor damage at Commerce City. In September of that year, the Army began removing fluid from the Arsenal well at a very slow rate, in hope that earthquake activity would lessen. The program consisted of four tests between September 3 and October 26. Many slight shocks occurred near the well during this period. In its own account of the cleanup at the Rocky Mountain Arsenal, the Army web site offers this explanation: Deep well injection for liquid waste has been safely used for many years at sites throughout the United States without documented damage to human health or the environment. After an extensive study of deep injection wells across the country by the U.S. Environmental Protection Agency (EPA), it was concluded that this procedure is effective and protective of the environment. The Rocky Mountain Arsenal deep injection well was constructed in 1961, and was drilled to a depth of 12,045 feet: The well was cased and sealed to a depth of 11,975 feet. with the remaining 70 feet left as an open hole for the injection of Basin F liquids. For testing purposes, the well was injected with approximately 568,000 gallons of city water . prior to injecting any waste. However, when the Basin F liquids were actually introduced, the process required more time than anticipated to complete because of the impermeability of the rock. The end result was approximately 165 million gallons of Basin F liquid waste being injected into the well during the period from 1962 through 1966.

		The waste fluid chemistry is not known precisely. However, the Army estimates that the waste was a more dilute version of the Basin F liquid which is now being incinerated. Current Basin F liquid consists of very salty water that includes some metals, chlorides, wastewater and toxic organics. From 1962 --1963, the fluids were pumped from Basin F into the well. From 1964-- 1966, waste was removed from an isolated section of Basin F and was combined with waste from a pre-treatment plant, located near Basin F, and then pumped into the well. The waste from the pre-treatment plant was generally a solution containing 13,000 parts per million sodium chloride (salt). with a pH ranging from 3.5 to U,5. The organic content of the solution was high but is largely unknown The injected fluids had very little potential for reaching the surface or useable groundwater supply since the injection point had ll,900 feet of rock ab~ s sealed at the opening. The Army discontinued use of the well in Feb. 1966 because of the possibility that the fluid injection was triggering earthquakes in the area. The well remained unused for nearly 20 years. In 1985, the Army permanently sealed the disposal well in stages. First, the well casing was tested to evaluate its integrity. Any detected voids behind the casing were cemented to prevent possible contamination of other formations. Next, the injection zone at the bottom 70 feet of the well was closed by plugging with cement. Additional cement barriers were placed inside the casing. across zones that could access water-bearing formations (aquifers). The final step was adding Bentonite, a heavy clay mud that later solidified, to close· the rest of the hole up to the ground surface. [Illegible.] If EPA has any influence, vote of all S.D's.
481	Ex. 6 Personal Privacy (PP)	The Black Hills, in general, are also geologically unstable as there is already on going seismic activity. This is important as waste water deep injection wells have been linked to increased earthquake activity in Oklahoma
493		Who is accountable when tectonic stability is changed and movement occurs that allows poison production water to further contaminate our regional groundwater?
496		In its own outlines, the USGS lists specific factors necessary for injection wells to induce earthquakes. Those factors include the presence of faults that are large enough to produce eartquakes, stresses that are large enough to produce earthquakes, and the presence of pathways for the fluid pressure to travel from the injection point to faults. It is obvious that those same factors are in severe question in relation to this injection project.
512		Injection wells like the one being proposed here have caused many problems in areas like Oklahoma over the last few years. The United States Geological Survey data shows that between 1978 and 2008 there were no more than 3 earthquakes per year with a magnitude of 3.0 or greater in Oklahoma. With the proliferation of fracking, the number of earthquake with a magnitude of 2.0 was 585, 887, and 639 for the years 2014-2016. The impact of these earthquakes is borne by citizens who suffer property damage and businesses who lose revenue while they recover.
513	[No name provided]	Injection wells have created increased earthquakes along fault lines. Is this a possibility in regards to the class V injection waste wells in the Dewey Burdock area?
514		It has been discovered that pumping high pressure fluids into faults and cracks in the rock can and do cause increased earhquake activity and strength. The area in question is of this nature and has connection with immense cave networks such as Jewel and Wind Cave.
527		The EPA also omits information in its discussion of seismic factors in the Class V Fact Sheet. It states that it is "not aware" of a seismic event causing an injection well to contaminate a USDW or of studies done to determine whether such contamination has occurred (p. 54). It then lists states that have been studied on this issue. The list omits states with injection wells that have been linked – at least in the media -- to seismic incidents, including Oklahoma, North Dakota, and Pennsylvania. The EPA may be "not aware" of some of the research, but it should be held to a higher standard and required to do the relevant research before omitting important information. We also searched the Class V Fact Sheet looking for a thorough discussion of the seismic characteristics of the proposed mining and injection area. The presence of faults in the immediate area is mentioned (pp. 22-23), but their potential impacts are never analyzed. Similarly in the Class III Fact Sheet, the mechanisms by which Fall River formation water comes up through the Dewey fault is never analyzed (p. 45).
07459 (Valentine hearing)		And something else, as for the water that can't be used later on that they want to inject in a lower area of the earth, that just reminds me of Oklahoma. That is fracking. That is high-pressure water going to lower levels that cause earthquakes.
7460 (5/8 Rapid City hearing)		If you look at the Madison in Edgemont, it's 4,000 feet deep, the water is boiling hot, 210 degrees -- boiling is 212 -- and it isn't pure either. It is exhibiting radioactivity and arsenic and other contaminants. If you look at the Madison in Provo, another 8 miles south, right near the depot there, you'll see a 4,200-foot well that has, you know, some level of radiation, some level of arsenic and it is boiling hot. The boiling hot tells you that this is a seismically active area. It's picking up the heat from the earth's crust, and it's coming up there. One of the things that we may see when we do all this is we may see earthquake activity. You know, I have experienced minor earthquakes at the ranch all my life, you know, things where the furniture moves a little bit, the pictures get cattywampus, this kind of thing. You can look out of the window of the ranch living room, and you can see an ancient volcano right straight out there, less than 5 miles away. This is a seismically active area to start with. That area just to the west has something called the Dewey Fault.
7461 (5/9 Rapid City hearing)		Okay. So say if we can use these other chemicals to neutralize the radioactivity, what if -- okay, say, imagine if the radioactivity has no effect at all. We're still on fault lines. [...] So there's the water. There's also the fact that by causing vibration in the earth, we create an exponential butterfly effect. It happens with water, and it happens with earth. This is how tidal waves are created, and this is how earthquakes are created. This is how volcanoes begin to erupt. This how the earth might begin to shake.
7461 (5/9 Rapid City hearing)		This piece of paper that I brought with me is further indication that we don't know what goes on underneath the ground. And on page -- page 3, this is a document that was copied from the Geological Survey files. The Geological Survey wrote this document. On page 3 it says: "After an extensive study of deep injection wells across the country by the U.S. Environmental Protection Agency, it was concluded that this procedure is effective and protective of the environment." What they're talking about here is deep well injection wells. This particular document was initially downloaded in 2011. I don't know when it was printed or when the study was done. But anyway, it goes -- what happened is that Rocky Mountain Nuclear Arsenal -- Rocky Mountain Arsenal down by Denver, they decided to get rid of some of their nuclear waste. So they drilled a deep hole in the ground. They drilled this hole in 1961, and -- okay. They started -- they drilled the hole in 1961. They started injecting nuclear waste and liquid waste into this hole in March of 1961.

		The first earthquake happened down there on the 24th of April, 1961, very shortly after they started injecting in there. From 1963 to 1967 there was 1,300 earthquakes that were felt all the way from Laramie, Wyoming clear down to Trinidad, which is south of Pueblo. They stopped pumping nuclear waste and liquid waste into this borehole in March of 1966. The last quake was one of the most severe, and that was in August of 1967, and it registered 5.3. Okay. In 1985, several years after they quit pumping, they decided to plug the well, and they plugged it with bentonite and concrete. But all of this is indicative of the fact that I think this is a ridiculous proposal and it shouldn't happen in our state. I'm sure that if it was given to a vote of the people, the people wouldn't vote for this.
7461 (5/9 Rapid City hearing)	Wankinya Ho Waste	And I hope you guys are well-educated about geological -- of the plate tectonics. And the plate tectonics are always moving. So even with her plans about keeping it contained, it will never stay contained because by the plate tectonic theory, the earth is always moving. And the earth is always growing itself, and it will -- any earthquake can occur, and it will split anything. And you digging as far underground, you could speed up that process. And even contaminating water and overusage of the water and you pulling that water out of the land, then putting it back in can create carbons, and it will collapse. That's what you call a sinkhole. And that's a geological term. And I'm sorry to all the uncis here that I'm speaking English language, but it's what I grew up on. Thank you.
7462 (Hot Springs hearing)	Paul Wheeler	PAUL WHEELER: Oh, okay. Well -- so, in its own outlines, the United States -- two paragraphs. The United States Geological Survey lists specific factors necessary for injection wells to induce earthquakes. Those factors include the presence of faults that are large enough to produce earthquakes, stresses that are large enough to produce earthquakes, and the presence of pathways for the fluid pressure to travel. It is obvious that those same factors are in severe question in relation to this project. I think what I would like to say is that geology is an imperfect science. I'm sure the Powertech geologists would agree. What cannot be seen below ground cannot be anticipated or contained.
7642 (Hot Springs hearing)	Ed Harvey	Since no mining operations are occurring, no need is shown for disposal wells at this time. This area is also seismically active, with known faults in close proximity. Given the known occurrences of induced seismicity from injection well operations, containment of hazardous materials cannot be guaranteed.
7642 (Hot Springs hearing)	Mary Helen Pederson	It has already been proved that injecting materials into high -- under high pressures deep underground causes earthquakes. This area is already having numerous earthquakes as the whole Black Hills is in uplift stage.
7642 (Hot Springs hearing)	Uriah Luallin	It has been discovered that pumping high-pressure fluids into faults and cracks in the rock can and do cause increased earthquake activity and strain.

Letter ID	Commenter Name
489	Ex. 6 Personal Privacy (PP)
7443	
7460 (5/8 Rapid City hearing)	
7461 (5/9 Rapid City hearing)	
7642 (Hot Springs hearing)	

Text
Water is life – no fracking.
Subject: No TO FRACKING FOR URANIUM OR ANYTHING ELSE!!! from Geralynn Barner Sir or Madam, **USGS FINALLY ADMITS THAT FRACKING CAUSES EARTHQUAKES** Posted by Aaron Kesel | Mar 2, 2017 | NO, I SAY A THOUSAND TIMES NO! NO FRACKING TYPE ACTIVITY! PERIOD! Underground Injection Control **USGS FINALLY ADMITS THAT FRACKING CAUSES EARTHQUAKES**
KRISTOPHER JAMES: Ya'at'eeh abini. My name is Kristopher James. I am Dine from the Dine -- from the Navajo nation down in Arizona. My -- I come from the Yoo'o Dine'e Todich'ii'nii. I was born for Kinyaa'aanii. And I came here to speak on behalf of my people. A lot of us are lost in the fracking minings down that way from the coal mines and the uranium spillage that is spilling into our waterways that is now water waste. And so, pretty much, our water source is -- is just straight jacked.
The sulfuric acid, whenever you put hydrochloric acid into the ground to cause a fracture, and that's what causes it, along with radon and all these other things. That's what they use to make sure the fracture. When it comes back up, it has so much sulfuric acid in it. You are talking about you got a problem with sulfur. You're about to put sulfur in sulfur. You're going to have a big problem. You cannot get rid of it.
I will say, with all due respect, the EPA has got a terrible track record when it comes to overseeing cleanup. Again, I mentioned the cleanup, and we've been places where there's messes. The fracking around Chaco Canyon, you could not believe it, and the EPA is supposedly watching that.

Letter ID	Commenter Name
6	Alan Binnie
15	ANGRY AMERICAN
24	Aryeh Frankfurter
71	Dahl McLean
72	Dahl McLean
86	Dan Gallett
88	Denise Mooney
94	Donald Harland
95	Donald Pay
103	Edward Starr
108	Ellie Irons
136	Gerard Jamin
162	Jane Patnoe
172	Jennifer Nitz
174	Jennifer Waggoner
201	Juli Ames-Curtis

207

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221

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Ex. 6 Personal Privacy (PP)

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481	
485	
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496	Ex. 6 Personal Privacy (PP)
00500, 00501	
513	[No name provided]
514	Ex. 6 Personal Privacy (PP)

519

Ex. 6 Personal Privacy (PP)

527

528 Ex. 6 Personal Privacy (PP)

531	Ex. 6 Personal Privacy (PP)
532	Ex. 6 Personal Privacy (PP)

537	Ex. 6 Personal Privacy (PP)	

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7448

7457

Ex. 6 Personal Privacy (PP)

7460

(5/8 Rapid City hearing)

7460

(5/8 Rapid City hearing)

7460

(5/8 Rapid City hearing)

7460

(5/8 Rapid City hearing)

7461

(5/9 Rapid City hearing)

7461

(5/9 Rapid City hearing)

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(5/9 Rapid City hearing)

7461

(5/9 Rapid City hearing)

7462

(Hot Springs hearing)

7462

(Hot Springs hearing)

Ex. 6 Personal Privacy (PP)

7462

(Hot Springs hearing)

7462

(Hot Springs hearing)

7462 (Hot Springs hearing)	Lindsey McLean
7462 (5/9 Hot Springs hearing)	Paul Wheeler
07463 (Edgemont hearing)	Don Matt
07463 (Edgemont hearing)	Edward Starr
07463 (Edgemont hearing)	Gardner Gray

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)
7464 (mass mailer text)	N/A
7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)
7642 (Hot Springs hearing)	
7642 (Hot Springs hearing)	
7642 (Hot Springs hearing)	
7642 (Hot Springs hearing)	

Text
Subject: Please do not issue permits for the Dewey-Burdock uranium mine Dear EPA decision-maker, I'm writing to comment on the applications the Dewey-Burdock Uranium mine. The location of this proposed mine is not suitable for this type of operation because the stata is unstable and full of perforations. Use of the proposed techniques poses an unacceptable risk to the groundwater aquifer. Please insist that a full study taking these risks into account be performed before considering the application for this unusually dangerous and destructive method of uranium extraction.
Subject: DENY PERMITS & RETURN BRIBES Re Dewey-Burdock Uranium Mine Dear CRIMINAL EMPLOYEES @ EPA, Commenting on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells. The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is very likely.
Subject: Re: Dewey-Burdock templates [...] The proposed mine and deep disposal wells are in a severely compromised area. Ample documentation exists that demonstrates that the proposed Mine and Well area has numerous faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged.
I find it appalling that anyone would approve disposal of waste from uranium mining activity into a potable water source for this area. In addition, the Minnelusa sits above the Madison aquifer, a major source of drinking water for many communities, therefore, hundreds of thousands of people in western South Dakota and eastern Wyoming. Since the Black Hills were formed from an uplifting of the earth, no one can guarantee that each aquifer is isolated from the one below it. Fissures are known to exist that would allow transfer of water, and in this case, contaminates, to move freely to other aquifers.
It appalls me that anyone would approve disposal of waste from uranium mining in our potable water source. Since the Black Hills were formed from an earth uplift, nothing guarantees that each aquifer is isolated. Known fissures could allow water and contaminants to move freely between aquifers.
6The aquifers here can all be connected by cracks and splits and no one has any idea what really goes on underground. Thank you,
It will be impossible to adequately oversee the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells, our groundwater is likely to be irreversibly contaminated. There are well documented faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged in the area of proposed mine and deep disposal wells . It will be impossible to contain mining fluids or waste liquids, contamination of our groundwater is highly likely.
The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is very likely.
Subject: Underground Injection Control Program's Draft Permits for the Proposed DeweyBurdock Uranium Mine and Deep Disposal Wells In the 1980s I researched the Dewey Burdock area for the Technical Information Project. TIP was involved in several contested case hearings in before the South Dakota Board of Minerals and Environment and its predecessor board. We were also involved in several appeals before the US Forest Service for previous attempts to explore and/or mine uranium in this area. I also was involved in the research TIP conducted at the Gilt Edge Mine, operated by Brohm Mining Company. TIP sued EPA to get proper NPDES permitting for that mine, but soon acid rock drainage would overwhelm the site. It is now a Superfund site, and EPA is spending a lot of money to bring the problems there under control. I am concerned a similar fate awaits Powertech's Dewey-Burdock uranium operation if it allowed to proceed. DeweyBurdock area has thousands of boreholes drilled through the upper confining layers of this proposed ISR operation, and perhaps nearly as many through the lower confining layer. Laws at the time required surface capping only, not fully cemented holes. Further, inspections of the cementing of the holes was extremely haphazard, with, at most, 10 percent of the holes actually inspected. Many of these holes have probably collapsed by now, but they still have punctured the confining layer(s) in multiple places. My concern is that operating an in-situ project in this area will be a disaster.
The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.
Subject: EPA public comment: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits Dear Valois Shea, Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells: (...) • The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.
The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.
4. The "best guess" is that the aquifer won't leak but there is no proof! With possible gas/oil exploration in the area, there is the possibility of future fracking which could lead to earthquakes/fissures.
Subject: Permits for Dewey-Burdock Uranium Mine I am writing to comment on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells. The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged
Powertech failed to report that it possessed thousands of records of drilling the Tennessee Valley Authority, and then only released 34 of 6,000 borehole logs. Back in 2015, Dr. LaGarry reviewed half of the newly disclosed drilling logs and found the existence of faults in the area and that many boreholes were not properly plugged (which makes the area unsuitable for in situ leach mining because the project won't be able to control the highly toxic and carcinogenic mining fluids.
The proposed min and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 od boreholes that have not been properly plugged. It will be impossible to contain mining fluid or waste liquids, and contamination of our ground water is very likely (as it has shown to be in all uranium mines in the USA)
Subject: Comments on Powertech Underground Injection Control Draft Area Permits, Dewey- Burdock Uranium In-Situ Recovery Site, Edgemont, SD Dear Ms. Shea: From 1992 through 1999, I was an environmental engineer and eventually the environmental compliance manager for the largest oil refinery in Minnesota, now known as Flint Hills Resources (formerly Koch Refining Company). When we took a large gasoline storage tank out of service for routine cleaning in September 1997, we found a nickel-sized hole in the bottom. Understanding immediately that we'd had a very large spill, we called the Minnesota Pollution Control Agency (MPCA), our regulating agency, and told them about the problem. The MPCA came out, we drilled some exploratory wells, and found there was a large lake of product, hundreds of thousands of gallons, lying on the water table. After several meetings with regulators, we devised a plan that the MPCA agreed was the best: we'd drill more wells and pump the product off the water table, send it through the refining process again and, of course, replace the entire floor of the tank.

The following year, while we were still pumping that gasoline off the water table, the weather was very dry, and the water table dropped as a result. One afternoon when I was on call, an employee walking his dog on the shore of the Mississippi River on a Sunday afternoon called the refinery and told us his dog had come out of a swamp smelling like gasoline. The refinery called me, and I called the MPCA, and we immediately called a refinery emergency.

The gasoline lying on top of the water table had been fine until the water table dropped. Then, as it turned out, it had seeped down a fracture in the subterranean bedrock, a crack nobody had known was there, and emerged in a backwater slough of the river. The regulatory agency had brought its geologists and hydrologists to all the meetings, and they had investigated the area and concurred with our plan. Our own hydro-geologists did, too. Fortunately, the spill was caught before that gasoline made it to the river itself, but it cost the refinery millions of dollars to clean up, and the cost to that slough was that it essentially got eradicated in the cleanup. If that employee had chosen some other place to walk his dog, we might not have discovered the spill until it had reached the locks at Hastings, Minnesota, several miles downriver. By then the damage would have been much more significant.

Let me stress that the refinery did everything right, everything it was supposed to do, in dealing with the spill. But nobody knew – nobody COULD know – about that fracture in the bedrock.

And neither will Powertech. I'm sure they'll use the very best technology to try to protect our water, but because we can't see underground, we can't know with certainty how anything will behave in that environment. Is it worth it to risk Powertech's uranium-laden solution getting into our underground aquifers (not just the Inyan Kara)—where it will mix, not lie on top—and make that water unusable far into the future? We in western South Dakota cannot afford to pollute the very water we rely on, not only for agriculture and animal husbandry, but for life. I hope you agree with me that, no, it's not worth that risk.

I urge you to deny Powertech's permit for uranium mining in the southern Hills. Our water is simply too precious. Thank you.

Also that the Fuson shale confining zone may have some areas compromised by other holes punched through it, and the wellfield pump tests will pinpoint any breaches…

Subject: Stop Dewey-Burdock Uranium Mine

Dear EPA,

I wish to comment on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells. The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is very likely

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Subject: Uanium etraction project in western South Dakota.

As a lifelong resident of the Black Hills of western South Dakota and a student of the geology of this area I know from my experience and knowledge how fragile is the rock strata of the western Black Hills. Particularly the underlying limestone and sandstone.

I shall repeat some incidents that reveal the porosity of the rock strata. When I was active in drilling oil wells not far from the proposed Dewey-Burdock uranium extraction program we would often 'lose circulation'. This meant that we would drill into large cavities or fissures underground which would carry away our drilling mud or lubricant. A rancher who lives not far from the proposed project decided to drill a new water well. He actually has a water-well-drilling business. He was in the process of drilling this well when he suddenly drilled into a huge cavity. He withdrew his drilling pipe and later notified the superintendent of the nearby Jewel Cave National Monument. The Jewel Cave people came to the bore hole site with fiber optic cameras and equipment to put down the hole. When asked what the saw, they responded: "It looks just like Jewel Cave."

I am a member of the Darton Geological Society. We have guest speakers at out monthly meetings. One speaker presented professional documentation related to a study of how fluids migrate underground in limestone and sandstone strata. In addition to a bore hole in which fluid was injected they had a series of bore holes near the injection hole to monitor for the migration of fluids. They had injected harmless ionized water and it was amazing how quickly and how far the fluid had spread from the injection site. Another speaker, who was a professor from my alma mater, South Dakota School of Mines and Technology, was the project leader in a project to drill experimental bore holes through South Dakota. Many holes were drilled but the astounding knowledge gained was that it was discovered that a fault line existed either under the Missouri River or paralleling it for a great distance from the Nebraska border northward.

We are reminded that the famous Homestake Mining Company did core-drilling from the surface down to great depths to discover new ore bodies. As a result of their core drilling they decided to excavate a tunnel 2 miles in length to where they assumed the new gold ore body lay. When they got to the area they did not find the any new gold ore bodies. This was done relatively recently before Homestake gave up the gold mine after some 140 years. This work was done in hardrock, of course, and not sedimentary stone, but the fact is evident. We do not really know what lies beneath the surface.

One of the colored displays at the EPA hearings up here in the Black Hills showed a cross section of the underlying rock strata in the Dewey-Burdock area. I submit that the drawing is NOT REPRESENTATIVE of the underlying rock. Instead of solid rock displayed it should more accurately be shown to be filled with cavities, holes and fissures, Much like a sponge or Swiss cheese.

The few studies of the geology of the region indicate that there is no way to isolate the mining chemicals to one formation, as the Dewey-Burdock proposal claims they will do. There are too many features, natural and man-made, that cut across formations, that can allow for contaminants to migrate into unwanted areas.

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6. The permit application does not incorporate recent studies showing that water moves between aquifers to a much greater degree than previously thought. http://www.nature.com/ngeo/journal/vaop/ncurrent/full/ngeo2943.html The permit application assumes that the relatively thin "confining" strata do not allow mixing of water from the various permeable strata. Please re-evaluate in light of this new research or explain why such analysis is not needed here.

General Considerations of Permits for Class 5 and Class 3 mining wells for Dewey Burdock

• EPA should require thorough borehole identification and plugging prior to issuing a permit, as there are currently 7,650 old boreholes that have not been closed or have been closed incorrectly (ie. with fence posts, or pie plates with a rock on top).

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.

Subject: uranium mining in black hills Dear EPA,

Region 8:

I urge you not to grant permits for the Dewey-Burdock uranium mine. Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells:

[…]

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.

Subject: Refuse Permits for Dewey-Burdock Uranium Mine

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is very likely.

Any risk of contamination of the aquifers is unacceptable. Containment is not possible due to the natural fissures of our geology. Geologist Hannan LaGarry found serious flaws in Arzarga Resources' analysis of the groundwater geology. He concluded that that there is a risk of groundwater contamination if the mine is allowed to go forward.

Dear Sir or Madam:

The undersigned, Ex. 6 Personal Privacy (PP), an individual, residing at Ex. 6 Personal Privacy (PP) Rapid City, SD 57701, hereby provide the following WRITTEN TESTIMONY to the above-referenced draft permits and documents related to Powertech/Dewey-Burdock. These written comments are provided in addition to the original hearing in Rapid City, SD on 09 May 2017.

I have been a research assistant at Oglala Lakota College as an undergraduate for three years, specializing in stratigraphy, geology, field surveying, geochemistry, and ICP-MS analysis. I have previously participated in the initial review of the belated disclosed Dewey-Burdock's data at the office in Edgemont; including borehole logs and multiple geology field notebooks from the field surveyors and those whom maintained the boreholes and wells. According to those records: over half of the boreholes (4,000+ of 7,000+) all of which were meant to be properly plugged and capped, were in fact not capped or plugged in a manner that would cease groundwater flow from traveling between these units. Not only did the field surveyors identify and record these improperly capped boreholes, but also mentioned in the notes of geothermal activity causing some fluid in the boreholes to bubble up and overflow onto the surface. Indicating direct contact and pressurized groundwater communication between the depths of the boreholes, the Madison formation, and potentially with other formations. Records stated of improperly capped boreholes, but also evidence of a fault within the initial land survey. The presence of a fault, shows the potential of consistent seismic activity within the permit zones and additional potential of groundwater flow being directed towards the fault line. Unless we recap the fact of gravity riding everything, the natural mobility of water is to continue flowing to the lowest point in elevation until its restricted and collected onto a body of water i.e. lake, pond, or aquifer. If contaminants were accidentally released, it would increase the potential of mobilizing lixiviants into the water table and altering water chemistry. Once a plume settles, it will take numerous years (potentially 140+ years) before its half-life is reached and allowed for lower levels of radiation to be exposed to.

Subject: Comment on Azarga uranium mining

Dear Valois,

I am amazed and genuinely disheartened to see that the EPA has allowed consideration of the Uzarga mining project in Fall River County, South Dakota. I have been an amateur geologist for many years and own a home in Hot Springs, SD. Knowing the complex nature of Black Hills geology, I find it appalling that you would consider injection well technology safe in an area directly adjacent to the Dewey and Jewel Cave fault zones and their direct connections to both the Barker Dome anticline and the Fanny Peak monocline.

Subject: Comment on the Dewey-Burdock class III and class V injection well draft area permits.

[...]

The proposed mine and Deep Disposal Wells are in an area that is documented to have faults,fractures,breccia pipes,and over 7,000 old borehole that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our ground water is likely

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Subject: Comments on Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

[...]

I am not a geologist or a hydrogeologist, but being familiar with the vulnerable geology in the area, I began doing some research about the subject. One paper that I found to be particularly insightful was: Epstein, J.B., 2000, Gypsum karst and hydrological evolution in the northern Black Hills, South Dakota: in Strobel, M.L., A.D. Davis, J.F. Sawyer, C.J. Webb, C.A. Naus, and P.H. Rahn, eds., Proceedings of the 1999 conference on the Hydrology of the Black Hills: South Dakota School of Mines and Technology Bulletin 20, p. 73-79.

This paper discusses how dissolution of anhydrite in the Minnelusa Aquifer at depth has produced a regional collapse breccia, many sinkholes, extensive disruption of bedding, and breccia pipes and pinnacles, some of which extend more than 300 m (1,000 ft) in the overlying strata. And this dissolution is an ongoing phenomenon, so we have no business using these formations for in-situ uranium mining and especially not for waste disposal.

It goes on to state that the Minnelusa Formation is a heterogeneous unit. The upper part, which is highly brecciated and contains numerous breccia pipes, has greater fracture porosity than the lower part. The point is that the entire Minnelusa should not be considered a unified aquifer.

Therefore I strongly urge you to recommend REJECTION of these permits based on the risk of contaminating our underground aquifers that people rely on for drinking water for both people and livestock.

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is highly likely.

...The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7,000 old boreholes that have not been properly plugged. it will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.

...I believe this Dewey Burdock mining site should be a designated SuperFund Site. The 10,500 acre Powertech Project Site contains at least 7,650 bore holes made by exploration companies which have never been properly sealed and which have leaked rainwater and mine runoff into the aquifers below for at least 40 years. In addition there are many fissures, fractures, breccia pipes and sinkholes naturally occurring in the area which are also communicating with water below ground. Thus the site is like Swiss Cheese. The extreme erosion that has occurred has contaminated underground water and ultimately the aquifers used by Fall River and Custer County for drinking and livestock water. These are the Minnelusa and Inyan Kara formations with some utilizing the Madison Aquifer, depending on the area.

It is my contention that these aquifers communicate with each other and mining activities that disturb, or inject any type of waste in this aquifers would forever ruin the water for drinking, livestock, and household water...

TVA subsequently abandoned the site, leaving those boreholes not properly closed for the most part, that then allowed further mixing of the aquifers even more than the already naturally existing numerous fractures, fissures, breccia pipes and sinkholes that are common in this continuing uplift region.

[...]

We are opposed to both the mining activity, which would contaminate the Inyan Kara aquifer permanently for agricultural use, for which it is currently being used, and also contaminate other aquifers in the area as well, because of the many fissures, fractures, breccia pipes and sinkholes that are naturally occurring, and the 7,650 unclosed old exploratory boreholes that allow the mixing of aquifers at the site

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2) In addition, I have recently learned that The hydrology of the Black Hills area is very comp According to the USGS's website "Numerous fractures, faults, and solution cavities allow flow of water in rocks that otherwise are relatively impermeable" link source: https://sd.water.usgs.gov/projects/bhhs/Intro.html

In addition to the very common occurrences of spills, leakage and lack of proper containment as sited previously & the geological data that shows that rock is not impermeable and water can flow into our aquifers, Scientist from Arabian Journal of Chemistry state "Problems with Recovery of Mined Minerals When Organic Compounds Contaminate an Aquifer. Summary: You cannot recover all of the uranium from the mining water. Organified uranium compound levels will build up in the wastewater." Volume 4, Issue 4, October 2011, Pages 361-377.

The proposed wells are in an area known to have geological faults and fractures, and thousands of old boreholes. If during the in-situ recovery and disposal the massive volumes of water are pumped in and around these potential escape routes, the poisoned water might easily find its way into other aquifers or water sources.

Attached is a copy of the Well Drilling Report for my well. It shows that it was drilled through the Minnelusa aquifer, down to the Madison aquifer. This hole will be a source of contamination from the Minnelusa to the Madison. There are MANY such wells throughout the area that will allow this cross-contamination to occur. Natural fracturing of the geological layers will also serve as contamination points between aquifers. I also have several neighbors who have wells drilled into the Minnelusa and utilize this water for their every day use. Water is VERY precious in this area as many people haul their water or have it delivered to cisterns. Contamination is NOT AN OPTION!! It is a scientific fact that the Minnelusa flows from west to east. It would flow directly to my area, and ultimately contaminate the entire regions' water sources.

[...]

* There are over 7000 old boreholes that have not been properly plugged, making it impossible to contain mining fluids or waste liquids. Contamination of our groundwater would be almost guaranteed.

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes. In addition, over 7,000 old boreholes have not been properly plugged in the proposed project area. It will be impossible to contain mining fluids or waste liquids and contamination of our groundwater is very likely.

• The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.

I do not believe that the contamination cab be contained in one area. There are too many porous areas, cracks, fissures, caves.

There are many other reasons to not allow this permit, but for me the most compelling is the fact that he mine and deep disposal wells is cannot be completely contained and will very likely impact our water supplies. The proposed area is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged.

The geology of the strata formations include numerous breccia pipes, fractures and caverns (ex. Jewel Cave and Wind Cave formations) which no one knows of their extent. These are the pipelines of water transmission by these aquifers and the extent to which they communicate with each other Is unknown. One should also include the 7650 abandoned boreholes that leak and transfer water.

Hannan LuGerry is a geologist that had worked this area and knows that this whole area has many faults. That's what happened to Chadron Creek in 2007, it just disappeared one day into a fault in the earth.
He and some helpers went over 10,000 pages of the permit. He looked at the Driller's notes and found artesian wells popping out of some of the holes which show fault in the aquifers. And all the holes dug over there have not been plugged like the NRC told them to. Some of the holes went into caves (like Wind Cave?). Lots of things he found in the driller's notes were things like...Don't tell the land owners and don't report Indian relics. This was just all about the 760 well holes that weren't plugged from the TVA.

More important information!

1. That the Minnelusa aquifer has over 125 holes that have Minnelusa wells in the souther hills that would be impacted by haz waste contaminated water

2. that II the water in the Minnelusa flows east and south, contaminating those households and farms above and ultimately ends up in the great Oglala aquifer that services the entire central US

Boreholes and toxic flush extraction and milling yellowcake endangers,downstream comrunities far into the future

First, I would like to thank the EPA and the village of Hot Springs for the chance to speak to the facts as we see them. I've been traveling to the Black Hills for over 30 years, and recently purchased a house here in Hot Springs. I've been a rock hound of sorts and a minor geology buff for many years. After reading the Class 3 and Class 5 permit fact sheets provided by the EPA in regards to the proposed Azarga project, it is evident to me that this project is, at the very least, impractical, and at the very worst, extremely dangerous. Considering the complex sub-surface geology of the area and its close proximity to known fault zones, the choice to use injection well technology to both contain contaminated waste waters and mine sub-surface uranium deposits, is both irresponsible and potentially catastrophic.
I would like to comment on just a few of the potential sticking points. Page 23 of the Class 5 fact sheet states the locations and conditions of fault zones in relation to the project area. And I quote: " The Dewey structural zone consists of steeply dipping to vertical faults that are uplifted on the north side relative to the south side of the zone a total of 500 feet. The Long Mountain structural zone is located approximately 7 miles south of the project area. This fault zone consists of small NE-trending normal faults observed in outcrops of the Inyan Kara Group and Sundance Formation within a zone measuring several miles across. The displacement across the faults measures up to 40 feet, with folding of the strata adjacent to the faults adding up to 60 feet additional structural relief. The faults in the Dewey Quadrangle occur NW of the Dewey Fault in the Dewey Terrace area approx. 1.5 miles NW of the project area. A sub-surface fault was identified by seismic methods about 5.5 miles N of the project area boundary. It is about 1.5 miles long and 400 feet wide. 3 Faults are shown in the NE comer of the Burdock Geologic Quadrangle. The report states that these faults have a displacement of less than 10 feet and are located 2.5 miles or more from the eastern edge of the project boundary." So in short, there are at least a half dozen faults of differing size located within a mile and a half to 5 and a half miles from the project zone. Page 25 of the Class III Draft fact sheet draws an even better picture of the Dewey Fault in particular, and I quote,"The Dewey Fault, a NE to SW trending fault zone, lies approx. 1500 feet NW of the DeweyBurdock Area Permit Boundary."
So again, we have a steeply dipping fault line lying less than a half-mile away from the project zone. Related to those facts, page 26 of the same sheet states, and I quote, "many other faults are probably spresent but not discernible because of poor exposures." LET ME REPEAT THAT. In response, it is stated that "If there are any faults and fractures occurring within a well field area that cause a breach in a confining zone, they will be detected during the wellfield drill and pump testing. If found, the placement of injection and production wells can be modified from the regular pattern to control lixiviant flow around the fractures or faults to keep it flowing through the uranium ore bodies rather than along these paths of lower hydraulic resistance." So if additional fractures and faults are found in the project area, and there are already many, PowerTech will simply and safely adjust the flow around these breach zones and continue to mine uranium? To think that you can safely continue to apply injection well technologies in an area of potentially breaching fractures and faults, I find to be both ridiculous and irresponsible. If the information showing the close proximity of numerous fault zones to this injection well area is not enough to disallow this project, we must also consider the confining layers that will be used to contain the injected toxic fluid. The entire project area relies upon a lower and upper containment layer of Fuson shale that underlies the whole region. However, to quote from page 22 of the Class 3 fact sheet," There may be points where the Fuson confining zone has been compromised by improperly plugged exploration drillholes or wells that penetrate the Fuson confining zone. Evidence that suggests at least one breach in the Fuson confining zone is included in the reports on the pump tests ... conducted in the Chilsen Aquifer in the Burdock area." It is clear from pages 15 and 17 of the Class 5 sheet that the porous nature of the Minnelusa sandstone as an upper containing layer is a concern. From page 18 of the same sheet, "Low-permeability layers in the lower part of the Minnelusa Formation generally act as an upper confining zone to the Madison Aquifer. However, karst features (limestone that has dissolved and is in some stage of collapse) in the top of the Madison Limestone may contribute to reducedfompetency of the overlying confining zone in some locations." I suspect we would all like to know where those locations are, and what the consequences of their "reduced competency" will be. I think it should also be mentioned that, on page 25 of the Class 5 fact sheet, PowerTech's own miscalculations on the pressure required to move fluid from containment layers to public water supplies is openly challenged by the EPA itself.
Beyond that, we must also consider the history of Power Tech drill sites from the past, and the competency of the work that was done. State regulation requires drillholes be plugged after they are logged. Newer PowerTech drillholes were plugged and abandoned according to SD regulations. However, historical drillhole records are not available to show how they were plugged. On page 3 7 of the same report, "It is possible that some historical drillholes may not have been plugged in a manner that would prevent communication between sub-surface aquifers." Page 45 of the same report states,"With one exception, groundwater discharging to the ground surface is limited to flowing artesian wells ... the only feature identified that was indicative of groundwater discharge from exploration drillholes at or near surface was the alkali area in the SW comer of the Burdock portion of the project area." "PowerTech has identified this area as a !SE - possible location where groundwater may be discharging to the surface from the Fall River and possibly the Chilson (aquifers) to the surface through an abandoned exploration drillhole." PowerTech will not be able to begin injection activity until this issue is resolved. Resolutions of the issue may involve locating and plugging of improperly plugged historic drillholes, locating and performing corrective action on nearby wells that create a pathway through the Fuson confining zone, or a pumping, injection and monitoring plan that demonstrates control of lixiviant in the areas where breaches in the Fuson confining zone have been identified." It is obvious that there already exist communication between aquifers because of these abandoned drillholes. And it is also clear that they are fully expecting there to be further breaches in these confining zones. To think that all of these potential breaches and leaking drillholes can be identified and resolved is wishful thinking, at best.
[...]
Finally, I think what I would like to say is that geology is an imperfect science. I'm sure the PowerTech geologists would agree. What cannot be seen below ground, cannot be anticipated or contained. In my opinion, considering the toxic nature of these injection fluids and the obvious dangers of both questionable confining layers -and their close proximity to known -and unknown fault and fracture lines, the idea that this project can be done safely and with no ill effects to our water supply or to local geologic integrity, is foolhardy and defenseless. The massive public and environmental loss that could very well occur far outweighs the private gain that is being sought. thank you.

But another concern is that even with numerous sweeps in the restoration phase they remain in solution and without the reducing field formerly provided by the mined out ore body will migrate down gradient within the aquifer to find at some point a breccia column, unplugged bore hole, fracture, mining tunnel or fissure. We are told that TVA did a wonderful job of plugging the bore holes but alas there are some that weren't.

Are there any exploratory wells in the area involved or close by, Are these wells cased, filled or capped? What is the possibility of these wells becoming avenues for migration of mining fluid or waste into drinking water aquifers?

Compounding this is the presence of numerous exploratory wells that have been drilled in the past. These wells have not been filled, cased, or capped.

Perhaps the most important omissions of information in the EPA's documents have to do with the confinement of mining fluids in the Class III wells areas. This goes to the heart of the safety of the project, and to the heart of the future of the region. There are real doubts whether the mining fluids can be contained at the proposed mine site. As Dr. Hannan LaGarry's research shows, there are around 7,500 old boreholes on the site, not the lower numbers put forward by the EPA or the company. This number comes from Dr. LaGarry's direct observation of Powertech's records. Even the lower numbers indicate that it is unlikely that all old boreholes can potentially be found and properly plugged.

In addition, research by Boggs and Jenkins (1980) indicated leakage across the Fuson shale between the Lakota and Fall River formations. Research by Wicks, Dean, and Kulander (2000) indicated that the Fall River formation is "pervasively fractured" along the western edge of the Black Hills. And research by Tank (1958), which may the only focused research on the Morrison formation in that area, indicates that the formation's thickness varies widely and that there is a "marked difference" between the formation's composition in Edgemont and seven miles north of Edgemont. The draft permits' heavy reliance on the Morrison formation as a confining layer should be re-considered, as the reality may not support the assumptions used in writing the draft permits. Given the information that is available, and given the importance of this particular issue, it is irresponsible to "conclude" that mining fluids could be contained based on limited scientific information and weak analysis.

Perhaps the most important problem in the EPA's documents has to do with the confinement of mining fluids in the Class III wells areas. This goes to the heart of the safety of the project, and to the heart of the future of the region. There are real doubts whether the mining fluids can be contained at the proposed mine site. As Dr. Hannan LaGarry's research shows, there are around 7,500 old boreholes on the site, not the lower numbers put forward by the EPA or the company. This number comes from Dr. LaGarry's direct observation of Powertech's records (For further information, his e-mail address is Ex. 6 Personal Privacy (PP) Even the lower numbers indicate that it is unlikely that all old boreholes can be found and properly plugged. And the Class III draft permit is based on information that does not extend 1.2 miles outside the proposed project boundary (p. 36). Additional analysis is needed.
In addition, research by Boggs and Jenkins ("Analysis of Aquifer Tests Conducted at the Proposed Burdock Uranium Mine Site: Burdock, South Dakota," 1980) indicated leakage across the Fuson shale between the Lakota and Fall River formations in the Burdock area; this is one of the TVA papers. The Class III Fact Sheet notes the connection between the Chilson and Fall River formations in the Dewey area, which was from the other TVA test done in the early 1980s. This found the Chilson member of the Lakota formation to be "exceptionally permeable," as quoted by Dr. Perry Rahn (2014. "Permeability of the Inyan Kara Group in the Black Hills Area and its relevance to a proposed in-situ leach uranium mine" in the *Proceedings of the South Dakota Academy of Science*). Rahn, is Professor Emeritus at the South Dakota School of Mines and the acknowledged expert in matters related to hydrology in the southern Black Hills.
The EPA also notes that the Powertech pump test in the Dewey area was not only done differently, but that the TVA test was done at a pumping rate 16 times higher than the company test. This makes it look as though the company didn't want to do much that might show a connection between formations in the Dewey area. A more comparable update of the Dewey study is needed.
Research by Wicks, Dean, and Kulander ("Regional tectonics and fracture patterns in the Fall River Formation (Lower Cretaceous) around the Black Hills foreland uplift, western South Dakota and northeastern Wyoming." 2000) indicated that the Fall River formation is "pervasively fractured" along the western edge of the Black Hills. The opinions of Dr. Robert Moran and Dr. Hannan LaGarry, which are included in the NRC proceedings and Exhibits, also indicate that fractures, faults, breccia pipes, and other geological characteristics of the project area, have not been adequately researched. The Class III Fact Sheet says that there are 64 drinking water, irrigation, and livestock wells in or within 1.2 miles of the mine boundary. To families on the ground, the situation is high-stakes, and this is not a game. It is critical that the geology of the area be fully understood – preferably before draft permits were issued – but certainly before any further steps are taken.
Research by Tank (1958. "Clay Mineralogy of Morrison Formation, Black Hills area, Wyoming and South Dakota," *Bulletin of the American Association of Petroleum Geologists"*), which may be the only focused research on the Morrison formation in the Dewey-Burdock area, indicates that the formation's thickness varies widely and that there is a "marked difference" between the formation's composition in Edgemont and seven miles north of Edgemont. The draft permits' heavy reliance on the Morrison formation as a confining layer should be re-considered, as the reality may not support the assumptions used in writing the draft permits. Making the Morrison Formation look thick in graphics and accepting the company's word for its permeability is not enough (Class III Draft Permit, p. 20; p. 23).

Given the information that is available, and given the importance of this particular issue, it is irresponsible to conclude that mining fluids could be contained based on limited scientific information, weak analysis, and company documents. It is up to the EPA to get or create accurate, substantial, third-party and peer-reviewed information and to analyze it thoroughly before granting draft permits and aquifer exemptions.

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2. COMMENTS SPECIFICALLY RELATED TO DRAFT CLASS III UIC AREA PERMIT

Perhaps the most important omissions of information in the EPA's documents have to do with the confinement of mining fluids in the Class III wells areas. This goes to the heart of the safety of the project, and to the heart of the future of the region. There are real doubts whether the mining fluids can be contained at the proposed mine site. Frankel/ARM Comments Powertech-Dewey Burdock Page _5 of _38
As Dr. Hannan LaGarry's research shows, and as reflected in the NRC's decision requiring the additional Borehole License Condition (discussed in subsection D below) to properly plug and abandon **ALL** boreholes, there are around 7,500 old boreholes on the site, not the lower numbers put forward by the EPA or the company. This number comes from Dr. LaGarry's direct observation of Powertech's records. Even the lower numbers indicate that it is unlikely that all old boreholes can potentially be found and properly plugged.
Since Powertech does not have the financial resources to pay its current operating expenses or trade payables, who will pay for the proper plugging and abandonment of the boreholes?

In addition, research by Boggs and Jenkins (1980) indicated leakage across the Fuson shale between the Lakota and Fall River formations. Research by Wicks, Dean, and Kulander (2000) indicated that the Fall River formation is "pervasively fractured" along the western edge of the Black Hills. And research by Tank (1958), which may the only focused research on the Morrison formation in that area, indicates that the formation's thickness varies widely and that there is a "marked difference" between the formation's composition in Edgemont and seven miles north of Edgemont.

The draft permits' heavy reliance on the Morrison formation as a confining layer should be re-considered, as the reality may not support the assumptions used in writing the draft permits. Given the information that is available, and given the importance of this particular issue, it is irresponsible to "conclude" that mining fluids could be contained based on limited scientific information and weak analysis.
[...]

B. In areas within proposed wellfield 7, the potentiomentric surface for the Chilson aquifer is below the top of the overlying Fusion shale confining layer and in some areas it is below the top of the "confining" zone that separates the middle Chilson for the upper Chilson (in these areas the overlying Fall River Fm is dry). Again, these hydraulic conditions make it more difficult to control mining fluids and increases the risk of excursions. Powertech suggests that the low permeability shale zones that separate the ore bearing sands of the lower, middle and upper Chilson will "hydraulically confine" the three ore bearing sand units and prevent dewatering of the ore zones. Powertech has no experience or financial resources to be able to offset such risks.

The draft permit requires Powertech to further evaluate the hydraulic confinement during wellfield pump tests and if partially saturated conditions occur within an injection zone – Powertech is required to develop an appropriate 3D unsaturated flow model to assess the ability to maintain control of mining fluids. Powertech lacks the financial resources to comply with these requirements to develop appropriate 3D modeling.

This is problematic –the shale confining layers are thin and could easily have secondary pathways that allow vertical migration. Also- as shown on Plates 6.17 and 6.18 in the Class III permit application, the potentiometric surface of the Chilson in the vicinity of wellfields 6, 7 and 8 is very close to the potentiometric surface of the overlying Fall River Fm – which suggests a connection thru the Fusion Shale. If partially saturated conditions develop and Powertech is unable to maintain an inward gradient in the injection zone –excursions are likely.
[...]
D. Unplugged Boreholes. Reference is made to the NRC Partial Initial Decision related to Powertech's NRC License SUA-1600, namely LBP 15-16, by the Atomic Safety and Licensing Board (April 30, 2015) , pertaining to Powertech/8 Azarga's NRC license SUA-1600, at p.73:

g. Boreholes While all parties acknowledge that thousands of historical boreholes penetrate the Dewey-Burdock site, Intervenors assert that a large number remain open and could act as pathways for waters moving from the ore zones to adjacent aquifers. It is apparent that some boreholes on the site have not been adequately plugged, because leakage between formations was attributed to open boreholes in the TVA studies of the late 1970's, was again cited as the cause of leakage by Powertech and NRC Staff witnesses who analyzed the more recent pumping tests, and is cited as the cause for surface water in the "alkali flats" area. In light of these occurrences, it seems unlikely that all historic boreholes have been properly abandoned or have "self sealed."

Both Powertech and NRC Staff witnesses further assert that open boreholes do not pose a concern because Powertech will be required to locate any historical boreholes that were not properly abandoned and plug them with bentonite or cement grout. After considerable searching, we were able to locate the place in the record where "Powertech commits to properly plugging and abandoning or mitigating any . . . historical wells and exploration holes." [Fn 374 Ex. APP-016-B, Powertech Application for NRC Uranium Recovery License, Technical Report RAI Responses at 31 (June 2011).]

And, despite the NRC Staff's claim that because "there are a number of improperly plugged or abandoned boreholes at the Dewey-Burdock site, as a condition of its license Powertech must address these boreholes before beginning operations," we did not find any such explicit condition in the license. Therefore, the Board will amend license SUA-1600 with a similar condition that was included in the Strata license. License SUA-1600 shall be amended to include an additional license condition (the "Borehole License Condition") stating:

Prior to conducting tests for a wellfield data package, the licensee will attempt to locate and properly abandon all historic drill holes located within the perimeter well ring for the wellfield. The licensee will document, and provide to the NRC, such efforts to identify and properly abandon all drill holes in the wellfield data package.

According to the EPA project documents, (pp 36-37 of the Class III Fact Sheet), there is a significant discrepancy between the nature and extent of proper plugging of abandoned boreholes with Bentonite and Cement Grout (per the NRC requirements) and the plugging of boreholes pursuant to South Dakota requirements, and differing technical requirements under the Class III permit.

The EPA documents lacks a comprehensive or cogent discussion of all the applicable standards and also lacks reference to the Borehole License Condition imposed by the ASLB in its Partial Initial Decision in LBP 15-16.

The EPA Class III Fact Sheet states (with bold emphasis added) that:

"State regulations require these holes to be plugged after the holes have been logged. The newer Powertech drillholes were plugged and abandoned according to current protective South Dakota regulatory requirements. The historical drillholes have been plugged; however, records are not available to show how they were plugged.

It is possible that some historical drillholes may not have been plugged in a manner that would prevent communication between subsurface aquifers.

Part II of the Class III Area Permit requires Powertech to take steps to identify leaky historic drillholes near the wellfield areas during the design and implementation of the wellfield pump tests (Section C), during the design of the wellfield monitoring system (Section D), during the implementation of formation testing (Section E), and during the implementation of the corrective action requirements in Part III. Powertech must complete these actions prior to receiving authorization to inject, to prevent these drillholes, or any other type of confining zone breach, from acting as pathways for contamination of USDWs."

The foregoing EPA description is misleading and incorrect because the NRC ASLB decision in LBP-15-16, issued prior to the issuance of the draft EPA permits and fact sheets, clearly states that "It is apparent that some boreholes on the site have not been adequately plugged". This conflicts with the EPA statement that 'It is possible that some historical drillholes may not have been plugged in a manner that would prevent communication between subsurface aquifers."

Further, this EPA misrepresentation gives the public the impression that there is some uncertainty here when all the parties - Powertech/Azarga, the NRC Staff and the local intervenors all agree that "leakage between formations was attributed to open boreholes in the TVA studies of the late 1970's, was again cited as the cause of leakage by Powertech and NRC Staff witnesses who analyzed the more recent pumping tests, and is cited as the cause for surface water in the "alkali flats" area." **As a result, the EPA documents concerning the leaky boreholes is inaccurate and misleading to the public.**

The so called 'Alkali Flats' area is referred to at Page 45 of the EPA Class III Fact Sheet:

4.6 Possible Breaches in Confining Zones

With one exception, groundwater discharging to the ground surface is limited to flowing artesian wells, which will be controlled and mitigated as described in the corrective action requirements discussed in Section 6.2.

The only feature identified that was indicative of groundwater discharge from exploration drillholes at or near surface was the alkali area in the southwestern corner of the Burdock portion of the project area (N1/2 NE1/4 Section 15, T7S, R1E). The location of the alkali area is shown in Figure 15.

Powertech has identified this area as a possible location where groundwater may be discharging to the surface from the Fall River and possibly the Chilson to the surface through an abandoned exploration drillhole.

The "alkali area" lies within the proposed location of Burdock Wellfield 2. The hydraulic communication between the Fall River and Chilson Sandstone aquifers and the ground surface will be investigated more closely during the wellfield delineation drilling and wellfield pump tests (discussed in Section 5.0 and required in Part II of the Class III Area Permit) for Burdock Wellfields 1 and 2.

The observation wells for the wellfield 1 and 2 pump tests will be more numerous and more closely-spaced than those for the Powertech Burdock Area pump test conducted in 2008 and the TVA Burdock pump tests conducted in 1979. Comparing the responses in each wellfield pump test observation well will help identify more closely the locations of the leaks through the confining zones at the site and help narrow down the locations of the leaking drillholes or other breaches in confinement.

Part II of the Class III Area Permit includes the best available technology requirements Powertech must implement to locate leaking drillholes or water wells and Part III includes corrective action requirements to prevent lixiviant migration along communication pathways between the Fall River and Chilson through the Fuson Shale or through the Graneros confining zone to the ground surface.

The foregoing EPA statements are also misleading because they conflict with the NRC License Condition which says that ALL historical boreholes must be properly plugged and abandoned whereas the EPA Class III Fact Sheet states that Powertech/Azarga is only required to locate and properly plug the 'LEAKY' boreholes. This is incorrect and misleading to the public.

Further since Powertech lacks financial resources to pay its current expenses or trade payables, how will it pay for the 'best available technology' referred to in Part II of the Class III permit?

This misrepresentation is repeated by the EPA at Page 73 of the Class III Fact sheet, as follows (misleading information highlighted in bold and underlined text):

The Class III Area Permit requires Powertech to properly plug and abandon or mitigate any of the following **should they have the potential to impact the control and containment of wellfield solutions within the project area:**

1) Historical wells and exploration drillholes (Part III, Corrective Action),

2) Holes drilled by Powertech for the purposes of exploration and wellfield delineation that are not used for installing an injection, production or monitoring well (Part II, Section B.3),

3) Any injection, production and monitoring wells failing mechanical integrity demonstration or testing (Part VI, Section B.5 and Part VII, Section F and Part II, Section D.4.f), and

4) Any stock wells or other types of wells located near the wellfields that could impact wellfield fluids control during ISR operations or groundwater restoration when evaluated during the wellfield pump tests.

It is misleading for the EPA to inform the public that Powertech must properly plug and abandon only historical drillholes that 'have the potential to impact the control and containment of wellfield solutions within the project area" when the NRC License Condition requires that "the licensee will attempt to locate and properly abandon all historic drill holes located within the perimeter well ring for the wellfield."

[...]

E. **It is important to pay attention to the potential for some of the more than 5,000 exploration holes to provide flowpaths through confining zones –which creates possibility for contaminated groundwater to migrate to a USDW. This is apparently occurring in the "alkali area" in the SW part of the Burdock area. The permit application presents significant attention to this issue The draft area permit requires Powertech to take steps to identify leaky historic drillholes during the design of wellfield pump tests and monitoring systems.** A three strategy process is provided by Powertech to accomplish this. This issue raises the question – Can migration of radionuclides from ore bodies to the surficial alluvial aquifers contribute to the high radionuclide content in the alluvial groundwater?

Since Powertech is insolvent and doesn't have financial resources to pay its operating expenses or trade payables, how will it finance the identification of these leaky drillholes?

The undersigned, Ex. 6 Personal Privacy (PP) an individual, residing at Ex. 6 Personal Privacy (PP) Chadron NE 69337, hereby provide the following SUPPLEMENTAL WRITTEN TESTIMONY to the above-referenced draft permits and documents related to Powertech/Dewey-Burdock. These written comments are provided in addition to the written testimony provided at the original hearing in Hot Springs SD on 10 May 2017.

Introduction

I have served as an expert witness for uranium intervenors since 2008, and have provided numerous expert written expert testimonies for both the Crow Butte Resources (CAMECO) and Dewey-Burdock (POWERTECH/AZARGA) ISL uranium license interventions. I am a stratigrapher and geologic mapper with 30 years of experience working in the geology of SW South Dakota and adjacent NW Nebraska. A copy of my CV is attached at the end of this testimony to establish my credentials in this proceeding.

In my initial testimony I provided the data we recovered from our examination of Powertech's belatedly disclosed borehole data purchased from the Tennessee Valley Authority (TVA). Within this data we observed that the drillers of the TVA boreholes documented uncased holes, improperly plugged holes, artesian water, breccia pipes and caves, and faults. In my expert opinion, secondary porosities in the Dewey-Burdock area are such that loss of containment and the escape of pressurized fluids from underground waste injection are almost a certainty should either mining or injection be allowed.

WRITTEN SUPPLEMENTAL TESTIMONY OF DR. HANNAN LAGARRY

I, Ex. 6 Personal Privacy (PP) hereby declare as follows:

1. I am an expert in the above-captioned proceeding; my testimony, CV, and area of expertise are already in the record. To summarize, I am a stratigraphic mapper and full-time professor at Oglala Lakota College in Kyle, South Dakota. In preparing this declaration, I relied on the expertise gained through my training and experience in reviewing and interpreting borehole logs and other geologic data to create and review narratives, representations, and maps of subsurface geology and hydrogeology.

2. My testimony herein is based on my review of Powertech's recently disclosed borehole logs, maps, and other data. My testimony is also based on my review of the testimony and exhibits submitted by both NRC Staff and Powertech to the Nuclear Regulatory Commission Atomic Safety and Licensing Board, and my expert opinions offered before and during the hearing in Rapid City, South Dakota.

3. On November 12, 14, and 15, 2014 myself and 3 student assistants continued to review drillers' notes and borehole logs prepared by the Tennessee Valley Authority and recently disclosed by Powertech. This review was conducted at the Powertech offices in Edgemont, South Dakota.

The available data consists of paper files contained in 28 bankers' boxes, 5 file cabinets, and 31 sets of mini logs (reduced to about 1/l0th of the full-sized logs). Based on records I reviewed during my initial visit to the Powertech offices on September 14-16, 2014 these boxes, cabinets, and mini logs contain ***at least·***

7515 total borehole logs

7454 known borehole logs prior to acquisition of the recently described data

3920 borehole logs owned prior to acquisition of the recently disclosed data

3075 digitized data logs

These totals may underreport the number of logs made available, as I was not able to confirm whether my count was inclusive of all logs made available. Our understanding was that the newly disclosed borehole logs numbered over 4,000 data sets.

In total, my assistants and I were able to review drillers' notes from 4,177 boreholes (56% of the 7515 listed above) in 2.5 bankers' boxes, with at least 2.5 bankers' boxes of similar records remaining unexamined. We also examined 488 full-sized (in 3 boxes) and 1774 "mini" resistivity and gamma log pairs (30% of the 7515 listed above), with at least 6 bankers' boxes and 5 file cabinets of similar records remaining unexamined. The number of notes and logs examined was likely 5% fewer than the total number of records reviewed because some logs and notes were discovered to be moved or missing (see below). Also, there is overlap between the drillers' notes and the "mini" borehole logs reviewed. The "mini" logs, although briefly reviewed, did not contribute to the observations listed below.

My review confirmed my previous testimony that the raw data was not presented by modem modeling I would expect to find in such data compilations. Because of the limited time available and the lack of modelling, we did not attempt to reconstruct the geology of the proposed license area. Rather, we focused on the first-hand accounts of the geology of the site and the drilling conditions recorded by the geologists logging the wells. Based on our review of the data, we documented the following unique instances:

140 open, uncased holes

16 previously cased, redrilled open holes

4 records of artesian water

13 records of holes plugged with wooden fenceposts

6 records of holes plugged with broken steel

12 records of faults within or beside drilled holes

I drawing of 2 faults and a sink hole within a drilled transect

7 notations "do not record this value on drill hole maps"

2 notations "do not return this to landowner"

63 redacted borehole logs

Many notes contained references to water at various levels and poor, muddy, or destroyed samples. We also found that, in the data sets we reviewed, blocks of records had been moved or were missing.

4. Based on the observations noted above, I offer the following expert opinions:

Sample size

We examined drillers' notes from 4,177 boreholes, which is at least 56% of the available data. In my expert opinion, while this sample likely underrepresents the total number of features listed above, it is sufficiently large to characterize the data and to reasonably reflect the geological conditions in the licensed area. In contrast, the NRC review of 34 boreholes constitutes less than 1 % of the available data, grossly misrepresents the sample, and is not scientifically valid or useful in any meaningful way.

Open, uncased holes, including redrilJed open holes

(Exhibit SNT25)

Casing of boreholes prevents the unwanted migration, transfer, and cross-contamination of water within a borehole. Uncased holes allow unrestricted communication between waterbearing strata at the site. Each uncased hole is a breach of the confining layers assumed to restrict the movement of mining fluids and contaminants. Redrilling of previously cased holes destroys the pre-existing casing and returns the borehole to the open, uncased condition. In my expert opinion, while it is possible that confinement may yet exist in undrilled areas, there is no reasonable expectation that confinement remains in drilled areas.

[...]

Plugged holes

Typically, boreholes are plugged with concrete. Plugs made of wood rot and disappear. Plugs made of ferrous metals, including steel, rust and disappear. It is my expert opinion that, for purposes of determining aquifer isolation, boreholes plugged in such a way should be considered open, uncased boreholes.

Faults and sinkholes

(Exhibits DS178 back side, DS392, IHK2, IHM32, IHM62, TRR17, TRT16, FBM95)

During hearings before the ASLB in August of 2014, Powertech repeatedly asserted that faults and sinkholes were not present in the license area, and that the license was somehow unique in that regard. In my previous testimony, I offered the expert opinion that faults were almost certainly present, and the license area was most likely crossed by numerous faults. The observations I document herein demonstrate that my previous expert testimony was correct, and there are numerous faults present in the licensed area. Likewise, the drillers' notes document a sinkhole along a drilled transect associated with two closely spaced faults also intersecting the drilled transect. Sinkholes typically form along faults, as the fault allows the initial penetration of acidic surface waters, which then dissolve a conduit through the rock which eventually forma a cave that subsequently collapses to for the sinkhole.

Suppression and redaction of data

(Exhibit TRJIII)
Notations in the drillers' notes to withhold data imply that there was an attempt to deceive somebody about the character of particular boreholes. The possible motivation for withholding the data was not clear from our limited review in these instances. More troubling is the deliberate masking (redaction) of borehole log data. This information may not be recoverable without additional drilling adjacent to the original borehole, and is clear evidence that information was withheld for some reason. As in the previously mentioned withholding of data, what this is and why it was withheld cannot be determined. A competent and complete scientific review upon which a determination could be based that containment of mining solution can be achieved at the Dewey-Burdock property would account for this missing data.

Water in boreholes

The presence of water at various levels in the drill holes suggests that there are multiple unrestricted flow between water-bearing strata at the site.

Poor, muddy, and destroyed samples
Problems with samples can bias rock descriptions and create circumstances in which the confining units would be misidentified, leading to miscorrelations of strata and confining layers considered present when in fact they are not. In order to determine if miscorrelation or false identifications have occurred would require detailed redescription of the available data. In my expert opinion, conclusions based on such samples, such as the presence or absence of a confining layer, should remain tentative at best.

Moved or missing data
The amount of moved or missing data and its significance is difficult to ascertain from our brief review. It may have been extracted from the set it is part of and relocated to another box, withheld, or destroyed. Only a thorough review and inventory can determine the disposition of the missing data. A review of this data is necessary to form concrete conclusions as to the confining properties of the geological strata.

5. In conclusion, the numerous records of open holes, artesian water, faults, and sinkholes. My prior testimony and opinions regarding Contentions 2 and 3 are supported by the observations recounted here.

6. It is my further expert opinion that NRC-directed "spot check" of 34 borehole logs from somewhere between 1750 and 6000 available borehole logs does not provide a scientifically recognized analysis that can support any hydrogeological conclusion about the project area. In my professional experience, there are numerous methodologies for analyzing the raw data contained in borehole logs. There are also numerous methodologies for presenting the results of the analysis of the raw data. Modem methods typically result in GIS/three-dimensional visualization and modeling of systems or similar computer modelling based on the raw data in borehole logs. A copy of the website is attached to confirm the widespread and accepted use of these methodologies within the profession.

7. A "spot check" of borehole logs is not proper where analysis has not been carried out and recorded by GIS/three-dimensional visualization and modeling or similar technique. The NRC Staff testimony indicates that Powertech has not conducted the necessary mapping of available data. In such a circumstance, NRC Staffs conclusions are not reliable where NRC Staff accepts assertions of scientific fact made by Powertech that are not supported by accepted methodologies used to review data in borehole logs.

8. The NRC Staff testimony makes no mention of the information contained in the drillers' notes. Drillers' notes are an important source of interpretive information, often revealing information not disclosed by sliding logs. For example, drillers' notes can reveal the location of caves, artesian water, and the intermittent absence of confining layers. Although my review is not complete, the drillers' notes I have reviewed do contain this type of information.

9. The NRC "spot check" of 34 data points does not provide a statistically reliable testimony or basis for any conclusions regarding confinement or hydrology. I teach various math and statistics courses at Oglala Lakota College. Multivariate statistics is one of the formal research tools required for my PhD in Geology from the University of Nebraska-Lincoln. I am charged with review ofresearch students at OLC who frequently apply statistical methods in their capstone research sequence required for their BS in Natural Science. NRC Staffs "random" analysis lacks the basic safeguards applicable to those who would rely on statistical methods.

10. The minimum number of data points for a statistically valid and meaningful sample is generally 10%. In the Powertech instance the minimum acceptable sample size would be a randomly selected sample of at least 175 borehole logs. Based on the recent disclosure of over 4,000 previously withheld borehole logs, the appropriate sample would be 10% of the entire set, or about 575+ borehole logs checked. NRC Staff presents no basis for its so-called "random" selection. Without such information, professionals in my field cannot accept such assertions where it is possible that the limited data set resulted in poor methodology that is the hallmark of modern junk science. Having examined only 37 data points out of thousands available, NRC would have failed my Math 123 Introduction to Statistics class. None of my student researchers would be allowed to publish or present their research findings had they made such a fundamental error.

11. In my experience and training, NRC Staffs methodology is fundamentally flawed and the testimony based on the NRC Staffs review cannot be relied upon for any legitimate scientific purpose.

12. Although I relied on student assistants as appropriate, the testimony and opinion provided herein are based on my direct professional review and personal knowledge. Any errors or misinterpretations of data herein are exclusively my own.

I declare under penalty of perjury that the foregoing is true and correct of my own knowledge.

Executed in accord with JO CFR 2.304(d).

Executed in Chadron, Nebraska on November 21, 2014

Please accept these comments on behalf of Native Research Solutions (NRS). Native Research Solutions (NRS) is an Indigenous-led organization that provides legal research to grassroots communities working on social justice and human rights issues. NRS specializes in Federal Indian Law, Environmental Law and Water Law. NRS is dedicated to supporting and working with communities impacted by natural resource exploitation, racial discrimination, and other social injustices. NRS works with communities to protect the health and livelihood of the people, the environment, sacred sites, and water resources. NRS works with tribal governments and organizations to assert tribal sovereignty and fulfill tribal self-determination. NRS stands in solidarity with the Lakota Nation and other tribes in enforcing treaty rights and protecting sacred sites.

Currently, the EPA does not have all the necessary data to make a thoughtful, wellplanned decision on these permits. The impacts of past drilling and improperly plugged boreholes and how ISL mining will further impact these boreholes is largely unknown.

[...]

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7,000 old boreholes that have not been properly plugged.10 It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is certain. The problems of leaks and spills and contamination of water resources begin even before the mines close.

Abandoned exploration wells are ubiquitous in the project area, and likewise provide potential pathways for injectate. *(In re PowerTech (USA) Inc.,* LaGarry, Supplemental Written Testimony, ASLB, Doc. 40-9075-MLA, Nov. 21, 2014). The EPA has failed to consider the potential for abandoned or poorly constructed wells to affect the migration of contaminants.

[...]

Regarding this post-hearing bore hole data, Dr. LaGarry provided a detailed expert review of that information which confirms his hearing testimony that there are substantial questions as to the hydrogeologic conditions at the site that warrant additional investigation and analysis. Exhibit OST-029 (Written Supplemental Testimony of Dr. Hannan LaGarry). In that document, Dr. LaGarry testifies that his review of the bore hole data demonstrates that the data discloses, at minimum: 140 open, uncased holes; 16 previously cased, redrilled open holes; 4 records of artesian water; 13 records of holes plugged with wooden fenceposts; 6 records of holes plugged with broken steel; 12 records of faults within or beside drilled holes; and 1 drawing of 2 faults and a sink hole within a drilled transect. Exhibit OST-029 at 2. Dr. LaGarry goes on to testify as to the likely consequence of these conditions, all of which support the Tribe's assertions that additional investigation of the site is necessary in order to satisfy the SDWA and UIC statutory and regulatory requirements, and in order for the applicant to demonstrate an ability to contain the mining fluids.

[...]

Instead of providing a reasonably complete discussion of mitigation and providing an analysis of the effectiveness of those mitigation measures, the EPA analysis repeatedly refers to various commitments by the applicant to mitigate impacts by submitting plans in the future as a result of license conditions imposed by the draft permits and the NRC process. These future plans encompass mitigation for a broad scope of impacts, including such basic elements as requiring the applicant to conduct hydrogeological characterization and aquifer pumping tests in each wellfield to examine the hydraulic integrity of the Fuson Shale, which separates the Chilson and Fall River aquifers; a commitment from the applicant to locating unknown boreholes or wells identified through aquifer pump testing, and committing to plugging and abandoning historical wells and exploration holes, holes drilled by the applicant and any wells that fail mechanical integrity tests.

However, no discussion or analysis is provided to explain how an applicant might go about identifying abandoned holes or analyzing the effectiveness of long-after-the-fact plugging and abandonment, nor is any discussion given to what methodology or effectiveness criteria accompanies the pump tests or monitoring well systems.
[...]

Other proposed groundwater impact mitigation that lacks reasonably complete review and analysis as to effectiveness include a proposed, but unevaluated, monitoring well network for the Fall River aquifer in the Burdock area for those wellfields in which the Chilson aquifer is in the production zone in order to address uncertainties in confining properties of the Fuson Shale because leakage may occur through the Fuson Shale and draw-down induced migration of radiological contaminants from abandoned open pit mines in the Burdock area. Despite having none of this information or plans developed, the EPA nevertheless concludes that the risks of this type of contamination are expected to be small. Such unsubstantiated conclusions based on unsubmitted, unreviewed, and even undeveloped mitigation plans are not allowable under the SDWA, UIC regulations, NEPA, or APA.

[...]
Dr. LaGarry credibly opines that "[s]o this TVA report recognizes that the whole area is fractured and that breccia pipes form along these fractures, but they didn't make it into the scientific literature for maps. But if I was to take a geological mapping field crew out there, we would find them because we're looking for them." Id. at p. 1074, lines 4-9. See also, id. at p. 1074, line 14 to p. 1077, line 23 (Dr. LaGarry discussing the commonly overlooked faults and fractures in the area); p. 1109, line 15 to p. 1111, line 2 (discussion of USGS report (attached, and referenced therein as Exhibit NRC-081 at 7) demonstrating extensive breccia pipe formation in the area).
Dr. LaGarry's (and Dr. Moran's) testimony is consistent with the attached TVA report (Exhibit OST-009), the USGS report (Exhibit NRC-081), the USGS-derived Gott map (Exhibit APP-015(f)), all of which show faults, fractures, and breccia pipes in the immediate area of the proposed project, and thus is far more credible testimony that the geology is highly variable in the area given the scientific evidence. At minimum, this corroboration between the Tribe's expert testimony and the extensive geological reports demonstrates EPA's failure to conduct the necessary physical surveys to confirm or deny the presence of these geological features – especially considering the applicant's pump tests proving leaky confining layers. Instead, EPA's draft permit materials rely on the applicant's assumptions, unsupported by empirical data or detailed site investigation, that somehow in a sea of geological fractures and faults surrounding the Black Hills and particularly in this area, the applicant's chosen site is free of geological irregularity that would affect fluid containment simply because there is no "smoking gun" in the reports showing a major fault directly crossing the site. In this case, the SDWA, UIC regulations, NEPA, and the APA require EPA to do more to reconcile the evidence in order to meet its statutory obligations. Deferring this analysis to a later date through wellfield hydrogeologic data packages or injection authorization data packages is not lawful.

The potential pathway for migration of injectate into the Madison aquifer (per EPA) and then into surface water (per USGS) is improperly discounted by EPA. The agency has failed to give proper consideration of the potential existence of pathways resulting from unidentified faults or future seismic activity. The EPA finding that "the nearest potential pathway for fluid movement out of the injection zone in the Dewey area is the Dewey fault," is not supported by adequate data, in light of the regional seismology. (EPA, Dewey Burdock Class V Draft Area Permit Fact Sheet, p. 26).

Unidentified faults and abandoned test wells in the project area provide potential pathways for the migration of contaminants into adjacent aquifer formations and artesian springs, which potentially impacts surface water. For these reasons, the Dewey Burdock UIC Class V permit application must be denied.

Subject: Public Comments about Uranium mining
Im writing to state my opposition to the Underground Injection Control Programs draft permits for the Dewey-Burdock Uranium Mine and Deep Disposal Wells project. It is yet another project that threatens our underground water sources, the faults located in that area and is an overall threat to the Earth and therefore the people.
Invest in renewable sources of energy! We all win with that route!

I am appalled at the chance that "They" could ruin our water supply by forcing "waste" under pressure into the nearby soil. Hundreds of feet deep, thousands of gallons of waste produce. This area is full of caves, caverns, fissures, cracks, They claim scientists have it figure out. That it is safe.

"What if is isn't"!!

The product they will mine is very dangerous to all.

And then the next part -- and I think that's the most part that we've been hearing, is this stratigraphy and the fault lines that are -- have been proven. We can't see below the surface, but from different researchers and just recently, we know that the stratigraphy is not even.
As you seen, the stratigraphic column that was displayed on the screen where it showed that everything is straight across, the hydrogeology, the geological stratigraphy is not like that. There are fault lines there that are active, and the Black Hills are tectonically active.
[...]
Also, the other fact that come -- the other parts that come to mind, this -- whenever you're talking about the geology, it says that it's -- you know, the Black Hills are part of the Late Cretaceous period, but also we also have the late Eocene period in here, which has the active fault lines, the fractures, and the folds.
In the past at that site when they had the uranium mine when they talked about the air being contaminated and the water being contaminated, could it be caused from the 4,000 exploration drill holes that took place there? The 115 holes, the 20 monitoring wells, which were unplugged?
And we know that they are supposed to be -- whenever you do the test drilling, they're supposed to be filled in in a certain way, but these were not filled in that way.
When you're looking into the history of how they cleaned up the mines, they were not cleaned up because some -- when you go back into the research of the drillers' logs from the last hearings on this specific place and that site, they were filled with fence posts. So how do you fill drill holes with fence posts when they are supposed to be secured?

We are told that TVA did a wonderful job of filling all these boreholes and so forth, but the other concern is numerous sweeps in the restoration phase leave -- put -- they remain -- I got it screwed up here.

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes. In addition, over 7,000 old boreholes have not been properly plugged in the proposed project area.
It will be impossible to contain mining fluids or waste liquids, and contamination of our groundwater is very likely.

The proposed well fields are located approximately 2 miles southeast of a large fault named the Dewey Fault. So far this fault is known to extend approximately 16 miles east and 4 miles west of the proposed ISL mine site.

The consequences of an excursion of contaminated groundwater along a fault impacted my community when two containers of ethylene dibromide, a pesticide used to control the mountain pine beetle, was reportedly disposed of near the U.S. Forest Service Nemo Work Center in the mid 1970s.

Plumes of groundwater contaminated with this probable human carcinogen continued to follow a fault that communicates with Box Elder Creek, upstream from a well-documented karst formation in the Madison limestone, and down into the Madison aquifer below Rapid City.
Costs for water transport and water treatment were considered to be too high when the EDB was discovered in regional domestic wells in 1997, and so for the past 19 years, the community has depended upon one remote community well and two domestic wells for its entire water supply.
If such an excursion were to enter the Dewey Fault, the scale of the problem could be staggering. I believe that Azarga/Powertech is overconfident in stating they will simply pump back excursions of lixiviant that occur.

Throughout Indian country in South Dakota, there are thousands of abandoned and unmarked open pit uranium mines as well as exploration holes going to the depths of 800 feet. These exploratory holes allow radioactive pollutants to contaminate underground water sources critical to providing drinking water for the surrounding communities.
[...]

And as far as our history goes, there are a lot of underground channels and chambers that can lead to the reservation and also can lead in to the Ogallala aquifer. So please put into consideration that Mni Wiconi, water is life. So we -- as a Treaty Council from Sicangu Oyate, we oppose uranium mining.

I'm not convinced that, given the highly fractured nature of the hydrogeology in the southern Black Hills, the 7,500 exploratory boreholes left by TVA's exploration in the '70s and '80s, and what the Geological Service calls relatively fast-flow velocities of groundwater movement, given all of that, I'm not convinced that it makes sense to say that contamination won't occur as a result of this proposed project.

KENNETH HARGENS: Good afternoon. Thank you all for giving me the opportunity to speak here. I hadn't really intended on saying anything. I just came out here to see what was going on.

But I did bring a piece of paper with me that addresses some of the scientific aspects of this project. But first of all, I've got to say that before the Army sent me to Vietnam, I was drilling oil wells over in Wyoming. And just an indication of the fact that, with all of our scientific knowledge, we really don't know what goes on underneath the ground.

And with my education at the School of Mines, I learned a lot of things, and there's a lot of things I didn't learn. But anyway, when we drilled oil wells, we would have a pit in the ground. It's called a mud pit. And it was a lubricant. It's still bentonite and water lubricating the drill pipe.

And one of my jobs was to monitor the level of mud in there, and periodically it would just disappear. It'd go out. And at that time, we had to call Halliburton or Dowell, and they'd come in with the lost circulation equipment and plug the hole underneath the ground.

And I belong to the geological society, and we've had several speakers. And one of them, a couple years ago, addressed the fact that they did a study, they drilled a borehole, and they injected ionized water into it.

And there was a series of monitoring wells around it. And in a very, very short period of time, what they injected in that well spread a great distance, 4,000 feet.

Another indication we don't know what's underneath the ground is down to -- by Fall River, Cascade Falls, the spring comes out of the ground. Near there one day they were drilling a water well and -- through that red dirt down there, and the water in the Cascade Spring turned red. So there's something underneath the ground. There's a fissure or something that caused the water flow.

Also, a friend of mine that lives in Lithograph Canyon not far from the Dewey and Burdock test sites there, he decided to drill a water well on his property, and his drill pipe went out of sight. The superintendent from Jewel Cave went over there and dropped a fiberoptic camera down there. And somebody said, "Well, what does it look like down there?" He said, "It looks just like Jewel Cave." So once again, we don't know what goes on underneath there.

Many years ago, the Homestake Mining Company drilled core drills over towards Maitland. So they decided to drill a tunnel over there to extract the gold. They drilled that tunnel two and a half miles, and when they got there, there wasn't any gold there. There was no gold ore there. Once again, we don't know what goes on underneath the ground.

[...]

As far as these graphics go, these maps and stuff right here, we have a -- we have a saying in the Army that if you can't dazzle them with brilliance, you baffle them with B.S., and I think that's what some of that stuff is.

LINSEY MCLEAN: Thank you for having me, and I'll need a minute or two extra, too. And I am science based.

My name is Linsey McLean, and I am an environmental biochemist in toxicology for the last 40 years. I was born and raised in Flint, Michigan, and lived there for the first 55 years of my life with over 450 Class VII industrial dump sites in each of the counties of southwest Michigan, so I am well acquainted with environmental contamination of all kinds.

In fact, this is the reason, actually, that I sought my course of study and pursued a career in the effects of environmental pollution on the living body of both animals and people. I am also a federally approved expert witness.

The history of the Dewey-Burdock area as far back as the 1950s is well known. But what is not well known is the summary of the explorations and subsequent 7,650 old boreholes left by the TVA unclosed or improperly closed in two different explorations over ten years, which says, "The aquifer test results indicate that the Fuson Member of the Lakota formation is a leaky aquitard separating the Fall River and Lakota aquifers; thus the ability to dewater the area for mining was impossible and the site was abandoned twice."

The understanding was that even if the boreholes were closed, there are still enough geologic anomalies to prevent effective confinement of rock layers for ISL mining or dewatering for tunnel mining.

Powertech knew this when they first concocted this business, but failed to disclose to the NRC, the EPA, and the public.

The fact that the permit papers filed with the State of South Dakota featuring tested uranium concentrations in the area show the highest levels in the alluvial aquifers, which are essentially runoff from the old roll front that was completely mined out back in the '50s and '60s in the open pit mines left there and not able to be mined due to lack of confinement.

EPA should require borehole identification plugging. Fence posts and sloppy sealants ain't going to work.

The first time I reminded the EPA at the EPA hearing that we live in a fault area with -- from Yellowstone National Park, and it is part of my biggest concern. But I do think those of you that did bring that up, the first time, none of it was brought up.

The continuous uprising of our Black Hills will continue to move, and those faults will continue to move. What does that say about putting waste in our Minnelusa formation? It is not safe.

The second time I spoke to you, I also stated that these faults will affect our water aquifers, and as no secure process is available, we cannot guarantee it. And I spoke with you, and I believe you are sincere. It is not for you to necessarily be able to control all of that.

We have seismographic testing going on over at Provo. I do not feel that's safe either. What is that going to do to these faults? I do not know.

So I'm asking that both the Class III and the Class V permits be denied. And I speak for myself personally and also for the City of Hot Springs. Thank you.

DR. HANNAN LAGARRY: My name is Dr. Hannan LaGarry. I am a professor at Oglala Lakota College on the Pine Ridge Reservation.

In 2014, I served as an expert witness on behalf of the Oglala Sioux Tribe and the consolidated interveners in opposition to Powertech's license renewal.

As part of that proceeding, I had the opportunity to review some belatedly disclosed data from Powertech after the hearing had concluded.

On November 12th, 14th, and 15th in 2004, myself and three student assistants reviewed drillers' notes and borehole logs prepared by the Tennessee Valley Authority that was disclosed by Powertech. This review was conducted at the Powertech offices in Edgemont.

We were able to review drillers' notes from 4,177 boreholes, 56 percent of the total of 7,515 that were available to us. In this data we found written records from drillers of 140 open, uncased holes; 16 previously cased, redrilled open holes; 4 records of artesian water; 13 records of holes plugged with wooden fence posts; 6 records of holes plugged with broken steel; 12 records of faults within or beside drilled holes; 7 notations, "Do not record this value on drill hole maps"; 2 notations, "Do not return this data to the landowner"; and 63 redacted borehole logs.

Redacted borehole logs are those things you see in top secret documents where they are blacked out. So the TVA had some secrets to keep. Many of these notes contained references to water at various levels and poor, muddy, or destroyed samples coming from the holes. We also found that in the datasets we reviewed, lots of records had been moved or were missing.

This data, Powertech attempted to suppress it, but the Atomic Safety and Licensing Board overruled them. When it was time to make this testimony public, Powertech objected, but the Atomic Safety and Licensing Board overruled them. In the final partial initial decision, this testimony resulted in license conditions requiring Powertech/Azarga to exhume all 7,500-plus borehole logs and examine them to make sure that they were properly plugged. This work has not been done.

Powertech appealed this decision and these license conditions, but the Atomic Safety and Licensing Board denied the appeal, and those license conditions stand to the present time.

Thank you.

But my concern is not based on that. It's -- I'm concerned about the 4,000 wells that are going to be drilled there.

Right before Hannan's presentation, I was going to say that on a very conservative estimate, a half a percent failure rate nobody is going to dispute. That means at least 20 of those wells are going to be open sources of contamination.

And what worries me and -- is the fact that they are using oxygenation. And in Wisconsin, we were weren't allowed to chlorinate wells because it's an oxygenation process that releases arsenic, and we had a lot of arsenic over in some of the aquifers there.

And the hydrologists made some mistakes, and the arsenic was traveling places they didn't expect. The solution was they drilled wells into aquifers that were deeper and were safe.

They had some well drillers who got sloppy, had -- the annular's places were not sealed correctly, and they created an open source of contamination into the contaminated aquifer.

So I'm real concerned about those wells. And this may sound really callous to a lot of people in the audience, it's not humans and drinking water I'm worried about because there's a lot of plumbers and equipment installers, they'll sell you for a really expensive price, there's ways to get water safe to drink for humans. They'll make a lot of money doing it. I'm not going to be one of them because I'm not into that.

[...]

And I'm going to get in touch with Dr. Hannan. Yeah, those guys are a lot sloppier than I thought. Having worked in a nuclear power plant, I thought they would be a lot more careful. They are really sloppy in their well drilling.

Number three, the old boreholes were actually holes that they actually were going to use as their wellfield that they abandoned, and that makes this situation even worse.

[...]

And finally, number five, the open boreholes and the fence posts and at least some of them have allowed contamination to the aquifer of microorganisms that are known to organify metals and make them unrecoverable by ion exchange.

PAUL WHEELER: My name is Paul Wheeler. I've been a rock hound of sorts, a minor geology buff for many years. I've traveled into the Black Hills for over 30 years and recently purchased a house here in Hot Springs.

After reading the Class III and Class V permit fact sheets provided by the EPA in regards to the proposed project, it is evident to me that this project is, at the very least, impractical and, at the very worst, extremely dangerous.

Considering the complex subsurface geology of the area and its close proximity to known fault joints, the choice to use injection well technology to both contain contaminated wastewaters and mine subsurface uranium deposits is both irresponsible and potentially catastrophic.

I would like to comment on just as few of the potential points. Page 23 of the Class V sheet states the locations and conditions of fault zones in relation to the project area. And I quote: The Dewey structural zone consists of steeply dipping to vertical faults that are uplifted on the north side relative to the south side of the zone, a total of 500 feet.

The Long Mountain structural zone is located approximately 7 miles south of the project area. This fault zone consists of small northeast-trending normal faults observed in outcrops of the Inyan Kara group and Sundance formation within a zone measuring several miles across.

The displacement across the faults measures up to 40 feet, with folding of the strata adjacent to the faults adding up to 60 feet of additional structural relief.

The faults in the Dewey project will occur northwest of the Dewey fault in the Dewey terrace area approximately one and a half miles northwest of the project area. A subsurface fault was identified by seismic methods about five and a half miles north of the project area. It is about one and a half miles long and 400 feet wide.

Three faults are shown in the northeast corner of the Burdock Geological Quadrangle. The reports states that these faults have a displacement of less than 10 feet and are located two and a half miles or more from the eastern edge of the project zone.

So -- end of quote. In short, there are at least a half dozen faults of differing size located within a mile and a half to five and a half miles from the project zone.

On page 25 of the Class III draft sheet, this -- there's an even better picture drawn of the Dewey fault, and I quote: The Dewey fault, a northeast to southwest trending fault zone, lies approximately 1,500 feet northwest of the Dewey-Burdock permit boundary.

So again, we have a steeply dipping fault line lying less than a half mile away from the project zone.

Related to those facts, page 26 of the same sheet states, and I quote: Many other faults are probably present, but not discernable because of poor exposures. Let me repeat that: Many other faults are probably present but not discernable because of poor exposures.

In response, it is stated, quote: If there are any faults and fractures occurring within a well field area that cause a breach in a confining zone, they will be detected during the well field drill and pumping testing.

If found, the placement of injection and production wells can be modified from the regular pattern to control flow around the fractures or faults to keep it flowing through the uranium ore bodies rather than along these paths of lower hydraulic resistance, end of quote.

So if additional fractures and faults are found in the projected area and there are already many, Powertech will simply and safely adjust the flow around these breach zones and continue to mine uranium? To think that you can safely continue to apply injection well technologies in an area of potentially breaching fractures and faults, I find to be both ridiculous and irresponsible.

If the information showing the close proximity of numerous fault zones to this injection well area is not enough to disallow this project, you must also consider the confining layers that will be used to contain the injected fluid.

The entire project area relies upon a lower and upper containment layer of Fuson shale that underlies the whole region. But to quote from page 22 of the Class III sheet: There may be points where the Fuson confinement zone has been compromised by improperly plugged exploration drill holes or wells that penetrate the Fuson confining zone. Evidence suggests at least one breach in the Fuson confining zone is included in the reports on the pump test.

It is clear from pages 15 and 17 of the Class V sheet that the porous nature of the Minnelusa sandstone as an upper containing layer is a concern.

[...]

In my opinion, considering the toxic nature of these injection fluids, and the obvious dangers of both questionable confining layers and their close proximity to known and unknown fault and fracture lines, the idea that this project can be done safely and with no ill effects to our water supply or to local geologic integrity is foolhardy and defenseless.

The massive public and environmental loss that could very well occur far outweighs the singular and unnecessary private gain that is being sought.

Thank you.

When tritium from nuclear fallout moved through groundwater in the Inyan Kara group at 15 feet per day, it indicated possible flaws in the rocks or porous lenses. This data was either ignored or explained away.

A recent paper said the 1963 data showing much faster velocity is an unresolved issue. That's from the South Dakota Academy of Science's Proceedings, Volume 93, 2014, page 28.

Capping is between layers, like that picture you had up here. They force cement between the water and this other sediment, uranium, and that's capping. That's what needs to happen.

If that doesn't work, that doesn't work, what happened, the radon, radium will come up. And it happened in the reservation. At that 18- -- oh, 1981. We had a sudden death of -- SIDS, a lot of babies were dying. The doctors at Pine Ridge Hospital said those are something in the air.

[...]

EDWARD STARR: Okay. But the officials heard about it, heard the doctors' statements, and they fired all of them. They transferred them out.

But uranium isn't safe, never was and it never will be.

The Black Hills -- oh, the Black Hills water is a recharge, actually, for outside water, for example, in the Ogallala. That's pretty general. The hydraulic connection between aquifers exists, and there are two -- these two aquifers, the Madison and the Minnelusa, are connected to surface water resources. They are not disconnected.

Part of the -- a major part of the success of this operation is the non-transmissibility between aquifers. Well, this shows that there is transmissibility, that they do connect and that they're hydraulically connected.

There are numerous fractures -- it goes on to mention there are numerous fractures and solutions, and openings that have created extensive secondary porosity and permeability. Just another example of these aquifers are not impermeably protected.

Both the Madison and the Minnelusa aquifers are potential sources for numerous large artesian springs in the Black Hills and hydraulic connection between the two aquifers in other locations.

So once again -- I mean, this is the Black Hills hydrology study. I didn't write it. I just read some of it. I am not a hydrologist, so I don't make up my own opinions. I look at this. And if that's what it says, then I think these guys know what they are doing.

RUBE TIFFT: I was wondering what this is. Okay. Okay. This is a test hole cap. This is from the '40s and '50s and the '60s. In that duration, when they dug a test hole, they dug a foot down, and they set this in the hole, and then they piled some dirt on it.

As you can see, this one had a couple little holes poked in it so it wouldn't hold no water, you know, but this was a test hole plug.

What I would like to bring to -- I was raised on a ranch east of Sturgis 60 miles, Township 7, Range 13. Well, in -- I was probably 17 when my dad allowed them to dig three uranium test holes.

Well, the one was out on what we call the hay field, which was 160 acres, and there was a lake bed there that covered at least 40 acres, grew some grass, ducks there. Growing up, I mean, there was set water year-round.

Well, they dug a hole in the corner of it. Well, the first thing that occurred was the neighbor a mile north, he had a deep well, and he was all pissed off because his water started pumping up that mucky stuff from the test -- the lake bed, and eventually ruined his well. And he passed away bitter at my dad for allowing it to happen.

Well, as the years went by, that 40 acres, which there was an ancient Indian campground, teepee rings, and it was known as an area where they used to camp, because that water always drifted, and it filled the dam, irrigation.
It went dry, turned into white soil, prairie dogs took over, the dam started going dry. I started digging dugouts to water the cows. The grass didn't put up the hay.
Our house well was 30-foot deep. One of the nicest wells you'd ever drink water out of. It started going -- getting lower and lower, so I dug one 40 feet deep, but that didn't help much because it was shallow water and, well, eventually Bud Wenzel, which his actual name was Walter Wenzel, he -- he passed away. The family sold their place because they had no water on it.
A few years later, Oscar Davidson, he was 5 miles east of where they dug that test hole, and he was pumping up mucky water. Well, it just drained that whole lake bed aquifer right down into the deep water.
And well, you know, it wouldn't run the amount of livestock that it ran when I was a kid, and by '95, I give up my dream. Quit. And I didn't have a big enough place to go on, and the little place wasn't producing.

What scares me is these test holes sit open. They are not filled. If they were filled, it would be different. You start pressurizing it up, water raises, down it goes into the deep water, or maybe it comes up into the shallow water. But you're going to have a problem. Water courses are changed all the time.

Homestake changed a lot of water courses over the years. You talk to people that mined in there, well, water courses are changed. It might come up; it might go down. But it's going to affect things.
In this area, you've got alkali, which is a form of Epsom salts, selenium. And you got layers. You go along the Cheyenne River, you'll find 6-feet layers of pure -- pure stuff. Well, you dig through that and water caves down in, pretty soon water -- water gets contaminated with that stuff.
And these open test holes are an issue. I mean, the one that caved in, why, you could have dumped a car in there before I left. That's in the top. I mean, they went through a 60-foot base in the ground that was full of water. So down it went.
Well, all I'm saying is, all these open test holes, I wrote President Trump a letter, and I says, I bet you in ten years, if they do it, I'll bet you a dollar that you can't drink Hot Springs water. So I guess that's my testimony. Thank you.

Subject: Deny Permits for Dewey-Burdock Uranium Mine

Dear EPA,

Thank you for the opportunity to comment on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells.

The proposed mine and deep disposal wells are in an area that is documented to have faults, fractures, breccia pipes, and over 7000 old boreholes that have not been properly plugged. It will be impossible to contain mining fluids or waste liquids, and contamination of groundwater resources is very likely.

The NRC has prohibited the in-situ mining operation in this area until the 7600-plus abandoned boreholes are properly sealed. Geologically this is part of the Black Hills uplift area, which is still rising, causing the rock to be highly fractured and constantly changing.
Both of these conditions allow flow between all area aquifers. This will make containment of mining waste and waste fluids impractical or improbable.
Aquifer flow data is presented -- as presented is inconsistent.
In the mining application, the flow rate of feet per year is cited; yet in the very next paragraph, a pump test showed a drop in a test well 1500 feet away in less than five minutes. Pressurized injection would certainly move faster than pump suction head values.
USGS aquifer data shows tritium levels, which would infer high flow rates from the known recharge sources. This was assumed to be caused by an unknown recharged source.
TVA driller notes, initially suppressed by Powertech, show that at least one borehole went into an underground cave. This could be due to the Jewel Cave and/or Wind Cave structures extending under this area.
USGS aquifer data also concludes that flow rates through such structures is similar to surface flows in the area. This could easily explain the deviation between well data and tritium data without the need to identify an inferred new recharge zone.

And I've been hearing about these geological faults in the area. Good evidence we just heard.

Hannan LaGarry is a geologic -- geologist -- I can't even talk -- that had worked this area and knows that this whole area has many faults.
That's what happened to Chadron Creek in 2007. It just disappeared one day into a fault in the earth. And that was their total water supply for the town of Chadron, Nebraska.
He and some helpers went over 10,000 pages of the permit. He looked at the drillers' notes and found artesian wells popping out some of the holes, which shows faults in the aquifers. And all the holes dug over there have not been plugged like the NRC told them to.
Some of the holes went into the caves. Like Wind Cave? Lots of things he found in the drillers' notes were things like, Don't tell the landowners and don't report the Indian relics. This was just all about the 760 well holes that aren't plugged from the TVA.
[...]
Also, the Tennessee Valley Authority, after ten years of looking for uranium to mine in the Dewey-Burdock area, left because they found too much gypsum and cave lines in the area.

This is a disaster waiting to happen. What will happen here is that the already fissure-laden structure underneath this area will begin to move water toward the aquifers.
[...]
In the area of the Dewey-Burdock, the Madison, the Minnelusa, and the Inyan Kara aquifers are in close proximity. They are also broken up by the 4,000 -- I mean the 7,650 boreholes that are already there, the Wind Cave structure that's underneath it, the various things that were done during the mining activities.
In other words, it's Swiss cheese. And what we are going to do is move radioactive waste into this Swiss cheese and then contaminate our water.

Compounding this is the presence of numerous exploratory wells that have been drilled in the past. These wells have not been filled, cased, or capped.

[...]
The area in question is of this nature and has connections with immense cave networks, such as Jewel and Wind Cave.

Letter ID	Commenter Name	Text
11		Subject: Comment on UIC Area Permit to Powertech, Inc To Whom It May Concern: I find the use of injection wells in the Inyan Kara Group horrifying and should not be permitted. Further, this aquifer should NOT be exempted from the Safe Drinking Water Act.
21		Subject: Aquifer Exemption for S D Minimg Project I am writing to provide an opinion of the exemption rules proposed for this project. Why in the world would injecting uranium waste products into a fresh water acquifer even be considered for approval? Protect our drinking water, no matter where it is. An acquifer is not a garbage can for some mining company.
22		Subject: Draft permits and aquifer exemption for uranium mining project in southwestern South Dakota I am writing to voice my strong opposition to the EPA issuing Underground Injection Control Area permits to Powertech Inc for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. I am specifically horrified that the EPA would allow an exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur and strongly oppose this exemption. Thank you for considering my voice and views in this matter.
41		Subject: no on exemption from safe drinking water regulations in SD In regards to the below, I am against both the uranium mining and most especially exempting the company from regulations on safe drinking water. That sounds like a bad idea for public health. Thanks.
64		Also with regards to the aquifer exemption of uranium-bearing portions from the Safe Drinking Water Act. I am trying to figure out what good can be gained from this exclusion? I am respectfully requesting that the EPA, in its infinite wisdom not grant these permits or exemptions. The Safe Drinking Water Act was put in place for a reason. Our future depends on the actions of the present. Thank you for letting my voice be counted.
87		Subject: quifer exemption for uranium mining project in southwestern South Dakota I find this shocking. No, the uranium bearing portions of the Inyan Kara Group aquifers SHOULD NOT BE EXEMPT from protection under the Safe Drinking Water Act. What in the world is going on? Please, do your job and protect our drinking water.
160		In regards to legal discrepancies, there seems to be many that are associated with this project. The fact that an exemption from the Safe Water Drinking Act is needed to proceed with this uranium extraction says a lot in itself (EPA, 2016). This Safe Drinking Water Act was enacted to protect our nation's potable water sources, and therefore, should continue to do this instead of allowing exemptions that compromise the safety of the water within these aquifers.
169		The EPA website also claims the following: "EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uraniumbearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur." Why is an exemption required if nothing will happen that will affect the drinking water in this area. This seems like a CYA move on the part of the EPA.
171	Ex. 6 Personal Privacy (PP)	Subject: Inyan Kara Group aquifers Please do not exempt anyone from regulations prohibiting the injection of uranium et al into the aquifers. The mining company should still be subject to the regulations in place meant to protect the water.
180		The second permit that the EPA is suggested that there would be an exemption for the aquafer. Meaning that this exemption would exclude uranium-bearing portions of the Inyan Kara Group aquifers from abided the Safe Drinking Water Act (EPA, 2017). In order for this any ISR activities to occur this exemption must be in place. The second permit is a UIC 'Class V' Area Permit for deep injection wells where the dispose of ISR process waste fluids into the Minnelusa Formations below the Inyan Kara after treatment (EPA, 2017). In addition, for the 'Class V' permit, the water being injected back into that aquafer must abided by all radioactive waste and hazardous waste standards set by the Clean Water Act (CWA) and National Pollution Discharge Elimination System (NPDES). These two permits should not be passed due to the dangers associated it with UIC. [...] At a legal standpoint looking at both permits purposed they can violate the terms of the Safe Drinking Water Act, CWA, and various of water acts that are put into place to ensure quality drinking water. Mainly though, these permits would allow for a loop holes for the Black Hills region to not have to abided by. If these permits are adopted it can infect and pose health problems to those living around the aquifers. Sometimes violations of these acts can be criminalized, or most companies face many heavy fines.
192		Subject: UIC 'Class III' Area Permit/ UIC 'Class V' Area Permit for deep-injection wells in the Minnelusa Formation Hello! I'm responding to the EPA Region 8 draft proposals mentioned in https://www.epa.gov/newsreleases/epa-seeks-publiccomment-draft-permits-and-aquifer-exemption-uranium-mining-project I was particularly alarmed by the language that "EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur." As a citizen sympathetic to my fellow citizens pursuing such activities as "drinking and otherwise using water without it increasing the likelihood of cancer and poor health" I highly object to this exemption approval. If the Class III Area Permit is in an area vulnerable enough to require such review, then such review is a vital part of the process and should not be simply discarded out of convenience.
205		EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur. Thank you for your consideration and please do not provide the permit with SFDA drinking water exemptions.
236		Subject: Aquifer Exemption South Dakota There is no safe level of Uranium waste in drinking water, and you won't be able to reach safe levels of uranium waste if you are exempting an aquifer from the safe drinking water act. By that very act you are saying that the people of that area don't deserve or need safe drinking water.
238		Subject: I am opposed to granting permits to Powertech for uranium injection wells in South Dakota I am writing to register my opposition to the granting of permits and exemptions to the Safe Drinking Water Act for Powertech's proposed uranium mining in South Dakota..

		The Safe Drinking Water Act is a crucial means of protecting an irreplaceable resource used by local tribes and other residents. Granting exemptions to this Act so that a private company can reap financial rewards is wrong. There is NO safe amount of uranium that can be injected into an aquifer. i call upon the EPA to do its job in protecting the environment and its inhabitants. Do NOT GRANT this permit and exemption.
288		Subject: Dewey Burdock SD Dear Ms. Shea, Attached please find my written testimony objecting to the granting of exemptions to the Clean Drinking Water Act applied for by Powertech in their quest to mine in Dewey-Burdock areas of Fall River County and Custer County, South Dakota. [ATTACHMENT: "EPA.pdf"]
289		The very fact that exemptions to the Clean Drinking'Water Act have to be requested indicates that if the parfy requesting them has no interest in followrng the law. They want to violate it. If the E.P.A. grants these exemptions they will be complicit in violating the Cleaning Drinking Water Act, one of the most important pieces of legislation the E.P.A. exists to protect.
289		These exemptions to the Clean Drinking WIter Act could only be granted if it were economically viable to mine this uranium. With all that compensation that would have to be paid they cannot possibly be economically viable.
304		5. Policies Involved One policy that would be effected by the mining for uranium in the Inyan Kara Group aquifers would be the Safe Drinking Water Act (McClain-Vanderpool, 2017). But, if the proposed UIC Class III Area permit would be put into place, then the aquifers in the Inyan Kara Group would be exempt from the provisions in the Safe Drinking Water Act (McClain-Vanderpool, 2017).
308		If this is allowed, despite what I expect will be *huge* public disapproval, then there should be no exemption of the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act.
309		Subject: exemption for uranium mining project I am writing to urge you to deny the exemption for the uranium mining project. The cost of this project to human health vastly outweighs the benefits; there are too many possibilities for error and too many risks associated with the waste injection methods for this to move forward. Please protect our environment and deny the exemption- please prioritize our children's health over profit.
416	Ex. 6 Personal Privacy (PP)	III. Legal Issues An investigation by Pro Publica deemed that allowing permitting to allow chemical injections and Safe Drinking Water Act exemptions conflicts with the EPA's mandate to protect drinking water (Lustgarten, Dec. 11, 2012). Legally, the EPA is only permitted to grant exemptions to aquifers that are unable to supply drinking water because they are too remote, unclean, or deep (Lustgarten, Dec. 11, 2012). This permit would violate these requirements because the Inyan Kara and Minnelusa Aquifers do not fit the given conditions to be unfit for drinking water. IV. Conclusion I greatly appreciate your willingness to review public comments on the draft permits and aquifer exemption for the uranium mining project in southwestern South Dakota. I encourage you to strongly consider the risks uranium injection poses to the affected aquifers. Exemptions on policies like this make laws less stringent and could set a precedent for future miners. Since the late 1980s, the EPA has permitted energy and mining operations to pollute portions of more than 100 aquifers of drinking water (EPA, N.d.). The Safe Drinking Water Act is in place to protect United States' citizens from ingesting harmful substances and no exemption should be permitted to compromise that, as it is clear that even after "clean-up," there is the potential for lasting contamination. Thank you for your consideration.
423		Subject: draft permits and aquifer exemption for uranium mining project in southwestern South Dakota I am writing to state my opposition to the draft Underground Injection Control Area Permits issued to Powertech Inc. for injection wells for the in-situ recovery of uranium in Inyan Kara Group aquifers. I am opposed to the approval of an aquifer exemption, which would exempt portions of this aquifer from protection under the Safe Drinking Water Act. This exemption would set a dangerous precedent by exempting drinking water protections at the federal level. I am concerned for the health and safety of the citizens of South Dakota and Wyoming that utilize this aquifer; and for the tourists that visit the Black Hills and Mount Rushmore. Deep injection wells have the potential to leak. ProPublica completed a review of more than 220,000 well inspections from October 2007 to October 2010, finding that structural failures were routine. More than 17,000 integrity violations were handed out and more than 7,000 of these wells were found to be leaking (https://www.propublica.org/article/injection-wells-the-poison-beneath-us).
451		Asking for an aquifer exemption should certainly make clear their intentions. Many people use the very same Inyan Kara aquifer that the mining will be done in, and are at lower elevations. The deep disposal of waste into lower aquifers, is just an easy means for disposal of this toxic waste. Out of sight, out of mind, and too deep to be monitored. Will it flow into other aquifers? What happens after they are finished and long gone? Who monitors it then? Who cleans up any leaks or excursions from waste disposal ponds? Who pays for it? Once stirred up, the process continues, leaching forever into the gound water around the project area. Into Beaver Creek, into the Cheyenne River, into Angostara Reservoir, where people swim, fish and enjoy the outdoors. Since the recovery of the uranium is not 100% and they are not pulling the other harmful elements out for production, arsenic, which is a known cancer-causing metal and contaminates wells. Molybdenum and Vanadium, etc. are another elements that could be extracted. But I see no intention within permits to recover anything other than uranium. All that will be waste. We recycle plastics, glass and cardboard.
458		A ProPublica website article dated December 26, 2012 on Wyoming in situ mining notes "1he Safe Drinking Water Act forbim injecting industrial waste into or above drinking water aquifers, but the EPA ismJed what are called aquifer exemptions that gave mine operators at the ranch permission to ignore the law. Over the last three decades, the agency bas issued more than 1,5000 such exemptions nationwide, allowing energy and mining companies to pollute portions of at least 100 drinking aquifers."
478		RE: Two Underground Injection Control {UIC) Draft Area Permits, and one associated Proposed Aquifer Exemption Decision for the Dewey-Burdock Uranium In-Situ Recovery {ISR) Site located near Edgemont, South Dakota under the Authority of the Safe Drinking Water Act and UIC Program Regulations in connection with the Class III Area Permit to exempt the uranium bearing portions of the Inyan Kara Group Aquifers. Note -Powertech is now owned by AZARGA. I have used Powertech and/or AZARGA-Powertech in mv document. Fellow Public Attendees and EPA representatives, I, Ex. 6 Personal Privacy (PP) from Englewood Colorado, stand here today to loudly and clearly oppose the proposed Aquifer Exemption decision for the Dewey-Burdock uranium in-situ recovery {ISR) site located near Edgemont, South Dakota under the Authority of the Safe Drinking Water Act and UIC program regulations in connection with the Class III area permit to exempt the uranium barring portions of the Inyan Kara Group Aquifers. The EPA has proven itself to have devolved into nothing more than an 8 billion dollar agency dedicated to supporting and promoting EXEMPTIONS for the very industries that continue to cause massive environmental contamination -the legacy of which is left to the local residents for generations.

		AT ISSUE -The portions of the Inyan Kara Group aquifers the EPA proposes to exempt have historically been used as a source of drinking water, are currently used as a source of drinking water, and can be a future source of drinking water. **EPA's current Title 40 146.4 declares "The proposed aquifer exemption area must not be a current or future source of drinking water using the criteria at 40 CFR146.4".** This latest **grotesque and alarming action by the EPA to propose exemption** of these portions of the Inyan Kara Group aquifers **blatantly ignores the existing original EPA aquifer exemption criteria found in Title 40 146.4, and sets a disastrous new precedence for opening up our ever more scarce and precious life sustaining clean water Aquifers that can be used as sources for drinking water to permanent contamination from oil/gas hydraulic fracturing for UIC recovery and disposal wells, and uranium and other ISR mining activities that also utilize hydraulic UIC recovery and disposal well activities, and any other In-Situ Solution Mining.** The evidence of the convoluted joint efforts between the EPA and AZARGA-Powerteck to set this precedent in order to change the current Aquifer Exemption criteria is spelled out in the **EPA's 11/17/16 Aquifer Exemption Technical Memorandum.** As recorded in the 11/17/16 Memorandum, EPA and Powertech worked cooperatively to manipulate (as evidenced by actions regarding the resident using well 16) the status of current drinking water use of water from the targeted portions of the Inyan Kara group in order to eliminate the "current use" protection from exemption under the current 40 146.4 Criteria, and then intend to eliminate the "or future source of drinking water" criteria by simply not considering 'future source of drinking water'' with this Aquifer Exemption Proposal. If this this proposed Aquifer Exemption were to be Allowed, the "future source of drinking water" protection will be eliminated by this precedent setting Aquifer Exemption. Currently there are multiple wells drawn from the targeted portions of the Inyan Kara Group Aquifers that were historically and currently used for both human and livestock consumption. Many of these residences are currently abandoned and therefore the EPA and AZARGA-Powerteck can say are not currently using the water for drinking water. But at least one residence continues to use well water (well 16) from this targeted portion of the Aquifer. To create a "no current use status" from which the EPA and AZARGA-Powerteck are trying to base this AE Proposal, Powerteck promised to permanently provide the resident with bottled water for drinking if they agreed to let Powerteck severe and seal off the water line from the well to the home. The resident agreed and the water line from the well to the house was severed and sealed. However, well 16 water continues to be used for this resident's livestock -Which under SD laws is still considered the same as well water used for human consumption -A fact that the EPA is also willing to ignore! But this was sufficient for the EPA to approve consideration for the proposed Aquifer Exemption concluding their 11/17/16 Memorandum; **"Based on the CZA calculations, the EPA has concluded that the portions of the Inyan Kara aquifers proposed for exemption 'do not currently serve' as a source of drinking water."** *[Handwritten]* per Valois Shea on 3/6/2107, two well fields will be removed in regards to Well 16 I publicly denounce this current effort by the EPA, and I demand that the EPA follow its own laws and Environmental Protection mandate and not approve this Inyan Kara Aquifer group for exemption, because in fact this Inyan Kara Aquifer Group is indeed a "current and future source of drinking water" that requires an mandates protection!
488		South Dakotans do not want to be the dumping ground for toxic waste. No amount of assurances by anyone can guarantee the safety of our precious water. I am incredulous that the EPA is also **proposing** to exempt the portion of the Inyan Kara Aquifer from the "Safe Drinking Water Act" which is necessary for mining to occur there. WHY? Why would you wont to make our water unsafe to make a few guys rich?
512		An exemption to the Safe Drinking Water Act is being sought as part of this project. Protection of drinking water is necessary and should be a basic function of a government that is concerned with its citizens' health and well-being. If the EPA abdicates itself of this responsibility to the people of South Dakota, those people's health and livelihoods will be put at risk. It will potentially add to the burden of the healthcare system and could ultimately results in lawsuits costing the EAP millions of dollars, for which the US taxpayers will ultimately be responsible.
528	Ex. 6 Personal Privacy (PP)	**7. COMMENTS ON TWO OPTIONS FOR APPROVAL OF THE AQUIFER EXEMPTION THAT POWERTECH REQUESTED RELATED TO THE CLASS III PERMIT APPLICATION** The EPA has suggested two options for AE Approval: Two Options for AE Approval: For this reason, the EPA is offering and requesting comment on two options for approval of the AE area based on the status of well 16: Option 1 includes approval of the AE area shown in Figure 4, excluding the two Burdock Area wellfields (6 and 7) shown in blue in Figure 4. Powertech may request the exemption of Burdock wellfields 6 and 7 once well 16 is plugged and abandoned after the alternative water supply is in place. Both Burdock wellfields 6 and 7 are being excluded from this option because it appears that the southeastern end of Burdock wellfield 7 partially overlaps the northeast end of Burdock wellfield 6 in the area of well 16 as shown in Figure 4. Well 16 is located up-gradient of Burdock wellfields 1 and 8, which are the closest Burdock wellfields to well 16 outside of wellfields 6 and 7. Even though well 16 is located up-gradient of Burdock wellfields 1 and 8, the EPA calculated the capture zone width for well 16, as discussed below, to verify it does not cross the AE boundaries for Burdock wellfields 1 and 8. Option 2 allows Powertech to plug and abandon well 16 before the issuance of the final AE Record of Decision. After well 16 has been plugged and abandoned, the EPA will be in a position to determine that the groundwater within the AE boundary for Burdock wellfields 6 and 7 is not a current source of drinking water, and can approve the portion of the AE area shown in blue in Figure 4 as part of the final AE Record of Decision. **As between the two Options, it would be preferable to require Powertech, under Option 1, to request the exemption of Burdock wellfields 6 and 7 once well 16 is plugged and abandoned after the alternative water supply is in place.** Powertech doesn't have the funds or resources to properly plug and abandon the boreholes, and Well 16 or do anything else and, therefore, should be required to demonstrate performance with the EPA requirements and existing NRC License Conditions, including the proper plugging and abandonment of all boreholes, and the implementation of the alternative water supply for Well 16, before it is allowed to request the exemption for wellfields 6 and 7.
531		**§146.4 Criteria for exempted aquifers.** An aquifer or a portion thereof which meets the criteria for an "underground source of drinking water" in §146.3 may be determined under §144.7 of this chapter to be an "exempted aquifer" for Class I-V wells if it meets the criteria in paragraphs (a) through (c) of this section. Class VI wells must meet the criteria under paragraph (d) of this section: (a) It does not currently serve as a source of drinking water; and (b) It cannot now and will not in the future serve as a source of drinking water because: (1) It is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible. (2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; (3) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or (4) It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or

		(c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system. (d) The areal extent of an aquifer exemption for a Class II enhanced oil recovery or enhanced gas recovery well may be expanded for the exclusive purpose of Class VI injection for geologic sequestration under §144.7(d) of this chapter if it meets the following criteria: (1) It does not currently serve as a source of drinking water; and (2) The total dissolved solids content of the ground water is more than 3,000 mg/l and less than 10,000 mg/l; and (3) It is not reasonably expected to supply a public water system. (Clean Water Act, Safe Drinking Water Act, Clean Air Act, Resource Conservation and Recovery Act: 42 U.S.C. 6905, 6912, 6925, 6927, 6974) [45 FR 42500, June 24, 1980, as amended at 47 FR 4998, Feb. 3, 1982; 48 FR 14293, Apr. 1, 1983; 75 FR 77291, Dec. 10, 2010] The attached water test shows TDS and U levels below the secondary maximum contaminant levels established by EPA for potable drinking water. Based on these standards, the Minnelusa Aquifer sampled in this case is a valid source of drinking water, and, given that the USGS document cited earlier does not recognized barriers to water flow within the aquifer, the Minnelusa Aquifer is ineligible for an aquifer exemption, and this residents potable water supply may be jeopardized by uncontained injected waste. [ATTACHMENT: test results from Midcontinent Testing Laboratories, Inc.]
537	Ex. 6 Personal Privacy (PP)	An aquifer exemption allows mining activity to occur in groundwater that would otherwise be protected as a drinking water source. EPA promulgated rules for exempting aquifers from the SDWA in 1980.[20] The EPA allowed for the creation of aquifer exemptions so as not to severely limit certain types of energy production, such as ISL mining.[21] The EPA Administrator was given the authority to exempt certain underground sources of drinking water when those sources have "no real potential to be used as drinking water sources."[22] As of 2014, more than 4,000 exemption permits have been approved by EPA throughout the country.[23] An aquifer meets the criteria for exemption if: (a) It does not currently serve as a source of drinking water; and (b) it cannot now and will not in the future serve as a source of drinking water because: (1) it is mineral, hydrocarbon or geothermal energy producing, or can be demonstrated by a permit applicant as part of a permit application for a Class II or III operation to contain minerals or hydrocarbons that considering their quantity and location are expected to be commercially producible; (2) It is situated at a depth or location which makes recovery of water for drinking water purposes economically or technologically impractical; (3) It is so contaminated that it would be economically or technologically impractical to render that water fit for human consumption; or (4) It is located over a Class III well mining area subject to subsidence or catastrophic collapse; or (c) The total dissolved solids content of the ground water is more than 3,000 and less than 10,000 mg/l and it is not reasonably expected to supply a public water system.[24] In this case, Powertech is requesting the aquifer exemption under (a) and (b)(1). Subsection (a), requiring current use of an aquifer is clearly inconsistent with Congress's intent that aquifers be protected if it is reasonable they could be used in the future. Subsection (b)(1) is similarly inconsistent with Congress's intent that water sources be protected, regardless of whether there are economically valuable minerals in the aquifer.
537		**II. The Proposed Aquifer Exemption Should Be Denied Because it is Inconsistent with the Purpose and Intent of the Safe Drinking Water Act.** The Safe Drinking Water Act (SDWA) was passed in 1974 and amended in 1996.[11] The purpose of the SDWA is to assure that drinking water sources meet minimum national standards for the protection of public health "to the maximum extent feasible."[12] The SDWA accomplishes its purpose of protecting drinking water supplies throughout the nation by setting national health-based standards for drinking water, creating barriers against pollution, providing grants to states to implement state drinking water programs, and by disseminating information to the public about water systems in their area and where their water comes from.[13] Standards for drinking water set "enforceable maximum contaminant levels for particular contaminants in drinking water."[14] Barriers against contamination include source water protection, treatment, distribution system integrity, and public information.[15] It was Congress's intent that the SDWA be "liberally construed so as to effectuate the preventative and public health protective purposes of the bill."[16] Congress sought to protect not only currently-used sources of drinking water, "but also potential drinking water sources for the future."[17] Congress noted that contamination of potential drinking water sources should "not be permitted if there is any *reasonable likelihood that these sources will be needed in the future* to meet the public demand for drinking water and if these sources may be used for such purposes in the future."[18] The SDWA creates the framework for the Underground Injection Control (UIC) program. The SDWA directs EPA to establish minimum requirements for control of underground injection processes in order to protect sources of drinking water.[19] The UIC program governs the ISL process.
553		Comments on the Aquifer Exemption Draft Record of Decision 13. Page 9, Option 2 - DENR recommends EPA select Option 2, plugging and abandonment of well 16. This is DEN R's preferred option because it eliminates the possibility of well 16 being used as a drinking water well in the future. 14. Page 12, Flow Rates Used in the Capture Zone Equation - In the first paragraph of this section replace "South Dakota State Engineer's Office" with "South Dakota Department of Environment and Natural Resources". 15. Page 14, Flow Rates Used in the Capture Zone Equation - in the third paragraph on this page replace "State Engineer" with "South Dakota Department of Environment and Natural Resources". 16. Page 18 - 19, Demonstration that the Injection Zone Fluids Will Remain within the Exempted Portion - DENR recommends EPA include a bullet describing the Class III Area Permit mechanical integrity requirements as an additional factor supporting EPA's conclusion that adjacent USDWs will not be impacted.
565		The EPA proposes to issue permits to pollute two of the three major aquifers in the Black Hills region. This would completely prevent any further economic development in the southwestern Black Hills and downstream, due to the lack of safe drinking water. Radiation is forever. Our water will never be the same, and this is the point of the company seeking an aquifer exemption. It is also critical for the EPA and the company to prove that the Minnelusa Aquifer could not be used for drinking water under any likely scenario - not just under current conditions. The Aquifer should have been tested to determine its drinking water status before a draft permit was issued. It is imperative that the company's actions be directly monitored (on-the-ground) if testing is being done to determine water quality in the Minnelusa Aquifer.
07459 (Valentine hearing)		SCOTT KILE: My name is Scott Kile. I live west of Crawford, Nebraska. And it's been brought up to me that the idea of cleaning up the water back to its original state is the plan for this in-situ leach mine. [...] And I would think that before a new permit is given to exempt an aquifer, these companies should prove that they can put that water back the way it was. And if they can't do it, then they shouldn't be given an exemption. That's my opinion. I think it should be upheld ahead of time rather than wait until afterwards and we find out it can't be done. That's protecting our environment and our water.

		[...] And it shouldn't be allowed in our state or anywhere else. So hopefully they can clean up the water and prove it to us before anything is decided. Thank you.
7460 (5/8 Rapid City hearing)		South Dakotans do not want to be dumping grounds for toxic waste. No amount of assurances by anyone can guarantee the safety of our precious water, and I am incredulous that the EPA is also proposing to exempt the portion of the Inyan Kara aquifer from the Safe Drinking Water Act, which is necessary for them to be able to mine. Why would we ever want to delete the Safe Drinking Water Act from any kind of mining? Why? Why do you want to make our water unsafe to make a few guys rich? I don't get it.
7460 (5/8 Rapid City hearing)		I urge you not to exempt a portion of the Inyan Kara Aquifer from the Safe Drinking Water Act. The Inyan Kara is used by many people and livestock, and given the aforementioned risk factors, water contamination is likely.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	KATHLEEN BAILEY: I, Kathleen Bailey, from Englewood, Colorado, stand here today to loudly and clearly oppose the proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery site located near Edgemont, South Dakota under the authority of the Safe Drinking Water Act and UIC program regulations in connection with Class III area permit to exempt uranium-bearing portions of the Inyan Kara aquifers. [...] At issue, the portions of Inyan Kara aquifers the EPA proposes to exempt have historically been used as a source of drinking water, are currently used as a source of drinking water, and can be a future source of drinking water. EPA's own current Title 40 146.4 declares the proposed aquifer exemption area must not be a current or future source of drinking water using the criteria under 40 C.F.R. 146.4. This latest grotesque and alarming action by the EPA to propose this exemption for these portions of the Inyan Kara aquifers blatantly ignores the existing original EPA aquifer exemption criteria found in Title 40 146.4 and sets a disastrous new precedence for opening up ever more scarce and precious life-sustaining clean water aquifers that can be used as a source of drinking water to permanent contamination from oil and gas hydraulic fracturing using the UIC recovery and disposal wells, from uranium and other ISR mining activities that also utilize hydraulic fracturing for their UIC recovery and disposal well activities, and in any other in-situ solution mining. The evidence of the convoluted joint efforts between the EPA and Azarga/Powertech to set this precedent in order to change the current aquifer exemption criteria is spelled out in the EPA's own November 17, 2016 Aquifer Exemption Technical Memorandum done by Valois Shea. As recorded in this memorandum, EPA and Powertech work cooperatively to manipulate the status of the current drinking water use of water from targeted portions in the Inyan Kara group in order to eliminate the current use protection from exemption under the current 40 146.4 criteria, and then intend to eliminate the "or future source of drinking water" criteria by simply not considering future source of drinking water with this aquifer exemption proposal. If this proposed aquifer exemption were allowed to go through, future source of drinking water protection will be eliminated by this precedent-setting aquifer exemption. Currently by this study there are multiple wells drawn from the targeted portion of the Inyan Kara group aquifers that were historically and currently used for both human and livestock consumption. Many of these residences are currently abandoned, and therefore, EPA and Azarga/Powertech can say they are not currently using the water for drinking. But at least one residence continues to use the well water, Well 16, from the targeted portion of the aquifer. To create a no-current-use status from which the EPA and Azarga/Powertech are trying to base this aquifer exemption proposal, Powertech promised to permanently provide the resident with bottled water for drinking if they agreed to let Powertech sever and seal off the waterline from the well to their home. Well, 16 continues to be used for this resident's livestock, which under South Dakota laws is still considered the same as water used for human consumption, a fact that EPA in November 2016 was willing to ignore. Their conclusion for that memorandum was based on CZA calculations, the EPA has concluded that the portions of the Inyan Kara aquifers proposed for exemption do not currently serve as a source of drinking water. Since the November '16 memorandum, in March of 2017 they tried to get around this -- the concern they realized they faced with the Well 16 by removing the two fields associated with Well 16 from being mined, as if the contamination that results from all the other fields all around the two fields removed, will not migrate into the well that feeds 16, and also does not address the wells that are simply currently not being used that feed from all the other parts of the Inyan Kara aquifer. [...] KATHLEEN BAILEY: Certainly. I wish to add two more facts. What the EPA won't tell you is that uranium in-situ recovery mining has consistently resulted in contamination. And per the USGS, to date there had been no successful mitigation of the contamination resulting from in-situ recovery mining, so your current status of future source of drinking water will be permanently lost if this exemption is approved.
7462 (Hot Springs hearing)		And remember, Powertech cannot -- Powertech cannot do any mining at all unless the laws protecting the water and the land are put aside and waivers issued allowing the contamination, which is by law not allowed.
7462 (Hot Springs hearing)		KATHLEEN BAILEY: I, Kathleen Bailey from Englewood, Colorado, stand here before you again to repeat loudly and clearly: I oppose the proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations in connection with Class III area permit to exempt uranium-bearing portions of the Inyan Kara aquifers. [...] EPA's own current Title 40 146.4 declares, quote: The proposed aquifer exemption must not be a current or future source of drinking water using the criteria at 40 C.F.R. 146.4. This latest grotesque and alarming action by the EPA to propose exemption of these portions of the Inyan Kara group aquifers blatantly ignores the existing original EPA aquifer exemption criteria found in Title 40 146.4 and sets a disastrous new precedence for opening up our ever more scarce and precious life-sustaining clean water aquifers that can be used as a source of drinking water to permanent contamination from oil and gas, UIC recovery and disposal wells, and uranium and other ISR mining activities that utilize UIC recovery disposal well activities, and any other in-situ solution mining. The evidence of the convoluted joint efforts between the EPA and Azarga/Powertech to set this precedence to change their own laws is spelled out in EPA's 11/17/16 Aquifer Exemption Technical Memorandum done by Valois Shea. As recorded in that 11/17/16 memorandum, EPA and Powertech worked cooperatively to manipulate the status of the current drinking water use from these targeted portions of the Inyan Kara group in order to eliminate the current use protection from exemption under the current 40 146.4 criteria. And then they intend to eliminate the "or future source of drinking water" protection of an aquifer simply by considering -- simply by not including future-source drinking water in their aquifer exemption proposal.

		If this proposed aquifer exemption were to be allowed, the future source of drinking water that now protects aquifers -- clean water aquifers, that protection of that status will be eliminated by this precedent-setting aquifer exemption. Currently -- based on the 11/17 EPA memorandum, currently there are multiple wells. This is permanent well -- wells that were used and some are currently used as well water for human consumption and livestock consumption. There are multiple wells drawn from the targeted portions of the Inyan Kara aquifers that were historically and currently used for both human and livestock consumption. Many of these residences are simply currently abandoned, and therefore, the EPA and Azarga/Powertech can say for those residents they are -- there is no one currently using this water from the Inyan Kara group for drinking water. But at least one resident continues to use the water, Well 16, from this targeted portion of the aquifer. In order to create a no-current-use status from which the EPA and Azarga/Powertech are trying to base this particular aquifer exemption proposal, Powertech promised to permanently provide the resident with bottled water for drinking if they agreed to let Powertech sever and seal off the house -- the well to the house, the well to the home. The resident did agree, and the waterline from the well to the house was severed and sealed. However, Well 16 continues to be used for livestock for this resident. And at that time -- [...] KATHLEEN BAILEY: Sure. But at that time, this was sufficient for the EPA in this memorandum to conclude, based on the CZA calculations, the EPA has concluded that the portions of the Inyan Kara aquifers proposed for exemption do not currently serve as a source of drinking water. And the last meeting I attended, Valois -- Valois informed me that after this November 17 memorandum in 2016, a March 6, 2017 memorandum was created in which two of the mining wells were simply pulled out of those UIC mining well -- injection wells from that group because they somehow devised that those two sites were what fed that Well 16. However -- [...] KATHLEEN BAILEY: So your current status of future source of drinking water will be permanently lost if this exemption is approved.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	KATHLEEN BAILEY: I have to make a disclaimer. I'm from out of state, but no one shipped me here. I drove up in a 1994 Toyota Corolla with my dog, and I'm staying at a campsite. I just got in on Monday so I could be at all of these. I'm here from -- so I can be at all these meetings. AUDIENCE MEMBER: Use the mic. KATHLEEN BAILEY: I didn't want them to take my time by doing that. I'm here from my passion and heart. No one shipped me here. You wouldn't hear me anyway if I was at the mic. I don't have the eloquence or the knowledge of the majority of the people that spoke today, so I'll be repeating what I've said in the last -- in the meetings, all the meetings I've attended. I, Kathleen F. Bailey from Englewood, Colorado, stand here before you again to repeat loudly and clearly that I oppose the proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery site located near Edgemont, South Dakota under the authority of the Safe Drinking Water Act and UIC program regulations in connection with the Class III area permit to exempt the uranium-bearing portions of the Inyan Kara Groom aquifers. [...] At issue, the portions of the Inyan Kara aquifer the EPA proposes to exempt have historically been used as a source of drinking water, are currently used as a source of drinking water, and can be a future source of drinking water. EPA's current Title 40 146.4 declares, "The proposed aquifer exemption area must not be a current or future source of drinking water using the criteria at 40 CFR 146.4." With this specific aquifer exemption approval, they will set a precedent eliminating that second part of protecting the future -- exempt an aquifer that could be used as a future source of water. They will set a precedent to eliminate that because they have not included it with this exemption proposal. And the evidence of the convoluted joint efforts between EPA and Azarga/Powertech to meet the only consideration they want to continue under their own 40 146.4. The current source of drinking water was recorded in 11- -- on the November 17, 2016 memorandum by Valois Shea, EPA and Powertech worked cooperatively to manipulate the status as "no current use" from the targeted portions of an Inyan Kara group in order to eliminate the current use protection. Per the 11/17/16 EPA memorandum, currently there are multiple wells drawing from the targeted portions of the Inyan Kara group aquifers that were historically and currently used for both human and livestock consumption. Many of these residences are currently abandoned, and therefore the EPA and Azarga/Powertech can say they are not currently using the water. But at least one of the residents continues to uses the well water, Well 16, from the targeted portion of the aquifer. To create -- to create a "no current use" status from which the EPA and Azarga/Powertech are trying to base this aquifer exemption proposal, Powertech promised to permanently provide the resident with bottled water for drinking if they agreed to let Powertech severe and seal off the waterline from their well to their home. The resident agreed, and the waterline from the well to the home was severed and sealed. However, Well 16 continued to be used for the resident's livestock, which under South Dakota law is still considered the same as a well -- as well water used for human consumption, a fact that the EPA at that time was willing to also ignore. This was sufficient back in November 2016 for the EPA to conclude. Based on CZA calculations, the EPA has concluded that the portions of the Inyan Kara aquifers proposed for exemption do not currently serve as a source of drinking water. Per Valois Shea in one of the last meetings, she informed me that since that November 16 -- November 17, 2016 memorandum, they corrected themselves, and on March 6, 2017, to get around the Well 16 issue, they simply removed two wellfields within all of the wellfields that they were going to be drilling from -- from out of drilling target because they determined that those particular two wellfields are what fed that Well 16. And yet, they're in the middle of all the well -- in-situ welling that's going to go on and will contaminate the entire area. I publicly denounce this current effort by the EPA, and I demand the EPA follow its own laws and environmental protection mandate and not approve this Inyan Kara aquifer group for exemption because, in fact, this Inyan Kara aquifer group is indeed a current and future source of drinking water that requires and mandates protection.
7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	ED HARVEY: Good afternoon. My name is Ed Harvey. I'm a resident of Hot Springs. All the aquifers in this proposal are presently being used for potable water by local residents, thus no exemption to the Safe Drinking Water Act of 1974 should be allowed. Both domestic and agriculture wells are in use. [...] Will the agency granting these exceptions be responsible for mitigating any damages caused by this permit?
7642		If this water will be so safe after treatment, why is the EPA planning to exempt the Inyan Kara aquifer from the Safe Drinking Act? This seems to me like another example of a private, for-profit, and in this instance, global corporation

(Hot Springs hearing)		ramming their resource extraction and environment-destroying project down the throats of the caretakers of the land.

Letter ID	Commenter Name	Text
39	Ex. 6 Personal Privacy (PP)	Pollutants that have been left in the water at in situ leach uranium mines after "restoration" include toxic heavy metals and radioactive materials. This is dangerous and life threatening to all life forms downstream or downwind.
70		Subject: UIC Permits for Edgemont, South Dakota Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds.
251		Subject: Public Comment on Draft Permits and Aquifer Exemption for Uranium Mining.... To Valois Shea: I am writing to OPPOSE approval of the permits that would allow "injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and ... deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class III injection wellfields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected."
286		Subject: Concerns Please accept this communication as a formal comment regarding the proposed two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota, under the authority of the Safe Drinking Water Act and UIC program regulations. I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds.
302		While our laws state that an aquifer must be restored to its previous condition when mining is finished, a 2009 report from the U.S. Geological Survey says, "To date, no remediation of an ISR (in-situ recovery) operation in the United States has successfully returned the aquifer to baseline conditions."
304		4. Scientific Arguments In situ uranium extraction has become more and more common in recent years in regions that include the United States, Europe, and Russia; while being tested in Australia (Mudd, 2001). In the United States, Nine Mile Lake, Wyoming and Reno Ranch, Wyoming were both used as trials of in situ uranium recovery (Mudd, 2011). At Reno Ranch, uranium recovery was cut short due to problems with well circulation and uranium recovery rates (Mudd, 2001). The mining halted and restoration processes commenced directly after, immediately treating the groundwater. At both sites, restoration efforts were very expensive and were revealed to not be cost-effective when compared to more traditional uranium recovery methods. In terms of monitoring the groundwater after restoration efforts, contaminants were discovered to be moving down slope at the Nine Mile Lake location (Mudd, 2001). Overall, in situ uranium mining in the United States experienced problems with wells plugging up, as well as increasing the levels of salinity, sulfate, and radionuclides within the surrounding groundwater, causing a decrease in the overall water quality when compared to the water quality before mining commenced. Along with this, there was no evidence of natural reduction of the pollutants in post-restoration monitoring (Mudd, 2001). There is a policy in place that was created in 1995 that creates standards relating to the protection of public safety, health, and the environment in regards to uranium processing (Radiation Protection).
325		Subject: Dewey-Burdock uranium in-situ recovery (ISR) I urge the EPA to deny both of these permits. Among other hazards, radon emissions, toxic heavy metals and other pollutants, including chloride, sulfate, sodium, radium, arsenic and iron, are in ISR wastewater ponds.
		Based upon a belief that the High Plains Aquifer is already contaminated and injecting radioactive waste into it would somehow not alter the chemistry towards and within the aquifer, is the main justification of this permit. Unfortunately, if one dug a little further into the research, information, or conversation, an understanding of the difference between Naturally Occurring Radioactive Material (NORM) and chemically altered radioactive waste, especially the health impacts, along with the environmental impact of injecting radioactive waste into boreholes (Class III and V Injection Wells). Naturally occurring radioactive material exists as a sulfide form (solid rock) present within multiple stratigraphic units for millions of years (approximately 45 million years) and are undergoing a continual process of natural weathering of areas that are near the surface and exposed to the surface. This weathering process has released some of these radioactive materials through weathering and oxidation, which transforms these sulfide forms into an oxide form and capable of limited mobility within the water system. Due to the extensive period of time of natural weathering, has allowed the conditions needed of these radioactive materials to be oxidized and released at extremely low rates. The extremely low rate and low concentration over the course of thousands of years, has allowed enough time for biological organisms, climate, and of the like to potentially adapt to these levels.

349		In situ leach mining (ISL) of these NORMs will essentially speed up this natural process by the additional acids and elements combined with the lixiviant fluid and being pressurized into the strata ore body. This process can release large amounts of the radioactive material from its sulfide form and oxidize into an entirely different substance (radionuclide) than its natural weathering counterpart due to the catalyzing effect of chemical alteration and additional compounds used during the in situ process. Radioactive waste can be classified as the waste precipitated during in situ leach, fission, and fusion processes. This radioactive waste is an entirely different radionuclide compared to NORM, especially in its rate of impacting health, unknown ratios and concentrations of elements, increased mobility, and overall uncertainty of the length of half-life. Injection of radioactive waste into the water table could potentially release and oxidize even more of the NORM present in the stratigraphy and mobilize higher concentrations of heavy metals, minerals, and sediments into the water table along with the higher concentrations already present in the radioactive waste. Thus increasing the overall amount of total dissolved solids and concentrations of radionuclides and elements within the water table and any underlying aquifer. The largest issue with the management of radioactive waste seems to boil down the inability to get rid of it, especially if all that has and can be done is to move it from one site to the next with as little of a mess as possible during the transportation process. This poses another challenge of decisions, especially the tough decisions that will impact generations to come. [ATTACHMENT: "Figure 70, Subareas, generalized ground-water flow directions, and flow zones for the Minnelusa aquifer. Estimated transmissivities and flow components for flow zones also are shown (from Carter, Driscoll, Hanmade, and Jarrell, 2001)."] Driscoll, D. G., J. M. Carter, J. E. Williamson, and L. D. Putnam. 2002. Hydrology of the Black Hills Area, South Dakota. United States Geological Survey Water-Resources Report 02-4094, 150 pp. The information contained herein is true and correct to the best of my knowledge at the time of this writing on 19 June 2017.
363		There also were test conducted besides the company that was hired by Powertech, and two of three as it showed did not recommend ISU. Thank you for The consideration.
364		Subject: Dewey/Burdock ISL Good Morning, spent the rest of yesterday sorting thru all my saved papers and documents to find the two sources that were against the project. So far I only came up with one, which (I am sure) You're already familiar with. I attached the PDF file anyway. The other info I found is incomplete and needs further research , are two names Prof. Thomas Borch and Prof. James Stone. these gentleman did a study on the effects of ISR mining on groundwater. Contacted Clean Water Alliance with this info, maybe they can contact them easier, Will contact you when /if have more info, [ATTACHMENT: "2014.07.15 LaGarry expert opinion_ML14197A377.pdf"]
365	Ex. 6 Personal Privacy (PP)	Subject: Re: Dewey/Burdock ISL Hello, I am replying to this e-mail, since I am not sure you remember me. I attached a link of an article/research that refer to "groundwater pollution" which I had mentioned to you. It does not go into detail of the research like the one PDF document I have, and still look for. Maybe it can lead you into the right direction of the actual test results. Altough I am disappointed in the final judgement by the EPA, I feel you should consider the findings. I will keep searching for the above mentioned document,.....i saved so many of them. Here is the link: https://psmag.com/why-are-we-allowing-uranium-miners-to-pollute-groundwater-in-drought-zones
416		Furthermore, there have historically been numerous problems nation-wide with in-situ uranium leach mines. The Rapid City Journal published an article detailing many complications arising from this practice and sent their list to Powertech to respond on how to prevent these issues (Simmons-Ritchie, 2013). One very similar example is Christensen Ranch in Wyoming. Christensen allows companies to access minerals, oil, and gas beneath the ranch. The EPA granted a permit that now allows 200,000 gallons of toxic waste from uranium mining to be pumped into aquifers under Christensen Ranch every day (Lustgarten, Dec. 11, 2012). Now, the aquifer has uranium levels more than 70 times greater the maximum limits (Lustgarten, Dec. 11, 2012). This aquifer could have provided an immense source of drinking water but is now so contaminated it may never be able to be used for that purpose.
445		Further, no aquifer has ever been restored anywhere in the world after ISL uranium mining. For this reason, ISL mining is banned in Europe, where numerous mines have completely ruined many aquifers. [...] *7.)* The claim that Powertech/ Azarga is going to treat the wastewater first to "purify" it to classify for the Class 5 deep injection regulations, does not include the inability to extract radioactive organified metals that are now found in wastewater by ISL in several studies, notably uranium. By regulation, Class 5 waste waters can only be as toxic as storm sewer waters. This wastewater is hardly that. Radioactive organified metals and metallic salts in this wastewater make this waste water unusable for even agricultural purposes, as it would be in this dry uplift area where water is "blue gold", if it were as "pure" as the company says it is. Better technology today shows us the flaws of obsolete testing and regulations today, and why we see such horrid toxicities in Nature at mining sites. The company has not shown any technology that could be effective in processing this wastewater to be safe for a Class 5 well.
447		And second, learn that ISL may use horrific chemicals like sulfuric acid to do its gruesome dirty work. Let's talk about hypocrisy and cynicism. It is breathtakingly cynical for Azarga and other mining forces to stand before us today and say that they will clean up after their mining activities. They cannot restore leached water to its prior condition, and they know it. Consider this quote from the US Geological Survey: "To date, no remediation of an ISL operation in the US has successfully returned the aquifer to baseline conditions."
		My name is Ex. 6 Personal Privacy (PP) I'm a retired pathologist living in the Black Hills.

457		I'd simply like to report to you that in 2014, after a discussion of the ISL uranium mining technique and the potential risks to SD aquifers, the SD Medical Association adopted a resolution opposing uranium mining in the state. It was felt that the risks outweighed any potential benefits to residents of the state. In this action, SD followed the example of the CO medical association, which also went on record to oppose uranium mining. I think physicians in the region are concerned about the public health consequences of any prolonged increase over background radiation exposure (even if small) experienced by humans or food animals, and are concerned as well about the chemical toxicity of uranium and other heavy metals freed during the ISL procedure. Proven and potential cross-communication and cross-contamination among aquifers pose a significant risk to health which the proponents of ISL uranium mining have no way of providing absolute protection against. Thank you.
459		I WOULD STRONGLY SUGGEST THAT THE EPA REFOCUS ITS EFFORTS WITH FULL CONSIDERATION OF THE EASILY-AVAILABLE INFORMATION ON THE PROBLEMS ASSOCIATED WITH ISL URANIUM MINING AND DEEP DISPOSAL WELLS. AS I THINK HAS BEEN ABUNDANTLY CLEAR DURING THESE HEARINGS, ONLY THEN CAN THE AGENCY REALLY DO ITS JOB TO THE BENEFIT OF THE PUBLIC, RATHER THAN A FOREIGN CORPORATION. YOU ARE SUPPOSED TO BE ACCOUNTABLE TO US. THANK YOU FOR THIS OPPORTUNITY TO COMMENT. I PLAN TO SUBMIT FURTHER COMMENTS BY MAY 19.
480	Ex. 6 Personal Privacy (PP)	I don't believe that ISL uranium mining is a beneficial use of our groundwater or that disposal of wastewater via land application or in Class V disposal wells is in the public interest. I am not a hydrogeologist or geochemist. However I can and do read scientific research and three areas of the proposed project concern me: -The fate of contaminated mine waste materials. -Aquifer restoration following ISL uranium mining. -Our choice of uranium as an energy source. My first concern is the fate of the toxic waste produced by ISL uranium mining. According to the Powertech Ground Water Discharge Permit Application, (section 3.7.1.2), the proposed perimeter of operational pollution lies at the base of the Beaver Creek Basin and the Pass Creek sub-basin, watersheds that drain approx. 1,400 square miles. Three miles downstream, these basins empty into the Cheyenne River. I believe that what happens in one part of a watershed can affect evervone who lives within the basin. In the description of "land application water properties" (section 5.8) wastewater will be treated with ion exchange for uranium removal followed by radium removal through co-precipitation with barium sulfate in radium settling ponds. There is mention of leak detection systems in these ponds, but no plan for repairing these leaks. Radium is a dangerous waste material and little information is provided about how it will be handled. The proposed well fields are located approx. 2 miles southeast of a large fault. I've witnessed the consequences of an excursion of contaminated groundwater along a fault near Nemo, SD, where I live. This excursion event was only discovered some 20 years after the contaminant was disposed of. Costs for water transport and water treatment were considered to be too high and the community has relied on a single, remote well for the past 15 years. (Contaminant Survey and Site Characterization Report; Executive Report, USDA Forest Service Nemo Work Center, Nemo,SD September 3, 1997.) I believe that Powertech is overconfident in stating that they will simply "pump back" any excursions of lixiviant that occur. The contaminated mine wastewater disposal method has not been finalized. Powertech's preferred disposal method is injection of treated wastewater into 4 to 8 Class V deep disposal wells into the Minnelusa and/or Deadwood formations. They have stated they will perform the necessary feasibility tests for this method only AFTER the EPA has issued the permit for the Class V deep disposal wells. (Powertech report on the Inyan Kara and Madison Water Rights Permit applications.) I am concerned that even if a monitoring plan seems adequate, there is significant potential for surface leaks, accidental spills, well casing failures and excursions of production and wastewater. Government responsibility for permitting and oversight is fragmented. The high cost of reclamation has often fallen on the taxpayer in the *long* run. This project cannot be in the public interest. (According to the 2002 USGS Atlas of Water Resources in the Black Hills Area: "Human influences have the potential to degrade water quality for both ground water and surface water. For ground water, the potential for contamination can be large. For surface water, various land-use practices can affect water quality. Two Superfund sites have been listed in the BH area primarily related to concentrations of various trace elements resulting from mining activities".)
488		ISL mining occurs in the subsurface subsurface, within groundwater aquifers. In this case, it would occur in the Inyan Kara aquifer and would include the injection of wastewater back into the Minnelusa aquifer. But people are using the water in these aquifers for drinking water and agricultural purposes, etc. So this is a terrible idea. ISL mining involves the drilling of thousands of wells into the ore deposit where uranium occurs naturally in a solid state. Leaching solution is then pumped into the aquifer where it makes contact with the ore and artificially dissolves the uranium, along with many other heavy metals. This solution is then theoretically captured and pumped to the surface for further processing. However, after naturally-occurring uranium and other heavy metals are mobilized in this fashion, it is absolutely impossible to guarantee 100 percent capture of this solution, especially given the heterogeneous conditions (different materials/layers, etc.) that exist in this area. The interconnections make it impossible to predict with certainty how liquids are truly flowing. And this uncertainty occurs not only when the mining operation is active, but it is exacerbated at the end of operations when the mining ceases and the pumps are turned off. The remainder of these heavy metals, including uranium, that were loosened during the ISL will then continue to flow within the aquifer. And to make matters worse, no such ISL operation has ever been successfully cleaned up.
		Another concern is the in-situ mining process itself which uses a lixivient solution to release and suspend uranium in solution but also does the same for a number of other toxic heavy metals including arsenic, vanadium, selenium, et.al that are withdrawn with the uranium and wind up being precipitated out in the settlement pond or sprayed onto fields or sent to a class V deep well.

00500, 00501	Ex. 6 Personal Privacy (PP)	[...] The radioactive remains like thorium, radium and presumably non-radioactive elements like lead, arsenic and selenium, products of the RO process that weren't disposed of by spraying on the land or placed in a deep disposal well are sent to White Mesa even though they are trying to detoxify that site as well. Another issue is water consumption where the water is poisoned beyond any future use, although according to EPA report that might be kept to a minimum in the mining process by stripping the lixiviant by RO and reinjecting most of that water back into the Inyan Kara aquifer to repeat the cycle. The restoration phase might be another matter though where multiple pore volumes are required to bring concentrations of these toxic elements even close to baseline levels which has never occurred in any ISR mining operation.
527		Moving to the nature of the ISL uranium industry, the Fact Sheets and Cumulative Effects documents do not discuss the uranium industry's record in relation to problems with the ISL process at other sites. This minimizes the many problems that the ISL industry has experienced and, thus, the potential problems from the Dewey-Burdock project. This makes the portions of the draft permit dealing with excursions and leaks inadequate, as well as sections about mitigation and reclamation. If EPA staff look over the information about ISL mines and regulation at http://www.wise-uranium.org/umopusa.html (WISE Uranium, "Issues at Operating Uranium Mines and Mills – USA," last updated April 19, 2017), it quickly becomes clear that excursions are "normal," as the former CEO of Powertech said in a public forum in Colorado, and that leaks of both pipelines and ponds are common. This indicates that both surface and ground water are at risk. This source also documents the movement of mining fluid beyond the mine boundary at the Kingsville Dome ISL mine in Texas (Rice. 2013. "Excursions of Mining Solution at the Kingsville Dome In-Situ Leach Uranium Mine." *Austin Geological Society Bulletin)* and the Highland Uranium Project in Wyoming. A summary of this type of information can also be found at Daniel Simmons-Ritchie, "Troubled history" in the *Rapid City Journal* . September 23, 2013. A history of these issues in the northern Plains region can be found in Jarding. 2011. Uranium Activities' Impacts on Lakota Territory, *Indigenous Policy Journal*
		I. **All metals/minerals have a relationship to each other in Nature.** The EPA documents fail to consider or analyze the relationship between and among heavy metals and relationship to animals, and human bodies. Heavy metals generated from mining are many, and will compromise many essential minerals for health. When one mineral or metal is too high, it will exert a repressive effect upon its counterpart metal or mineral, causing a deficiency or imbalance. Since minerals are known to fuel enzyme systems in the body, and the living body is dependent upon enzymes for life itself, compromise of any enzyme system can cause severe health consequences and even death. The toxic heavy metals generated in ISL mining are shown in an overlay to accurately depict the interference of those toxins on the natural system and their impact to all living things, even plants. Inorganic salts of metals most prominent in aquifers, also have different toxicities, and any monitoring of aquifers should include speciations of these different forms so that proper toxicity evaluation can be done. Simply giving the absolute levels of a metal does not tell the whole story. All metallic "salts" are not equal. They can have different solubilities, different melting points, different Ph, different conductivity affecting the central nervous system that relies on electrical signals, and totally different chemistry within the living body. Further, any discussion to the general lay public needs to distinguish between a chemical metallic salt and ordinary table salt, that the public is led to believe will be created as "salt" in a mined aquifer. There are many species/chemical forms that a metal can take upon exposure to oxidation/reduction reactions typical within an ISL mining aquifer. Typically, speciation testing, even if monitored by the mining company, is not made available to the public. Selenium is the example, but all metals do this. J. **The difference between inorganic and organic compounds.** EPA documents fail to describe, consider or analyze the difference between inorganic and organic forms of the same compounds. Organic compounds always contain carbon, while most inorganic compounds do not contain carbon. Also, almost all organic compounds contain carbonhydrogen or C-H bonds. Organic chemistry is "The Chemistry of Life". Metals in an inorganic form have significantly different chemistry in the living body from organically bound minerals Organic forms of uranium as well as other toxic metals have also been shown to exist in mining areas and they are not known to be recoverable by the ion exchange method of ISL recovery, since it is already bound organically and will not bind to the organic synthetic resins. Organic forms of any heavy metal are known to be much more toxic and much more bioavailable, so that they are able to penetrate the lining of the digestive tract much easier than ionic and inorganic salts that are blocked by their electrical charges. Organic metals have their electrical charges spread over the organic ligand they are bound to, so that they act as a "chelate", something that the health industry does to minerals to significantly improve absorption of essential minerals, and also make them much more able to enter into direct biochemical reactions in the living body. Organically bound metals under this circumstance, and there is plenty of organic carbon naturally existing with ISL min- ing sites to make this a complication, will continue to increase in the waste water of the ISL mine as they are **not recoverable, adding to the metal burden of the wastewater and also the toxicity of such beyond what would be it the metals remained in an in- organic and ionic form.** Reference: **Problems with Ion Exchange in Water Purification** "Ion exchange is another method used successfully in the industry for the removal of heavy metals from effluent. An ion exchanger is a solid capable of exchanging either cations or anions from the surrounding materials. **Commonly used matrices for ion exchange are synthetic organic ion exchange resins. The disadvantage of this method is that it cannot handle concentrated metal solution as the matrix gets easily fouled by organics and other solids in the wastewater.** Moreover ion exchange is nonselective and is highly sensitive to the pH of the **solution." (Kurniawan et al., 2006).** **On the other hand, binding natural essential minerals to organic molecules will make them more bioavailable as well, and so much better able to enter the living body.** We use that chelation process to enhance nutrition for essential minerals. **Arabian Journal of ChemistryVolume 4, Issue 4, October 2011, Pages 361–377**

25 controlled studies by different authors in five different countries adverse array of data is presented. These data validate the effectiveness of mineral nutrients presented as amino acid chelates when compared with the ionic forms derived from the inorganic salts. These studies further support the results of numerous laboratory experiments showing increased absorption, assimilation and reduced toxicity of the forms of minerals chelated to amino acids. With little cost and effort animals can be supplemented with amino acid chelates which will promote, with little risk of overdose, a fuller genetic potential achievement as far as mineral requirements are concerned. Results of this supplementation are reflected in increased growth, immunological integrity and more consistent reproduction increased ovulation and conception after first service as a result of increased bioavailability of these. See slide 5

Reference:

Chelated Minerals in Animal Nutrition

Rajendran, C.Kathirvelan and V.Balakrishnan, Madras Veterinary College, Chennai, INDIA

K. **The opposing 'personalities' of minerals.** Even the minerals that we consider necessary for the living body will have different biochemical actions and tissue and organ destinations in the living system. EPA documents fail to describe, consider or analyze this.

Common case in point: selenium. Selenium is known to have wonderful health effects, preventing cancer, converting the storage form of the storage thyroid hormone T4, to the active form T3 by virtue of fueling an enzyme glutathione peroxidase. This biochemical reactions is absolutely essential to life.

Glutathione also doubles as the most powerful antioxidant in the body. Inorganic selenium, as is the form generated in ISL mining, is known to cause birth defects of the highest severity.

However, in the inorganic state, selenium as a consequence of mining, is severely toxic, producing severe deformities. The higher evolved animals above micro organisms are not able to convert quantities of the inorganic forms of minerals, even essential ones like selenium, into the bio compatible organic forms.

How inorganic metals are organified by microorganisms that contaminate aquifers from open boreholes, and surface waters and lands environment, rising up the food chain.

Elemental inorganic forms of metals and minerals are "organified", bonded with carbon compounds to become organic forms by micro organisms, which are then eaten by simple life forms, which are then eaten by higher animals, and so on, all the way up to man and other top predators at the top of the food chain. As these metals and minerals pass from one body to the next, they are known to concentrate as they move up, with humans and other top predators then suffering the worst consequences from the highest concentration in their tissues and organs. There can be formed many different kinds of organic metal compounds, however, all are not equally bio essential, some are even more toxic as the living body cannot convert them. This will depend on which micro organisms are organifying the metals into which compounds.

L. Selenium is a poorly regulated heavy metal, and difficult to regulate as far as toxicity and allowable levels are concerned, because of the myriad chemical forms that it can exist in, each with different toxicity. The same can also be said for every other toxic metal as well as nutritional metal. The opposing 'personalities' of these elements is a very real thing in the natural world. There are incongruencies between actual toxicities of some chemical forms of selenium and the regulatory levels. Most toxicity level charts fail to take into consideration the chemical forms of metals and minerals, which is absolutely critical in assessing any toxicity status. Care for patients suffering from selenium poisoning is usually aimed at treating symptoms. There is no specific antidote or treatments for selenium poisoning.

Selenium from mining waste is highly mutagenic. EPA documents fail to describe, consider or analyze this.

Reference:Upper Human Limits for All Minerals and Metals http://iom.edu/Activities/Nutrition/SummaryDRIs/~/media/Files/Activity%20Files/Nutrition/DRIs/ULs%20for%20Vitamins%20and%20Elements.pdf

M. Arsenic is another major pollutant. Unlike selenium, which has a value in certain chemical forms as a health and life biochemistry promoter, arsenic has not been found to have any health value outside of its use as a parasiticide, and even that use can have toxic consequences. EPA documents fail to describe, consider or analyze this.

Arsenic, in particular, is extremely dangerous in the world today, and especially North America, because arsenic opposes iodine on the mineral wheel, meaning that high arsenic causes iodine deficiency. Current research has shown that we need far more iodine than we thought we did for health, and we are not getting it in food or water, even as we used to decades past, when iodine was used in food processing and water purification.

Arsenic has been rising in our environment and food supply because of the legal dumping of it into commercial fertilizers from mining and ore smelting waste since 1976 when it became legal to do so. In the 1980's President Reagan increased to legal limit of arsenic in public drinking water because the levels were rising so high, and arsenic is both difficult and expensive to remove from water, as mining reclamation efforts have shown.

Arsenic compromises thyroid. Thyroid disease has escalated epidemically in the last 50 yrs since iodine was reduced in our food and water supplies. And today, as relevant for accelerated aging, each generation is not expected to live as long as its parents, and higher and higher statistics of formerly "old age" ailments are evident in younger and younger segments of the population, severely compromising our health care.

Arsenic will cause a physiological iodine deficiency by its opposing actions even if there is enough iodine in the diet to counteract general deficiency. Such is the case with all opposing metals and minerals of nutritional minerals. This is how things work in Nature and the living body. Metals like arsenic have their own set of compromising chemistries, but the opposition and interference chemistries of opposing metals and minerals presents a whole new set of pathways for health compromise, independent of the individual roles of the individual metals in actual biochemical reactions. So, but its opposing action on iodine, arsenic can precipitate a whole hypothyroid overlay on the living body, complete with all the health compromises that a hypothyroid body will manifest.

There are different LD 50 doses for different chemical forms of arsenic. LD 50 represents the level at which 50% of the animals are killed from the toxin presented. So this again shows the importance of different toxicities of different chemical forms.

528 Ex. 6 Personal Privacy (PP)

There is no specific treatment for chronic arsenic poisoning. Once it has been identified further exposure should be avoided. Recovery from the signs and symptoms may take weeks to months from when exposure is stopped. In particular, effects on the nervous system may take months to resolve and in some cases a complete recovery is never achieved.

N. **Heavy metals also act as xenohormones and hormone disruptors in the living body.** EPA documents fail to describe, consider or analyze this.

Human hormones are all stereoisomers, meaning atoms are arranged differently in 3 dimensional space, and are subject to the toxic effects of xenohormone environmental toxins. Heavy metals have been shown to act as xenohormones, entering into the cellular receptor sites and skewing the hormone biochemical pathways for Estrogen, Testosterone, Progesterone, Cortisol, Pregnenolone, Thyroid, DHEA, Insulin and more. Since hormones are key initiators, regulators and intermediary metabolites of virtually every biochemical reaction in the living body, the protection of their integrity is crucial for their actions. Heavy metals, environmental chemicals and industrial chemical wastes can act as "xenohormones", and interfere with natural hormones, enzymes, etc., and cause cancer and other severe ill health compromises.

Further, heavy metals are known to be "xenoestrogens", a hormone mimic of estrogen, the female and growth hormone. Estrogenic toxicity causes cancer, skin lesions, obesity, fertility problems, accelerated aging, liver problems, learning problems, mood disorders, metabolic syndrome, blood sugar irregularities, blood fat irregularities, increase in breast tissue and size in both males and females, smaller or even undeveloped male genitalia and higher anger and anxiety responses to daily life situations. Mineral imbalances caused by high levels of toxic heavy metals themselves, also are known to cause hormone imbalances of insulin, thyroid, testosterone, progesterone, estrogen and cortisol.

We see those very problems exemplified in the most toxic areas of the world, and in increasing statistics overall in the world, as environmental pollution moves around the world. All of the heavy metals studied so far, that are common exposures to man, have shown to be "xenoestrogens", including those that are generated from the rock strata at ISL mines. The increase in obesity of animals and humans over the last several decades is directly correlated to the increase of environmental toxins that are known to be fat soluble and deposited in body fat, including heavy metals.

Reference: J Toxicol Environ Health B Crit Rev. 2009 Mar;12(3):206-23. doi: 10.1080/10937400902902062.

The effects of metals as endocrine disruptors.

Iavicoli I1, Fontana L, Bergamaschi A.

Abstract

"This review reports current knowledge regarding the roles that cadmium (Cd), mercury (Hg), arsenic (As), lead (PB), manganese (Mn), and zinc (Zn) play as endocrine-disrupting chemicals (EDCs). The influence of these metals on the endocrine system, possible mechanisms of action, and consequent health effects were correlated between experimental animals and humans. Analysis of the studies prompted us to identify some critical issues related to this area and showed the need for more rigorous and innovative studies. (1) Study the possible additive, synergistic, or antagonistic effects on the endocrine system following exposure to a mixture of metals since there is a lack of these studies available, and in general or occupational environments, humans are simultaneously exposed to different classes of xenobiotics, including metals, but also to organic compounds that might also be EDCs; (2) assess the potential adverse effects on the endocrine system of low level exposures to metals, as most of the information currently available on EDCs originates from studies in which exposure levels

Our hormones are all stereoisomers, meaning atoms are arranged differently in 3 dimensional space, and are subject to the toxic effects of xenohormone environmental toxins. Heavy metals have been shown to act as xenohormones, entering into the were particularly high; and (4) assess the effects on the endocrine and reproductive systems of other metals that are present in the general and occupational environment that have not yet been evaluated."

O. **Heavy metals are also known to denature protein and negate the biochemical activities of protein based enzymes and hormones, as well as cause effects in skeletal muscles.** EPA documents fail to describe, consider or analyze this.

Protein makes up a full 90% of the dry weight of the living body. Any living body, any species. Protein is an organic compound com- posed of long chains of amino acids. Each protein has its own distinct combination of amino acids and also its unique three dimensional shape, and it is the shape that gives it its unique biochemical activity, not simply the chemical formula of its amino acid composition. **This is the most important concept in protein, hormone and enzyme biochemistry.** Denaturation is a process in which proteins lose their three dimensional structure/shape which is present in their native state, causing them to unwind and deform, by application of some external stress or compound such as a strong acid or base, a concentrated inorganic salt, an organic solvent (e.g., alcohol or chloroform), radiation or heat. If proteins in a living cell are denatured, this results in disruption of cell activity and possibly cell death. Denatured proteins can exhibit a wide range of characteristics, from conformational change and loss of solubility to communal aggregation to form a solid.

P. **Heavy Metal Salts: Heavy metal inorganic salts act to denature proteins in much the same manner as acids and bases.** EPA documents fail to describe, consider or analyze this.

Heavy metal salts usually contain Hg+2, Pb+2, Ag+1 Tl +1, Cd+2 and other metals with high atomic weights. Since salts are ionic they disrupt salt bridges in proteins. The reaction of a heavy metal salt with a protein usually leads to an insoluble metal protein salt, meaning that it forms a solid and becomes inactive biochemically.

A common example that we all understand and that is epidemic in the human and pet animal population today, is that of insulin. Insulin is a three dimensional folded protein that acts also as a hormone, regulating blood sugar but escorting glucose in the blood into the tissues for storage. If the insulin cannot accomplish this process, then the blood sugar rises to dangerous levels and the patient is diagnosed with Diabetes.

		Non-Insulin Dependent Diabetes, or Diabetes Type 2, is the result of such a compromise in the body, with the insulin not able to perform its designated function. It is also called Insulin Resistant Diabetes, because simply giving the affected patient more insulin does not cure the problem. Typical blood testing of insulin reveals the presence of adequate insulin or even higher than normal levels, but conventional blood testing is not capable of viewing the actual three dimensional shape of the molecules to properly asses their actions or lack of. So we typically see the Type 2 diabetic having both high blood glucose along with high insulin levels that are not working effectively. The insulin has been denatured in the blood, and any new insulin that would be still functional when administered to the type 2 diabetic with toxic blood sporting effective levels of some denaturing toxin, will just further deform any new and functional insulin given. Such is the naming of "Insulin Resistance". The same scenario is commonly born out with thyroid testing and other natural hormones such as estrogen, testosterone, progesterone, DHEA, cortisol, pregnenolone, etc. We call this scenario in medicine "euthyroid hypothyroid" for thyroid, and appropriately such for the other hormones, where the blood levels show normal levels but the patient manifests hypo hormone symptoms, because the hormones present have been denatured and rendered ineffective. This is a serious problem for medicine today. This is a serious problem in assessing the real toxicity of any environmental toxin that has been shown to denature protein, such as heavy metals. Conventional blood testing does not accurately reflect the true health compromise of the sick individual. Metals cannot be broken down to other elements in Nature or the living body, and in fact, toxin exposure in continuous low levels, formerly thought to be safe, have now been shown to have additive or synergistic effects, where the end effects of a combination of toxin exposure produces more severe health compromises than those that would be expected from each toxin. The common example is that 2 +2 now equals 8. Since different chemical forms of minerals and metals can and do exist, and some are more toxic than others, and travel up the food chain at different rates. Different chemical forms of minerals and metals target different organs and tissues of the body. Additionally, each individual toxin is shown to enter the body at levels under the body's detoxification radar of liver detoxification, thus allowing toxic levels of the pollutant to build up over time, until the body becomes so sickened that it cannot help itself anymore in a detox and elimination protective method. Reference: **Combined Toxic Exposures and Human Health: Biomarkers of Exposure and Effects** Int. J. Environ. Res. Public Health 2011, 8, 629-647; doi:10.3390/ijerph8030629 Q. No testing for speciation of inorganic forms of metals, and testing for organified forms, including uranium. The EPA documents fail to describe, analyze or even mention this. EPA should upgrade their testing of MCL's by including the speciation of inorganic forms of metals, and testing for organified forms, including uranium. Then, comparing the LD 50 levels of each chemical form, which are often orders of magnitude in difference. Only then can the true toxicity of the wastewater you are testing be assessed. Using only a quantitative analysis of the metals tells you nothing about the toxicity you are actually looking for. R. **Lack of oversight of UIC wells.** The EPA does not adequately supervise or properly regulate UIC wells after the permits are issued. This puts the public at great risk. The EPA documents fail to describe, analyze or address this issue. The Government Accountability Office says environmental regulators are failing to adequately enforce rules for wells used to dispose of toxic waste from drilling. **"Injection wells used to dispose of the nation's most toxic waste are showing increasing signs of stress as regulatory oversight falls short and scientific assumptions prove flawed."**[37] "Federal environment officials have failed to adequately oversee hundreds of thousands of wells used to inject toxic oil and gas drilling waste deep underground. "The report, by the U.S. Government Accountability Office, is critical of the Environmental Protection Agency's inconsistent handling of safety inspections, poor record keeping, and failure to adjust its guidelines to adapt to new risks brought by the recent boom in domestic drilling, including the understanding that injection wells are causing earthquakes." Often the EPA does not know exactly how many wells existed in the United States or what volume of waste was being injected into them, and that it did not possess complete records required to be collected under the Safe Drinking Water Act." "These wastes, often euphemistically referred to as "saltwater," commonly contain a mixture of water, hazardous chemicals and radioactive minerals." "The EPA generally agreed with the GAO's findings and characterization of the challenges the agency is currently facing. Concerns have mounted recently about potential water contamination from injections wells." **If the circumstances of the past have not been rectified, then the proposed Powertech permits, which require so much on the part of Powertech to be in compliance, should not be issued.**
537	Ex. 6 Personal Privacy (PP)	**I. The Class III and Class V UIC Permits Should Be Denied Because Contamination from ISL Mining Operations is Certain and Irreversible.** While touted by the uranium industry as "advanced"[1] technology, ISL mining has been used in the U.S. and around the world since the 1960s.[2] The process of ISL mobilizes uranium that would otherwise be locked in place and releases it into the groundwater. Through this process, the ISL method purposefully contaminates groundwater by mobilizing uranium into the groundwater that would otherwise have been held captive in the bedrock.[3] Meanwhile, contamination from the mines and impacts on the underlying aquifers would last long after the Dewey-Burdock mining operations ended. Communities in the area are concerned that impacts to their groundwater source may be irreversible, as has been the case in other places that have experienced ISL mining. Texas has the greatest number of *in-situ leach* uranium mines in the U.S.4 Uranium Resources, Inc. owns the Kingsville Dome uranium mine in Texas where contamination from an ISL mine has spread throughout the aquifer to nearby drinking wells.[5] According to a USGS study that studied the effectiveness of groundwater restoration at ISL sites in Texas, more than half of the uranium production areas surveyed had higher levels of uranium in groundwater after mining and reclamation, than before mining began.[6] Equally important, all of the studied sites had received "amended restoration goals for at least one element after operators have expended a reasonable degree of effort to restore groundwater."[7] Amended restoration goals occur when a party is unable to restore the groundwater to the previously agreed-upon water standards. The experience in Texas confirms community concerns that restoring groundwater to a usable condition after mining is unlikely.

		The NRC itself has conceded that restoring an aquifer to a pre-mining condition after ISL mining has ended is "virtually impossible".[8] The EPA has also stated, "Based on EPA's experience with other in-situ mining projects, EPA believes there is a high likelihood that, following mining activities, residual waste from mining activities will not remain in the exempted area" and waste will travel throughout the aquifer.9 These statements confirm community fears that certain and irreversible contamination will occur in the overlying and underlying aquifers which residents rely on.
546	Ex. 6 Personal Privacy (PP)	Historic evidence demonstrates that ISL uranium mines have a very poor record of restoring ground water aquifers – in fact, none have ever actually restored an aquifer used to conduct ISL uranium mining. See J.K. Otton, S. Hall, "In-situ recovery uranium mining in the United States: Overview of production and remediation issues," U.S. Geological Survey, 2009 (IAEA-CN-175/87), Hall, S. "Groundwater Restoration at Uranium In-Situ Recovery Mines, South Texas Coastal Plain," USGS Open File Report 2009-1143 (2009), Darling, B., "Report on Findings Related to the Restoration of In-Situ Uranium Mines in South Texas," Southwest Groundwater Consulting, LLC (2008). The EPA cannot provide information to the public concerning unmitigated impacts where groundwater mitigation plans have not been developed or analyzed for effectiveness.
565		We understand that other comments will talk more about some of the problems associated with modern in situ leach uranium mining and with deep disposal wells. We support comments that illustrate how this type of mining has caused problems for both surface and ground water.
07459 (Valentine hearing)		NANCY KILE: I'm Nancy Kile. I'm from Sioux County, Nebraska. I spoke earlier, but I wanted to talk a little bit about the language that gets used for this industry and their talk about recovery, uranium recovery. We have people in my town, rural people who are saying, "We should be glad that they're taking that bad stuff out of the soils." And -- and what they're doing is fracking, but they call it in-situ leach. It's all solution mining using water as a tool. And they are stripping the minerals off of the sand, and they are leaving the bad stuff, like Scott was mentioning earlier.
07459 (Valentine hearing)		And that is hiding their mess. Because in there, in that water, is minerals that they do not want to deal with, so they want to hide it somewhere. And that's part of extracting it. And when they do this mining, this in-situ leach mining, they take out what they want, and they dump the crap back in there, the bad minerals. And that's what's going to happen.
7460 (5/8 Rapid City hearing)		What most people are concerned about is the sedimentation ponds -- speaking about the in-situ uranium mining process itself, the sedimentation ponds have a tendency to leak -- although the EPA report does address that -- and contaminate groundwater, which -- which has happened in several ISL locations. Migratory birds will land in these ponds. Insects will obtain water from -- of which becomes bird food. West Nile virus will become more prevalent because of the breeding opportunities for mosquitos. And another concern is the in-situ mining process itself, which uses an oxidizing suspension lixiviant solution to release and suspend uranium in solution, but also suspends a number of other heavy metals, including arsenic, vanadium, selenium, et cetera, that are withdrawn with the uranium and wind up being precipitated in the sediment ponds. [...] Anyway, I'll just read on. The radioactive remains in those mined areas, like thorium and radium and presumably nonradioactive elements like lead, arsenic, and selenium, products of the reverse osmosis process, are precipitated out and sent to the White Mesa for them to deal with, even though they are trying to detoxify that site as well.
7460 (5/8 Rapid City hearing)		My big concern is the bleed production that you're mentioning here. There's no control. It's a manmade disaster. [...] My concern again would be the bleed production, and there's no oversight. [...] So it is a people issue. This bleed production, which is going to contaminate, no matter what EPA, you know, says, no matter what Powertech says, this bleed production is going to be out of control. There's no way it can be controlled. No way. You can turn your pumps on and try to bring that back in, but you just can't tell, you know. You just -- you just don't know. That factor alone should make somebody's permit, like South Dakota permitting and NRCs, you know, they're actually kind of dropping the ball now, and it's a very big concern. [...] But the bleed production alone should -- should -- you know, should deny the permitting of this insanity, I'll call it. In Lakota,(Speaking in indigenous language). It's kind of, in English, like you're being fooled, a movement of deceit, something like that.
7460 (5/8 Rapid City hearing)		And please, Friends, never call it in-situ recovery; it is in-situ leaching. And second, learn that ISL may use horrific chemicals, like sulfuric acid, to do its dirty work. [...] They cannot restore the leached water into its prior condition, and they know it. Consider this quote from the U.S. Geological Survey: "To date, no remediation of an ISL operation in the U.S. has successfully returned the aquifer to baseline conditions."
7460 (5/8 Rapid City hearing)		The United States Geological Survey, also known as USGS, has found that no ISL uranium mining operation has been able to return water quality to pre-mining cleanliness. The USNRC has been quoted saying that, "The restoration of an ISL-mined aquifer to pre-mining water quality is...an impossibility." [...] Is it fair to the unborn to allow ISL uranium mining to start when we know that the USGS has found that water quality has never been returned to baseline after ISL uranium mining? Who will protect the unborn if we adults fail to do so?
7460 (5/8 Rapid City hearing)		I just don't believe that this proposed course of action has adequately demonstrated that it will be able to protect human health and the environment. Let me explain why. We've already heard about the ISL injection of leachate into thousands of wells in the Inyan Kara aquifer, where the uranium exists naturally, and it would be artificially dissolved with this leachate, along with many other heavy metals.

		The leachate solution is then theoretically captured and pumped to the surface where it's processed. However, once uranium and other heavy metals are mobilized in this fashion, it's absolutely impossible to guarantee capture. I've seen the cartoons that have been put onto the board here about the typical five-spot well field pattern. This is a dream that someone had sitting behind their desk or perhaps even in a laboratory under ideal conditions. But I can tell you, it doesn't work in the real world where heterogeneous conditions exist. In geology such as this, I put in a well that's been able to produce less than .1 gallon per minute, and 10 feet away, it's produced 30 or 40 gallons per minute. So we don't understand what's going on in the subsurface, and we need to do a lot better job. These interconnected fractures and fissures make it impossible to predict with any certainty about how these fluids are actually flowing in the subsurface. And once the recovery wells are turned off, then this mobilized mass of uranium and heavy metals will continue to flow unabated in the subsurface.
7461 (5/9 Rapid City hearing)		FRANK DICESARE: That's quite all right. It happens to me all the time. First, I want to thank you for your service to the people of the United States and for conducting these hearings here. Secondly, I'd like to state that in general I'm not opposed to mining, but this type of ISR mining that's proposed here, that I'm opposed to, primarily because it does affect the water. I won't elaborate on that in detail. Many other people already have.
7461 (5/9 Rapid City hearing)		GENA PARKHURST: Thank you. My name again is Gena Parkhurst, and yesterday I mentioned a resolution passed by the Rapid City Common Council. And since we have a little extra time, I'd like to read the full text for the record: "Resolution Number 2013-083: A resolution expressing grave concern about the in-situ mining of uranium by Powertech in Custer and Fall River Counties. "Whereas, Powertech Uranium Corp. has submitted applications to the South Dakota Water Management Board for permits to use water from the Madison and Inyan Kara aquifers to conduct in-situ mining of uranium in Custer and Fall River Counties in the Black Hills of South Dakota; "And whereas, in-situ mining, or in-situ recovery, involves pumping solutions incorporating water from the aquifers into an ore body through wells which will then circulate through the porous rock and recovering the minerals from the ground by dissolving them and pumping the solution containing the ore to the surface where the minerals can be recovered;
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	A case study in how the in-situ uranium mining can go awry is of the Christensen Family south of Gillette, Wyoming about 40 miles. They first homesteaded that land, the grandfather, John Christensen back 100 years ago, basically. And John was raising sheep and cattle, was struggling with a drought in dry conditions in that area, and so chose to both help the U.S. energy cause and develop another source of income by selling his mineral rights to gas, oil, and uranium mining companies, thinking they would still have the 35,000 acres with aquifers underneath them that would be safe to use for their livestock and for their personal use. Well, the in-situ mining wells in that area did have excursions. He said he was never told about excursions. They did contaminate the shallowest of the aquifers at that point in time, and it was no longer usable for his livestock.
7461 (5/9 Rapid City hearing)		Another woman who works at, I think, an ISL mine in Wyoming was saying, in her professional capacity, that there was no problems, they haven't contaminated water, et cetera. [...] And I think it was the Riley mine that Mr. Massopust referred to as having to pay the biggest financial fine for contaminating water in an ISL mine in Wyoming. And I'm pretty sure that's along the route I take when I drive to Lander, Wyoming to visit my good buddy who I go fishing with, and my brother's family in Lander. And my buddy and I went fishing in Green Mountain, along -- between Muddy Gap and Lander, and he was telling me about that contamination and that the people in the little town in between there could no longer use their water. The mining companies had to buy and bring water to the community. Totally ruined their aquifers and their wells to produce drinkable, potable water. So just a couple examples of other types of problems that have occurred with ISL mining sites in the region.
7461 (5/9 Rapid City hearing)		The EPA fails to acknowledge the dozens of violations and reportable incidents at just one in-situ leach mine, the Crow Butte Mine, or to talk realistically about the fact that excursions and leaks are normal for in-situ mines. In fact, at least two ISL mines, excursions have reached outside the mine boundary. [...] Instead, the public is presented with a sanitized, ready-for-prime-time version of the ISL process that can be displayed by neat drawings. This lack of realistic consideration of in-situ leach mining process bodes poorly for the public as it increases the probability that the Agency will issue final permits without ever having given a hard look at the proposal.
7461 (5/9 Rapid City hearing)		OXANA GORBATENKO: Good evening. I'm going to apologize for my English. When I heard about this issue permit about one and half months ago, it's made me to do some extra research and look a little bit deeper at what's going on, and what is related to our drinking water in our area. Because I'm a scientist, I like to read the research. Recently I did some -- and especially after I told... I'm sorry. This was a man who was representing an organization for the uranium. He was saying how safe it is, how great it is, but mine is operating in Wyoming about last 20 years. I today have very interesting reading. It was Nuclear Regulatory Commission memorandum from October 2009 about groundwater impact from licensed in-situ uranium recovery facilities. And I look on some statistics from two sites located in Wyoming and one located in New Mexico. It says that they had pretty good luck with water restoration, and there was -- was able to restore the water for about 50 percent of original level of contaminants. But let's look what they left behind. It didn't meet the range of baseline of alkalinity, ammonium, barium, carbonate, chloride, calcium, conductivity, lead, magnesium, manganese, sodium, total dissolved base, radium-226.

		On second site, they were able to clean 70 percent of other contaminants, but some they couldn't remove. What they couldn't remove? They didn't remove arsenic, bicarbonate, chloride, calcium, conductivity was off, iron, magnesium, manganese, pH, sodium, selenium, sulfate, total -- total dissolved solids, uranium, and radium-226. In addition, information about potential spills. In the same report, I found information. It doesn't say, unfortunately on -- [...] OXANA GORBATENKO: I'm sorry. I said what -- in the same report, we had information about accidents which was related to this mining, as well about spills in horizontal and verti- -- vertical and horizontal spills of this contaminated water.
7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	And per the USGS to date, there has been no successful mitigation of the contamination resulting from uranium in-situ recovery mining.
7642 (Hot Springs hearing)		According to the World Nuclear Organization, the USA legislation requires that the water quality in the affected aquifer be restored so as to enable its pre-mining use. Usually this is potable water or stock water, usually less than 500 parts per million total dissolved solids. And while not all chemical characteristics can be returned to those pre-mining, the water be usable for the same purposes as before. Often it needs to be treated by reverse osmosis, giving rise to a problem in disposing of the concentrated brine stream from this. After termination of an in-situ leaching operation, the waste slurries produced must be safely disposed and the aquifer contaminated from the leaching activities must be restored. Groundwater restoration is a very tedious process. It is not yet fully understood. Even after considerable processes, various problems remain unsolved. Contaminants that are mobile under chemically reducing conditions, such as radium, cannot be contained, controlled. If chemically reducing conditions are later disturbed for any reason, the precipitable contaminants are remobilized. The restoration process takes very long periods of time. Not all parameters can be lowered appropriately. The restoration scheme applied in some of these situations that the document is talking about was applied as the first two steps mentioned should be done. It turned out that the water volume of more than 20 times the pore volume of the leaching zone had to be pumped and still several parameters did not reach background areas. So relaxed groundwater restoration standards have been granted at these and other sites since the restoration criteria could not be met. Until the abandoned mines are cleaned up, there should be no consideration of new mining. The track record of uranium mining is not good.
7642 (Hot Springs hearing)		This in-situ mining is an experiment. We've been reading about this ever since we've been following this. We've been traveling all the way through California and other places, and we've learned about this. So we've been looking forward to coming here, my wife and I. And so we've been learning about this a little bit. And it really is an experiment. They don't know that that water is going to be safe. They don't know that it's going to stay where it's supposed to stay. We've had a lot of evidence that it's not going to stay there. So I don't think they should play with these people's lives out here for an experiment. There's scientific ways of doing experiments, and it's controlled. And this is not controlled at all.
7642 (Hot Springs hearing)		Now I want to speak about some studies done by a hydrogeologist, Dr. Roseanna Neupauer from the University of Colorado. She studied groundwater flow at an ISL mine in Christensen Ranch, Wyoming. And she found that contaminated -- contaminants, excuse me, will remain in the aquifer after all effects of restoration and will migrate through the aquifer into the future. She noted that a comprehensive modeling exercise was impossible because of insufficient data of the spatial distribution of various chemical perimeters or on the chemistry of the injection solution used by the industry. Dr. Neupauer noted that diffusion of chemicals out of the immobile region can occur over many years or decades. Thus, even if the water in the mobile zone appears clean, it may become contaminated over time by this diffusive process. It would further increase the concentration of lixiviant in the past -- in the post-restoration aquifer. Dr. Neupauer reported that her report is consistent with that of experts of USGS and other geological scientific communities. Groundwater has never been restored at ISL operations -- the NRC acknowledges that -- and some 40 percent of measured constituents could not be restored to the baseline conditions. [...] ISL uranium mining is a poor choice to contaminate scarce western groundwater and harm the environment. Truthfully, only a small number of short-term jobs will be provided with this project with an inherent environmental risk. Thank you.

Letter ID	Commenter Name	Text
88	Ex. 6 Personal Privacy (PP)	As an RN, I find the health issues related to the risks exposure of uranium contamination at any level are deeply concerning. Even one death or illness as a result of uranium mining is totally unacceptable.
88		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.
108		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes. Thank you for your consideration,
175		Subject: Uranium mining in the Black Hills – public comment [...] Uranium is dangerous, furthermore, and should be left in the ground
242		Subject: Uranium waste I live in Grants, New Mexico, the former self proclaimed "Uranium Capital of the World". As a now retired RN, I can tell you of the many deleterious effects of Uranium Waste. Years after closure of the mines here we are still dealing with illnesses and deaths from uranium, and the water and environment are still not cleaned up, and won't be. Allowing uranium mining waste disposal in a SD aquifer is an absolutely horrible idea unless you blieve is is a good thing to poison people, give people cancer...please, NO
272		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes.
280		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes Sincerely, Lucia Akard
295		2. Uranium affects humans and animals on cellar level. Meaning it breaks down your whole body an organs. People over profit!!! 3. Short term profit with long term pollution, and unemployment. [...] 5. Weather phenomena such as tornados spread Uranium, and radiation. Which is also causing cancer all around your area and starting to see the effect the radiation has on people.
357		Mark me in as opposed. We have more than enough uranium stored and we should never have let the Clinton's sale 20% of our supply to the Russians. Is this permit being issued to a foreign entity? Shame on the EPA! I hope President Trump drastically reduces the EPA!!!
373		It should be clear that I oppose uranium mining for these reasons, as any fair-minded person would after careful consideration of these and other arguments. As a steering committee member for the National League of Cities' Energy, Environment, and Natural Resources committee 2005-2007), I learned that energy resources (such as uranium for nuclear energy, coal for oxidized energy, and water for hydroelectric energy) often must be prioritized against other natural resources (for example land and water resources traded for radioactive products, habitat and cultural resources for minings, and community health for energy extraction & consumption in the case of uranium). Your steering of this difficult community-wide decision regarding utilities, which are the primary users of energy production from uranium extraction, is a heavy burden, and I greatly appreciate your willingness to manage this sometimes thankless work. I hope that you will find your way to a decision in the best interest of all constituents--current and future.
419		Subject: Uranium Mining comment [...] -Exposure to radon and radium found in uranium causes cancer: here is a paragraph from the EPA site: "Chronic (long-term) inhalation exposure to uranium and radon in humans has been linked to respiratory effects, such as chronic lung disease, while radium exposure has resulted in acute leukopenia, anemia, necrosis of the jaw, and other effects. Cancer is the major effect of concern from the radionuclides."
441		The radiation explosion in Washington state today should get the attention of the officials who think it is just fine to allow this uranium mining. Human lives are not expendable, and money should not be looked at as a god. If another country thinks they can come here and have their way with our land, they have another thought coming. They can dig around in their own back yards and discover whatever they are trying to get at here (uranium). Thank you for hearing my rant. I do love my country and the entire population needs to be in full support of never allowing uranium mining to take place here.
		1)The Uranium mining industry does not have a very good history of being responsible for clean up nor preventing accidents. According to Lindsey Mclean, Biochemist & expert witness for NRC/ASLB in her Position statement she states, "Tennessee Valley Assoc drilled a total of 7650 boreholes looking for more mine-able/extractable uranium, but failed to find any. Powertech/Azarga was ordered by NRC/ASLB to find and properly close all of those boreholes before they would be able to actively mine, as ISL mining requires aquifers to be contained properly for extraction efficiency. This is a hugely expensive process and to date, no work has been done on this." Information obtained by: UNITED STATES OF AMERICA NUCLEAR REGULATORY COMMISSION ATOMIC SAFETY AND LICENSING BOARD Before Administrative Judges: William J. Froehlich, Chairman Dr. Mark 0. Barnett Docket No. 40-9075-MLA ASLBP No. 10-898-02-M-1 Source link: https://www.nrc.gov/dML 1512/ML 15120A299.pdf. According to a Sep 23, 2013 Rapid City Journal Articled Titled 'Leaks, spills, and other problems at in situ uranium mines across the country' journalist Daniel Simmons-Ritchie sites eight examples of violations for other similar mining operations. http://rapidcityjournal.com/news/leaks-spills-and-other-problems-atin-situ-uranium-mines/article_694a875f-aa4e-5abd-9d23-2da9536acb73.html. More recently, on April 3rd, 2017 the U.S. Nuclear Regulatory Commission cited Cameco Resources dba Power Resources, Inc. with nine apparent violations were identified and are being considered for escalated enforcement action in accordance with the NRC Enforcement Policy. Source: NRC INSPECTION REPORT 040-08964/2016-003.

448	Ex. 6 Personal Privacy (PP)	[...] 3) With this inability to guarantee adequate protection comes real concerns to Human health. Science clearly shows the dangers of Uranium to the human body. Toxicology testimony by Linsey McLean, expert withness for NRC/ASLB on the birth deformities found in wildlife and domestic farm animals studied in ISL mining sites contaminated by toxic waste water and radioactive metals. Can be reviewed here: https://www.nrc.gov/docs/ML1513/ML15132A507.pdf and https://www.nrc.gov/docs/ML1513/ML15132A506.pdf A study by the Department of Biological Sciences, Northern Arizona University, Flagstaff, Arizona, USA; Department of Physiology, College of Medicine, University of Arizona, Tucson, Arizona, USA Titled 'Drinking Water with Uranium below the U.S. EPA Water Standard Causes Estrogen ReceptorDependent Responses in Female Mice'. Also provides evidence that uranium is an endocrine-disrupting chemical and populations exposed to environmental uranium should be followed for increased risk of fertility problems and reproductive cancers. Source: JOURNAL ARTICLE Environmental Health Perspectives Vol. 115, No. 12 (Dec., 2007), pp. 1711-1716 Published by:The National Institute of Environmental Health Sciences Stable URL: http://www.jstor.org/stable/4540018 Another study by the Argonne National Laboratory, EVS Human Health Fact Sheet, August 2005 points out a major health concern associated with uranium is kidney damage caused by the chemical toxicity of soluble uranium compounds. Source file can be found: http://www.powertechexposed.com/Radium_Argonne%20National%20Lab.pdf As a Yoga Instructor, I spend a considerable amount of my time and money to stay healthy. Pumping our aquifer with the fluids containing uranium puts me, my family and our community at substantial health risks. Is the EPA going to pay for our long-term health care bills due to uranium exposure? Are you going to provide me, my family & community with clean drinking water the rest of my life?
454		The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather than relying on imperfect protection and clean-up processes. “URANIUM IS NOT SAFE, IT NEVER WAS, AND NEVER WILL BE.
463		For the Record, May 10, 2017 in Hot Springs, SD Enclosed two "letters to the editor" from located individuals opposed to the uranium mining in this area. Also The Unexpected: The future is important. Here is a recent example of a disastrous event, unexpected. The event was caused by old gas wells lost over time in Colorado. The consequences to Colorado is also reported. [ATTACHMENT: “Colorado considers statewide gas-well map after deadly blast”; “Small gas pipeline blamed for fatal Colorado home explosion”; letters to the editor, “Why in-situ mining needs many permits”; “It doesn’t make sense”]
466		With uranium mining we need to keep in mind that fact that the half-life of uranium is 4.5 billion years. Yes, that is billion with a B as in boy. Untold numbers of people living now and those yet to be born could be affected.
470	[Name blank]	NO URANIUM
470	Ex. 6 Personal Privacy (PP)	Building uranium mines will not only affect the environmental but the people surrounding. The release of metals and radionuclides can equal to having 100 X-rays in one hour. Therefore, it can cause many health concerns.
470		No Uranium Mining!!!
470		Radon daughter remediation? Security of storage and transport of yellowcake.
470		Educate all on how harmful this process is to our future. Educate on reusable energies and renewables. Do not use uranium.
470		NO URANIUM!
489		I am opposed to uranium mining especially to a foreign owned company. Would you approve this if it were in your backyard?
489		It should be illegal to mine [uranium].
		H. **The Non Radiological Effects of Uranium.** The EPA documents omit any discussion or analysis of the non-radiological effects of Uranium. Inorganic forms of minerals, especially selenium and uranium, as well as other heavy metals, which consistently test high in aquifers post mining, have shown to be toxic to living systems of plants, animals and humans in very low levels. Uranium toxicity at low levels has shown in population statistics of exposed population downwind and downriver from old exposed uranium mines to be more predisposed to chronic conditions such as: metabolic syndromes, diabetes, behavior and sleep problems, obesity and heart disease, fertility, and morbidity and mortality compromises. These are non radiological effects of uranium discussed, in that uranium as a metal actively incorporates itself into the biochemistry of the body. The radiological effects are another subject, not involving the actual chemical reactions such are described here. **Heavy metal uranium affects the brain cholinergic system in rat following subchronic and chronic exposure** - “Previous studies have shown that uranium is present in the brain and alters behavior, notably locomotor activity, sensorimotor ability, sleep/wake cycle and the memory process, but also metabolism of neurotransmitters. The cholinergic system mediates many cognitive systems, including those disturbed after chronic exposure to uranium i.e., spatial memory, sleep/wake cycle and locomotor activity.” **Uranium is known to travel through the blood to virtually every tissue and organ system in the living body through active transport by blood.** It will reduce and for solid precipitates in the hard tissues of the body like bone and also cause kidney stones and kidney disease and the precipitates enlarge with time and chronic exposure. Binding with bicarbonate in the body will also compromise the body’s ability to neutralize acids, predisposing to gastric ulcers as well as various muscle pains, cramps and spasms. Highly acidic bodies with compromised acid neutralization abilities, such as contamination with compromising uranium ions, will have higher agitation levels and volatility of behavior. Uranium ions in the liver will compromise blood sugar regulation, causing increased cravings for sugars in the diet, leading to diabetes, metabolic syndromes and obesity, as carbohydrate metabolism is compromised.

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Further, as blood sugar lacks internal regulation, alcohol and drug use is elevated in statistics, as the body struggles to "just feel good for a little while". Increased cancer rates are observed with uranium exposure as well as reproductive toxic effects with DNA breakage observed. Compromise to the connective tissues of the body, that cover virtually every surface in the entire body, produce autoimmune diseases such as crippling Lupus. This is exactly what we are seeing in population health statistics on the reservations affected. Further, the toxic effects of uranium are greatly enhanced in the presence of calcium ions, which are known to be generated in ISL mining as well as in runoff waters of the Rocky Mountains over old uranium open pit mines. The Rocky Mountains are high reservoir of calcium carbonate, so ISL mining waters containing uranium as they are known to do, will have even more toxic effects in synergy than what would be expected and predicted of each separately. [36]

"Uranium as a heavy metal is of particular importance as a complex of uranium and bicarbonate ions, which increases the solubility of uranium in serum. This compound is rather insoluble in water due to the complex ion formation between uranium and bicarbonates. This mechanism determines the transport of ultra filterable uranium from the sites of contamination to the tissues and target organs (8). In blood, the uraniumbicarbonate complex establishes an equilibrium with non-filterable protein-bound uranyl ions, with 60% of uranium bicarbonate-formed and 40% protein- formed (9). In other studies, 74% of uranium in blood was present in the inorganic compartment of plasma, 32% was protein-formed, whereas 20% was associated with red blood cells (10). Uranyl salt complexes with bicarbonates are less stable than uranous salt complexes. Reduction of uranium in plasma is not probable, while the uranous salts can be reduced in the intracellular environment (11). Uranous (IV) retention sites are the bone and kidney, whereas uranyl (VI) ions accumulate in the liver and spleen prior to their redistribution in the renal and skeletal system."

Each of the uranyl ions are complexed by two phosphate ions on the surface of bone crystals, with simultaneous release of two calcium ions. The uranous ion produces a toxic effect on the living cells by inhibiting the processes of metabolism of carbohydrates by the inhibition enzyme systems. A uranyl ion replacing a magnesium ion binds the ATP molecule to hexokinase. ATP-uranyl-hexo- kinase complex blocks the release of phosphate to glucose, inhibiting its first step of metabolic utilization with non-metabolized glucose in the extracellular environment (12). The toxic effects of uranium were shown to be enhanced by the administration of calcium (33). The effects of uranium on the nervous system have been described as paralysis of the hind legs, blindness, and loss of coordination in rabbits in the terminal phase of intoxication (52). Most recent studies indicate significantly higher prevalence of malignant diseases in uranium workers (59), with increased mutations in underground miners (60) and connective tissue disease, including lupus erythematosus (61). Reproductive toxicity of uranium in a recent Chinese study includes chromosome aberrations in spermatogonia, causing DNA alterations in the spermatocytes and strand breakage in sperm (62)."

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4. WHEREAS, in areas where uranium mining has been performed in the past there is documented increase in rates of; testicular and ovarian cancer, leukemia, childhood bone cancer, miscarriages, infant death, congenital defects, genetic abnormalities and learning disorders in the population living near the mining site, and

[...]

7. RESOLVED, that the South Dakota State Medical Society is opposes the practice of in-situ and open pit mining of Uranium in geographical areas that are utilized by the farming or ranching communities or where there are human residents due to the adverse health conditions associated with the mining process, and be it further

8. RESOLVED, that the South Dakota State Medical Association Delegation, along with the Colorado Medical Society Delegation to the American Medical Association take to the AMA House of Delegates a resolution that would provide a similar opposition at the federal level.

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7443	Ex. 6 Personal Privacy (PP)	I belong to the Intelligentsia. The half life of uranium is 4.5 billion years! You cannot bribe us with short-term job security!!!
7461 (5/9 Rapid City hearing)		So I would like to go on the record to say that I am against the uranium mining, and I would also like to suggest that if the time comes for frontliners to set up camps, to set up first line direct actions against uranium mining, that I hope you don't send the Pennington County sheriffs with their rubber bullets and their water cannons again, and that you use our law enforcement for what they are supposed to do, protect and serve community members, not to protect corporations, not to protect the poisonous act of genocide that we call uranium mining. Thank you for your time.
7461 (5/9 Rapid City hearing)		There's a lot of irreparable harm to our health that's already happened, and I don't think that any federal government can repair irreparable harm. With uranium, I don't care how safe you say it is, how contained it is, how good it is, it is not safe. And the scientists, the ladies before us, you know, they put it in terms on how it's going to still affect our people.
07463 (Edgemont hearing)		But anyway, I asked somebody earlier today what the -- what it would be used for. And they said that they don't really know, but it will, like -- they were kind of, do it -- well, they were like, do their research, and then, like, they will get, like, a client, but they don't really know what it would be used for now. So I would -- well, I'm against it. I hope you can see this, and yeah -- and, I guess, so...
07463 (Edgemont hearing)		Right now, I apologize, but I want to throw out some data response to some of what was said by those from the industry. I learned -- I had to learn about radionuclides because of an issue that we had at a simple water treatment plant, and the levels of radionuclides that were ever increasing in the byproducts, the sludge. And so I learned all about it from EPA documents mostly. And they list each of the radionuclides, uranium, radium-226, -228, radon, gross alpha, gross beta, and all the cancers that are associated with chronic exposure for each of those radionuclides. There is a dose concentration. There's low risk. Those are low risk radiation sources. However, low risk does not mean zero risk, and the risk that they were talking about is the risk of developing these diseases. They are called scol- -- and I cannot pronounce it. I don't even know if I spelled it. I wasn't prepared to talk about this. But again, it's from an EPA document, stochastic effects from chronic exposure to low dose radiation. And it is heartbreaking to hear this sort of thing danced around as if it is nothing. And I heard this when this particular municipality was continuing to say it's no more radiation than that from living in a brick home. The concentration when you are pulling out these naturally occurring radioactive elements changes. The exposure changes when you're working with them. Yellowcake is an intensified collection of uranium. Uranium is pretty much the mother of radium-226, -228, radon, gross alpha and gross beta. And you are concentrating, you are pulling it out from its natural form in doing that. Every time you have any radioactive element, radionuclide in low dose, and that volume changes through whatever the processing, water, pulling out it out of the water, whatever, you are creating a higher value in that Rem, the real Rem, that is calculated with the picocuries per liter or picocuries per gram when dealing with a soil or a sludge. It's picocuries per gram if you're dealing with water solution; it's picocuries per liter -- I think that it's liter, and I apologize, I forget. I wasn't prepared to talk about this. And then if you're going to identify the Rem, which is the measurement of the radiation dose that you are getting every year in that exposure to that low dose radiation, it's called millirem. It's in -- it's in -- it's the measure of the radiation equal to -- a Rem is a radiation equal to X-ray, an equal level of X-ray. And it does take a high level of Rem from radionuclides to equal that. But the result is health effects. And the result is most often cancer. Not everyone in the population will get it. More people are more susceptible than others, that's why it's called a low risk. Those who are statistically calculated to be susceptible to that are a small enough number that they are actually almost written off. But when you are the person who has developed the cancer because of your reaction to that chronic exposure to that level of radiation, it is 100 percent risk. So it should never be minimized, laughed at, or talked about. It took almost a year to prove the difference between living in a brick home and being exposed to the sludge that this particular municipality started storing in 2011, '12, '13, '14, and '15 sludge at levels that were so high, when they finally uncovered on site where these people were working -- and this is a water plant -- and the levels skyrocketed in 2009. And they started stockpiling when the state finally stopped them from disposing in a municipal treatment -- municipal landfills because the radiation level went through the -- was so high. Or, not the radiation level, the concentration of the radionuclides were so high. [...] KATHLEEN BAILEY: Okay. So when they started stockpiling, a year later three people got cancer at the site and two of their wives. The following year, another person got cancer at the site, in '13. He's one of the few still surviving and fighting. And one -- another one got it in 2015 and died. All on the same site.

		And we get the same thing. You can't prove that it's associated with the radiation from the radionuclides. And it is -- it breaks my heart to have otherwise intelligent, capable engineers and workers and everything minimize -- and -- minimize a proven consequence of this level of exposure, even at low dose. And I just had to throw that out.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	And then they had all this uranium. They didn't quite know what to do with it. So they thought they should put it to good use. They come out with all kinds of advertisements, if you used uranium on your skin, your skin will just glow, and you will be beautiful. And people bought that. And there's movies out about it. There's -- like the movie about the girls that had to paint the illuminous dials on watches and what happened to them. There's all kinds of scientists out there that prove what uranium will do for you. True, like some of the people talked about, there's uranium, you know, all over the world. But as long as Mother Earth has taken care of it and it's down underneath, she knows how to take care of it. It's only when we have greedy people that come along and want to dig it up and do all these wonderful things with it and try to convince all of us that this is the best thing that ever happened to us in the world, then Mother Earth gets a little mad and things kind of go off and, mistakes happen and leaks happen. And the people around here that are listening to these engineers out of the engineering, mining college up there in South Dakota, they evidently didn't go to really check out the scientific information on uranium. Because there's all kinds of websites out there that you can go to and learn everything you want to know. There's pictures of what uranium does to you. There's -- I have a friend right here, didn't happen in Edgemont, but she's got 90 percent uranium in her body. She is going to die from it, from uranium. You know, call it cancer. You can call it all kinds of fancy names that the doctors have made up for all this stuff that goes wrong with the person. But she has been contaminated with uranium to 97 percent, and I know she's going to talk later so she can talk more about that.
07463 (Edgemont hearing)		Because if you don't start respecting us, not -- I'm not just talking about indigenous people, I'm taking about everybody, every single one of us, you are our relatives, too. We have the same hearts, the same minds, the same lungs, the same air we breathe, the same food we eat, the same atmosphere we're exposed to. We live in this world together. We need to co-exist together. And find renewable energy, and ways with renewable energy. Start funding towards it. Because this addiction to uranium and fossil fuels is killing you. [...] TASINA SMITH: All of us. Respect us, please. Or once again, expect more of us to come. Thank you.
7642 (Hot Springs hearing)		PATRICIA SHIERY: You are. Good afternoon. My name is Patricia Shiery. I am currently a resident of Hot Springs, South Dakota. I originally come from East River, Madison which I served 2011-2012 in the state legislature. At that time I did fight against this project, and I continue to fight. I continue to study and to research and to learn more about uranium, about the ISL process. And what I have discovered is there's a purpose for uranium in the earth, and that purpose is it has a huge effect in the magnetic flow of the earth. It also has a huge effect in keeping the earth warm. If we keep removing the uranium from the earth, it's going to affect the polar -- it's going to -- how our earth axis sits, and it's going to affect our weather patterns.

Letter ID	Commenter Name	Text
96		I am a proponent (and an experienced user) of renewable-energy generation of electricity. Given the current economics and feasibility of renewable energy plus storage for our electricity needs, I find no justification for potential environmental and public-health risks inherent in further reliance on nuclear power. Thanks for your consideration of these comments. Sincerely,
155		After doing some research, most of the uses are for military situations.
210		Subject: Comments on proposed uranium mining and storage plans on Lakota lands Since 1980 we have been depleting more resources from the earth than we are generating. As of today, the rate of "taking" vs. "replenishing" is at 50%. A path that has us destined for extinction. I am completely against these permits due to the the obvious risk and detriment to our health, mental stability and planetary regeneration these permits will allow. Uranium has only been aggressively used as a source of energy for 60 years, yet look at the continued death of the Pacific ocean as the Fukushima disaster rages on with no containment is sight. The only containment for any hazardous substances we've already generated is above ground retrievable storage will allow for containment without the risk of breaching the aquifers. To say it's OK to generate more deadly waste that we have no way of making non-toxic makes no sense.
289		Subject: Written testimony objecting to the granting of exemptions to the Clean Drinking Water Act for In Situ Uranium mining in the Dewey-Burdock area. No useful purpose exists for uranium mining. Fukishima has shown us that nuclear energy is not safe. Nuclear energy producing plants are fallible and can be destroyed by nature causing environmental disaster and death to fish, wildlife and humans. Mankind was not wise enough to learn this from Chernopal, but continued on using and building nuclear power plants. Now we have two examples of what can happen using this type of energy. The only other use for uranium is war. Using uranium in atomic bombs means the direct killing of humans and all life forms in the vicinity where they are dropped and causes extensive environmental damage for a vast area surrounding the bombing sight. DO NOT LOSE SIGHT OF THE FACT THAT WE NOW HAVE A PRESIDENT WHO THINKS THAT NUCLEAR BOMBS ARE TO BE USED.
387		Subject: Uranium mining in the Black Hills Please do not allow Uranium Mining in South Dakot and the Black Hills - Energy development has already moved toward renewable energy - this would be counterproductive - REMEMBER WHAT IS HAPPENING TO THE OCEAN FROM THE REACTOR ACCIDENT IN JAPAN. Thank you for listening -
410	Ex. 6 Personal Privacy (PP)	V. Why Mine Uranium with Foreign Countries? Azarga is a Hong Kong Company with many ties to mainland China interests. We have noted above that Russia through Uranium One has extensive uranium mining interests in the United States. [...] Nuclear power plants worldwide have huge and dangerous stockpiles of radioactive waste that threatens the environment wherever they are. Technology now exists to reuse portions of the spent fuel to run America's 100 or so operating plants. America is awash in uranium based by products and fuel. We do not need to mine uranium now at all; and probably not for 300 years. So why would we allow Russia and China to damage our environments with uranium mining? Their motives are simple to deduce. They both want to enhance their stockpiles of weapons grade uranium. Russia and China are both doing business with some of the most dangerous groups on the planet including North Korea, Iran, Pakistan, Syria and various muslim organizations. Continued mining of uranium will only increase the amounts of bomb grade uranium products which will eventually lead to global nuclear war. If you do nothing else think of denying this permit to limit the proliferation of nuclear weapons.
438		Subject: Underground Injection Control (UIC) Area Permits for Powertech Inc. - duplicate I am opposed to the mining of uranium for nuclear power use. There has been many irresponsible decisions fuled by greed made by present American nuclear power plants; causeing radioactive leaks, explosions, and even leaks in the waste disposal sites. Such accidents put the wellbeing of our country in jeopardy. Mining for more fuel for these types of plants will only cause more health issues in the future. Due to just one nuclear power plant mistake in Japan, scientists now believe all aquatic life will be extinct before 2050. Surely you don't want to have such future catastrophes on your hands by allowing access to more uranium. Thank you for taking the time to hear my concerns.
451		Once extracted and shipped to Canada for placement on the International market, where would this uranium end up? Perhaps China, North Korea, or Iran?
455		* There is no need for uranium for use in the United States. All of it would be shipped out of country - contaminating our lives, for foreign countries, i.e. potential enemy use. AMERICA FIRST!
458		My name is Ex. 6 Personal Privacy (PP) I am currently living in Edgemont, South Dakota. I have a relative whose first wife grew up here. She died of cancer at 37. 1he only thing he will say is, "Don't drink the water." As a young man, I lived a few years in Utah, where I had to comfort a roommate from St. George, Utah who lost a 19-year-old brother to cancer. Children there used to write their names in the nuclear fallout dust covering automobiles. A July 2017 eleven-page Special Report to the Oregonian reported there were an estimated 400,000 Atomic Veterans ordered to be nuclear guinea pigs under or near atomic test blasts, and the reluctance of government experts to acknowledge ongoing health damages. Salt Lake's Deseret News spent years documenting the culture of insensitivity and denial of first the Atomic Energy Commission and then the Nuclear Regulatory Commission, a cosmetic change that made little actual difference. More recently, I knew a Rapid City South Dakota photographer who loved vacationing in the beautiful Utah areas with the aftereffects of hundreds of uranium mines and nuclear tests. He died of cancer. I could not resist picking up a copy of the book titled, The Day They Bombed Utah by John Fuller. The list of nuclear test problems and losses is mind-numbing. These countless examples demonstrate an ongoing culture of denial and insensitivity that carries forward to this day. I can see why regulators would block out things which would cost them their jobs and bring billions of dollars in lawsuits. According to paid **engineers working** for the Chinese uranium mining company, A7.3lg3, they and the Nuclear Regulatory Commission are best qualified to look after our safety and welfare. Not everyone always sees it that way. In 2007, then candidate **Barack Obama** stated, "The NRC is a ... moribund agency that needs to be revamped and bas become captive of the industries that it regulates," according to a Keene (N.R) Sentinel interview.
470		How much of this uranium stay in the US? If this is a Chinese Co. – do they sell to N. Korea. Japan bought up our scrap steel prior to WWII.

470	Ex. 6 Personal Privacy (PP)	If Powertech owners in China and you give these permits and Powertech granted, then these get sent to China. Then China can sell this uranium to North Korea. Then North Korea can turn this into bomb, send it back over here and blow us up.
470		I believe there is no need for uranium. It is used for nuclear weapons. We need to STOP going to war. STOP damaging the Earth. But mostly we need to STOP treating the Earth like its replaceable...
470		We had enough uranium to allow Obama & Clinton to give them uranium. Our water is a limited resource. I don't see any sensible reason to risk it for foreign interest.
470		The worldwide shift should be away from Nuke plants for energy. It is unsafe and potential problems can be disastrous, citing Chernobyl & Three Mile Island.
		I also have concerns about the process part too. As the yellow cake is obtained, processed and stored ... and then eventually shipped to the border, what security is there that some whacko doesn't blow it up. It would be devastating. [...] **Declaration of the World Nuclear Victims Forum in Hiroshima (Draft Elements of a Charter of World Nuclear Victims' Rights)** 23-Nov-15 1. We, participants in the World Nuclear Victims Forum, gathered in Hiroshima from November 21 to 23 in 2015, 70 years after the atomic bombings by the US government. 2. We define the nuclear victims in the narrow sense of not distinguishing between victims of military and industrial nuclear use, including victims of the atomic bombings in Hiroshima and Nagasaki and of nuclear testing, as well as victims of exposure to radiation and radioactive contamination created by the entire process including uranium mining and milling, and nuclear development, use and waste. In the broad sense, we confirm that until we end the nuclear age, any person anywhere could at any time become a victim=a potential *Hibakusha,* and that. nuclear weapons, nuclear power and humanity cannot coexist. 3. We recall that the radiation, heat and blast of the atomic bombings of Hiroshima and Nagasaki sacrificed not only Japanese but also Koreans, Chinese, Taiwanese and people from other countries there as a result of Japan's colonization and invasion, and Allied prisoners of war. Those who survived "tasted the tortures of hell." We pay tribute to the fact that the *Hibakusha* question the responsibility of the Japanese government which conducted a war of aggression; call for recognition of the right to health and a decent livelihood; have achieved some legal redress and continue to call for state redress to be clearly incorporated within the Atom Bomb Victims Relief Law; struggle to guarantee the rights of those who experienced the atomic bombings yet are not recognized as *Hibakusha;* and call not only for nuclear weapons abolition but also oppose nuclear power restarts and exports, and demand adequate assistance for nuclear power plant disaster victims. 4. We noted that through the international conferences on the humanitarian impact of nuclear weapons held in Oslo in 2013 and in Nayarit and Vienna in 2014, the understanding is widely shared internationally that the detonation of nuclear weapons would cause catastrophic harm to the environment, human health, welfare and society; would jeopardize the survival of the human family; and adequate response is impossible. We warmly welcome the Humanitarian Pledge endorsed by 121 states, pledging to fill the legal gap for the prohibition and elimination of nuclear weapons. We support the adoption in early November 2015 at the UN General Assembly First Committee, by an overwhelming majority of 135 in favor with only 12 opposed, of a resolution convening an open-ended working group "to substantively address concrete effective legal measures ... and norms that will need to be concluded to attain and maintain a world without nuclear weapons." 5. We acknowledge that the mining and refining of uranium, nuclear testing, and the disposal of nuclear waste are being carried out based on ongoing colonization, discriminatory oppression, and infringement of indigenous peoples' rights, including their rights to relationships with their ancestral land. These activities impose involuntary exposure to radiation and contaminate the local environment. Thus, the local populations are continually and increasingly deprived of the basic necessities for human life with ever more of them becoming nuclear victims. 6. We also reconfirmed that every stage of the nuclear chain contaminates the environment and damages the ecosystem, causing a wide array of radiation-related disorders in people and other living beings. Through the experience of the nuclear disasters at Chernobyl and Fukushima, we see that nuclear accidents inevitably expose entire populations living near the power plants and the workers assigned to cope with the accident to harmful levels of radiation, and that adequate response to such a disaster is impossible. We further see that radioactive contamination is inevitably a global phenomenon. We know that "military" and "industrial" nuclear power are intimately connected within a unified nuclear industry, and that every stage of the nuclear chain, including the use of depleted uranium weapons, creates large numbers of new nuclear victims. 7. Complete prevention of nuclear chain related disasters is impossible. No safe method exists for disposing of ever-increasing volumes of nuclear waste. Nuclear contamination is forever, making it utterly impossible to return the environment to its original state. Thus, we stress that the human family must abandon its use of nuclear energy. 8. We acknowledge that the Atomic Bomb Trial against the State of Japan (the Shimada Case; December 1963) found that the US military violated international law in dropping the atomic bombs, and that the advisory opinion issued by the International Court of Justice stated that "there exists an obligation to pursue in good faith and bring to a conclusion negotiations leading to nuclear disarmament in all its aspects under strict and effective international control" (July 1996). We support the Marshall Islands, whose people have suffered the effects of intensive nuclear testing, in bringing this issue back to the Court in April 2014 through filing cases against nine nuclear armed states. Furthermore, we recall the World Conference of Nuclear Victims which pursued criminal liability on the part of the nuclear weapon states and the nuclear industry (New York Resolution, 1987), and that the military industrial complex was found to have the responsibility of providing damages compensation (Berlin Resolution, 1992). In addition, we confirm that the International People's Tribunal on the Dropping of Atomic Bombs on Hiroshima and Nagasaki found all 15 defendants guilty, including President Truman (July 2007). 9. We emphasize that all states that promote nuclear energy, the operators that cause radioactive contamination, and the manufacturers of nuclear facilities including nuclear power plants must bear liability for damages done, as do their shareholders and creditors. We are gravely concerned that the export of nuclear power plants is extremely likely to result in severe human rights abuses and environmental damage. 10. We accuse the International Atomic Energy Agency (IAEA) and the International Commission on Radiological Protection (ICRP) of underestimating the harm done by radiation exposure and hiding the true effects of nuclear power accidents. We demand the abolition of the IAEA's mandate to "promote the peaceful use of nuclear power".
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11. We have identified that the military-industrial-government-academic complex and states that support it have, through the use of nuclear energy, degraded the foundations of human life, and violated the right to life of all living beings. We assert that the acts of members of this complex violate fundamental ---principles of international humanitarian, environmental and human rights law.

12. We condemn the Japanese government for failing to learn from the Fukushima disaster, without carrying out adequate investigations into the facts and impacts, hiding and trivializing the damage, and cutting off assistance to the victims, while investing in the restart and export of nuclear power plants. We oppose the building, operating or exporting of nuclear power plants or any industrial nuclear facility in Japan or any other country.

13. We call for the termination of uranium mining, milling, nuclear fuel production, nuclear power generation and reprocessing, and for the abolition of the entire nuclear chain.

14. We call for the urgent conclusion of a legally binding international instrument which prohibits and provides for the elimination of nuclear weapons.

15. We call for the prohibition of manufacture, possession and use of depleted uranium weapons.

16. With the momentum of this World Nuclear Victims Forum, we confirm our desire to continue to cooperate in solidarity and share information regarding nuclear victims, and disseminate our message through various methods including art and media.

17. Thus, as a result of this World Nuclear Victims Forum and in order to convey to the world the draft elements of a World Charter of the Rights of Nuclear Victims, we adopt this Hiroshima Declaration.

Draft Elements of a World Charter of the Rights of Nuclear Victims

[I] The Basis of Rights of Nuclear Victims

1. The natural world is the foundation of all life, and each human being is an integral member of the human family innately endowed with the right to partake in human civilization with equal rights to life, physical and emotional wellbeing, and a decent livelihood.

2. All peoples have the right to be free from fear and want, and to live in an environment of peace, health and security.

3. Each generation has the right to enjoy a sustainable society and the responsibility of effective stewardship for the benefit of the future generations of all living beings.

4. There exists the inherent dignity of the human person and the right of all peoples to self-determination as enshrined in the Charter of the United Nations, the rights to life, health and survival as stipulated in international positive law including the Universal Declaration of Human Rights, International Covenants on Human Rights, and the Declaration of the Rights of Indigenous Peoples, as well as exists the principle of international customary law which helps to shape the emerging "law of humanity".

[II) Rights

(1) To alleviate current and prevent future nuclear catastrophes, all persons living in the nuclear age have the right to demand the following:

1. Not to be exposed to ionizing radiation other than that which occurs in nature or is for medical purposes,

2. Prohibition of coerced labor involving potential exposure to ionizing radiation, and when labor involving such potential exposure cannot be avoided, for exposure to be minimized,

3. Minimization of medical exposure to ionizing radiation, and

4. Full, accurate information regarding the dangers of ionizing radiation exposure through school and community education; this information to include the facts that no level of radiation exposure is without risk and that children, women and girls are especially sensitive to radiation.

(2) Additionally, nuclear victims have the right to demand the following:

5. Nuclear victims have rights under domestic law derived from human rights and basic freedoms, including personal rights and the right to health.

6. To receive free of charge the best possible medical care and regular examinations for effects related to past, present and future exposure; this right to extend to the 2nd, 3rd and future generations.

7. An apology and compensation from the offending party for all damage to life, health, finance, suffering, and culture related to the use of nuclear energy.

8. The remediation of radiation contaminated land and domicile, and the renewal of community and local culture.

9. Thorough scientific investigation of the victim's exposure by competent scientists independent of the offending party, with all findings and information completely open to the public, and the victims themselves involved in the investigation and control of information.

10. To not be forced to return to radiation contaminated land, and for the freedom to choose whether to evacuate from or remain in a radiation affected area. And, no matter this choice, to receive support to minimize exposure to radiation, protect health, and maintain and rebuild a way of life.

11. To refuse to work in an environment where radioactive contamination could constitute a health threat, said refusal having no negative ramifications for the victim.

Tunnel with nuclear waste collapses in Washington state

SPOKANE, Wash. (AP) -A portion of a storage tunnel that contains rail cars full of radioactive waste collapsed Tuesday morning, forcing an emergency declaration at the Hanford Nuclear Reservation in southeastern Washington state.

Officials detected no release of radiation and no workers were injured, said Randy Bradbury, a spokesperson for the Washington State Department of Ecology.

There were no workers inside the tunnel when it collapsed. But nearby Hanford workers were evacuated and others who were farther away were told to remain indoors, the U.S. Department of Energy said.

The accident occurred at a facility known as PUREX, located in the middle of the sprawling Hanford site ,which is half the size of Rhode Island, Bradbury said.

Hanford is located near Richland, about 200 miles southeast of Seattle.

The closed PUREX plant was part of the nation's nuclear weapons production complex.

Hanford for decades made plutonium for nuclear weapons and is now the largest depository of radioactive defense waste that must be cleaned.

It contains about 56 million gallons of radioactive waste, most of it in 177 underground tanks.

Bradbury said the collapse occurred at one of two rail tunnels under the PUREX site.

In the past, rail cars full of radioactive waste were driven into the tunnels and then buried there, he said.

Hanford has more than 9,000 employees.

The site was built during World War II and made the plutonium for most of the U.S. nuclear arsenal, including the bomb dropped on Nagasaki, Japan, at the end of the war.

486		Title of newspaper article: Montana authorities learning how to respond to nuclear theft Associated press Great Fall, Mont. - Montana law enforcement agencies are learning how to respond to an attack on a nuclear weapons convoy, a scenario that nuclear weapons officials say gives then nightmares. To date, there have been no attacks on convoys, but the agencies say they are prepared. Local authorities have been put on notice they could be the first to respond to any incident that occurs off base at Malmstrom Air Force Base or away from guarded nuclear sites, and federal officials want to be sure they are ready. About 15 local, state, tribal and federal agencies joined Malmstrom airmen recently for an exercise and a demonstration of how security forces airmen would response to a simulated attack on a convoy. The exercise involved a simulated attack on the transfer of nuclear weapons to a missile launch site. Stan Moody, Malmstrom's security plans and programs manager, said a presidential order requires an integrated force of federal and local agencies for any nuclear incident response plan to "handle our worst day." Col. Jay Folds, Malmstrom's vice commander, said the partnerships are working well. "We've got confidence in what we do," he said. Col. Ron Allen, 341st Missile Wing commander, told the participants that if there was a situation where the Air Force units were trying to stop an armed attacher, local agencies may be called on to control crowds and handle civilians. Capt. Jeff Newton of the Great Falls Police Department said his agency has had a good working relationship with federal agencies for the last five years, the Great Falls Tribune reported. Each agency has a role to play, and building the relationships ahead of time is critical, officials say. Senior Airman Patrick Currie, a member of the 741st Missile Security Forces Squadron Convoy Response Force, said all agencies are learning how to respond and their responsibilities. "It's important to all be on the same page," Currie said. "We reply on them just as much as they rely on us."
486	Ex. 6 Personal Privacy (PP)	Please add these comments to the record. Hi Seth, I spoke with you briefly before the hearing started yesterday. Your line is today's report is not necessarily true "The uranium would be sold, processed and used elsewhere to produce nuclear energy." Once the uranium leaves the US border, there is no control over what, where, to whom it goes. Azarga is a huge international company who's purpose is to sell uranium to the highest bidder. Some country may buy it for a nuclear power plant; some group may buy it for bombs and even Azarga may not know; it just is a money transaction.
00500, 00501		Dear Sirs, Yesterday I printed off the 151 page EPA summation entitled "Draft Cumulative Effects Analysis of the Dewey-Burdock Uranium in-situ Recovery, Underground Injection Control Area Permits" and took most of the day to read it because I wanted to be as fair as I could be about this process. The report painted a rather benign picture of the mining process ending with kudos for the small carbon footprint left by the power plants that produced the electricity from the enriched uranium. Not mentioned was the enormous amounts of electricity required to isolate U234, U235 from U238 generated by coal or gas fired power plants but more importantly the toxic products of this process that we are creating with no safe place to put them. The entire nuclear industry has left behind a toxic nightmare that has to be dealt with and has been systematically ignored and made the responsibility for a future generation. [...] What I see is the worst part of this question though is that the mining phase is just the start of a horrifying development that results in ever more toxic next phases of the uranium story. The UF6 leaks in the separation phase, the electrical generation using the enriched/blended U235, the military uses that have poisoned countless people worldwide from the fallout and bio-accumulation of radioactive nuclides especially Cs137, Sr90, 1131, Pu239 et.al. producing cancers; such as, lymphoma/leukemia, bone, pancreatic, liver, lung, brain, colon, skin and breast which has seen dramatic increases after the 1300 open air nuclear tests. Exploding nuclear power plants like Three Mile Island, Chernobyl and now Fukushima which is an ongoing disaster that won't be stabilized for 40 to a 100 years and continues to gush l00's of tons of radioactive water into the Pacific every day ultimately biologically magnifying into the fish and the humans that eat them. Cancer rates in Japan are just now becoming apparent as we see children being affected by what is referred to as Chernobyl heart disease caused by cs137. We have our own Fukushima potentially waiting for us at the Indian Point reactor just above NY City also subject to the effects of an earthquake. Given the artificially extended lives of our aging nuclear power plants are more such events going to happen? It is just a matter of time before we find out. And now we have high level nuclear waste with no place to go. Oh, yes of course we have Yucca Mountain which will be a disaster because it is not sealed off from water incursions. But we would have to have dozens of Yucca Mountains to take care of all the waste sitting around just the 104 nuclear reactors in the United States. And then it has to be safely transported. The American build sheet metal casks that last about 30 years but the German build cast iron ones seem to last much longer and don't seem to crack with age for onsite storage. And don't leave out the military uses of course. The Nagasaki/Hiroshima experiment is still with us as are the depleted uranium (U238 without the U235} particulates being enjoyed by the Iraqi people to the point where they are afraid to have children in some places. The high level waste from WWII is still sitting in giant pools and with time leaking into the Columbia River. And now "we" want to invest a trillion dollars in making nuclear weapons over a 30 year program to make them more user friendly. We have made a Faustian bargain with the Devil by creating problems no one will be able to solve and in the process engaged in a collective death wish that might be granted earlier than we thought with the present administration filling agencies at the top with administrators who are ignorant and hostile to their missions. Like the people on the trains to Auschwitz we have to ask ourselves "where are we going?" before it is too late.
		My name is Ex. 6 Personal Privacy (PP) I moved to Hot springs in 2002 because of the abundant clean, pure spring water here. I moved from Colorado after spending my childhood in Breckenridge. Co. I moved to Golden, Co and then to Boulder, CO in the 1970's. I became involved With the Rocky Flats Truth Force, a group of people who wanted the truth about the Rocky Flats nuclear weapons plant to be exposed.

504	Ex. 6 Personal Privacy (PP)	I watched friends who got high paying jobs at Rocky Flats right out high school turn yellow than green, then gray and then they died. The whole time the information coming out of Rocky Flats was the levels of radioactive were safe and below normal ranges. In the 1983, I took my 18 month old daughter to a protest on the ground above the underground plant. A few years latter when the plant was closed due to radioactive contamination and the EPA came in to clean up the underground plant and the plans for the ground above was for an open space. The EPA found the levels of radioactivity were so high the ground was not even safe for day use and it stands empty and fenced off to this day. I drove from Golden to Boulder when I was attending CU and went right by Rocky Flats. I always thought as I was passing I would just hold my breath. While attending CU I was an art major with my focus on Pottery. In the glaze room where I formulated glazes form mineral powders there was a large jar with a skull and cross bones and a sign, vanadium oxide. It was a beautiful yellow and I experimented with it. Today I know that vanadium is radioactive and I carry that in my body today. I am in the 97.5 percentile for vanadium. In the 1970, one of the many geology classes I took in college, was paleontology. We took a field trip to an old limestone quarry right across the highway from Rocky Flats. We were digging in the radioactive limestone for marine fossels. People believed that this was safe. I carry uranium in my body today. I am in the 95 percentile for uranium. In the 1960 and 70's the public was not educated about radioactivity and believed the propaganda mining, power and weapons industry fed them. Today it is different and we know the dangers of radioactivity. It's ironic, that the picket signs for Rocky Flats nuclear weapons plant I painted were "Don't kill me before the enemy". None of the nuclear bombs made at Rocky Flats have been use against any enemy. The radioactivity released in making all those bombs still contaminates the earth and many of us who lived there.
519		Despite the importance of these issues in the local region and the permanence of impacts resulting from any uranium mining, this is not just a local issue. Any uranium mined under these permits would be shipped to facilities in Illinois and/or Ontario for enrichment, and the byproducts would be shipped to the White Mesa mill site in Utah. And, of course, further enrichment, production of electricity or weapons, and waste disposal would impact additional areas of the country – and potentially the world. Powertech is a multinational corporation based in Canada, and the resulting uranium could be shipped abroad. It is thus important to all of our organizations to oppose these permits and aquifer exemption.
07459 (Valentine hearing)		ANDREW BLANCHFLOWER: Thanks for holding this space. I'm not sure if it makes much difference, this whole process, but mostly I just wanted to register my opposition to this proposal that this corporation is wanting to do because, even if it is completely safe, it's uranium. It's not -- it's not safe. It makes bombs or it makes nuclear power, and we still don't know how to deal with nuclear waste.
07459 (Valentine hearing)		KATHY CHAUNCEY: My name is Kathy Chauncey. I live up at Mission on the Rosebud Reservation, and my sister lives out to Edgemont at the other end of the area that this lady that was just speaking was talking about. She has a ranch, and she has -- you know, she's been, you know, trying to get the cleanup going around her area where her land is. She has now grandchildren there. It's a third-generation property. I know Pine Ridge has a lot of reservations. You see the problems with Brazil, their meat was bad. And now you're also destroying the livelihood from Pine Ridge, Rosebud, and the people that live out where you're going to have this mining. And it's not really mining because we're, as we -- as I understand it, it's going to go to the foreign countries that are making weapons to use against us.
07459 (Valentine hearing)		And we stand on the treaty, and we ask that -- not just oppose it, but also the U.S. needs to go back and tell President Trump to stay away from things that will hurt the Mother Earth. We're heading into fossil fuels. We have pipelines coming -- going through the U.S., and nuclear energy. These are all negative. They have -- they can destroy our earth. And I ask you to tell the President to look at renewable energy and go away from these things that are destroying our -- our environment. We need to stop the U.S. from going in that direction.
7460 (5/8 Rapid City hearing)		I remember old Paul Harvey years ago -- thank God he's passed on -- he used to come up and bless the nuclear power industry every day. Cheapest, cleanest power there ever was. But he didn't tell us the rest of the story. And that was, when we developed nuclear power, after we tore the hell out of part of Japan with the atomic bombs. We decided we needed power -- nuclear power for peace. Hell, they were even talking about blowing up mountains to get at whatever they needed under there. So the United States government decided to give all the goodies and the money and the power and the profits to the nuclear power industry. But the waste and the hell that it's caused in getting this power was to be borne by the government. We take power. We take waste from around the world. We're still taking waste. We don't know what the hell to do with it. We come up with all kinds of things. Carlsbad, New Mexico, I've been there. Out in Nevada, I've been there. These people who've got the companies in their backyard want that waste the hell out of there. And maybe this new concept of extra wells, we can't trust corporations. I'd like to trust my government, but I can't because they've let the companies get their wish far too often. Mussolini described fascism, and I remember World War II well. He described fascism as when your government has been bought and paid for by the corporate powers. That's something we better think about if we want to keep this republic healthy and responsible. [...] I don't care how well educationed you are -- educated you are. I rode horses to school for eight years, then I went four years to a Catholic school in town here. As far as I got with being smart. But it's been a fight ever since to survive, against government policies, to stop making more war, uranium, we're making weapons that we're using in Iraq. We used them, depleted uranium. What the hell's the matter with us? We've screwed up the life for millions of people. [...] But I hope you listen, and I hope, I pray that you get some real backbone. This state is just coming out of the Dark Ages. We have to, we have to get better at what we do and respect the people, not to put government power in corporations. Thank you.

7460 (5/8 Rapid City hearing)		The entire nuclear industry has left behind yet a toxic nightmare that has to be dealt with and has been systematically ignored and made a responsibility for the next generation.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	RODNEY KNUDSON: Yeah, okay. What I see is the worst part of this question though is that the mining phase is just the start of a horrifying development that results in ever more toxic next phases of the uranium story. Uranium hexafluoride leaks in the separation phase, the electrical generation using the enriched/blended uranium-235, military uses that have poisoned countless people worldwide from the fallout and bio-accumulation of radioactive nuclides, especially cesium-137, strontium-90, iodine-131, plutonium, et al., and others, producing cancers, such as lymphoma/leukemia, bone, pancreatic, liver, lung, brain, colon, skin, and breast, which have been dramatic -- which have seen dramatic increases after the 1300 open-air nuclear tests. Exploding nuclear power plants, like Three Mile Island, Chernobyl, and now Fukushima, which is an ongoing disaster that won't be stabilized for 40 to 100 years and continues to gush hundreds of tons of radioactive water into the Pacific every day, ultimately biologically magnifying into the fish and the humans that eat them. Cancer rates in Japan are now just becoming apparent as we see children being affected by what is called a Chernobyl heart disease caused by cesium-137. We have our own Fukushima potentially waiting for us at the Indian Point reactor just above New York City, also subject to the effects of earthquakes. Given the artificially extended lives of our aging nuclear power plants, are more events going to happen? It is just a matter of time before we find out. And now we have high-level nuclear waste with no place to go. Oh, yes, of course. We have Yucca Mountain, which will be a disaster because it is not sealed off from water incursions. But we would have to have dozens of Yucca Mountains to take care of the waste that's sitting around just the 104 nuclear reactors in the United States. And then it had to be safely transported. The American-built sheet metal casks that can last about 30 years, but the German-built cast iron ones seem to last much longer and don't seem to crack with age. Don't leave out the military uses, of course. The Nagasaki/Hiroshima experiment is still with us, as are the depleted uranium particulates being enjoyed by the Iraqi people to the point where they are afraid to have children in some places. The high-level waste from Word War II is still sitting in giant pools and, with time, leaking into the Columbia River. Now we want to invest a trillion dollars in making nuclear weapons over a 30-year program to make them more user-friendly. We have made a Faustian bargain with the Devil by creating problems no one will be able to solve and, in the process, engaged in a collective death wish that might be granted earlier than we thought with the present administration filling agencies at the top with administrators who are ignorant and hostile to their missions. Like the people on the trains to Auschwitz, we have to ask ourselves, "Where are we going?" before it is too late. Thank you.
7460 (5/8 Rapid City hearing)	son	We know that uranium is used for a few things, namely nuclear power plants and nuclear weapons. We also know that Fukushima has been covered up, but it stands to contaminate the whole western hemisphere. And we have uranium mines all over in every country. [...] All over the world -- Chernobyl -- mutations, cancers, leukemias, and death, because of one power plant. And everything humanity does can break down and fail, and science is not the answer. [...] Those of you that don't live here and a company that's foreign, why do we need more uranium? We need nothing more that has to do with uranium. We're playing with fire. And it's so interesting to me that Native Americans came and told the world leaders, "Don't ever dig up uranium. Don't bring it to the surface because you can't control it." That's true today. Nuclear waste sites, Hanford, all over this country, there's no way to guarantee anything. I'm pissed, but we're going to fight.
7460 (5/8 Rapid City hearing)		And for the people, it is a health concern that you heard. We're facing radiation fallout right now from Fukushima Daiichi, you know. [...] When the tsunami hit those reactors at Fukushima Daiichi and created that -- probably extinction-level event now, that everybody is either sleeping or -- what can we do? You know, so it's right along with anything that radiation does.
7460 (5/8 Rapid City hearing)		My third concern is the assumption that ISL uranium mining will contribute to clean energy. In 2002, the Bush/Cheney administration's Nuclear Power 2010 Program provided large subsidies for a handful of Generation III+ demonstration plants. The expectation that these nuclear power plants would be built and come online by 2010 has not been met. Azarga/Powertech has also stated that the company would like to sell uranium oxide on the world market, especially to the BRIC nations, Brazil, Russia, India, and China. Nearly all of the reactors that have been built or under construction in these countries are light-water reactors. The hope that breeder reactors would replace light-water reactors and that more economic means of reprocessing spent fuel would be developed has not been realized. At present, it is generally found to be cheaper to mine new uranium, which is then used in a once-through process that creates spent fuel, the radioactive waste that is considered to be the Achilles heel of nuclear energy. The nuclear industry uses uranium in the least efficient way and is fraught with dangerous waste and high costs associated with construction, operation, repair, decommissioning, and cleanup after accidents. Various agencies have tried to estimate -- [...] KIM KELLEY: The estimated length for primary sources of uranium, assuming a once-through cycle, is said to be 42 years. Thus, in order to provide nuclear power for a period ending during the lifetimes of many alive today, we leave permanent potential increased contamination of soils, river systems, and aquifers. Throughout our human evolution, humans have discovered, developed, and abandoned myriad energy sources, whale oil among them, notoriously. If we run out of our -- if we run out of or choose to stop using oil, coal, natural gas, or uranium, we can make use of many other energy sources. There are no alternatives to water.
7460		We're not exactly ready to ditch modern sources of energy and move on, but people are innovating and finding new ways to do things.

(5/8 Rapid City hearing)		Uranium is used for energy and weapons. Nuclear energy we already know is risky. Look at Chernobyl in Russia, and see how long that place has been closed off. These are long-term problems, and when they happen, it's over.
7460 (5/8 Rapid City hearing)		This will be a sale to somebody who's going to do something we probably aren't going to like. The Russian involvement comes from a company called Energy Metals Corporation, which had hundreds of thousands of leases around the American West for uranium mining and for oil and gas exploration. And it was bought by Uranium One, which is Vladimir Putin's wholly owned Russian uranium mining company. You can read about this on the front page of The New York Times on April 23rd, 2015. But the bottom line is that Mrs. Clinton, when she was Secretary of State, allowed him to buy that, and in the process of this, they got hundreds of thousands of acres of mineral leases around the West that they now own. And they are going to mine uranium, and they are going to process it, and then they are going to ship it out of the country. And when it gets out of the country, it may end up in places like North Korea, Iran, Pakistan, you know, some places that we can't control very well and that we're now genuinely afraid of. So this whole thing has national security issues.
7461 (5/9 Rapid City hearing)		I know you guys are all smart people, you know. You have scientists and all coming in. This is not, you know, brain surgery, rocket scientists or whatever, and that's what they're going to use it for. And that's the other thing is, this is a China-based company. You don't know where that uranium is going to go. Once it's out of the Black Hills, it's going to go to China. We're going to have another Fukushima on our hands. [...] In the news, I -- don't know if anybody seen this yet, but emergency -- just today, emergency declared at nuclear contaminated sites in Washington state where underground containment system, it fell through.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	CAROL MERWIN: I'm Carol Merwin. And I was at home thinking I was going to clean up my house and get the paper out of there. In my white privilege thought, well, the Native people and the Audubon and the Sierra Club and Dakota Rural Action and the Clean Water Alliance will take care of it. And then I heard on the radio that at Hanford, Washington this morning, there were rail cars crushed in by a tunnel collapsing. So more of the radio- -- the uranium waste is coming out again. And I thought, I have to come. So with that paper that I was getting rid of this morning, I have articles that are all from the Rapid City Journal, not one of them is even a year old, and I just want to read a little bit of each one. There is no safe place to store uranium waste and I don't want uranium weapons. And since there's no safe place to store it, I don't see that it can be used for anything except maybe medical purposes. And you have to be really careful with that. So, "Study Raises Uranium Concerns": Abandoned uranium mines are contributing to elevated uranium levels in Angostura Reservoir in the southern Black Hills. Ripples from nuclear plant closings overwhelm towns. "We have become a de facto nuclear waste dump. It just sits there and sits there for ever." This is the mayor of Zion, Illinois, a quote from him. Montana authorities learning how to respond to nuclear theft. No control whatsoever. Uranium miner agrees to fix sludge leaks. This is: A uranium mining company has agreed to corrective measures after two spills of radioactive sludge. Cheyenne, Wyoming.
7461 (5/9 Rapid City hearing)		And I'm also very concerned about the shipping of it outside into the national -- international market because of North Korea, China, and the threats. I have more, but I'll stop.
7461 (5/9 Rapid City hearing)		JERRY MEYER: Okay. First of all, my name is Jerry Meyer. I'm 68 years old; born in North Central South Dakota; lived in the Black Hills area most of my of life, since 1966. I've been through this process before 40 years ago when uranium mining was initially being proposed for this Black Hills area. I opposed it then, I oppose it now. I worked for 30 years as a social worker. In graduate school I learned the value of thorough and complete assessments, and my assessment of the value and the worth versus the risk and the harm to our environment from uranium mining in general is not worth it. And secondly, for these two draft exclusions, I guess, one for hazardous waste disposal, I believe, and the other to continue mining, I'm adamantly opposed to. There were a couple of speakers yesterday who talked about one young woman who either worked for or attended the School of Mines, saying she supported nuclear power because it was clean energy but was opposed to uranium mining, which is a contradictory statement in my view. But it's clean energy that leaves nuclear waste, which our world has not yet figured out how to dispose of in an effective and safe manner. So we have places like Hanford Nuclear Facility, where I think it's nuclear weapons waste that is being stored that has leaked, and today one or two other people mentioned that. One of the storage tunnels housing railroad cars full of nuclear waste collapsed. And I know that Hanford site has had contaminated water leak into the groundwater in that area as well as into the Columbia River in the past. So a result of nuclear weapons production. In addition, nuclear weapons are used to kill a lot of people as evidenced by Nagasaki and Hiroshima in Japan. The damage that can be done by nuclear power facilities is demonstrated by, in this country, Three Mile Island some many years ago in the eastern U.S., Chernobyl on the Ukraine-Russian border, and most recently by the Fukushima Daiichi disaster, the result of a nuclear power plant being destroyed via a -- I think a tidal wave or a hurricane or something like that. [...] In addition, when he first started mining, it was a South African company that owned the mineral rights and did the mining. That changed, I think, three times during the time he had been there, two where Uranium One now is the primary owner of the mining that occurs on his property. And Uranium One is 94.3988 percent owned by Rosatom, a major Russian corporation, energy corporation and development, confirming my fears that Vladimir Putin is indeed, according to one of our Dakota Rural Action members who was from Belarus and is a freelance journalist, wanting to have Russia dominate control of nuclear energy production and nuclear weapons production. So I feel that by us supporting international corporations to do this kind of work, for one thing, pollutes our local water tables, aquifers, surface water through disposal and injection; and gives foreign corporations, who seem to be fly-by-night, the opportunity to capitalize and, in the case of Russia, dominate maybe worldwide this scary type of energy development and weapons development. Thanks for listening.
7461		JERRY MEYER: Jerry Meyer.

(5/9 Rapid City hearing)		Two young women yesterday talked about -- one of them -- that she felt nuclear power was a good thing. I talked about that earlier, why I don't think it is. [...] Regarding nuclear contamination due to either weapons or nuclear energy development, I have here -- and you have of a copy of it -- a draft, "Elements of a World Charter of the Rights of Nuclear Victims." And it's a Declaration of the World Nuclear Victims that came about at the Declaration of World Nuclear Victims Forum in Hiroshima on November 23, 2015. And in that declaration, they talk about that they have, "reconfirmed that every stage of the nuclear chain contaminates the environment and damages the ecosystem, causing a wide array of radiation-related disorders in people and other living beings. Through the experience of the nuclear disasters at Chernobyl and Fukushima, we see that nuclear accidents inevitably expose entire populations living near the power plants and the workers assigned to cope with the accident to harmful levels of radiation, and that adequate response to such a disaster is impossible. "We further see that radioactive contamination is inevitably a global phenomenon. We know that 'military' and 'industrial' nuclear power are intimately connected within a unified nuclear industry, and that every stage of the nuclear chain, including the use of depleted uranium weapons, creates large numbers of new nuclear victims." Just one more statement from that draft I want to read. "We condemn the Japanese government for failing to learn from the Fukushima disaster, without carrying out adequate investigations into the facts and impacts, hiding and trivializing the damage, and cutting off assistance to the victims, while investing in the restart and export of nuclear power plants. We oppose the building, operating, or exporting of nuclear power plants or any industrial nuclear facility in Japan or any other country. "We call for the termination of uranium mining, milling, nuclear fuel production, nuclear power generation and reprocessing, and the abolition of the entire nuclear chain."
7461 (5/9 Rapid City hearing)		In today's paper it was talking about yesterday's hearings, and one of the things -- lines it said is that uranium would be sold, processed, and used somewhere else to produce nuclear energy. And that's not true. Once the uranium leaves the U.S. border, there is no control where -- to whom and where it goes to. Azarga is a huge international company whose purpose is to sell uranium to the highest bidder. Now, some company may buy it for a nuclear power plant, but some group -- and we have no idea who -- may buy it for bombs. And even Azarga may not know. It's just a money transaction. And we don't know where this stuff goes to once it leaves our borders. I'm also concerned about the process, part two. And I know we haven't -- we've talked more about the front end of the pollution. But as the yellowcake is obtained, processed, and stored, and then eventually shipped to the border, what security is there that some whacko doesn't throw a bomb at it and blow up the storage unit or blow up the truck that's going to the border? And if that were to happen, that would just be devastating. And so what -- what guarantees do we have that that's not going to happen? What kind of security is there?
7461 (5/9 Rapid City hearing)		And you also can get into thermonuclear global war, a nuclear winter that cured global warming -- I'm joking, okay -- or just depleted uranium and munitions scattered all over the war zones of the world.
7461 (5/9 Rapid City hearing)		HAROLD FRAZIER: Thank you. You know, we've -- we Indian people, Lakota people, we look at the water as life. And we know that it is life, and it needs to be protected. What is the purpose of this uranium? Is this uranium going to be given to North Korea so they can bomb our people? There's a lot of questions that need to be answered. Why all of a sudden there's interest in uranium. What is Trump up to?
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	You know, that bomb, whatever, blew up over there [at Fukushima], that's contaminating that water. And it's coming, and everybody is going to be affected by that contamination of that water. That's what you guys are proposing here against our own people.
7462 (Hot Springs hearing)		My other concern, I am active with veterans. I'm a life member of the VFW and American Legion Auxiliary. And I'm concerned about our vets because I don't really believe this uranium will be used for a nuclear plant. I believe our men or women are going to face it in a nuclear attack or something like this. And so I'm not interested in letting a foreign company take any of our natural resources to use against us. So thank you.
7462 (Hot Springs hearing)		JACKIE GERICKE: My name is Jackie Gericke. I, my husband, and two small children moved from Ocean County, New Jersey to Hot Springs, South Dakota 25 years ago. Before we moved, we didn't check the local business climate, we didn't check out the schools, we didn't seriously investigate the housing market. Although I had a three-month temporary position, we didn't even have permanent jobs. We moved here for the beautiful night sky, for the clean air, and especially the clean water. You see, where we moved from, our local wells had become contaminated. Luckily, there was another source of water. It was the Cohansey aquifer. All of our relatively shallow wells were mandatorily capped, and a municipal water system was hurriedly installed. Problem was, I felt that it was only a matter of time before the aquifer itself was contaminated, and there was only sand between the wells and the new municipal water source. Another environmental issue that caused us to leave our home was the fact that we lived only a few miles from the Oyster Creek nuclear power plant. It's been clearly shown that there are much higher rates of cancers among people who live and children who are born near nuclear power plants. While there, we were involved with what is known as the Tooth Fairy Project, where researchers collected children's baby teeth to measure the amount of radioactive strontium-90 that was contained within those baby teeth. Strontium-90 is emitted by power plants, nuclear weapons testing, fallout, and other sources of radiation. Because it so resembles calcium, the body is fooled into depositing it into bones, in children's baby teeth where it forever emits radiation. The children in our county showed a statistically significant higher amount of radiation in their teeth than children in other areas.
7462 (Hot Springs hearing)		JOSEPH FARRELL: Hello. I am Joe Farrell. I'm a licensed Wisconsin master plumber. I have a plumbing contractor's license in this state. I was a licensed well pump installer in the state of Wisconsin. So that people don't engage in ad hominem arguments, I have worked in nuclear power plants. They are one of the safest places you work because if you make a mistake, the results are catastrophic. So I have a lot of respect for how dangerous nuclear power is.

		I'm not philosophically opposed. I just think there's got to be better alternatives, given the fact that they still haven't figured out what to do with the waste and because it's so dangerous, you have to work so carefully around it, so as not to really create another Chernobyl.
7462 (Hot Springs hearing)		LISA WOLF: Greetings. Thank you. I sent in a written statement by e-mail, but I had to speak when I heard comments about how safe nuclear power and nuclear waste are. I'm the chairwoman of a Nevada nonprofit called the White Buffalo Nation. We are dedicated to mending the Sacred Hoop of Life. My youngest daughter was born in a barn in the straw in Wisconsin near where Miracle had been born in 1996. And I came to South Dakota the end of February to help with the reestablishment of Oceti Sakowin traditional government. I do a radio program I've been doing since -- well, Standing with Standing Rock, Savage Sovereignty, and Water Protectors we've been doing since August because this is Lakota, Dakota, Nakota land. Today as we -- as you consider permitting the request of Powertech/Azarga, the West Lake Landfill is on fire underground in Montana. The Hanford Nuclear Site in Washington state has seen a tunnel collapse. According to my friend Bob Nichols of Veterans Today, Your Radiation This Week, we are at evacuation levels for radiation pretty much across North America as itis. In fact, Pierre -- Pierre, South Dakota is reading at 7,929 counts per minute, and I believe safe levels break off at 100. This is from EPA data, by the way. So one of the things that we've been focusing on on my radio program, which is titled Utopian Realities: From Concept to Planetary Restoration/S.L.O.P.E. Earth Aid Now, is solutions to extinction-level threats. We feature scientists, such as Professor John Searl, Searl Effect Generator, reenergy, radiation remediation. We feature people who have products that bioremediate the body to drop heavy metal toxicity. And now I live in Hot Springs, and I've been getting water -- I was getting water from Cascade Springs. And then Susan Henderson told me that, as far as she knew, it was radioactive. So I spent the morning on the phone with the USGS and found in fact that there are showing to be high levels of strontium. And then it was suggested to me that I reach out to friends from Pine Ridge and Wounded Knee and ask that there be a Standing Rock-style encampment in Edgemont. And then I was told by another person that that wasn't wise because the airborne radiation there from those open boreholes and the uranium mining that's already happened is so high that it's not safe. So I would ask the Environmental Protection Agency to be matriotic, to love this land, and to put your time and your energy and your money into supporting alternatives, into supporting healing the earth, instead of supporting a death machine and a death culture. There's no need, and it's time to tell people what's really going on. My friends who are scientists laugh at the thought of nuclear power plants and how ridiculous it is to cause so much damage to boil water to make power. [...] LISA WOLF: When we all know that those materials ultimately are for weapons of destruction. Let's support life. Thank you.
7462 (Hot Springs hearing)		It is therefore prudent to consider the purpose of the uranium operation, which is obvious: Feed the nuclear industry, which feeds the nuclear threat of water contamination. That's what they're going to do with this uranium.
7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	SARAH PETERSON: My name is Sarah Peterson. I moved to Hot Springs in 2002 because of the abundant clean, pure spring water here. I moved from Colorado after spending my childhood in Breckenridge, Colorado, and I moved -- Breckenridge, Colorado. I moved to Golden, Colorado, and then to Boulder. In the 1970s I became involved with the Rocky Flats Truth Force, a group of people who wanted the truth about the Rocky Flats nuclear weapons plant to be exposed. I watched friends who got high-paying jobs at Rocky Flats right out of school, they turned yellow, then they turned green, then they turned gray, and then they died. The whole time, the information coming out of Rocky Flats was the levels of radioactivity were safe and below normal ranges. In 1983, I took my 18-month-old daughter to a protest on the grounds above the plant. A few years later when the plant was closed due to radioactive contamination, the EPA came to clean up the underground plant and the plans on the ground above was for an open space. The EPA found the levels of radioactivity were so high, the ground was not even safe for day use, and it stands empty and fenced off to this day. I drove from Golden to Boulder when I was attending CU. I went right by Rocky Flats. I always thought as I was passing I would just hold my breath. While attending CU, I was an art major with a focus on pottery. In the glaze room, where I formulated glazes from mineral powders, there was a large jar with a skull and crossbones on it and a sign, vanadium oxide. It was a beautiful yellow, and I experimented with it. Today I know that vanadium is radioactive, and I carry that in my body. I am in the 97.5 percentile for vanadium. In the 1970s, one of my many geology classes I took -- I took in college, we went on a field trip. I was in paleontology. We took a field trip to the old limestone quarry right across the highway from Rocky Flats. We were digging in the radioactive limestone for marine fossils. People believed that this was safe. I carry uranium in my body today. I am in the 95th percentile for uranium. In the 1960s and '70s, the public was not educated about radioactivity and believe the propaganda the mining, power, and weapons industry fed us. Today it is different, and we know the dangers of radioactivity. It's ironic that the picket signs I used to -- the picket signs for Rocky Flats nuclear power plant I used to paint were, "Don't kill me before the enemy." None of those nuclear bombs made at Rocky Flats have ever been used against any enemy. The radioactivity released -- the radioactivity released making all those bombs still contaminates the earth and many who live there. I have been an organizer for a group of citizens in the Southern Hills working to educate the people of Fall River and Custer County about radioactivity, uranium, and the in-situ leach mining. I am handing in documentary and hydrology testimony from the NRC hearing, and I'm also submitting you my tests, my hair tests, that show all the heavy metals and radioactive element levels.
07463 (Edgemont hearing)		As a young man, I lived a few years in Utah where I had to comfort a roommate from St. George, Utah, who lost a 19-year-old brother to cancer. Children there used to write their names in the nuclear fallout dust covering automobiles. A July 2017 eleven-page special report to The Oregonian printed there were an estimated 400,000 atomic veterans ordered to be nuclear guinea pigs under or near atomic test blasts and the reluctance of government experts to acknowledge ongoing health problems. Salt Lake's Deseret News spent years documenting the culture of insensitivity and denial of first the Atomic Energy Commission and then the Nuclear Regulatory Commission, a cosmetic change that made little actual difference.

		More recently, I knew a Rapid City, South Dakota photographer who loved vacationing in the beautiful Utah areas with the aftereffects of hundreds of uranium mines and nuclear tests. He died of cancer. I could not resist picking up a copy of the book titled, The Day They Bombed Utah by John Fuller. The list of nuclear problems and losses is mind-numbing. These countless examples demonstrate an ongoing culture of denial and insensitivity that carries forward to this day.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	EILEEN OHLIGER: Hello, my name is Eileen Ohliger, and currently I'm residing in Hot Springs, South Dakota. Previous to this time I've sent in written comments to you guys, and I would like you to just know that I don't support this. And the reason being, I'm originally from New Jersey. And being from New Jersey and seeing what has happened with the pollutants with, like, Oyster Creek with the nuclear plant, having friends at home currently that have issues, that -- I have a friend that recent- -- that currently lives outside of where the plant was, in what is considered a Superfund area that has been cleaned up. His dogs go outside and they still get blisters on their feet. There's loads of people that have cancers. What I have seen coming from the east coast and coming from an area where there -- they supposedly, you know, the EPA come in and cleaned up, I've seen oil spills, I've seen things with the nuclear plant. I have -- I'm in this area for a reason, because this is a very clean, pristine -- and the water here is very clean.
07463 (Edgemont hearing)		Nuclear energy is not carbon-free. Remember that these regulations are only as safe as the people that are using the regulations and doing them well and doing them perfectly.
07463 (Edgemont hearing)		My husbands and I lived for quite some time in eastern South Dakota in a little town called Brandon. Well, it's not so little anymore. But anyway, they had a nuclear power plant right on the edge of the Sioux River. When they turned it on, they turned it off immediately because it melted down. There still are no trees growing there. There is no grass growing there. The river is polluted. There were a lot of people just south of where that power plant was who died from cancer. My daughter was born there, and we lived there for three years until she was three. When she was 22 years old, she had to have a hysterectomy because she had cancer. [...] Now, who's going to buy this uranium you're wanting to dig up? What's going to happen to it?
07463 (Edgemont hearing)		MARY HELEN PEDERSON: My name is Mary Helen Pederson. I do not live in Edgemont anymore, but 61 years ago I came over here from the Rosebud to go to school at the high school here. I lasted one semester. Because when I come over here, I thought, I got to wondering, What in the world is going on here? What's wrong with this sky? It's not clear. It's -- it's -- I don't know. And then I found out that there was uranium all around here. So I spent my lifetime checking out on scientists and stuff that have studied uranium, and I found out that one of the biggest uses for uranium was to have -- to make bombs and stuff with it, and what devastation they could -- they could prove. A person -- innocent people couldn't even have a chance for life. They would be killed. Actually, they would be melted in just a few seconds. We proved that with the Japanese people. I don't think we're any stronger than they are.
07463 (Edgemont hearing)		Why take the risk when you have so many alternative energies? heard one gentleman say, you cut down wind because it kills birds. Well, that's been fixed, too. They made them bigger and slower so they don't kill birds. You know, solar, well, it's got so cheap everybody can afford solar. There's so much power in the sun that will power everything for 36-, 40,000 years. Okay. You got those two things down. You can find out about those. What about magnetic? We have -- we have, you know -- we have a gravity pull that's so much magnetic power in this earth that's untapped. And it's very safe. All these other, the geothermal, all these different kinds of alternative energies that we have at our disposal that Mother Earth has created that's brought for us to live, to enjoy. We don't need to go underneath the ground.
07463 (Edgemont hearing)		SYLVANA FLUTE: (Speaking in indigenous language.) Good afternoon. I greet all of you with a good heart. I am Sylvana Flute of the Sisseton Wahpeton Oyate from northeast South Dakota. These are my nephews. We are members of the Oceti Sakowin, Seven Council Fires of the Dakota, Lakota, and Nakota Nation. I walk in both worlds as a Dakota with a drop of a wasichu French blood. I am an indigenous person of North America. I am a human being. I am a mother, a grandmother, and a life-giver. I come to help protect all our future generations. I come to remind you there is no such thing as a safe uranium system. Think or research Fukushima, Japan that continues to leak radiation into our earth's ocean, contaminating and killing living creatures in the ocean, and it's spreading this way.
07463 (Edgemont hearing)		I also ask that you take into consideration everything that has been happening within our world. Hanford, Washington, is the same time as during your hearings. That's direct evidence.
7642 (Hot Springs hearing)		Mni Wiconi. Let that stick with you, please. Because it is life, not uranium, nuclear power to fund -- I mean, they are going to be using it for nuclear energy, foreign companies, some of which are not even allied with the United States. So you're going to be helping companies that are foreign that are not exactly allied with the United States for nuclear power? That's scary. And it should scare you, too.

Letter ID	Commenter Name	Text
54	Ex. 6 Personal Privacy (PP)	Renewable energy is making nuclear power obsolete. The price of uranium is already going down and will continue to do so. It is not worth taking any risk knowing that these companies will eventually fold and ride off into the sunset as, is typically the case, leaving the locals with their mess. There is no amount of money that can be held to restore what we currently have when that happens....it's just a matter of time.
61		With the price of uranium 2 now, it's just not worth the risk. Hopefully the price of uranium drops to below $10 a lb. because the technology for renewables exceeds nuclear power. Which is headed in this direction.
119		Dear Shea: Another update about the lack of a Uranium market. [...] SincereSwitzerland rejects nuclear power! Switzerland has joined other European countries in rejecting nuclear power as the country's recent referendum returned a majority "no" vote on May 21. The outcome means billions in funding will be poured into renewable energy development to replace nuclear power. Switzerland's five nuclear plants will be decommissioned and no new reactors will be built. Germany intends to be nuclear-free by 2022 and powered at least 80% by renewable energy by 2050. Italy and Austria have also resoundingly rejected nuclear energy which is on the decline globally, due to exorbitant costs, its inherent and potentially catastrophic dangers, and the falling prices of wind turbines and solar panels. Switzerland's decision demonstrates that closing nuclear plants and rejecting new build opens the door for renewable expansion and not increased use of fossil fuel, as some pro-nuclear boosters allege.
120		Dear Ms. Shea: I support the Union n of Concerned Scientists and I have their most recent publication called CATALYST, Volume 16, Spring of 2017. I urge you to avail yourself of this news up-date as it affects directly any decision the EPA might make with regard the proposed Uranium mining in South Dakota. I might also add that the 3 Mile Island nuclear facility will be closing down due to five years of losses and the absence of the billions of dollars needed to cover the funding. Power Tech spokespersons like to claim that one: the mining area will be cleaned up and is safe and Two: the uranium to be removed will help the country's energy balance. I would say again the it will not be cleaned up because it is impossible to do so. As far as the need for U308 in this country, remember that California will be shuttering their nuclear power plants, Hawaii leads the nation in alternative energy sources and coal is being replaced by gas. Wind farms are becoming the staple of the energy system. Switzerland is shutting their power plants down as has Germany. The EU is transforming its energy balance away from nuclear. Would you be so kind as to remind the judge of these facts.
121		Dear Ms. Shea: Allow me a few minutes to summarize my concerns regarding the Dewey Burdock mining proposal. 1). There is no market for uranium 2). The price of yellow cake is about 30 dollars below break even 3). The US has years and years of uranium and doesn't need anymore
123		The following will bring to your attention, once again, some of the most obvious. 1: The only reason this approach (4000 new bore holes for toxic waste disposal.) is being considered is the fact that the original plan to mine uranium In Situ is now irrelevant due to the low value of the material, the lack of demand worldwide, the lack of verifiable amount of uranium, a lack of verifiable funds to actually mine the radioactive product and of course the reality that alternative energy sources such as wind and solar are now employing more new workers than the oil and gas industries. These realities beg the question: "Why are we even considering this permit."?
124		Seventh: Another issue is the cost of reclamation. In their socioeconomic report, P/T allows for $9 million. The bond is only 1.5 million (which is less than $150 per acre or about one hour of dozer work) but it also acknowledges that the expected cost for reclamation could be as high as 75 million if I am not mistaken. And if WY is any guide, it could be as high as 150 million. The ability of P/T to afford even the 75 amount, depends on the amount of uranium removed and therefore the amount of yellow cake produced. The other side of the coin is the price for yellow cake to support this kind of expenditure. P/Ts figures rely on the price of $65. This of course is only a hopeful number as the current price is below $40. But even at $40, there will not be profit of over $200 million available for this kind of activity but rather, if my math is approximately correct, closer to $50 million. If the remediation is to cost upwards of $75 million, well...you can see that this just doesn't figure or as my rancher friends like to say, it doesn't pencil. If the company can't sell at $40 then what is to become of the remediation after the mining? if they can sell at $40 or below then what funds are going to be available to attempt the remediation in the first place? This is a very unhealthy set of circumstances. [...] EVEN AT $65, THIS IS NOT A VIABLE ECONOMIC UNDERTAKING. AT $40 IT IS A FINANCIAL IMPOSSIBILITY. THIS BOARD HAS A CLEAR AND LEGAL RESPONSIBILITY TO STRONGLY OPPOSE AND DENY THIS OERMIT APPLICATION
125		Subject: Permits Dear Ms. Shea: I would like to add some last minute observations regarding an EPA's decision about water safety in the Dewey/Burdock mining area. Comments by those few people who expressed their support of the mining and disposal permits require enlightenment. Comments about the need for uranium for our own energy matrix are incorrect based on the reality that the US has 200 years of U308 on hand for any of its uses and needs none now or in the foreseeable future. Also, Germany, leading the way, has changed to alternative energy sources for 100% of its energy and will no longer need nuclear fuel, and California is closing its nuclear power plants, and the Fukushima radiation is traveling north to the coast of Russia, the Aleutians, south along coastal British Columbia and on down to California and Baja . All this and. more it painfully obvious that the U308 from this endeavor is a failed endeavor. With the possible exception of the interest that China may have in using nuclear power for the short term while it changes over to solar and wind and water, there is no market for the yellow cake in the US and elsewhere. The price of yellow cake is so low as to preclude any profit from being made. It costs about $65 per pound to produce,. but the market is paying no more than about $25 per pound. In addition, Power/Tech stock is now, and has been for several years, a penny stock meaning that investors know of the lack of viability of this company. Existing investors have seen their investment drop precipitously. One can easily see that there is no market and no money. Reason enough to deny the final permits.
127		Dear Ms. Shea: This article on NPR internet news should be a wakeup call for all those who support uranium mining and nuclear power. Thank you for your attention, [ATTACHMENT: "Struggling Nuclear Industry Lobbies State Governments For Help"]

336		There are also serious concerns about the company potentially cutting corners or abandoning the project. The price of uranium has been extremely low since the Fukushima nuclear disaster. With new problems that have since developed in the nuclear power industry the price for uranium will never recover. This could lead to a number of bad business decisions on the part of the mining company or an abrupt abandonment of the site when the business factors become too unfavorable or the company goes bankrupt. Currently Toshiba-Westinghouse has decided to permanently cease new reactor builds, is considering bankruptcy and could potentially default or abandon the current new US reactors under construction. Areva is in a similar situation as Toshiba-Westinghouse and would be unlikely to pursue any new reactor builds if they survive their current financial problems. This is all extremely relevant when considering what is permissible risk by a highly unstable private enterprise. Western South Dakota knows all too well what happens when a uranium mining enterprise abruptly fails. This is how the current uranium mining mess left in the state was created. We should learn from past mistakes rather than hoping another company coming in won't do the same thing.
410		Energy production through nuclear power plants is decreasing dramatically worldwide. General Electric, the premier designer of nuclear power plants which was bought out by Toshiba (Japan) has now gone bankrupt and the losses from GE are threatening Toshiba. The nuclear power plant industry has been heavily damaged by the Fukushima Power Plant disaster in Japan. Nuclear power plants are having increasing trouble securing insurance and it now takes 25 years at best to site a new one. Shale gas power plants can now go from design to operation in 18 months in most places and shale gas is now plentiful and much cheaper to use.
445		***2*** *.)* Evidence was presented to the NRC and ASLB in hearings appealing the mining permit issued by the NRC. It was disclosed in these hearings that the Tennessee Valley Assoc. thoroughly explored the area in question for more mine-able uranium deposits after the roll front of uranium was mined out in the 1950's by surface mining. TVA came to the area several times, years apart, and drilled a total of 7650 boreholes looking for more mineable/extractable uranium, but failed to find anv. [...] This was when uranium yellow-cake was in high demand during the Cold War and the spot price was $100.00 per lb. Today, the spot price for yellow-cake is currently $18.00 per lb, with the production break even cost of $63.00 per lb. Powertech/Azarga was ordered by NRC/ASLB to find and properly close all of those boreholes before they would be able to actively mine, as ISL mining requires aquifers to be contained properly for extraction efficiency. This is a hugely expensive process and to date, no work has been done on this. Powertech/ Azarga does not have the finances to do this, and ISL uranium mining is not profitable today, and not projected to be in the future.
451		Why wouldn't it be fiesable to insist on the recovery of all heavy metals and elements that are extractable from the process? The market for uranium is at an all-time low. Thanks to the ongoing fiasco of Fukushima and the shift to new renewable technology on the rise. Why would we risk contamination of a more precious resource, for uranium, that may not be used for energy in the future? Again is this worth the risk? Here I would like to remind you that the half life of uranium is 4.5 BILLION years. At this time it is not economical to extract. At $22.50 a pound, perhaps Mr Hollenbeck with his organic farming background should look for a more economic and ecologically sound idea for creating jobs in Edgemont by growning hemp. It's worth far more than uranium.
460	Ex. 6 Personal Privacy (PP)	My secondary concern is the economic viability of fission, nuclear powered, electrical power generation's future. As has been exemplified by the two G.E. nuclear power plants under construction back east that have been terminated and the subsequent bankruptcy of the parent company Toshiba due to cost overruns, the unresolved nuclear waste problem, and the legacy of Three Mile Island and and now the Chernobyl, Fukushima, and now the Hanford reservation failure. The price of renewable energy is dropping precipitously making it the energy of the future. The shortfalls of transmission and storage will be overcome by innovation and brute force effort. The price of yellowcake is well below the break-even point and demand is decreasing.
465		There are many reasons why the EPA should deny Azarga any permit to mine uranium and/or inject toxic fluids into currently used aquifers in the Dewey Burdock area of South Dakota, including the Inyan Kara, Minnelusa, Deadwood and the Madison. 2. There is no market for yellow cake. There is no profit to be made by mining Uranium. Therefore, there is no reason for Powertech to drill deep injection wells for toxic fluid that they will not be creating. It would appear that the only way for Powertech/Azarga to profit by their permits is to make deep injection wells available to outside sources of toxic waste. Powertech denies the idea of outside sources of waste saying they do not "plan" to take in outsude toxic waste despite the fact that their permit allows it and profit demands it.And remember, Powertech cannot do any mining at all unless the laws protecting the water and the land are put aside and waivers issued allowing the contamination which is by law not allowed. These new permits will allow Powertech to pollute the Inyan Kara and Minnelusa aquifers directly and the Deadwood and Madison aquifers by transmissivity. Once these aquifers are contaminated, there will be no remedy. They say they only need 1 1 /2% bleed replacement, so why ask for thousands of gallons per minute. If they will not take in outside waste, why allow for it ? They say the waste to be injuected into the aquifers is just salt water. The laws of chemistry refute tha claim. The application to the NRC by Powertech shows that the waste willl be impregnated with Radium, Cadmium, Chromium and Arsenic among many other poisons. These chemicals will absolutely be part of the so called lixiviant. New bore holes for toxic waste disposal are being requested because the original plan to mine uranium In Situ is now irrelevant due to the low value of the material and the lack of demand worldwide. Also, alternative energy sources such as wind and solar are now employing more new workers than the oil and gas industries combined.
470		Yellowcake demand has declined except for proposed nuclear reactor construction in China.
470		Also not needed as alternative energy is developing.
470		I see no compelling reason or need for uranium mine. I have neither heard nor read about a shortage of or more demand for uranium. To my mind, the only ones to benefit are the out of state and out of country companies. Figure out what to do with the waste we already have.
470		2. How critical is our need for uranium.
		My third concern is the assumption that ISL uranium mining will contribute to clean energy and a reduction in greenhouse gas emissions. According to the Powertech website, Powertech Uranium is "wellpositioned for rapid growth in the burgeoning US nuclear power industry". In 2002 the Bush/Cheney administration's "Nuclear Power 201 O Program" provided large subsidies for a handful of Generation 111+ demonstration plants. The expectation that these plants would be built and come online by 2010 has not been met.

There has been no ground-breaking on new nuclear plants in the United States since 1974. Until 2013, there had been no ground-breaking on new nuclear reactors at existing power plants since 1977. As of 2012, nuclear industry officials say they expect five new reactors to enter service by 2020; these are all at existing plants. As of August 2013, there are construction delays at two new reactor projects. In 2013, four aging reactors were permanently closed before their licenses expired because of high maintenance and repair costs at a time when natural gas prices have fallen. The state of Vermont is trying to close Vermont Yankee. New York State is seeking to close Indian Point, 30 miles from New York City. As of the present date, there appears to be a net loss of nuclear reactor numbers in the US, rather than a so-called "burgeoning industry". (New York Times, June, 2013)

Powertech has also stated that the company would like to sell uranium oxide on the world market, especially to the BRIC nations; Brazil, Russia, India and China. Nearly all of the reactors that have been built or are under construction in these countries are light water reactors. (International Atomic Energy Agency website, October, 2013)

The hope that breeder reactors would replace light water reactors and that more economic means of reprocessing spent fuel would be developed has not been realized. At present, it is generally found to be cheaper to mine new uranium, which is then used in a "once-through" process that creates spent fuel, the radioactive waste that is considered to be the "Achilles heel" of nuclear energy.

The nuclear industry seeks the cheapest ore, for use in the least efficient way, by an energy industry energy that is fraught with dangerous waste and high costs associated with construction, operation, repair, decommissioning and clean-up after accidents.

Various agencies have tried to estimate how long all of these primary sources of uranium will last, assuming a once-through cycle. The European Commission said in 2001 that at the current level of uranium consumption, known uranium resources would last 42 years. (The Times: London "Uranium Shortage Poses Threat" August, 2005).

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Thus, in order to provide nuclear power for a period ending during the lifetimes of many living today, we leave permanent, potential increased contamination of soils, river systems and aquifers.

The problems of global warming that the nuclear industry hopes to alleviate have also driven the development of renewable energy. The Intergovernmental Panel on Climate Change has said that there are few fundamental technological limits to integrating a portfolio of renewable energy technologies to meet most of total global energy demand.

In a 2009 Scientific American article entitled "A Path to Sustainable Energy", researchers write that producing all new energy with wind power, solar power, and hydropower by 2030 is feasible and that existing energy supply arrangements could be replaced by 2050. Barriers to implementing the renewable energy plan are seen to be "primarily social and political, not technological or economic". The authors say that energy costs with a wind, solar water system should be similar to today's energy costs. The authors only consider technologies that have near-zero emissions of greenhouse gases and other pollutants over their entire life cycle, including construction, operation and decommissioning. Similarly, they only consider technologies that do not present significant waste disposal or terrorism threats.

An intriguing result of their plan would be a decline in global power demand. That would occur because, in most cases, electrification is a more efficient way to use energy. For example, only 17 to 20 percent of the energy in gasoline is used to move a vehicle (the rest is wasted as heat), whereas 75 to 86 percent of the electricity delivered to an electric vehicle goes into motion. They note that the world manufactures approx. 73 million cars and light trucks every year. (Scientific American: November, 2009: Mark Jacobson and Mark Delucchi)

The International Energy Agency has stated that the deployment of renewable technologies usually increases the diversity of electricity sources and, through local generation, contributes to the flexibility of the system and perspective, my husband and I have lived affordably and comfortably in a house exclusively powered by solar electricity for the past 5 years.

If we run out of oil, coal, natural gas or uranium, we can make use of many other energy sources. There are no alternatives to water.

For these reasons, I do not believe that employing large quantities of water to mine uranium is a beneficial use of water. The risk of degrading large quantities of water, for the private gain of a few, is not in the public interest.

Respectfully submitted,

[ATTACHMENT: "CONTAMINANT SURVEY AND SITE CHARACTERIZATION REPORT"]

Title of newspaper article: Nebraska utility head recommends closing small nuclear power plant

Associated press

Omaha, Neb - The head of a Nebraska utility recommended shutting down the nation's smallest nuclear power plant by the end of the year, saying Thursday it doesn't make economic sense to keep it open.

Tim Burke, the president and CEO of the Omaha Public Power District, told the utility's board that Fort Calhoun Nuclear Station isn't financially sustainable.

Shuttering the plant would represent a major shift for the utility, which serves more than 310,000 customers in 13 counties in southeastern Nebraska.

Utility officials previously maintained that Fort Calhoun would be a valuable part of its plans because of its ability to generate power without adding to carbon dioxide emissions.

The board is expected to vote on the recommendations at its June 16 meeting.

The district spends about $650 million a year on generating power, which includes about $250 million on Fort Calhoun. Burke said closing the nuclear plant will help keep the utility's rates low compared to the average power cost in the region.

The utility also has to make sure its mix of power plants can comply with environmental rules and restrictions on carbon dioxide emissions. The district typically gets about 34 percent of its power from the Fort Calhoun plant, but utility officials said Thursday that other carbon-free options, such as wind power, now make better financial sense.

The economics of the utility business have changed significantly in recent years because of the new environmental regulations and cheaper natural gas prices due to hydraulic fracturing. Fort Calhoun's small size and single reactor contributed to the recommendation to close it.

"It's just not viable. It's just not economically viable," board member John Green said.

Smaller nuclear plants like fort Calhoun, have the most difficult tine competing on the price of power, especially if they have had serous safety problems said Mark Cooper, a senior fellow for economic analysis with the Institute for Energy and the Environment at Vermont Law School.

"The older, smaller reactors are really uneconomic," Cooper said.

That description fits several reactors that closed in recent years, such as the Vermont Yankee in Vermont plant that was shut down in 2014 or the Kewaunee Power Station in Wisconsin that shut down in 2013.

New Orleans-based Entergy Corp. has announce plans to close two more of its smaller, older plants by the end of the decade - Fitzpatrick nuclear plant near Syracuse, N.Y., and Pilgrim nuclear plant near Boston. Entergy also owns Vermont Yankee.

It's relatively rare for utilities to close a nuclear power plant unless there are major mechanical problems, but all nuclear plants face economic pressure because of the cheap natural gas and affordable power that can be purchased wholesale from other utilities.

"The industry is having trouble competing with costs," said David Lochbaum, director of the Nuclear Safety Project for the nonprofit group Union of Concerned Scientists.

486	Ex. 6 Personal Privacy (PP)	Adding to Fort Calhoun's problems is a series of setbacks it has had in recent years. the utility spent more than $140 million on repairs after flooding and a small fire damaged the plant in 2011. Among the violations cited by regulators was the failure of a key electrical part during a 2010 test, a small electrical fire in June 2011, several security issues and deficiencies in flood planning that were discovered a year before the river spilled its banks. It resumed operations in December 2013 after the utility hired Chicago-based Exelon, the largest U.S. operator of nuclear power plants, to run Fort Calhoun. OPPD estimates that it will cost $884 million to decommission Fort Calhoun over a least a decade. [...] Ripples from nuclearn plant closing overwhelm towns Associated Press Living in the shadows of the Davis-Besse nuclear power plant's cooling tower, which soars above Lake Erie in Ohio like an oversized lighthouse, brings with it some give and take. On the plus side, it generates tax money that once paid for a high school swimming pool and auditorium. Then there are the stockpiles of radiation pills and emergency drills for students in case of a disaster. For the small, mostly rural towns that are home to 61 U.S. nuclear plants that produce one-fifth of the nation's electricity, each one has been like the golden goose supplying high-paying jobs and money for roads, police and libraries. But those same places and their residents are bracing for what may come next due to the soaring costs of running aging reactors that have speeded up the closings of a handful of sites and are threatening at least a dozen more. That's because once the power stops flowing, so does the money. Towns that already have seen nuclear plants shuttered are now dealing with higher property taxes, cuts in services and less school funding - a new reality that may linger for decades. In Wisconsin, the tiny town of Carlton saw the source of roughly 70 percent of its yearly budget disappear when the Kewaunee 1 nuclear power plant closed four years ago. That resulted in the first town tax in its history. "Financially, we benefited, but now we're going to pay the price for the next 40 years:' said David Hardtke, the town chairman. When operations ceased at the Crystal River Nuclear Plant along Florida's Gulf Coast, "it was like something going through and wiping out a third of your county," said Citrus County Administrator Randy Oliver. To make up the difference, property tax rates went up by 31 percent and 100 county workers were let go - so many that Oliver worries there won't be enough to evacuate residents and clear roads if a major tropical storm hits. While the nation's fleet of nuclear power plants wasn't designed to last forever, closures are happening earlier than expected because repair costs are astronomical and it's harder to compete with cheaper natural gas - fired plants and renewable energy sources. The former head of the nuclear industry's trade group said last year that economic pressures have put 15 to 20 plants at risk of a premature shutdown. FirstEnergy Corp. will decide by next year whether to close or sell its plant in Pennsylvania and two in Ohio, including Davis-Besse, unless the states change regulations to make them more competitive. The uncertainty around Davis-Besse and a plan to lower its value caused the local school board to shelve plans to build a new elementary building for the district, which stands to lose $8 million a year without the plant. New Orleans-based Entergy Corp., owner of the Palisades nuclear plant in Michigan, announced plans late last year to close in 2018 even though it has a license to keep operating another 14 years. How much the losses will add up to isn't clear yet, said Deruns Palgen, a township supervisor where the plant has operated since 1971. "We're just in a state of limbo right now:' he said adding that plans to buy new fire truck are on hold. The plant and its 600 workers have been good neighbors, he said, buying backpacks for school children and emergency generators for the township. "The list goes on and on," Palgen said. In some cases, utilities are paying communities and schools during the first few years to help ease the sudden loss of their largest employer and taxpayer. But what makes recovering tough is that almost all nuclear plants are in out-of-the-way places that have become heavily reliant on them. And they employ specialized workers who are quick to leave for still-operating locations. To make matters worse, many closed sites can't be redeveloped for new uses because they're still storing radioactive waste. Some hope the Trump administration's new budget proposal to revive the mothballed disposal site at Nevada's Yucca Mountain will eventually allow for new development at the former plants. We have become a de facto nuclear waste dump. It just sits there, and sits there forever," Al Hill, the mayor in Zion, Ill., where spent nuclear fuel remains stored on prime property along Lake Michigan even though the plant shut down 20 years ago. On-top of that, the closing took away half of the city's tax base and pushed property taxes to the highest in the state, making it difficult to lure new businesses, Hill said. Left behind are empty storefronts and little foot traffic, said Chris Daisy, who runs a downtown bicycle shop. "It's had a devastating effect on this town," he said. [...] The recycled water would be "returned to a quality as close to pre-mining conditions as can practically be achieved, "according to Powertech. Hollenbeck said uranium is only released in an oxygen-rich environment, such as during in-situ mining. He said uranium that isn't extracted would remain trapped below ground by surrounding bedrock, which is oxygen deficient. Other toxic metals, like radium, and other by-products would be removed and shipped offsite for proper disposal, according to Powertech. The company also said leaching chemicals wouldn't be used in the mining process; only water, oxygen and carbon dioxide. As for the economy, Hollenbeck said there would only be a positive impact. "Projects that produce $40 million worth of economic development in western South Dakota don't come along every day, 11 he said II Most of that would be funneled through Rapid City." He said Powertech has already invested heavily in Rapid City on contractors and equipment, and that the mine's piping would come from the city's WL Plastics when it opens. Hollenbeck pointed to regional in-situ mining operation in the light of success. "This isn't a new technology. 11 he said. "This isn't a new idea. This has been going on for an extended amount of time."
489	Ex. 6 Personal Privacy (PP)	Uranium has no good place in our future – it is a failed industry – do not mess with it!!!
		Uranium Mining:

499		The going rate for uranium is $30. to $50.00 per pound. According to a recent article in the Rapid City Journal. Uranium mining has become more profitable since the nuclear meltdown in Fukushima, Japan. There is talk of Powertech using these bore holes already in the ground from past mining near Edgemont, S.D. mining. Powertech will be utilizing current sites already bored into the ground. These were drilled 20, 30 and even 40 years ago. Producing uranium isn't cheap. There are many factors in job costing for these projects. Such as production costs, uranium mining\milling costs, financial & market costs and world production costs. All these factors are considered for a profit. There is money to be made in the Black Hills. There is only one Mother Earth. When she is depleted; Powertech will have their profits and move on to their next project. The nuclear industry has always said they are environmental sensitive. But; that isn't the truth.
528		Finally, Powertech has estimated that the cost of ISL uranium mining is as much as US $63.00/lb, although some companies have estimated a cash cost of between $20/lb-$30/lb. With the current price of less than $20.00/lb, and an estimated cash cost to mine equal to between $20.00/lb and $30.00/lb, it is simply not worth mining the uranium that is estimated to be at the Dewey Burdock site.
7460 (5/8 Rapid City hearing)		My main issue is with Powertech. There's a lot of things I could say about this company, but I thought that I would focus on their financial and economic analysis because I know a lot of people are interested in the money aspect of uranium drilling. In 2015, they estimated that they could sell uranium for $65 a pound. With the price of $6.53 for a federal tax and $18.86 for the mining costs, they projected that they would mine 9.7 million pounds and make over -- make a profit of over $300 million. In 2015, though, the long-term price for uranium was $46.29, and the stock market price was $36.55. I'm not really sure where the $65 came from. I also have the last five years of uranium prices. As you can see, they're all declining. Nothing has gone up in the last five years. Today's prices for the long term is $33.12. And the long-term pricing, for those who don't know, is just a judgment for uranium companies, just, they think that that might be a price in the month, but it's not the actual stock market price. So the actual stock market price right now is $23.50 a pound. If they use this -- if they could sell at this price and take out the federal tax and the mining cost, it would be a negative $18 million to mine for uranium, which doesn't really make any sense. I'm really concerned about this overestimation.
7460 (5/8 Rapid City hearing)		We've already heard here this evening a lot of questions about what is really Powertech's intent. They have uranium prices that are 20 to $30 a pound, and they've already stated that if it's not at least in the 55, 65 range, they can't make this mine economically viable. So what is it they really have in mind?
7461 (5/9 Rapid City hearing)		Nebraska utility head recommends closing small nuclear power plant. It doesn't make economic sense to keep it open. Thank you.
7461 (5/9 Rapid City hearing)		The market for uranium is at an all-time low thanks to the ongoing fiasco of Fukushima and the shift to new renewable technology on the rise. Why would we risk contamination of a more precious resource for uranium that may not be used for energy in our future? Again, is it worth the risk? Here I would like to remind you that the half-life of uranium is 4.5 billion years. [...] CHERYL ROWE: At this time, it's not economically feasible at $22.50 a pound. Perhaps Mr. Hollenbeck with his organic farming background should look at a more economic and ecologically sound idea for creating jobs in Edgemont. Maybe grow hemp. That's worth far more than uranium.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	One of the groups that I belong to that's represented here, the Dakota Rural Action, two years ago, 2015, had not only opposed the development like this but promoted Solarize South Dakota campaign, educating people about alternative energy, in particular solar energy. National Geographic Magazine, in their March 2017 issue, said that currently there are more jobs in the alternative energy development field than there are in fossil fuel energy field in our country. We have the ability through solar, through wind, through biofuels to generate the energy we need in this country. And some states are doing that. California has closed all their nuclear plants except one, and that's on its way out. Texas is generating huge amounts of wind energy, as is Iowa.
7462 (5/9 Hot Springs hearing)		His concern -- Pete's concerned about the uranium industry possibly becoming obsolete as renewables take on more and more positive ground. We don't need uranium. We don't need more uranium on the planet. It really should be left where it is. We have other resources that we should be exploring and putting into effect.
7462 (Hot Springs hearing)		GARDNER GRAY: My name is Gardner Gray. There are many reasons why the EPA should deny Azarga any permit to mine uranium and/or inject toxic fluids into currently used aquifers in the Dewey-Burdock area of South Dakota, including the Inyan Kara, the Minnelusa, Deadwood, and the Madison. There is no market for yellowcake. There's no profit to be made by mining uranium. Therefore, there's no reason for Powertech to drill deep injection wells for toxic fluid that they will not be creating. [...] New boreholes for toxic waste disposal are being requested because the original plan to mine uranium in-situ is now irrelevant due to the low value of the material and the lack of demand worldwide. Also, alternative energy sources, such as wind and solar, are now employing more new workers than the oil and gas industries combined.
7462 (Hot Springs hearing)		LINSEY MCLEAN: I'll be brief. My name is Linsey McLean. I know that the EPA has, to date, approved all of the applications that have come before you for Class III and Class V UIC wells. And I know that all of these wells have commonalities that are requirements for this approval. However, this Dewey-Burdock area has five other factors that would preclude this permit that other sites already permitted do not have and that makes this site very different. Number one, there's no concentrated roll-front left to mine profitably. It's all been mined out by the TVA a long time ago. Number two, no ability to dewater the area, and that was determined by the TVA also and why they abandoned the site, so that there's no ability to confine the communicating aquifers. [...] With the history of now high levels of naturally occurring organic uranium in other mine sites where they're finding this where there was no contamination by microorganisms like Dewey-Burdock, this situation is very relevant. And so with the low levels of uranium in the proposed site, coupled with the high proportion of unrecoverable uranium likely, this will not be a profitable mining operation. And so if there ever was a case for denying a permit, this is one. Thank you.
7462		My secondary concern is the economic viability of fission, nuclear-powered electrical power generating's future, as has been exemplified by the two General Electric power plants under construction back east that have been terminated, and the subsequent bankruptcy of the parent company, Toshiba, due, to cost overruns. The unresolved nuclear waste problem and the legacy of Three Mile Island, Chernobyl, Fukushima, and now the Hanford Reservation failure.

(5/9 Hot Springs hearing)		The price of renewable energy is dropping precipitously, making it the energy of the future. The shortfalls of transmission and storage will be overcome by innovation and brute force efforts. The price of yellowcake is well below the breakeven point, and demand is decreasing.
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	DON MATT: When you look at the graph of the price of uranium, it looks like a roller coaster going down, down, down, and just rolling out on the flat. Now, the question that this raises is, why is this being pushed so hard?
7642 (Hot Springs hearing)		There's no uranium there to be mined that's profitable. So what are you not telling us?

Letter ID	Commenter Name	Text
31	Ex. 6 Personal Privacy (PP)	To whom it may concern, 1. Background From this time until May 19th, the United States Environmental Protection Agency (EPA) is calling for public comments regarding a hot topic issue in the state of South Dakota. The small town of Edgemont, South Dakota is currently at the center of an environmental deal between the US company PowerTech and the EPA that consists of permitting the company to conduct an in situ uranium recovery project that is located roughly 13 miles northwest of the town. This recovery site is located on the southwestern edge of the Black Hills, a wild horse sanctuary established roughly 20 east of Edgemont. In 2015 the EPA determined that the cleanup of these sites, the Darrow, Triangle, and Freezeout mines, was not required. While the EPA may have sampled upstream and downstream of the site in question, they were criticised for their ruling because testing within the actual mine sites was not conducted due to the fact that site assessors were unable to gain private landowners permission to access the sites. While this is not entirely the fault of the EPA, the conclusions drawn from their testing ultimately do not reflect the real life exposure and contamination potential and therefore should not be fully accepted. In addition, these assessments do not take into consideration large soil and mine-waste piles or possible runoff potential from the mine pits. Due to sampling conducted downstream that did not exceed healthy concentration levels, the epa was not able to document an occurrence of a release, however large gaps in preliminary site testing leaves a large amount of uncertainty to be accounted for.
36		Uranium was discovered in the southern Black Hills region in the 1950s and quickly boomed as prices rose dramatically with the advent of nuclear power. Much of the arid land in this region was public land, and prospectors could lodge mineral claims and drill test boreholes with little investment. As more uranium was found in the region, Edgemont, SD, was chosen for a uranium processing mill, promising jobs and wealth to local residents. Little regard was given to the lives of miners and uranium workers, or to those surrounding the operations. Tailings piles were left uncovered and grew to heights of 50 feet or more. In addition to the daily erosion from wind and sometimes rain and the communication of water between aquifers allowed by abandoned boreholes and smaller mines, a number of particular events would impact the region's future toxicity. In 1962, 200 tons of tailings broke through an earthen dam and washed into Cottonwood Creek and subsequently the Cheyenne and Missouri Rivers, which provided drinking water for thousands of people downstream, largely Lakota. But when the uranium boom was growing, these events were not treated with any particular notice (Grossman 2002, Halder 2002, Jarding 2011, LaDuke and Churchill 1985, Thunder Hawk 2007, Young 1996; on remaining effects of abandoned uranium mines on the Cheyenne River, see Sharma et. al., 2016).
37		Subject: Re: Uranium Mining in the Black Hills Azarga Uranium should never be allowed to drill hazardous waste injection wells near Edgemont SD. We still have many sites that have not been cleaned up from previous uranium mining! I strongly urge the EPA to decline Azarga's UIC permits and aquifer exemption. Thank you for allowing public comments.
44		And what about past mining operations that took place in the Dewey Burdock back in the 1950s, which still have not been cleaned up, or from my understanding are not even part of the Super Fund Sites. There are over 167 old mines in one area and literally thousands of old uranium operations have been left unreclaimed in the upper Missouri River basin. And these modern uranium companies employ people who were involved in past uranium operations.
54		As you probably know, Edgemont became a super fund clean up site and the tailing were eventually buried, however, there still remain old mines that have not been reclaimed to this day, They continually jeopardize our ground water and there are no plans to reclaim those sites after all of these years. How can the EPA even begin to consider another uranium mining project without ensuring that land be reclaimed from the previous fiasco? I lived in Edgemont in the 1980s while the tailings pile was still on the edge of town. From my home on a hill, overlooking town, I would regularly see the cloud of tailings blow into town. I called the State of SD to report it and they referred me to the Denver office of the EPA, to a gentleman named Mike Hammer. I explained the problem, He said that the tailings pile should have at least a 3 in. cover of top soil and be hosed down regularly to keep it from blowing around. He went on to empathize that our State of SD has very lax environmental oversight when it came to protecting the environment and that there was nothing the EPA could do. I called the mill and spoke to an employee to see if, in fact, they were following the guidelines to keep the tailings from blowing into town. He laughed at me and said that, "the tailings were all over his desk and that the mill was literally getting away with murder". He went on to explain that no one ever checked to make sure they were doing things that they knew they were required to do. I was horrified and began the process of moving out of town. No one has been able to ensure that our water and air are protected and I expect that will only get worse with this new administration.
103		TOld uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
106		Subject: Public comment on uranium mining in the Black Hills Dear Dr. Shea, In considering uranium mining in the Black Hills, I urge the EPA to clean up old mines before any new permits are issues,
108		• Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
113		Subject: Dewey Burdock uranium project Dear Ms. Shea, I am writing in regards to the proposed Dewey-Burdock uranium project. It is absolutely absurd that we are even considering ANOTHER uranium mine, when the disaster that occurred on June 11th, 1962 has yet to be cleaned up properly. The discussion we should be having is about what to do with the uranium tailings still present on the Pine Ridge Indian Reservation and in Edgemont, as a result of Total Mine Development's failed project.
		Re: Dewey Burdock Uranium Mining Proposal from Azarga Uranium Mining Co., formerly Powertech Uranium Mining Co., and Superfund Investigation brought by The Wild Horse Sanctuary, Hot Springs, SD Dear Ms. Thomas and Mr. Kettlelapper: It has come to my attention that a request for a full blown investigation of the Dewey Burdock mining area and surrounding areas mined in the 1950's and 1960's near Edgemont, SD was denied by the EPA because various owners of the huge open pit mines abandoned by uranium mining companies would not allow access to the EPA for testing of water and to observe erosion.

116	Ex. 6 Personal Privacy (PP)		There are over 200 open mines in the Dewey Burdock area, both within and adjacent to the 10,400 acre Azarga proposed mining area. Of these there are four huge mines which are over a mile across and which have estimated depths of at least 90 feet. The water in these open pit mines is extremely toxic, containing highly radioactive water and heavy metals, including high concentrations of arsenic, plus dissolved solids and other contaminants resulting from the previous mining activities. I own property in both Custer and Fall River Counties. I feel that the environmental health of both counties is at stake and that this area should long ago have been designated a SuperFund Site. [...] In July of 2014 and subsequent to that I flew over the Dewey Burdock and photographed the old mines and the drainage of the site which flows into Pass Creek and Beaver Creek. These creeks then combine and the water flows into the Cheyenne River near Edgemont. The Cheyenne flows into Angostura Dam, the largest fresh water irrigation and recreation dam in western South Dakota. This dam leads into the Missouri River. It is my contention from observing the drainage patterns of the site towards these creeks and the Cheyenne that substantial leakage from the mining areas is occurring and contaminating Beaver and Pass Creeks and then the Cheyenne River, and Angostura Dam with the potential to contaminate the Missouri River. With this letter I am submitting a CD of 92 pictures taken from the air which illustrate the drainage patterns, substantial erosion, and evidence of vegetation anomalies which belie the extreme toxicity of the water held in the larger open pit mines. Within the 2014 and 2015 time frame there was a major rain incident which sent a 4 foot high wall of water toward the railroad tracks in the Dewey Burdock which derailed at least 4 railroad cars. This was documented in the Edgemont Herald Tribune at the time. [...] I specifically call your attention to the following image numbers on the enclosed CD which show various aerial views of the Dewey Burdock area. These are: 2385, 2388, 2392, 3091, 3095, 3096,3097,3099,3103,3124,3136,3140,3142,3143,31144,3150,3154,3156,3162,3163, 3164, 3165, 3134, and 817. Images 3162 and 3163 show massive erosion areas on one of the open mines that is typical of many of the mines. [...] I stand ready to provide further information as needed. You have only to call me for assistance. In closing, please evaluate this site more carefully. It is only going to get worse and will ultimately result in an ecological disaster of massive proportions. We need your help.
125			I don't blame the Lakota for being emotional, however, because their water from the Cheyenne River and their wells is already contaminated as are the Beaver Creek, Pass Creek, the Wild Horse Sanctuary and Angostora Reservoir.
136			Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
165			In addition I want all of the old mines in the Black Hills cleaned up before any further permits are considered.
177			Subject: Proposed Dewey-Burdock Injection Wells [...] Before I retired as editor of South Dakota Magazine and contributing editor of Nebraska Life, I wrote in-depth investigative stories about the history of the insitu uranium mining project at Crawford, NE, the continuing threat from unreclaimed mines throughout the Black Hills and the current issues involving the proposed Dewey-Burdock project [...] Fourth, No further exploitation of uranium should proceed in South Dakota until the messes left by past mining are cleaned up--which realistically is not likely to ever happen...
234			Subject: Azarga Dear Ms. Valois: I am writing to urge the EPA not to grant Azarga permission to mine uranium in South Dakota's Black Hills. First, the area currently needs cleanup from previous mining.
244			Subject: No Uranium mining in the Black Hills follow-up Dear Sir/Madam: I sent an email to voice a public comment against uranium mining in the Black Hills. I also want to ask: - that the old mines are cleaned up before any further permits are considered
245			2. Historically, companies mining in South Dakota have many times left an environmental disaster in their wake. With the small bonds required by the state, there is never enough money to clean up the sites and the residents become dependent on the Federal Government to clean things up.
272			Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.
280			Subject: uranium mining in black hills Old uranium mines in the Dewey-Burdock area should be fully reclaimed before newmining is permitted.
280			• Old uranium mines in the Dewey-Burdock area should be fully reclaimed before newmining is permitted.
287			Subject: uranium :(PLEASE stop the Uranium in the Black Hills! PLEASE do not issue any permits PLEASE clean up old mines (reclamation) before any further permits are ever considered !! DO you really not understand the importance of cleaning this crap up??
296			Subject: EPA's mission is to protect human health and the en EPA's mission is to protect human health and the environment. We are here today to discuss allowing a foreign owned corporation to mine for uranium and to drill eight bore holes. There are already over 15,000 abandoned uranium mines in 15 Western states. 75% of these are on federal and tribal lands. 10 million people live within 50 miles of an abandoned uranium mine. No existing federal law requires the cleanup of these hazardous waste sites. Most of these abandoned uranium mines where established under the general mining law of 1872 and remain dangerously radioactive for hundreds of thousands of years. [...] Listen to these good people here today and work to clean up every abandoned uranium mine in the nation before considering a new one.
			Subject: Comment on the Dewey-Burdock class III and class V injection well draft area permits. This is my comment on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells.

371		Old uranium mines in the Dewey-Berdock area should be fully reclaimed before new mining is permitted [...] The history of uranium mining indicates that uranium mining cannot be done in a way that avoids creating or leaving contamination that will be reversible. This project should be stopped until it can be proved that any contamination will not migrate outside the area mined and aquifers affected can avoid contamination with uranium and heavy metal particles
380	Ex. 6 Personal Privacy (PP)	Subject: Dewey-Burdock Public Comment To: Valois Shea In business school one of the first lessons students are taught is that of a "cost-benefit analysis." Simply put, one looks at the costs of a proposal and the benefits to be derived and if the costs outweigh the benefits common sense dictates that you do not proceed. The potential environmental costs of this proposal far outweigh any short-sited economic hiccup this could provide our state. South Dakotans are still paying the tab left by previous mining companies and uranium mining has left one ofthe biggest tabs to date. Taxpayers have already spent millions on uranium brownfield mitigation in the Slim Buttes area of South Dakota and to this day near Edgemont there are hundreds of sites that have yet to see any mitigation decades after the mining interests left town with all the economic prosperity they originally promised. Who is left to sort out the mess, South Dakotans and folks like you with the federal government. Who is left with the uncertainty as to what the environmental and health care ramifications are that remains? Typically those who can do the least about it, the unborn child who has a greater likelihood of birth-defects, the disenfranchised on reservations, or those who can neither afford nor have time to even begin to figure out how to deal with it. Unless, we stop the problem before it starts. Let's first clean up the waste-fields and open pits we have already, before we start creating problems we can't see or fix so easily miles underground. In the meantime, ask yourselves if you would drink the water in a pitcher or bottle from this area, or from Pierre if this project is allowed to proceed. Better yet, would you feel comfortable giving that water to your grandchildren today or twenty years from today? My Rapid City friends, my ranching friends, my farming friends, and my Lakota friends are correct. We are indeed all connected and we all live downstream. Thank you for your consideration of my words and for your consideration of my home.
389		Dear EPA, Region 8: Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells: Old uranium mines in the Dewey-Burdock area should be fully reclaimed before any new mining is permitted.
394		Dear EPA Region 8: Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells: ・Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permuted [...] The history of uranium mining indicates that uranium mining cannot be done without creating and leaving contamination. This project should be stopped until it can be proved to be safe, rather relying on imperfect protection and clean-up processes.
410		Re: Comments on two draft Underground Injection Control (UIC) Area permits to Powertech (USA) Inc., now known as Azarga Uranium Corporation, for uranium mining permits in the Dewey Burdock area near Edgemont, SD, to include an aquifer exemption for the uranium bearing portions of Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. By this letter, I wish to object to the three parts of this Powertech permit application and ask the EPA to fully deny the Class III and Class V well permits and to fully deny the aquifer exemption which I understand relates to the Inyan Kara aquifer protection under the Safe Drinking Water Act. I. General Information: The Henderson Family has owned and operated the 8000 acre Henderson Ranch since my grandfather, Andrew Murray Henderson came to South Dakota in 1902. I currently own and operate this ranch. The ranch is located about 8 miles as the crow flies from the town of Edgemont which was the site of extensive open pit uranium mining activities in the 1950's and 1960's. The mining companies involved are long bankrupt and they abandoned over 200 open pit mines, of which four are huge, mile across lakes of highly radioactive and heavy metal laden water often 90 feet deep. See Rapid City Journal 6 part series on uranium mining history in Edgemont written by Seth Tupper in 2015. These mines are leaching into the two tributaries of the Cheyenne River, Pass Creek and Beaver Creek. The Cheyenne River feeds Angostura Dam, the largest fresh water irrigation and recreation dam in western South Dakota. Recent studies by the EPA Region 8 have identified contaminants, including radiation, arsenic, heavy metals, and a host of other damaging contaminants in Pass and Beaver Creeks, the Cheyenne River, and Angostura Dam which flows into the Missouri River
437		Subject: In Situ Mining To Whom It May Concern: This e-mail is being written to comment on the proposed in situ mining near Edgemont SD. I do not understand what it takes for you people to get the MESSAGE! My husband and I live southeast of Gilt Edge Mine, which is STILL not cleaned up from the late 1980s when Brohm Mine (a Canadian company) abandoned the site and left the taxpayers with a $10 million cleanup that is still ongoing. If you are not familiar with Gilt Edge, GOOGLE IT! What part of no do you not understand?
455		I also am against this proposal for the following reasons: * The previous mines in the Dewey-Burdock area have not been fully reclaimed.
466		There are a number of factors that indicate a mine in the Dewey-Burdock area would likely result in contaminated groundwater. There are old uranium mines in the Dewey-Burdock area that are not fully reclaimed, enhancing the risk of groundwater water contamination.
469		Dear EPA, Region 8: Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells: • Old uranium mines in the Dewey-Burdock area should be fully reclaimed before new mining is permitted.

470		The history of mining in the Black Hills includes corporations that have dissolved and left the American taxpayers to foot the bill of cleanup – Brohm caused a superfund site at the Gilt Edge Mine, Susquehanna & its subsidiaries left TVA & the U.S. Dept of Energy to cover the costs of cleanup associated with the mines and mill at Edgemont. There is still cleanup of abandoned mines that have not done because the area are on private land. I would ask that you enter the five series of articles the Rapid City Journal published (available at http://rapidcityjournal.com/app/pages/uranium) into the record for information on the history of uranium mining at Edgemont, including Dewey-Burdock.
470		NO permit for uranium mining should be granted & certainly not before all previous mines have been cleaned up!
470		I heard that uranium contamination has been reported in Angostura. Could you address this question? (Dr. Jim Stone at SDSMT, Dept Civil & Environmental Engineering)
470		Clean up the existing abandoned sites. Prove that it can be restored. Show and share all the process and data.
472		2) NO PERMIT SHOULD BE DISCUSSED UNTIL ALL PREVIOUS MINE ARE CLEANED UP [...] Until the abandoned mines are cleaned up, there should be no consideration of new mining. The track record of uranium mining is not good.
476		There are still old uranium mines in the Dewey-Burdock area that haven't been fully reclaimed. We need to see that old mines in our community will be cleaned up before we permit new ones.
486	Ex. 6 Personal Privacy (PP)	Title of newspaper article: Study raises uranium concerns Environmentalists: Angostura has elevated levels Journal Staff Members of three activist groups say reent research shows that abandoned uranium mines are contributing to elevated uranium levels in Angostura Reservoir in the southern Black Hills. The research was recently published in the journal Environmental Earth Sciences by authors that included two South Dakota School of Mines & Technology scientists, Rohit Sharma and James Stone. The article is titled "Stream sediment geochemistry of the upper Cheyenne River watershed within the abandoned uranium mining region of the southern Black Hills." According to the Clean Water Alliance, Dakota Rural Action and It's All About the Water, the research shows that elevated uranium levels at Angostura are partly caused by human activity, including abandoned uranium mines and a former mill at Edgemont. Elevated uranium levels at Angostura Reservoir are comparable to the elevated uranium levels upstream in the Cheyenne River watershed at abandoned mines, the groups said. "This impacts people throughout western South Dakota," Gena Parkhurst, president of the Black Hills Chapter of Dakota Rural Action, said in a new release. "The Cheyenne River runs along or through two reservations and five counties. It impacts agriculture and tourism. We need to clean it up." The groups cited U.S. Environmental Protection Agency reports that list 169 old uranium mines and prospects in the southern Black Hills, which was mined for uranium from 1951 to 1972. Few of the old mines have been cleaned up. Additionally, the groups said there was a 1962 dam break that released uranium mill wastes into the Cheyenne River, and some of the wastes reaches Angostura, a popular recreation spot. The groups are using the research to call upon state and federal regulators to clean up old mine sites. The EPA studied several abandoned mine sites north of Edgemont last year and determined that although the sites contained pollutants, there had not been a release of the material that was sizable enough to necessitate a cleanup. Lilias Jarding, of the Clean Water Alliance, said the recent research by the Mines scientists shows otherwise. "These radioactive mines have been sitting open for as much as 65 years:" Jarding said in the news release. "These test results make it clear there is a problem that threatens public health and demands immediate action." Aside from the concerns about abandoned historical mines in the Edgemont area, a proposal to conduct a new kind of uranium mining in the same area is pending from Azarga Uranium Corp. Instead of digging tunnels and open pits as past mining.operations did, Azarga wants to conduct in situ mining, which involves injecting a solution of water, oxygen and carbon dioxide to leach uranium from underground ore before pumping it to the surface. Uranium is a naturally occurring radioactive element that was mined historically for use in nuclear weaponry and is now mined for nuclear power generation. Naturally occurring uranium in rock form is not typically hazardous, because the skin blocks uranium's alpha-particle radiation. But if uranium particles are ingested in high concentrations via air or water, they can cause cancer.
486		Uranium miner agrees to fix sludge leaks Associated Press CHEYENNE, Wyo. - A uranium mining company has agreed to corrective measures after two spills of radioactive sludge, the most recent on March. 29 when some of the material from a Wyoming mine leaked from a truck onto a highway, the Nuclear Regulatory Commission said Wednesday. The low-level radioactive sludge leaked onto U.S. 191 outside a radioactive waste disposal facility in Utah, the NRC said in a letter Tuesday to Brent Berg, the president of mine owner Cameco. The company isn't aware of any danger to the environment or people, Cameco spokesman Kenneth Vaughn said Wednesday. Besides failing to prevent the spill, Saskatchewan-based Cameco failed to accurately determine the amount of radioactive material in the sludge and adequately document the material in shipping papers, according to the NRC. Cameco said it has agreed to halt shipping barium sulfate sludge without NRC approval, identify specifically what caused the two spills, report on all sludge shipments to the disposal facility in Blanding, Utah, over the past three years and develop a plan to correct the problem. A similar leak happened last summer. The white, pastelike sludge is a normal byproduct of in-situ uranium mining, a process that involves pumping water mixed with oxygen and baking soda into uranium-bearing sandstone deposits underground and pumping a solution containing uranium to the surface. The solution is processed into yellowcake, which can be processed further into nuclear fuel. Cameco has suspended sludge shipments from its mine while investigating how to prevent another leak, Vaughn said. The company ships the material by truck for disposal every six months. Last year's leak happened at the bottom of the 15.5-foot-long shipment container and this year's happened at a lid at the top, Vaughn said. "We are investigating all ways we can ensure this does not happen again," Vaughn said.

		Ryan Johnson with the Utah Department of Environmental Quality said where along the truck's route through Wyoming, Colorado and Utah the leak began is unknown. Testing with radiation monitors at places where the truck likely stopped or turned showed no sign of leakage less than a week after this year's spill, Vaughn said. Workers washed the white, paste-like material that spilled onto U.S.191 off the pavement and removed 5 yards to 6 yards of potentially contaminated soil, according to a report by Colorado-based Energy Fuels Resources, owner of the White Mesa Mill. Wyoming is home to four of the nation's six operational in-situ uranium mines and is the top uranium-producing state. Smith Ranch-Highland, capable of producing up to 5.5 million pounds of uranium hexafluoride annually, is the biggest in-situ uranium mine by production volume in the U.S.
489		We've already spent enough on clean-up and it hasn't been done.
489		Old mines should be cleaned up. No mining or deep disposal.
489		No new mines should be discussed until this [reclamation of abandoned uranium mines] is done! Merely exempting these wells is not acceptable.
489		[clean up abandoned mines first] My mother taught me to clean a mess before staring another one. You (EPA) have a bad track record of oversight. They [Native Americans] were here first and are still here. We have no control over acts of God, but we can exercise rick management.
495		We demand: 3) No Permit Clean up old mines
514		This area has already suffered at the hands of the Uranium mining industry. These foreign corporations basically exploited the area and left the clean up to the taxpayers. The medical and physical harm is still evident today. I am asking that this application for Uranium mining and high pressure deep injection waste wells be denied.
527	Ex. 6 Personal Privacy (PP)	As part of its regulatory process, the EPA should require that old uranium mines in the Dewey-Burdock area be analyzed for potential Superfund status. This is critical not only to the people and animals who live in the area, but also for the company's employees. A uranium company should not be able to tell the federal government to "take a hike" when it controls known contaminated land through leases. Old mines that pollute the water and sediment for miles downstream with radioactivity and heavy metals should not be ignored, especially when area populations have well-documented increases in cancer and lowered life expectancy – both of which can be linked to higher levels of radioactivity. And whether or not the old mines reach Superfund status, they should be cleaned up before any new uranium mining is allowed. […] Also missing from the Class III Fact Sheet is a reasonably believable analysis of the concerns surrounding abandoned uranium mines in the project area. Any discussion of a factual basis for this analysis would be reassuring. Instead, the document just asserts the number of old mines and their conditions. There are two drilling logs indicating the geological location for the two larger open-pit mines (where it is obvious), but for the other abandoned mines, their condition is simply asserted. Early uranium mining in the southern Black Hills was a "mom and pop" enterprise, and detailed records were not kept. Small abandoned mines or prospects could have escaped being recorded. One partial solutions is to allow Dr. LaGarry a longer period of time in which to look over the drilling logs; his time was quite limited when he was given access to Powertech's records under an order from the NRC administrative judges. […] In addition, all boreholes and old uranium mines on the full project area should be plugged and reclaimed before any further mining is allowed. Not only does this protect the water, soil, and air of the area, but it also protects workers who would be exposed to the old, open mines. Abandoned open pit uranium mines spread contamination through the water, sediment, and air, as shown by research done by Dr. James Stone of the South Dakota School of Mines and Technology and others. The old mines must be reclaimed, and the soil, air, and water must be tested to insure that it is safe before allowing any new uranium mining to go forward.
528		o B. There seems to be some uncertainty as to whether there are old underground mine workings. These uncertainties should be resolved **prior** to issuance of a permit.
565		All old uranium mines in the Cheyenne River watershed should be reclaimed before any new mine is permitted. There are 169 old uranium mines and prospects in the southern Black Hills. All but a handful of these old mines sit unreclaimed, leaching contamination into the Cheyenne River. While the research that has been done on the impacts are not encouraging, research overall has been spotty. There is no big picture of the impacts that already exist. Until this is done and the old mines are reclaimed, there should be no new activities that would bring water contamination to our area.
7455		Past uranium mining operations have compromised water quality in Angostura Reservoir, which is a resource for recreation and irrigation, and also on distant Indian reservations whose residents depend on the Cheyenne River for drinking water and fishing. Water is truly the lifeblood of our communities, and South Dakotans know that in situ uranium mining operations in other states have degraded the water resources that they exploited.
07459 (Valentine hearing)		And another important thing that I would like to bring up is that there are a lot of mines that are un- -- that are -- that are not reclaimed in the Black Hills. I would also like to request that the old mines in the Dewey-Burdock area which should be fully reclaimed before any new permitting -- new mining permit -- mining permit is permitted. I would also like to ask that there be adequate and documented procedures on that reclamation within the permit
07459 (Valentine hearing)		TONIA STANDS: I am Tonia Stands, and I'm from Oglala, South Dakota, and I come from a little town where the White River breaks into White Clay Creek. And along that White River, we deal with uranium contamination. And they -- I come from people that don't know that this is happening to them. And there's spills and leaks. And, you know what? There's swimming holes out there where people still swim when it's really hot, you know. And they -- and they live out there. And they still fish in those waters, and they eat those fish. And they even tell us, like the deer and the fish, they're all sick. They have bubbles and lesions on them. And I have family with uncles -- I think you're supposed to report this, and they don't even know how to report this stuff or how to deal with it. But those -- the horses drop dead. My uncle had, like, 15 head one time, 25 head one time, and they don't know what to think. Like, what's this coming from? And when you look on when these leaks and spills happen, they are around those times, and nobody tells the Oglala Sioux Tribe or the people that live along that area. […]

		So when you're -- and those mines, those old mines that this proposed mine is going to go on, it's going to increase the contamination, because they have these spray mists, that you know about, and these evaporation ponds.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	From recent other uranium mines nearby, there was a spill in -- back in, I believe, it's within the last ten years. If you go to the different sites and learn about the uranium spills, you'll learn that one of them spilled 9,000 gallons per minute for a year, and this was leaked to the surface of toxic water within the past decade. And so how is this uranium mine supposed to -- or this uranium company supposed to monitor that?
7460 (5/8 Rapid City hearing)		Uranium mines in the past in the Edgemont area have claimed bankruptcy and left disaster areas behind them. I don't think that Azarga looks like a company that's inclined to be successful, so I see this happening once again.
7460 (5/8 Rapid City hearing)		And so I'll reiterate a couple other points that I had made down in Valentine, that we're asking that there be no permit, no expansion, no additional uranium permits until the other uranium pits that are -- the other uranium mines that are out there have been reclaimed and that they are proven safe to the public and to the water and the wildlife.
7460 (5/8 Rapid City hearing)		The mining that was done there in the '50s and '60s that was documented by the Rapid City Journal described a uranium processing plant that was at the edge of Edgemont. And when it was over, 3 million tons of white radioactive sand that had come out of that plant was hauled to the south of Edgemont and buried, 3 million tons. And that was the processed sludge from the thing. There are 200 mines out there, some four of them have -- are over a mile across, full of at least 90 feet of highly radioactive water. This is an accident waiting to happen. It's draining into Beaver Creek and Pass Creek, which drains into the Cheyenne, which drains into Angostura Dam, which drains into the Missouri River. And now we have had the NRC say, Well, if you're going to mine out there, you better fill in the 7,650 boreholes that were left out there. But this company is making no effort to do that, nor do they have the money to do that. It would cost millions of dollars to do that before they ever could begin mining.
7460 (5/8 Rapid City hearing)		TERRI HULM: Good evening. I'm Terri Hulm. I'm a Cheyenne River Sioux Tribal member. We get our water from the Cheyenne River. It's already been contaminated. It's contaminated. We have arsenic. We have cancer clusters, and children swim there. [...] We all know the drill. We've been through it. We've lived through it, and we've lost loved ones due to death, due to cancer.
7460 (5/8 Rapid City hearing)		You live in Denver. You're not going to feel any impacts. We know that our rivers all over South Dakota have been contaminated already by Edgemont and by Crow Butte. We're talking life or death.
7460 (5/8 Rapid City hearing)		There are already over 15,000 abandoned uranium mines within 15 Western states; 75 percent of these are in federal and tribal land. Ten million people live within 50 miles of an abandoned uranium -- I've got to move this, sorry -- of an abandoned uranium mine. No existing federal law requires the cleanup of these hazardous waste sites. Most of these abandoned uranium mines were established under the General Mining law of 1872 and remain dangerously radioactive for hundreds of thousands of years. We will all be long gone. The public health threat they pose grows greater the longer they are left abandoned. [...] Listen to these good people here today and work to clean up every abandoned uranium mine in the nation before considering a new one. Thank you.
7460 (5/8 Rapid City hearing)		MICHAEL HERRERA: I just wrote something up real quick. I'm standing here against Powertech/Azarga today. I volunteered for Dakota Rural Action a few years back on a petition against the license for their access to the aquifer. I have lived here since the age of ten. I live south of Hermosa right now. Hermosa's groundwater is contaminated with radium. It's a small amount. The water is still safe to drink, just putting that out there. Further south in Edgemont, the groundwater is contaminated from uranium tailings from the mining that started back in the '50s.
7460 (5/8 Rapid City hearing)		MIENGUN PAMP: Honestly, I don't have a big stack of facts or anything to present. I was sent here on behalf of others. I'm from Michigan, just kind of wandering around the state. But I was asked to talk about, you know, taking care of the wells that have already been put in that are, you know, poisoning people to this day. You know, maybe you don't believe that they're doing that, but it needs to be addressed all the same. It's still there. I obviously say no to any further actions like this, no more permits or anything like that. [...] But what else was I asked... Sorry. It's just a lot to think about. You know, I mean, like, if you look at the oceans and stuff from the last time something happened in this, it's not exactly like we're talking about oil or something that can be cleaned up a little bit easier. We're talking about something that's polluting mass amounts of water from one spill of something, you know, radioactive. So there's just so much, like, evidence that says that we shouldn't keep moving in this direction.
7460 (5/8 Rapid City hearing)		We are requesting that the EPA clean up the uranium mines that are -- currently have been permitted, and the old radium mines that are still open, to clean up the mess that they have already created.
7461 (5/9 Rapid City hearing)		BARBARA DUNFEE: Hello. I'm not used to a mic. This is going to be interesting. And I'm going to try and be organized and not babble. I'm starting with something that sounds like it's off-topic, but I'm going to try to pull it back in. We have a Superfund site up in the Northern Hills. It's not connected to uranium. It's connected with the Gilt Edge Mine, which was a heap-leach gold mine that was owned by Brohm. And they -- in the 1980s, heap-leach suddenly became the thing because the price of gold had skyrocketed, and it made sense to start trying to get as much gold as possible out. Heap-leaching uses cyanide, and they have this plan that they'd have a clay-lined pit and that everything would be sealed and it wouldn't leak. And the Black Hills Alliance at the time objected. They said that all the heap-leach sites that were around so far had leaked, that this was a bad plan, and everyone was sort of like, oh, no, this is anti-business and you're a bunch of tree-hugger hippies, and so on and so forth. And the State had Brohm put up some money, but they didn't put up that much because they didn't want to be seen as anti-mining. And by the late '80s -- or the late '90s, Brohm had become insolvent. It went into bankruptcy. They abandoned the Gilt Edge in 1999, and indeed, they started to have leaking of things up there, and it became a Superfund site. Brohm forfeited $6.4 million of their mining bond, which didn't cover -- even come close to covering things.

		Four other corporations contributed another $30 million, but the current cost of estimated cleanup is at $89 million. And this is sort of what happens with corporations in South Dakota doing mining and cleanup. So down at Edgemont, to get back to what's going on with uranium, back in the 1950s was when the boom started, and a company called Susquehanna Corporation came in. Their subsidiaries are Susquehanna Western and Mines Development. And those are the two that actually did a lot down at Edgemont, were the subsidiaries. As I said, the mining started in the '50s, it continued through the '60s, and by the 1970s, things were closing down, partly because the -- there had been thought that we'd all go into nuclear reactors for energy, and that didn't happen, partly because the Cold War was sort of winding down, we weren't doing as much with nuclear weapons, and partly because we started to see a lot more environmental, just activism. The EPA starts in 1970. We start to worry about what we're doing because there haven't been that much regulation through the '60s, all through the '60s. So one of the things that had happened down there at Edgemont was they had tailings sitting around, just kind of loose. There was this big pile of -- they estimated it to be 40 to 50 feet tall. And it's just out there. And people have been freighting it and using it for filler around their houses. They figured there were about 60 houses that had used it. So by the early '70s, Susquehanna's -- one of its subsidiaries had been a really bad investment, and it was bleeding money, and it was threatening to bankrupt Susquehanna. And so Susquehanna starts to sell off subsidiaries, trying to shore themselves up and save -- basically, save the company. And in the process, they sell off Mines Development. Mines Development closed down the mill in Edgemont in '72. They sold off the rights to TVA in '74. In 1975, Susquehanna sells Susquehanna Western, and then both Susquehanna Western and Mines Development were dissolved in 1978. By the 19- -- oh, and then Susquehanna itself went through some changes, finally was sold to a French company and was dissolved by 1994. [....] BARBARA DUNFEE: Oh, dear. I'll try to tie this up. So corporations go through things. In the meantime, the 1980s, they finally decided we have to do something about this pile of tailings. Susquehanna's gone through stuff, there's no one to go back on. And so what happens is the TVA puts money into fixing it. The Department of Energy puts -- reimburses them, and in the end, it's the American taxpayer who foots all this for the bill.
7461 (5/9 Rapid City hearing)		So you're looking at the Dewey-Burdock area that has been out there for, I don't know, since what, the '40s, '50s, that hasn't been cleaned up. So we have 167 mines that have not been cleaned up. We have over a thousand in the Missouri Basin area that have not been cleaned up.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	It's -- the county will not issue a building permit for any location within this defined area as a precaution, but the private property rights have already been violated. The mining company that caused these heavy metals to be dislodged and wash downstream and settle in this town, did they ever anticipate this? I don't know. Maybe not. But too many Superfund sites already exist where mining companies and other types of toxic operations were simply walked away from only because it was financially possible to do so because the bonding that was posted for cleanup and reclamation was just insignificant as far as they were concerned. It would have been more costly to stay around.
7461 (5/9 Rapid City hearing)		History has shown that uranium on or near the Pine Ridge and Cheyenne River Reservations has caused irreversible contamination of both surface and groundwater necessary for human consumption, community gardens, and agriculture throughout the Black Hills and the Badlands. Water samples taken from the Cheyenne River have revealed levels of alpha radiation above the EPA's maximum contaminant level. This testing caused the EPA to post unhealthy dangers of ingesting the water and using the river for swimming and recreational pursuits. The contamination has resulted in the high proportions of cancer-related illnesses and birth defects. [...] Beyond the direct human consumption, the area of concern regarding uranium mining has been called the breadbasket of the world. The resultant runoff of abandoned open pit mines, processing sites, and waste dumps have been so severe that it has also taken coal and uranium and radiation that has gone to and continues to go to eastern power plants. Contamination is seen to be nonlocalized as the Cheyenne River flows into the Lake Oahe Reservoir of the Missouri River.
7461 (5/9 Rapid City hearing)		The Black Hills is full of contaminated mines that the companies have been allowed to walk away from. Even in recent years, there have been incidents of, "Oh, sorry. Here's our bond money. We'll forfeit it." And it doesn't begin to address the problem of cleanup.
7462 (5/9 Hot Springs hearing)		We have still got the remnants of the previous mines when uranium was booming back in the '50s through the '70s. They are not reclaimed yet, and they are still jeopardizing our water supply. The rivers, when we have floods, it's still not reclaimed. [...] My experience when we lived in Edgemont back in the '80s was that our state is a poor state. They do not oversee projects like this. I, at that time watched, the tailings pile blowing through our little town of Edgemont when we lived there, called the state, called the EPA, and was told that, yeah, our state has rather lax policies and environmental standards, and it was kind of a drag, but that's how it was. Not willing to do that again.
07463 (Edgemont hearing)		I could go on about the Superfund that Mark Hollenbeck wouldn't let on the land so they could declare it a Superfund. You've seen pictures of those things. I know some have been sent to you, those big dumps out there. And that's where they want to start up again. We had a big rain here in 2013, I believe it was, or '14, that they got nine inches of rain over there by Dewey-Burdock. What does it do? It fills up those holding ponds. [...] MARY HELEN PEDERSON: Well, I'm done. I can go on and on on your literature alone. That's lies.
		Then I talked to a couple local residents here, and they informed me, you know, that -- how -- I was always wondering how the Cheyenne River got poisoned to the point where my relatives in Cheyenne River can't even eat the fish. They come out two heads, three heads, four heads, whatever. Why can't they eat the fish? [...] So I really had -- how is it that Cheyenne River can't eat their fish? Then I find out today why. I didn't really know. I didn't understand why.

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	It's because where they are mining, this mine here back in '60 to '89, they had a whole bunch of tailings and a whole bunch of this dust that was piled up there somewhere by the river. And then the rains came and it pushed it out into the river, and it poisoned all the way down the river. So it might -- it might not -- it may not have poisoned here, but it poisoned everybody down river. And that's something you guys have to live with. This community has to live with that. You know, I'm not trying to give you any kind of -- any kind of emotional dramatics or any kind of emotional, you know, what do you call it -- the other guy said, whatever, propaganda, you know. I'm just talking to you straight up. Straight up. Man to man, person to person, human to human. That's all. No propaganda. Not trying, to you know, to do anything. I'm just trying to inform my opinion of what I think. You know, whatever I feel, that's it. No propaganda. That's all.
07463 (Edgemont hearing)		The old pit mine, my dad's house, which I just slept in last night, the radon levels are coming up from the basements. Independent studies -- they are coming up from the basement when it rains, the precipitation. We're already at risk, and this is going to continue.
7642 (Hot Springs hearing)		This area has 7,650 boreholes that were drilled there by the Tennessee Valley Authority during a time after uranium mining was suspended by the four companies that had gone broke and abandoned the open pit mines in the Dewey-Burdock area. Four of those mines are at least a mile across, and they had at least 90 feet of extremely contaminated radioactive arsenic-laden water. It kills every wildlife that approaches it.
7642 (Hot Springs hearing)		This area has already suffered at the hands of the uranium mining industry. These foreign corporations basically exploited the area and left the cleanup to the taxpayers. The medical and physical harm is still evident today. I'm asking this application for uranium mining and high-pressure deep injection waste wells be denied.

Letter ID	Commenter Name	Text
32		Who is this company? Where will the uranium be going? Will it go to countries that are not friendly to the United States?
39		Why would we trust them to clean up future operations? Why would we want to poison our homelands?
71		As a side note, please consider that this is a foreign corporation making this request to mine our uranium and highly likely our water. They can make grandiose claims that their process is safe and their practices are sound, however this company performed in situ mining. I'm very skeptical of their true intentions and personally expect them to sell the entire operation the required permits are obtained. The Russians have already obtained ownership of 20 percent of this country's uranium. hate to see any more of our uranium fall into foreign hands. Additionally, too many companies grab what they want of our then leave a polluted mess, which falls on the tax payers to finance the cleanup, if it is even possible. Respectfully,
71		It would be a travesty for an outside agency to determine that it is alright for a foreign corporation to not only have access amount of our water for free but also be able to inject their waste stream back into our potable water.
72		The company has never even performed this kind of mining. I expect them to sell the entire operation once all the permits obtained. The Russians already own 20% of this country's uranium. I would hate to see more of it fall into foreign hands. Too many companies grab our resources, then leave a mess for tax payers to try and clean up. If you agree, tell th deny water permits for Azarga Uranium Corp. by June 19 at shea.valois@epa.gov
77		Furthermore, permitting a foreign company a permit to ship in and inject waste material from other places is totally unacc Later in my career with the Forest Service part of my duties were to survey and catalog the many abandon mines around tl is obvious that mining companies care little about what they pollute and what they leave behind.
83		Furthermore the NRC ordered Powertec Azarga company to plug the more than 7600 test drilling bore holes in Fall River a counties. This was ordered two years ago and not one hole has been filled.
86		I do not want our land and water contaminated by anyone, much less a foreign company which absolutely cannot guarante will not happen.
89		Subject: NO to Uranium MINE Please, please consider NOT ALLOWING a Chinese owned company to come into our state , mine out the uranium, take it t perhaps use against the Americans, and then contaminate our water in South Dakota. Can't imagine what you are thinking consider this. I was raised in South Dakota and I love this state. Don't give it to a foreign government!!!!!!!!!!!!!!!. Our peo worth more than money. Hopefully this isn't about some corruption. Vote NO to uranium mining by a foreign owner. Only what happened to the gold mining near Lead S.D. A Canadian company defaulted and left the people of S.D. to pay for clea Please think smart. Thank you.
98		Assurances that their mining and pumping processes are safe are totally based on the word of company officials with spars data. On the other hand, the history of uranium mining here in South Dakota indicates that uranium mining cannot be don creating and leaving contamination. Cancer rates in areas where uranium was mined are alarmingly high. A poorlyfinancec without a proven track record, Azarga cannot guarantee that it will be responsible for costly safety measures, for accidents prompt and thorough cleanup. Azarga/Powertech's record at the Dewey-Burdock site is poor even as they know they must the public that they are a good corporate citizen.
99		Powertech, is a multinational corporation and division of Azarga Uranium Corporation of Canada, a foreign corporation. W the U.S. take the radioactive tailings and deposit them in the Inyan Kara system of underground aquifers? What part of NO Canadian corporation not understand? Keep the U.S. out of your equation of ridding your operations of radioactive materi NO. No.
123	Ex. 6 Personal Privacy (PP)	The fact that Platinum Partners, which is Azarga's largest share-holder, is being charged with a variety of misdeeds which i could provide prisoin terms for the guilty, should be a wake-up call to the EPA as the kind of people who are running the sl Azarga. With the company based in China, overseeing a Canadian company with offices in Colorado, one can easily guess h feels about the long term health of the citizens in this area when compared to the greed for profit.
124		Ninth: One of the serious problems I see with this operation is the lack of mining experience of the people in charge. For e company has yet to mine uranium. The Project Manager has never been a project manager on any other ISL and in fact has little "engineering" of any kind for many years The executives have experience in the nuclear industry and in administratio in managing and mining an ISL uranium mine. At least not according to the CVs. This is a very complicated and potentially and very expensive proposition. One of P/T spokespersons is a former Professor at the School of Mines. He has not mined uranium at an ISL mine The CEO has not mined any uranium at an ISL mine. They have not developed yellow cake, they ha remediated an ISL area. What they have accomplished is to file a permit application. And that after many corrections from and the DENR. I have to believe that this has to be their first filing for an ISL mining permit. So...this will be a trial run for P personnel, a first time operation. I am sorry but I have no faith in a lack of experience. I need to see years of experience in industry with a record of clean remediation and contamination containment. Based on their inability to produce a clean pe application without DENR and NRC assistance and their lack of experience and their public admissions that there will be le spills and runoff and contamination of the soils, there is no reason to expect P/T to be able to keep the public safe from thi contamination or remediate the operation to even a minimum standard. Indeed, their stock price would not be pennies a investors had any faith in this management and this operation. ARSD 74:29:07 clearly states that "The individual who devel reclamation plan must be competent in the management and planning of the specific type or types of reclamation selecte prior experience in reclamation, P/T clearly fails this test.
125		The proponents suggest tyhat the opposers lack intelligence, lack scientific standing and approach this issues with an over of emotion. This is misdirection at it's best. Professor Stone of the SDSM &T is a scientist and teacher of impecable credent studied this area extensively is quite clear as to the possible dangers of this mining operation. Professor LaGarry from Chac College has studied this area as well and has the same conclusions. Ms. Linsey McLean is a highly qualified chemist who ha before you and her background, studies and knowlege of chemistry and chemical effects of mining Uranium is an expert w is well known in many areas of the country. These scientists are not on a payroll and answer only to scientific truth rather t paycheck or a promise of future gains. PowrTech representatives on the other hand, have little to no experience in ISL min used intimidation techniques and physical threats to browbeat mining opponents. They have continuously erred in filing th applications due to their ignorance of the mining process and have had to be hand led through the process.
158		I am also aware that the Russians through Uranium One and the Chinese through the Azarga connections to Hong Kong ow substantial part of Azarga Uranium Corp. Neither of these nations are considered allies of the United States. [...] Uranium One has a financial interest in Azarga's Dewey Burdock Project, which is least 30%. The Russian mining company, One which is owned by Vladimir Putin, now has at least 20% and some say 50% of the uranium mining leases in the United Thus, if permitted, Azarga will be in a legal position to mine uranium in the United States, and ship it to its trading partners Iran, Syria, and a host of other bad actors. China has been trading heavily with North Korea, which has stated its desire to b nuclear weapons, capable of attacking US-Asian allies, and the United States. THE ACTUAL OWNERSHIP OF POWERTECH/AZARGA IS INIMICAL AND SHOULD PRECLUDE THIS COMPANY FROM BEING GIV PERMITS AT ALL BY THE UNITED STATES GOVERNMENT. I trust you will consider this letter carefully and deny all permit requests. Please call me at Ex. 6 Personal Privacy (PP) if you have furthe questions. Sincerely, C Ex. 6 Personal Privacy (PP)
174		For years, the industry has demonstrated that they will not be proactive and will require monitoring

202	Ex. 6 Personal Privacy (PP)	The fact that Azaga Uranium company is heavily financed by a Chinese investment fund under investigation by the Chinese government should red flag the EPA to also investigate the company itself.
231		Subject: Uanium etraction project in western South Dakota. [...] We strongly urge the EPA to NOT GRANT any of this drilling and water injection to proceed. This company does not have th monetary resources to remedy any of the possible detrimental effects to our environment and peoples health. We in the E daily confront the disastrous effects of the abandoned Gilt Edge Mining project. Now a superfund site.
253		Subject: Re: Thank you for your comments Though I am concerned about drinking water, my main concern is who is owning the uranium mining rights. There has bee articles online about a possibility that PowerTech is connected to Uranium One, the company rights sold to Russia while Hi Clinton was in the State Department.
256		Why should we allow a Canadian company with ties to Russia to extract uranium in the U.S., thereby poisoning everything of years inducing suffering our citizens and the environment? That the uranium is going to be sold to foreign markets adds insult to injury. This proposal is absolutely ignorant and short-sighted. Millions of Americans -- Indigenous and otherwise, c clean water for LIFE. WE THE PEOPLE have had enough of the mega-corporations polluting our skies, rivers, seascapes and stop this nonsense and do your job on behalf of the Americans you are supposed to be serving... ! !!!
262	Ex. 6 Personal Privacy (PP)	General History of the Powertech Company and Current Status of Their Mining Permit from NRC. In the 1970's and 1980's, Burdock area was, yet again, thoroughly investigated for potentially mineable uranium deposits, after the open pit mining front was completed in the 1960's. Uranium yellowcake was then going for $100 / lb and in high demand. The Tennessee V Authority was hired by the US DOE to locate geological sources for uranium. TVA then drilled over 7650 test site Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) 2 boreholes in Edgemont, in two investigative sessions, to locate more recovera uranium during/for the Cold War. A test mining tunnel was even attempted, but caved in due to the extensive and volatile structures in the area. They even lost an excavator, it sunk right into the ground while parked in what they thought was a s in the open air. The TVA abandoned the site altogether, twice, concluding that there was not enough recoverable uranium a mining project. Powertech tried to mislead the public by including focus on uranium levels tested in alluvial wells - instea limiting tests to the proposed affected aquifers. The alluvial wells actually showed higher levels of uranium than the intenc aquifers, which actually confirms the TVA's conclusion that the roll front uranium deposits were gone. Powertech was false claim the alluvial deposit concentrations as part of the deposits they would be mining. Alluvial wells are not mineable as th be confined, composed mostly of surface water. Like many mining companies in Canada, where the laws are lax, Powertec formed by a hedge fund in Vancouver about 1990, that has absolutely no experience or history in mining of any kind. They Powertech as an investment vehicle. The ten people who had shares in Powertech began to manipulate the reports about company in order to raise the stock share price. They first operated out of Colorado, attempting to start a uranium mining there. They drilled some test holes and damaged local water supplies. They were immediately sued by angry local home ov lawsuits ended up at the supreme court level of Colorado, where they lost. The governor of Colorado and the legislature pa restrictive mining laws and virtually forced Powertech out of Colorado. For this history, please consult powertechexposed.c Powertech then showed up in South Dakota, where they induced the legislature to pass SB 158 in 2011, which negated all c uranium mining controls that we had in South Dakota at the time. A substantial number of legislators, state officials, Fall Ri officials, and prominent people in South Dakota were induced to buy the stock at $20 per share, with promises that the stc be expected to go to $600. per share. Over the years, 420 million shares of stock were issued and $68 million were run thr small company, sold worldwide on the Toronto Stock Exchange. Sole revenues for Powertech were and still are, stock sales promising sounding "forward looking" press reports, while attempting to get various mining permits. They were granted a NRC permit, but have never been able to use it because they have never complied with the conditions for use. Currently th is on hold indefinitely from NRC. There are two more permits needed from the state of South Dakota, requiring a mining p public hearing and a water use permit public hearing, that are tabled pending the NRC and the EPA rulings. Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) 3 The TVA documents attached show that the Fuson shale is a leaky aquitard and the r reason that ISL mining was not considered at Dewey Burdock, causing the TVA to abandon the site after 10 years and 2 exp The Science Against Injection Wells in this Proposed Area (Dr. LaGarry and Dr. Moran) Testimony of Dr. Hannan LaGarry, ge stratigrapher, to NRC and ASLB 2014, shows that there are extensive fractures, fissures, sinkholes and breccia pipes in the a dramatically increase permeability within confinement layers. These geological features go unrecognized by Powertech. Pc was "cherrypicking data" (selecting a non-representative sample to incorrectly represent the whole) from the first TVA exp the 1950's and 60's, carefully selecting only the data that supported their project. They were not even in possession of the exploration TVA data from the 1970's and 80's when they submitted their permit requests. Powertech just obtained those in May of 2014. In the discovery of that data in the NRC/ASLB hearing of 2014, Dr LaGarry found that the drillers logs, note hydrological pump tests "did not provide a scientifically recognized analysis that can support any hydrogeological conclusic the project area". He also concluded that "The NRC 'spot check' of 37 random data points does not provide a statistically re testimony or basis for any conclusions regarding confinement or hydrology." Dr. LaGarry also added "NRC Staff presents nc its so-called "random" selection. Without such information, professionals in my field cannot accept such assertions where possible that the limited data set resulted in poor methodology that is the hallmark of modern junk science. Having examir data points out of thousands available, NRC would have failed my Math 123 Introduction to Statistics class. None of my stu researchers would be allowed to publish or present their research findings had they made such a fundamental error." Dr. F Moran's, hydrologist, testimony before NRC/ASLB thoroughly established that, "Dewey-Burdock uranium ore zones are not hydraulically - isolated from other geologic units, other aquifers, or zones outside the project area." He provides many Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) 4 examples of what he refers to as, "NRC Staff disregarding the conclusions numerous hydrogeologic experts (both Powertech-funded and independent).

		The Quantity of Injection Wells Requested for Waste is Ridiculous Powertech/Azarga is asking for 4 Class 5 UIC deep injecti for hazardous waste deposition, into the Minnelusa aquifer, with a reserve request for 4 more of the same "in case they fir need them". They say they need 2 of these "right away". Powertech/Azarga will operate 14 well fields total. The Minnelusa a major drinking water aquifer in the Black Hills. To say that it is not, is not correct. For comparison, Crow Butte ISL uraniur Crawford, Nebraska, operated 11 well fields for 20 yrs using a single UIC hazardous waste deep injection well for depositio toxic wastes. Dewey Burdock originally requested a total of 8 UIC hazardous waste deep injection wells, but EPA is only pe still too many for a non functional, no profit mine, two of which are requested to be drilled right away. (Really? What do th them all for? No work has been done to find and properly close any of the old borehole sites that is required by NRC, follo adequate pump testing to make sure that the aquifer is contained prior to actively mining. EPA is not requiring borehole cl the injection wells. This spells certain "disaster" even more.) It is estimated that this work will take approx. 3 years before can take place. By the numbers: Smith Ranch in WY :10 well fields, one deep injection well Crow Butte, Ne : 11 well fields, injection well for 20 yrs. Willow Creek, composed of two sites, Christensen Ranch and Irigary- 2 injection wells. Powertech/ also applied for Class 3 injection wells for 14 well fields. This will be an additional 84 injection wells that will be receiving r dissolving chemicals/lixivients for production. Normally a well field contains one production well for extraction surroundec injection wells. Further, the 14 production well fields are not on a uranium rich roll front, as per TVA documents. (uranium are typically situated on a uranium rich roll front so that extraction is efficient and the mine is profitable. Remember, the r was found by TVA to be mined out prior by surface mining) Where did the increased number of wells come from up to 4,0 hazardous waste deep injection wells in the area are destined for the Minnelusa aquifer, a drinking water aquifer in the Bl Normally, UIC hazardous waste deep injection wells are drilled "below" aquifers, not "in" them. The hazardous waste injec the aquifer will travel hundreds and even thousands of Ex. 6 Personal Privacy (PP) 5 mil contaminate other aquifers that are connected, and ultimately the huge Ogallala Aquifer that services the entire central U addition, these hazardous waste wells will legally be able to take in the water of the hazardous wastes, containing radioact toxic and heavy metals from other mining sites, to make our aquifers a toxic waste dump, and ruin the water we have ther the wastewater will contain radioactives and toxic heavy metals, the ultimate destination as to which class of deposition w required, is determined by the proximity of the drinking water aquifer near it, above or below. Powertech /Azarga has pla semantics game with the determination of the class of disposal well required, however the toxicity of the ultimate wastew the same. Nowhere can I find where Class 1 waste waters were ultimately dumped into a class 5 injection well. The claim t Powertech/Azarga is going to treat the wastewater first to "purify" it to classify for the Class 5 deep injection regulations, c include the inability to extract radioactive organified metals that are now found in wastewater by ISL in several studies, no uranium. By regulation, Class 5 waste waters can only be as toxic as storm sewer waters. This wastewater is hardly that. Ra
292		Also, the company applying for these permits has been shown to have questionable integrity. The Canadian government h challenged them in court charging that they provided misleading information to their stockholders. Our area has had probl companies not completing clean up after mining, and these early concerns could indicate problems in the future. Water is our most precious resource. The Lakota truism, Water is Life, could not be more applicable. Please deny these pe
328		Powertech seems to have a sloppy drill/borehole history and human and mechanical failure is a given. Please in the name of god do not do this. I am begging.
366		Most of all, there is the question of trust towards Power Tech, not to long in the past, some of these same people who wo mine uranium on their land also wanted a soil farm just outside of Edgemont, without the consent of the residents. That is a fact and it a public record. I know this is a toally different project, but it is about disrespect, and dishonesty. So if you are going to be thoughtful, take all these facts into consideration please. [ATTACHMENT: "2014.07.15 LaGarry expert opinion_ML14197A377.pdf"; "2014.07.15 Lagarry testimony 2.pdf"; "lagarrysupplementaltestimonyfinal_1-2015 (1).pdf"; "lagarrysupplementaltestimonyfinal_1-2015.pdf"; "1998-07-InSituLe UMining.pdf"]
410	Ex. 6 Personal Privacy (PP)	IV: Suitability of Azarga Uranium Company: A huge number of mineral leases including those for uranium were acquired over time by a company called Energy Metals Corporation. Vladimir Putin through a company he formed in the United States called Uranium One was allowed by Hillar when she was Secretary of State to begin mining extensively for uranium in the American West. Uranium ultimately boug Metals Corporation and thus acquired at least 20% of uranium mining leases in the United States. At least 30% of the minerals in the Dewey Burdock Project were owned by Energy Metals Corporation and are now owned Uranium One, a wholly owned Russian Company. The Russians also own leases in the surrounding area. Powertech has issued at least 420,000,000 shares of stock and garnered over $68,000,000 from stock sales. It has never ea money from mining or other legitimate endeavors. Instead it has spent the shareholder money. Many SD investors paid $ per share. The stock is now about 35 cents when it trades. The hedge fund founders have paid themselves huge amounts. shareholders have lost large investments. For years the Powertech stock was sold by the Toronto, Canada exchange or those in Germany. No filings were made with Securities and Exchange Commission nor the SD Securities Commission. For years there were no audited financial reports, "shareholder communications" which had the effect of encouraging more stock sales. Powertech also entered into lease agreements with landowners near or abutting the Project Site. Landowners were to be $50,000 per year for 10 years for the uranium leases on their land. In many cases, the lease amounts were more than the sell for. Some lease holders bragged that they already knew that there was no recoverable uranium on their land but they anyway. The lease agreements prohibited the leaseholders from objecting to the Powertech Project. Many thought that F would provide Madison Water at no charge and of good quality to their lands after the project was over. About two years, Powertech/Azarga abruptly stopped paying the leases. The fact that they do not live up to their lease arr should be a red flag for rejecting this proposal...
445		**Background of Powertech/ Azarga:** **The Issue of the 12 Requested Hazardous Deep Injection Wells by Powertech/Azarga at Edgemont, vs the 4 That Would Permitted** **COMPANY HISTORY** *1)* Powertech/Azarga is a Chinese based -foreign owned company that is essentially bankrupt. The partners took over a ba refrigerator manufacturing company shell and then declared themselves a uranium mining company, though to date, this has never mined anything anywhere. As a foreign owned company, they are free to mine and then bankrupt the company mining reserves are gone, leaving the hazardous and radioactive mess for the taxpayers to clean up. This is the most comm scenario with foreign owned mining companies in the U.S. [...] And the extra great expense of this processing will cost the profitability of the project dearly. They already canno mining land leases and are essentially bankrupt going in to this project. See the toxicology testimony by Linsey M expert witness for Consolidated Intervenors, to the Nuclear Regulatory Commission and Atomic Safety and Licen on the birth deformities found in wildlife and domestic farm animals studied in ISL mining sites contaminated by waste water and radioactive metals. https:Uwww,nrc,gov/docs/ML1513/ML15132AS07,pdf { {https://www.nrc.gov/docs/ML1513/ML15132A507.pdf} {https://www.nrc.gov/docs/ML1513/ML15132A506.pdf} {https://www.nrc.gov/docs/ML1513/ML15132A506.pdf}

		The business model for this Chinese based company in Dewey-Burdock is very likely to never start uranium mining to begir by their own admission, the price of uranium is far too low for profitability. They intend to use these injection wells for imp hazardous toxic mining wastes from other sites for profit, making the Black Hills an everlasting toxic waste dump. They stat need two deep injection wells for hazardous wastes *right away*.
447		And Azarga are crooks to boot! Their stock is worth pennies, and Platinum Partners, which owns 30 % of Azarga stock, is ur indictment that basically describes Platinum Partners as a Ponzi scheme, according to the Rapid City Journal and other sou even IF Azarga intended to use the most advanced monitoring and cleanup methods on the Dewey-Burdock site, they wou able to afford it. The people of Custer and Fall River counties will be left with toxic water and the bill to pay for it! Pay for i health of their children, their stock, and their livelihoods.
451		They claim there is no connectivity between the aquifers, and their project is completely contained. Spelunkers thought th the end of the third largest cave in the world, Jewel Cave, which is north of the project. The spelunkers were thrilled when squeezed through that tight space and found yet more huge caverns. We are not confident with Powertech Azarga's claim: knowing what lies beneath. The transportation and disposal of all related waste is an issue with far-reaching compromises environment, and contains its own very long list of concerns. They have found radioactive tracking socks discarded in Nortl illegally. Is there any wonder we are skeptical of another extractive business? You have heard already, from other testimony that we can not trust this company. Powertech Azarga's lobbyist wrote legis got it passed, whether by ignorance or corruption, that has made this project a self-monitored operation. This was intentic introduced to make it easier for them to Self-Monitor. This was an underhanded and arrogant thing to do to South Dakotai can we ever trust Powertech Azarga when they have this kind of dishonest intentions? Why, if the process is, to quote Mr I "safe and benign", would we need to change the rules to make it easier for a company to destroy an area and then walk av without paying the consequences.
464		Why allow a company that has no ISL experience to risk all four aquifers? [...] Finally, how can this board approve these permits when it would appear that this company does not have the financing to construction, that the personnel responsible for the operation do not have the necessary experience or the competence or to operate the system, that this company has left unanswered how it plans to assure the safety of the public from the disp dangerous chemicals and compounds, that has yet to find the one management position that will oversee the mining itself to produce a completed application on time, that has made incorrect, misleading and confusing statements, that cannot gu what it has to guarantee, that will abuse and possibly ruin three aquifers, while threatening the fourth? Simply put, it cann [...] *All numerical numbers refer to the NRC application filed **by Powertech/AZARGA**.
464		6.0 Should it concern this board that the reclamation plan is produced by WWC Engineering, which is on the PT payroll, an Blubaugh and Mays who have no experience in ISL mining operations when ARSD 74:29:07:18 requires that "The individual develops the reclamation plan must be competent in the management and planning of the specific type or types of reclam selected."? NRC states that"The primary goal of ground water restoration is to protect present or potential future sources of drinking "However, restoration to pre-mining may not be practicable or feasible .... " Is this really in the public interest? 6.3 Decontamination and decommissioning. PT has said that radiation can simply be hosed off with high pressure water or cleaning. If, indeed, it is even possible , there is no mention of what to do with the now contaminated water that is the res it can decontaminate the soil. NRC indicates that that cannot be done. Are these contradictions not of concern? PT gives it' confidence that the ... units ... meet the clean up guidelines or action levels." Would the public interest find 95% lacking?
465	Ex. 6 Personal Privacy (PP)	The fact that Platinum Partners, which is Azarga's largest share-holder, is being charged with a variety of misdeeds which convicted could provide prison terms for the guilty, should be a wake-up call to the EPA as to the kind of ethics embrace Azarga. With the company based in China, overseeing a Canadian company with offices in Colorado, one can easily guess Azarga feels about the long term health of the citizens in this area when compared to the drive for profit at all costs.
470		Is Powertech and their owner able to afford cleanup costs" Need guarantee! Am very concerned about water migration f Minnelusa to the Madison,. How does Powertech plan to remove all particulates and chemicals, heavy metals, etc.? The presentation charts from Powertech (?) do not show the severe faulting of the aquifers. Although Powertech is based in main stockholders are Chinese-based.
470		Who is Powertech? Who makes procedures?
470		There needs to be a cleanup plan for each drilling.
470		DO NOT allow Powertech to mine or dispose of waste. There is no company that will keep our water safe. This company particular has no experience and **no** history of performance.
470		An international company should not come before the wishes of U.S. residents.
471		Arzaga (formerly Powertech), is an international uranium company and this permit would benefit a foreign corporation a expense of South Dakota residents. A mistake was previously made to allow uranium mining in our state. We do not wan happen again. This company is on very shaky financial footing. Do we want this company to dictate the rules for doing bu South Dakota? Will the federal government pay for the cost of cleaning up the areas that will most likely be affected? We want to take that chance.
483		I am also appalled at the underlying greed behind all of this. No one in this area will get rich, except maybe Azarga, who spend their profits in paying fines for violations and clean-up. Or try to get away with it! Lawyers!
484		Only way to prevent this is to not let it happen in the 1st place. And this is our government. Powertech AKA Azarga is China [ATTACHMENT: "Tunnel collapses at Hanford nuclear waste site in Washington state"]
487		2. The *economics* of the project (a few temporary jobs, a huge profit for a few people versus probable environmental deva clean up costs). Western South Dakota has a long history of outside companies coming in and making profits and gone befo damage is evident. None of them put up the huge sums of money for clean up insurance. **LEAVE OUR LANDS ALONE!** [...] 5. The *shadiness and uncertainties.* Does Arzaga really want our uranium? Or is it our water? Or our holes for toxic dump s controls what they do? Who pays for their mistakes?
488		These permits do not benefit the United States. We don't need any uranium. The US has a 200 year supply. For us, it is all a protecting water. For Azarga, a foreign based conglomerate, it's all about greed. These new disposal wells will make them and leave us, once again, with a possible irretrievable mess.
494		We should never allow a foreign country, with a bad environmental record, that obviously has no concern for the emrirorn ever be given the opportunity to contaminate our land for money and then leave tt not restored.This has been a previously behavior and the environment never fuly able to be renxed to it's original state. [...] Powertach should estab(ish their business in their country and not on American soil. No company should be allowed to rec uranium or set up a Superfund site anywhere in the US. Powertech/Azarga permits should be denied, please think about th children's future. A problem could effect minions of people.
497		Powertech/Azarga are also not American Companies and the few jobs they generate are not worth the risk to our environr Please consider these ideas along with the many others and recommend denying the permit to Powertech. Thank You.
		LakM 683: Lakota Environment Mgmt. and Protection

499		Ex. 6 Personal Privacy (PP) to Powertech Uranium Mining in the Black Hills ***Introduction:*** [Handwritten] My concerns Who owns Powertech Canadian Azarga R Chinese A lot of variables. Cement caps @ different levels intervals IF 4.0 Earthquake happens, retest water. Powertech Uranium Mining Company pr mine uranium in the Black Hills of South Dakota. This is a Canadian company known as Azarga Uranium. In actuality, this cc comprised of shareholders and a Chinese investment fund. This Chinese investment fund is under investigation by Chinese authorities. It doesn't state what they are under investigation for. Powertech proposes to take water out of the ground.
509		WHAT IS AZARGA/POWERTECH? Azarga Resources Limited, is a Canada-based, China-led company that has never mined uranium. After owning part of Pow since 2013, it is now merged with Powertech to form a new company named Azarga Uranium. The new ownership control: Powertech's operations in South Dakota, as well as uranium interests in Colorado. Azarga's largest stockholder is Platinum Partners, a hedge fund that is based in the Cayman Islands. Seven members of Plat Partner's leadership team, including its founder, Mark Nordlicht, have been charged in federal court in New York for a $1 b and for running what the media has called a "ponzi scheme." This makes the status of Azarga uncertain. The former investment banker who heads Azarga Resources is Alexander Molyneux, who was born in Australia. Molyneux l investment banking and entered the mining industry with the help of Robert Friedland, a dual citizen of the United States a who lives in Singapore. Friedland is known by some as "Toxic Bob," partly for his role in the disaster at the Summitville gold mine in Colorado. The Summitville mine was run by a subsidiary of Friedland's company, Galactic Resources. It is now a Sup site that discharged acid drainage and cyanide, arsenic, cadmium, copper, lead, mercury, and other heavy metals into the A River. Friedland's bankrupt subsidiary pied guilty to 40 felony counts. Cleanup, which is expected to cost $150 million, is on Molyneux's mining experience began with his stint as CEO of SouthGobi Energy Resources, a coal mining operation in Mon company was controlled by a firm founded by Friedland. Molyneux was fired from this position after the company racked u of dollars in operating losses and he apparently alienated the Mongolian government. A market observer summarized the "The SouthGobi thing was a mess, with restated financials for two years, an abortive takeout by a China company, Rio Tint Mr. Molyneux his walking papers, and Ontario-groomed class-action lawsuits." (The Calandra Report) Whether Azarga intends to actually mine uranium in the Black Hills remains to be seen. It is also possible that the company make a profit by getting mining permits, then selling the proposed mine site to someone else, or they might get permissio deep disposal wells and start taking in other mines' wastes. In addition, Azarga/Powertech statements have faced scrutiny by the British Columbia Securities Commission. Canadian re consider Azarga's preliminary assessments "too speculative geologically." Azarga acknowledged certain "deficiencies" in its relating to the Dewey-Burdock project. There should be NO deficiencies where OUR WATER is concerned.
527	Ex. 6 Personal Privacy (PP)	One of the questions that is raised by the public that is not answered in the EPA documents is whether there is any uraniu mine in the project area, which was mined extensively in the 1950s – 1970s. Before the project goes any further, the comp be required to prove that there is the amount of ore present that it claims by providing information under close supervisio knowledgeable regulator selected by the EPA. As stated above, this should occur before any final permit is issued. If the c balks at this requirement, it should be inferred that it is not committed to the project as designed, that it knows there is le present than it has claimed, and/or that it expects the expenses of this activity to make the project unprofitable.
528		The undersigned, Ex. 6 Personal Privacy (PP) an individual, residing at Ex. 6 Personal Privacy (PP), Buffalo Gap, SD 57722, and the organization A Responsible Mining, at the same address, hereby provide the following written comments to the above-referenced draft p documents related to Powertech Dewey Burdock. 1. GENERAL COMMENTS APPLICABLE TO ENTIRE PROPOSED PROJECT. A. The Applicant, Powertech, which is now known as 'Azarga', is an insolvent and corrupt organization. The EPA has failed t Applicant's insolvency and inability to continue to pay its expenses in all of the project documents. This failure has led to m wrongful assumptions related to Applicant's obligations under the Class III and Class V permits that Applicant has the finan resources to perform the EPA requirements thereunder. These false assumptions need to be revisited in light of Applicant' insolvent status. After almost 15 years, and spending over $75 million of public shareholder monies, Powertech still doesn't know enough a project area to be allowed to pursue this project. Notably, as of December 2014, Powertech's technical expert Hal Demuth EPA officials that "there are "some unknowns" regarding what the data show to support UIC permitting." These 1 unknow not, to date, been resolved. Powertech misleads public officials and the public by providing conflicting information to different parties. It has informed industry[2] that there is 4 million pounds recoverable uranium which can be mined over 11 years and it has informed the EP between 8.5 and 9.5 million pounds of recoverable uranium deposits have been identified at Dewey-Burdock and that Pow expects to conduct mining operations for 20 years.3 Which is it? And such assumptions concerning recoverable uranium assumes that it is all of the type that is recoverable - which has bee doubt by the recent research set forth in Bhattacharyya, A. *et al* . Biogenic non-crystalline U(IV) revealed as major compon uranium ore deposits. *Nat. Commun.* **8**, 15538 doi: 10.1038/ncomms15538 (2017). Powertech/Azarga has as its largest (29.6%) shareholder, the criminal enterprise known as 'Platinum Partners'. Platinum Pa been found to be an illegal 'Ponzi' scheme and its principals were arrested and are under criminal charges. Platinum Partn acquired the shares after Blumont Group Ltd defaulted on its loan and Platinum Partners foreclosed on the shares in Azarga/Powertech. It is a very bad sign when the largest shareholder of the Applicant would rather give up its stock than p debts.[4] Platinum Partners executives were charged in a $1 Billion fraud in December 2016.[5] As a result of the seizure of the assets of Platinum Partners by the US Attorney's Office in the Eastern District of New York, possible that another branch of the US federal government, namely the US Department of Justice, is the decisionmaker wi to the 29.6% of Powertech/Azarga, which poses a conflict of interest for the EPA in this matter. All such conflict of interest resolved publicly before any permit is issued. Powertech's financial statements tell a sad story. The 6 stock price of Powertech/Azarga (TSX: AZZ) is CDN $0.285 per share 16, 2017. As of May 12, 2017, Powertech/ Azarga had 75,336,943 outstanding, giving it a market capitalization equal to CDI $21,471,028.76 which equals US $16,249,703.98. As of March 31, 2017, Powertech/Azarga had financial assets equal to CDN $607,823, which equals US $ 460,012.60 and to liabilities equal to CDN $3,997,580 which equals US $3,025,448.50. This means that Powertech/Azarga is financially insolve debts greater than its assets equal to US $2,565,435.90. It is $2.5mm underwater. Powertech/Azarga has current trade payables equal to CDN $1,327,373, which is US $1,004,582.43 and current cash equal $471,286, which is equal to US $356,678.67. **This means that Powertech/Azarga does not have sufficient cash resources t current trade payables making it legally insolvent.** During the first three months of 2017, through March 31, 2017, Powertech/Azarga spent CDN $243,354, which is equal to $184,175.17. **This means that even if it doesn't pay any of its trade payables, Powertech will run out of funds in six mon December 31, 2017.**

		Over the past 10 years, the stock price of Powertech/Azarga has crashed from CDN $23.33 to CDN $0.285. That is a 10,000 in stock value, highly disappointing its investors and raising the specter of stock fraud. **Meanwhile, over that period of tim Powertech/Azarga has raised over US$75,000,000 and has wasted all of it.** [...] **The EPA documents fail to consider the foregoing 'real-world' economic disincentives to continuing with this project.** While typically the concern of its management and not the licensing agency, Powertech/ Azarga's insolvency, bears directl consideration of these permits. The mining phases most likely to be impacted by Powertech/Azarga's demonstrated inabili manage it's financial resources are invariably restoration and remediation in addition to borehole plugging/ abandonment, drilling, monitoring, testing, modeling and analysis. Powertech/Azarga's failure, after the extraction of whatever recoverable uranium may be at the Dewey Burdock site, if an EPA and the American People the task of restoring the toxic mess they are sure to leave behind. [...] Since Powertech lacks the financial resources to pay its trade payables or current expenses, there is no reason to believe tl be able to design or operate an adequate treatment plan. [...] Powertech has ZERO real world experience operating an ISL mine and wants to practice on our communities in the Black H fact that they have chosen an area in which is difficult to control mining fluids makes it very likely that catastrophic enviror harm will occur. The fact that Powertech lacks the financial resources to pay even its current trade payables indicates that be able to attract and retain competent technical staff required to handle this difficult job making it even more likely for ca impacts to result from the proposed mining. None of these factors have been considered by EPA to date.
546		The EPA lacks adequate data to support a finding of no migration pathways for contaminants that may be released from th wells. The proposed permit relies upon future test results and findings by PowerTech Inc. But EPA has already determined provided by PowerTech is unreliable. The *Dewey Burdock Class V Draft Area Permit Fact Sheet* indicates that PowerTech overstated the critical pressure calculat injectate into the valuable Madison aquifer by 400-500 percent. (EPA, *Dewey Burdock Class V Draft Area Permit Fact Sheet,* Yet the proposed permit relies upon data from PowerTech to determine thickness and interconnection of aquifer formatio results, and corrective action. The reliance upon PowerTech to provide reliable data to determine the impacts of undergro injection is a fatal flaw for the protection of public health and the environment.
7458		WHAT IS AZARGA/POWERTECH? Azarga Resources Limited, is a Canada-based, China-led company that has never mined uranium. After owning part of Pow since 2013, it is now merged with Powertech to form a new company named Azarga Uranium. The new ownership control Powertech's operations in South Dakota, as well as uranium interests in Colorado. Azarga's largest stockholder is Platinum Partners, a hedge fund that Is based in the Cayman Islands. Seven members of Plat Partner's leadership team, including its founder, Mark Nordlicht, have been charged in federal court in New York for a $1 b and for running what the media has called a "ponzi scheme." This makes the status of Azarga uncertain. The former investment banker who heads Azarga Resources is Alexander Molyneux, who was born in Australia. Molyneux l investment banking and entered the mining industry with the help of Robert Friedland, a dual citizen of the United States a who lives in Singapore. Friedland is known by some as "Toxic Bob," partly for his role in the disaster at the Summitville gold mine in Colorado. The Summitville mine was run by a subsidiary of Friedland's company, Galactic Resources. It is now a Su site that discharged acid drainage and cyanide, arsenic, cadmium, copper, lead, mercury, and other heavy metals into the A River. Friedland's bankrupt subsidiary pled guilty to 40 felony counts. Cleanup, which is expected to cost $150 million, is on Molyneux's mining experience began with his stint as CEO of SouthGobi Energy Resources, a coal mining operation in Mon company was controlled by a firm founded by Friedland. Molyneux was fired from this position after the company racked u of dollars in operating losses and he apparently alienated the Mongolian government. A market observer summarized the "The SouthGobi thing was a mess, with restated financials for two years, an abortive takeout by a China company, Rio Tint Mr. Molyneux his walking papers, and Ontario-groomed class-action lawsuits. *n* (The Calandra Report) Whether Azarga intends to actually mine uranium in the Black Hills remains to be seen. It is also possible that the company make a profit by getting mining permits, then selling the proposed mine site to someone else, or they might get permissio deep disposal wells and start taking in wastes from other mines. In addition, Azarga/Powertech's own statements have faced scrutiny by the British Columbia Securities Commission. Canac regulators consider Azarga's preliminary assessments "too speculative geologically." Azarga acknowledged certain "deficie filings relating to the Dewey-Burdock project.
07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	CHARLES WARD: That's all right. Call me Izzy for short if you want. I just have a couple of comments to make. One is, I don't think the EPA goes out and does these things without somebody Somebody has had to put in a permit. Who is this Powertech? Who are they really? I mean, where are they coming from? W they? And what are they really? [...] And these people, I feel, are doing a job that they are asked -- somebody came to them, just like you or I came to them, an them to do something. I think we need to be looking at this Powertech, find out who these people are, and that's where you vent your things, not people, because they're just doing the job like we do a job also. So that's my comments. Thank you.
7460 (5/8 Rapid City hearing)		We have a plan here, which is going to take 4,000 wells, and use it, supposedly, for uranium mining. But I want to discuss tl of uranium mining for a minute so that you understand where this is all coming from. This company began as a hedge fund in Vancouver, Canada, with ten employees. They went to Colorado. They drilled some down there. They polluted some water. They got sued. The lawsuits ended up in front of the supreme court of Colorado. Tl governor got into it, as well as the legislature. They basically got thrown out of Colorado for having made a mess. And there is a wonderful website for this called PowertechExposed.com, which you can look at for the history of this. They to little South Dakota, which had rudimentary rules about handling uranium mining and it had very rudimentary rules abou after this. And then they ran into a local guy named Mark Hollenbeck, whose family had ranched in the Dewey-Burdock area for som he had been a state legislator for two years, and then he turned into a lobbyist, and then he somehow met the Powertech and then they began to attack South Dakota. First thing they did was they began to sell stock out of this hedge fund to everybody and anybody that would buy it. Before over, a significant portion of our state legislature had bought stock in it, so had every person of any wealth in Rapid City an Falls and Belgium and places like this. Pretty soon, Powertech had sold a whopping 420 million shares of stock. It had run close to $70 million through it, and that from stock sales. And they had spent the money on a few lawyers, a few hydrologists, and themselves. Themselves got the part of this. To get you in perspective, 420 million shares is a gigantic amount of shares for a little hedge fund company that has never single dollar of normal money from any operation that they might do. Somewhere along the line, about eight months ago -- [...]

		SUSAN HENDERSON: They sold some stock to Synatom, which is a unit of GDF Suez. They put -- Synatom put two guys on tl for about six months, and then they abruptly got off. They walked away from the $7 million that they had given to Powerte you have to look at what is Synatom doing. Well, Synatom is the largest purveyor of uranium worldwide. They sell uranium to countries that want to buy it, to our plar cetera, et cetera. GDF Suez is a huge, global conglomerate that is involved in water projects worldwide, and they bottle an water. So one of the things that's going to be interesting in this permit application is what is the real fate of the water. Now, this company is broke. It is supposed to, according to the EPA -- or the NRC, it is supposed to fill in 7,650 boreholes o you spent $50,000 a piece on that, you'd be talking about $382 million. They don't have this kind of money. They don't hav money at all. This is a company that has manipulated their annual reports and their quarterly reports to drive the stock up and down. Th they're really doing. This thing is a stock scam. So because the EPA allows this permit to be sold, this thing will be sold the next morning. After they get the permits and af get the giant water permit, the largest one that South Dakota will have ever issued, then they will be able to sell this. 30 pe the leases in the Dewey-Burdock are owned by a Russian company called Uranium One. Now, I hardly think -- [...] SUSAN HENDERSON: Well, that's fine. But I'm telling you -- the last thing I have to say here is that this is not going to be ur mining. This is going to be, sell the permit, and then we'll see what we're going to do with it.
7460 (5/8 Rapid City hearing)		SUSAN HENDERSON: Thank you. We have one chance at this. If we permit this and we allow this company to sell the permit or keep the permit or proceed uranium mining or not proceed with uranium mining or whatever it decides to do to make money to feed its voracious app do not get to do this over. Radioactivity is so very lethal, so very permanent, and so very hard to work with that that we will forever have to deal with comes because we have allowed this to happen. We cannot imagine the problems that will ensue. [...] There was a testimony in Hot Springs last week about the fact that the Tennessee Valley Authority had some sort of a repo been bought by or given to Powertech that indicated that there were -- after ten years of the TVA studying the site, that th not recoverable uranium there to be mined. Well, the import of this is, if they knew about this at the beginning, then they defrauded every single stockholder because this stock based on a uranium mining project. And they may or may not have -- but I suspect they did have -- knowledge of that there was no recoverable uranium there to mine. So once we give them this permit, what are they going to do about this problem? They don't want to spend $300-plus milli the boreholes. They want to sell this property. What does that property have that would be valuable? Well, it's going to ha huge water permit, and remember that this company has been bought by an outfit called Azarga out of Hong Kong and has interests in it. The Chinese are rolling all over the world looking for potable water because they have ruined the water in th country. [...] So this company does not have the money to mine. It has not acted properly toward its stockholders. It never registered w or with the Securities and Exchange Commission, of the State of South Dakota until, you know, just recently. For the longes didn't even have audited financial reports. The financial reports you got to read were things that they basically made up, and they were doing this so they could keep stock. Their whole idea was to sell the stock and make money on the stock. That's why they got the 420 million shares of stock, th they got the some $70 million in, and they basically spent it, so this company has never operated as a proper uranium mini company. And I would also tell you that some of the principals of that company do not have good track records either. So the bottom this will not be a uranium mining operation.
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	SYLVIA LAMBERT: Sylvia Lambert. What is Azarga/Powertech? Azarga Resources Limited, is a Canada-based, China-led company that has never mined uraniu owning part of Powertech since 2013, it is now merged with Powertech to form a new company named Azarga Uranium. T ownership controls Powertech's operations in South Dakota, as well as uranium interests in Colorado. Azarga's largest stockholder is Platinum Partners, a hedge fund that is based in the Cayman Islands. Seven members of Plat Partners's leadership team, including its founder, Mark Nordlicht, have been charged in federal court in New York for a $1 fraud and for running what the media has called a Ponzi scheme. This makes the status of Azarga uncertain. The former investment banker who heads Azarga Resources is Alexander Molyneux, who was born in Australia. Molyneux investment banking and entered the mining industry with the help of Robert Friedland, a dual-citizen of the United States who lives in Singapore. Friedland is known by some as, quote, "Toxic Bob," partly for his role in the disaster at the Summitville gold-silver mine in The Summitville mine was run by a subsidiary of Friedland's company, Galactic Resources. It is now a Superfund site that d acid drainage and cyanide, arsenic, cadmium, copper, lead, mercury, and other heavy metals into the Alamosa River. Fried bankrupt subsidiary pled guilty to 40 felony counts. Cleanup, which is expected to cost $150 million, is ongoing. Molyneux's mining experience began with his stint as CEO of SouthGobe Energy Resources, a coal mining operation in Mor company was controlled by a firm founded by Friedland. Molyneux was fired from this position after the company wracked up millions of dollars in operating losses and he apparer alienated the Mongolian government. A market observer summarized the situation, quote: "The SouthGobi thing was a mess, with restated financials for two yea abortive takeout by a China company, Rio Tinto's giving Mr. Molyneux his walking papers, and Ontario-groomed class-actic lawsuits." That's from The Calandra Report. Whether Azarga intends to actually mine uranium in the Black Hills remains to be seen. It is also possible that the company make a profit by getting mining permits, then selling the proposed mine site to someone else, or they might get permissio deep disposal wells and start taking in waste from other mines. In addition, Azarga/Powertech's own statements have faced scrutiny by the British Columbia Securities Commission. Canac regulators consider Azarga's preliminary assessments "too speculative geologically." Azarga acknowledged certain, quote, "deficiencies" in its filings relating to the Dewey-Burdock project. There should be no deficiencies where our water is concerned.
7460 (5/8 Rapid City hearing)		You guys -- most of what I wanted to talk about was covered. Azarga is a completely unethical company if you research the Powertech is a subsidiary of Azarga. They are going to do the same thing every other uranium mine has done. They are goi abandon it once they've made it toxic and leave.
7460 (5/8 Rapid City hearing)		BRYCE IN THE WOODS: Good evening. You know, when Powertech was doing this years ago, they went belly-up. And then you have this Chinese company come i trying to revive something that should have remained dead.
7460 (5/8 Rapid City hearing)		Let's talk about hypocrisy and cynicism. It is breathtakingly cynical for Azarga and other mining forces to stand before us a they will clean up after their mining activities. [...]

		And Powertech, they are crooks to boot. Their stock is worth pennies, and Platinum Partners, which owns 30 percent of Az is under indictment -- is under indictment that basically describes Platinum Partners as a Ponzi scheme, according to the R Journal and other sources. So even if Powertech intended to use the most advanced monitoring and cleanup methods on the Dewey-Burdock site, the be able to afford it. The people of Custer and Fall River Counties will be left with toxic water and the bill to pay for it, pay f the health of their children, their stock, and their livelihoods.
7460 (5/8 Rapid City hearing)		I think that that's the company trying to win us over because they are foreign. I also am concerned that they don't care about our livelihood because they are not from South Dakota or even the United Another thing that really bothers me is their current stock price is 32 cents per share. That's a penny stock. This company h financial backing. And if they did spill into our aquifer that provides water for 59,000 people in South Dakota, they would n amount of money to try and clean it up. So I hope that you take this into consideration. Thank you.
7460 (5/8 Rapid City hearing)		We are here today to discuss allowing a foreign-owned corporation to mine for uranium and to drill a total of eight borehc normally you only need one. Part of what I heard this morning makes me wonder, if there is more than eight required, wh corporation wants to do. There are already over 15,000 abandoned uranium mines within 15 Western states; 75 percent of these are in federal and Ten million people live within 50 miles of an abandoned uranium -- I've got to move this, sorry -- of an abandoned uraniur
7460 (5/8 Rapid City hearing)		I don't know how this company got here and elevated up with so much privilege. I know they have connections with the st government somehow. I don't know all the facts. They hired Mark Hollenbeck, former mayor of Edgemont. Hollenbeck, he believes it's ridiculous that they have to wait so long to be able to get to work on this. And I just want to say: Have you considered the consequences of what could happen? What do you expect? Do you think y come in here and open up shop? And -- yeah. What it really boils down to is it's all about the money. [...] Forget about it. This company isn't going to do us any good. Just think, when they tell us everything is going to be all right or criticize us, saying we're misleading the facts, I want you t remember it's all about the money. And that money isn't going in our -- that money is going in their pockets, not ours.
7461 (5/9 Rapid City hearing)		How can we ever trust them when they had this kind of dishonest intentions? Why, if the process is, to quote Mr. Hollenbeck, "safe and benign," would they need to change the rules to make it easier f company to destroy an area and then walk away without paying the consequences? Asking for an aquifer exemption shoul make clear their intentions.
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	A few years back, this gentleman here was in the legislature, and he encouraged a lot of people to buy stock. And then the with this bill, Senate Bill 158, I believe, where the state gave away its water to foreign corporations. Now, I'm sure all of you in your own hometown, wherever you live, get a water bill every month. And you pay it because y trusting them to bring you safe water, and it's there always. These people gave it away. Our legislature in this state gave it foreign corporations. Powertech is one of them, Azarga.
7461 (5/9 Rapid City hearing)		But let's say that all that did matter was money on this, and let's look at some of the financial aspects of this. If you read fir things having to do with the uranium industry, this project is on If you read financial things having to do with the uranium i this project is on the top of the list and it's publicized everywhere. They see this as a huge opportunity to make a huge amc money without a very large investment. It is also unclear who exactly owns Powertech. There's been mention of Chinese ownership. Even in the last week, there's l of who owns most stock in the company. And I believe that it probably is some kind of, basically, money laundering where you've got Powertech, the first organizati but it works up through many other investment companies, some of which have been found guilty of various types of illeg activities. Furthermore, if you read about China, their main objective right now is to get overseas sources of uranium, and that's big c agenda. So if Azarga or Powertech are somehow connected through China, it would make sense. The other thing, though, is that this company isn't real stable economically. There was a good column in the Journal by a w financial consultant named John Tsitrian. And I don't understand finances enough, but he talks about things like their stock being 30 cents right now, whereas it was $30 quite some time ago. And he makes comments about how they are very likel under. And so that is an issue when you talk about the potential liability that this mine or this cleanup would have. To give a couple examples of that kind of expense, there's a Riley Pass uranium mine not far from here -- I believe in Wyor was owned by Kerr-McGee in 2014, and they were fined $5.15 billion. And that's the largest environmental settlement eve the U.S. government for cleanup. They are responsible for thousands of sites contaminated by creosote and uranium debris, and they fraudulently moved as around to evade debts and liability for the environmental cleanup, justifying that kind of penalty. Another one has already been mentioned here, the Gilt Edge Mine. That's a gold mine, of course, but they had a $6.4 milli that they forfeited when they went bankrupt. But up until now, it's cost $88 million to the EPA and the State of South Dakc that up. And by the way, the environmental impact statement for that predicted a very low risk of acid rain off of those mi So I'm not sure, even at this hearing, if the EPA cares about what our concerns are. It seems like they just want to know if t technical data that would dispute their recommendations.
7461 (5/9 Rapid City hearing)		TERRI HULM: Good evening. I know it's your last night, and you guys have already heard about the ethics of Azarga and Po you already have that on record, how unethical they are. And you've heard all the scientific proof of that, how bad this is a bad this is going to be to people.
7642 (Hot Springs hearing)		The fact the Platinum Partners, which is Azarga's largest shareholder, is being charged with a variety of misdeeds which, if could provide prison terms for the guilty, should be a wake-up call to the EPA as to the kind of ethics embraced by Azarga. With the company based in China, overseeing a Canadian company with offices in Colorado, one can easily guess how Azar about the long-term health of the citizens in this area when compared to the drive for profit at all costs.
7642 (Hot Springs hearing)		ROBERT LAFFERTY: My name is Robert Lafferty. I'm from Pine Ridge, South Dakota, and I just have a couple concerns on wl owns Powertech. Is it Azarga, or is it a Chinese investment fund from China?

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Text
Subject: Aquifer exemption for uranium mining project in southwestern South Dakota In regards to the uranium mining exemption- We must not continue to destroy our waterways and lands by allowing big business to dump wastes and bypass the protections provided by the EPA. The EPA's job is to Protect the environment although it appears that Mr Pruitt is unfamiliar with the concept. What could possibly make anyone think that allowing dumping near an aquifer would be a good idea except someone who doesn't live near by and is only concerned about making more money. Mr Pruitt- Step up and protect the environment or step down!
Subject: Black Hill Aquifers Comment Hello, I am writing today as a concerned citizen of the United States of America. I live in San Diego, CA 92114. As a concerned mother I want to place a comment here for the people and water in the area. It is an unrighteous thing to do if you abandon this site like you have. Our people are getting sick, we can feel it in the spirit of things. Mothers are crying up to the heavens over all the atrocities our government is bestowing on us. Azarga has no compassion for us while contaminating our ground waters. I say "ours" and "my people" because we are one and we feel you as a government bringing shame on yourselves for what you have done so far. We feel you as mothers who mourn for the children yet to get sick from this. We grieve and feel the Holy Spirit grieving with us for those who are sick now and have died unchecked in your balances. Spiritually, if you ignore this and allow these mines to go unchecked your mark will be checked in heaven. You just cant keep grieving the Holy Spirit and think it is ok. We are the poor, the widowed, the downtrodden and your allowing a corporate company to further damaging access against our families. We are connected to each other [...] We want change, we want a government and the agencies associated who will not be able to receive a profit. To push that profit over people mentality. It is deep rooted in our government as they continue to slash employees from your EPA and throw out books that contain important regulations we need. Regulations our children need. We see it as a blatant attack on our right to life and want to bring suit against you all based on this uranium mess. We are expecting a righteous outcome because it is what we are praying for. Do the right thing EPA, Government and leaders of the corporate genocide and clean this mess up ! Because if the letters don't help us stop this injustice, some of us are prepared to go to litigation to bring charges against the multitude of evil profit people, for manslaughter, for neglect, for emotional damages. we are strong and many. Please, do the right thing.
Subject: Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc I don't know how this could possibly be a good idea. I know that Secretary Pruitt wants to protect business interests over the environment, but that is not the role of the EPA! The agency was developed to PROTECT THE ENVIRONMENT. I'd like to see the science saying this is a good idea and that ground water will not be affected. And if 98% of scientists say it's fine, I would expect Secretary Pruitt to use the same criteria he uses to evaluate scientific evidence for climate change to rule against this invasive action!
We are carefully taking note of the listening capability of your organization, the EPA, that claims to "protect" the people of this fair country.
I know it's awful for the environment, I know it can ruin people's lives, So is money the main push here because if it is I ask you to reconsider the actual facts not just what some government official tells you. Please reconsider may 19 to never. I mean this in the most peaceful polite way. All I ask is you research true facts! When you find those "true facts" dig deeper please think for yourself? What did you want to be as a kid? A government EPA official who destroys the world? No, im sure you saw trash and wanted to help the environment well now you are just plain destroying it. Please shut the whole operation down. Thank you! Peace love and light to you.
Subject: Exemption on Aquifer Requirements for Uranium Mining Lisa, Without doing a thorough assessment of the draft permits, just the concept of any exemption on aquifer requirements for Uranium mining seems crazy! As far as the details of the regulations I hope they are based on solid science and the need to proteck our environment (and especially drinking water) from long term hazardous contamination, but not knee jerk "anti-nuke" sentiments. In the past I've trusted the EPA to make sure judgements, hopefully this is still the case. Respectfully,
We can live without uranium but not without clean water and soil. How will our children and grandchildren survive without clean water. I believe that the EPA's existence is to protect our environment for future generations. Science has proven that mankind has abused our resources and has given us a path forward to ensure we all have clean water and air. Please stand up for us. We already have been let down by the EPA allowing the pipeline to proceed. Regards,
Subject: Draft permits and aquifer exemption for uranium mining project in southwestern South Dakota I think the job of EPA is to protect aquifers, not provide exemptions to companies that want to extract hazardous substances near water supplies. This is a continuation down the path of environmental degradation and a lack of concern for local drinking water. Please don't issue the permits.
Dear Shea Valois: As this issue has been extended for quite a while now, I will not start from scratch is detailing how unacceptable is the EPA consideration to allow injection of toxic waste into usable aquifers here in south west South Dakota. I will simply bring to your attention the fact that the EPA stands for Environmental Protection Agency not "Environmental Destruction Agency".
It is your responsibility to make sure the water remains safe and by even considering a permit to allow this is a violation of your responsibility.
Please remember that the EPA 's reason for existence is to protect the environment not serve the interests of a corporation whose purpose is to violate uour protection. These are major reasons to deny these permits. It is my understanding that monies for the NRC budget and the EPA budget are derived from the very operations that they are supposed to oversee which supports the idea that the EPA and NRC actually work for the mining companies and not the public.
Subject: Uranium injection activities Hello, I am writing to you as a believer in the epas mission BEFORE your new boss ever stepped in the building. And that is to provide quality control on the environment and to protect us, the citizens of this country from corporations and their profits over my health and neighbors well being. It doesn't take a rocket scientist to understand the implications of what is being sought after. Your job is to preserve the land for generations to come. Including the natural inhabitants of a given area. Human, or wildlife. We are all inhabitants of this earth and we are demanding that obvious dangers are unavoidable and cannot be maintained by humans should something go awry. And save the retort about the safe guards in place. We have seen time and time again that these "safeguards" are faulty by design or corners are cut to save time and money.
Subject: Uranium mining NO NO NO, it is not OK to mine uranium. Do your job EPA and start protecting people and the environment. Itis treason to put corporation profits ahead of the job you are supposed to be doing.
Please remember that it is the EPAs responsibility to protect our environment, not to issue exemptions (no matter what the political climate is). You are the last hope for area residents to keep as much viable drinking water as possible for themselves and their livestock, and more importantly, for future generations. Please don't risk contamination for the benefit of a foreign company with no proven record and no benefit to the citizens of the US. Please deny the permits and exemptions and PROTECT OUR ENVIRONMENT!
Do your job, please (directed at the agency, not you specifically) You are the EPA for Pete's sake! Thank you for the opportunity to comment.

Subject: Opposition to Dewey Burdock Uranium Aquifer Mining
The EPA's duty is to improve, not endanger, drinking water access (especially on tribal lands).

Subject: Underground Injection Control (UIC) Area Permits to Powertech
Concerning the potential proposal of permits for uranium injection control into an aquifer, the US and the EPA should be PREVENTING this level of environmental damage to not only our drinking water, but the entire ecosystem. I would like to vehemently voice my opposition to this proposed draft permit. INj, but the water and other natural resources this area provides. It's irresponsible to knowingly allow this level of damage to occur, but it also goes against the very name of the EPA. How can you 'protect' an environment when you're proposing a permit that allows for disposing of waste fluids in the process of uranium mining
It's astonishing to me that this permit has even pushed to draft stage. As an agency that is supposed to work for the people, for the environment and for the protection of natural resources, this flies in the face of all three.
I strongly urge the outright rejection of this proposed draft, as it could threaten human life and wildlife for potentially many decades to come.
It's astonishing to me that the EPA has failed the American public this quickly.

Subject: Mining waste
It's hard for me to believe that the EPA would for one moment consider it acceptable to allow uranium mining waste to be dumped in any aquifer.
If the EPA is not our champion and our protection against pollution of our drinking water, the air we breathe, and the God given beauty of our natural environment, then what on earth is its function!??!
Please do your job and do NOT allow the dumping of mining waste into the South Dakota aquifer, or any other act of pollution!

Your agency is the United States Environmental Protection Agency. You are to protect the American citizen from this kind of pollution. Plus we are dealing with a foreign holding company and they will not think protection our water is that important.

Subject: Storage of uranium in aquifer
Are you seriously considering this? I cannot believe the agency designed to protect the environment is actually asking civilians this question and not going to science...oh wait I forgot under Trump you can forget reality and be completely stupid!!!
[...]
Mr. Shea,
Thanks for the reply I appreciate it. I after reading the entirety of the documents, I am just going to restate my comment under a Trump administration reality has gone on holiday. There is nothing but bad (you, know, long after the fact bad) to come from this, and it is the duty of the EPA to ensure the environment comes before corporate gains!

Subject: Mining waste dump
Of course citizens are against allowing toxic waste dumping into our waterways.
How can the government even ask? This is the primary reason for EPA.
Stop irresponsible actions against our natural places and resources. This effects all people in the US.

Subject: Comments on Dewey Burdock proposal
[...]
The EPA was formed with the charge with the mission of protecting the environment and human life and wellness.

I don't believe that the EPA's mission should be to experiment with how much environmental destruction can we accomplish before we all die

---

Subject: Draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota.
Dear Valois Shea,
Please do not allow uranium mining waste disposal in aquifers or streams. It is the EPA's job to protect people and ecosystems, not pander to mining and energy interests.

To: McClain-Vanderpool, Lisa
Subject: Black Hills Aquifer

So let me get this straight...the EPA, an agency specifically designed to protect the environment, is going to use an aquifer to dispose of "treated" radioactive waste Seriously? No excuse. NONE I don't live in that area, but I am a human being, with a conscience. Do your jobs

Ex. 6 Personal Privacy (PP)

Subject: Epa seeking comment on uranium mining in S. Dakota

How can you even consider destroying an aquifer with uranium mining waste? It is inconceivable and appears to be in direct contradiction to the EPA mission to protect our water. Please, stop this kind of disgraceful catering to mining interests and protect our waters!

Sent from my iPhone

I am disgusted that our federal agency that is tasked with protecting our natural environment would consider a course of action that endangers our most precious resource, potable water. It is irresponsible to poison, or threatn any aquifer.

It's plain insane. The EPA is supposed to protect us, not side with big billionaires.
"EPA asks public for permission to allow Uranium mining waste disposal in SD aquifer."
Thank you!

I hope the EPA will do its job to protect the environment, even in this political climate. The EPA should not be influenced by politics and industry, but should maintain its focus on protecting our environment. It has done so many good things since its creation.
Please protect our water and environment.
Thank you,

Subject: EPA

Dear Valois Shea- I am very concerned about Pruitt denying climate science. The science is clear and we rely on the EPA for protecting our water, air, and land. We cannot rely on each state to clean up after themselves and not affect other states. We need federal regulation.

VII: Conclusion:
I am more than aware that because of the antiquated 1872 mining law, almost entity including foreign countries can submit mining claims, lease mining rights, and apply for projects such as the Powertech/Azarga Dewey Burdock Project.
The EPA is compelled by law to examine these proposals and render a decision. The mining industry also pays permit application fees which enhance the revenue streams of the EPA and the NRC.
But I would remind you that the EPA has a fiduciary responsibility to protect the public and the water resources which are so vital to the ongoing health of our country.

I urge you to set aside the political and financial ramifications of this permit and move as a proper fiduciary would to protect the environment.

Thank you for the opportunity to submit these comments.

It is the job of the government to protect and serve the people of this country. Dumping uranium waste into aquifers is counter to all that entails.

Subject: re: draft permits and aquifer exemption for uranium mining project in South Dakota
To Whom it May Concern:
The EPA has been held in high regard in generations past, and the American people trusted that our taxpayer funded EPA would protect our air, water and soil.
Clearly, the EPA has made poor decisions due to the political climate of late. But it is time to take our country back AND WE NEED YOU TO PROTECT US!

We are at a critical juncture environmentally, and hopefully we can trust you to make the hard decision to protect us from any and all uranium mining projects. You know the science--you know the truth. Please make the hard decision and do the right thing. Please protect the American Citizens from this terrifying move toward environmental destruction.

Subject: Uranium mining project - South Dakota

I'm writing in regards to the aquifer exemption for Powertech Inc and their uranium disposal.
I really don't see a single reason to grant them this exemption. This will not only endanger those that rely on the water supply surrounding these well fields, but is a threat to the surrounding environment. It sets a dangerous precedent, as long as a company pays off someone high up in the EPA or current administration, they can break what ever laws and regulations they want. Be better than this EPA. Stand up for something.

A BONFIRE OF LIES
Thank you. I am Ex. 6 Personal Privacy (PP) and I live near Nemo, SD. My theme today will be lies, cowardice, laziness, hypocrisy, cynicism, Native rights, and Azarga's and the EPA's role in environmental destruction or protection. First let us say that there are good people in the EPA who want to do good things, and have done a few good things. Perhaps some are in this room. BUT my message to you, the EPA, today is-don't be lazy. Don't be a coward. Stand up against Trump's war on the environment. Be like the employees of the Badlands Park Service who posted the TRUTH about climate change on the website. When you rule on this draft permit, speak truth to power.

Let's face it, the applicant is in it to make money and does not care about the consequences to the public. It is your job to protect the public's access to clean water per the Safe Drinking Water Act. No exemptions should be made nor any permit be issued to mine Uranium nor dump toxic chemicals into our critical aquafirs that are necessary to sustain life. Please use your conscious and legal obligations to the American public and deny these permits.
Thank you,

Reading all the above makes one wonder if the EPA Federal Agency is really and truly effective, and considers the effects on all of mankind and humanity. I am one of millions of the average citizenry of our great country, and do not have a whole lot of initials after my name, but am of the opinion I don't need those to make an intelligent response to the article "regarding the fight uranium mining in Black Hills." Common sense is all that is needed to know how dangerous and hazardous such projects in the Black Hills pose to humanity. I am of the opinion mankind and humanity no longer matter to the EPA, NRC, or any other federal agency of the government.

EPA-Environmental Protection Agency

Please do your job and protect the environment - that means no polluting. This project pollutes! Say No!

The EPA is supposed to protect the environment and wild life.

A relaxed standard for contaminated water is not proper stewardship of our natural resources and turns the EPA into an oxymoron We all know that water is the basis of life. Do the right thing and deny this project, as the risks are not worth it.

Why are we even considering doing such an unneeded project? **HELP STOP THIS!!**

Thank you.

It looks to me that EPA is in for a fight. Get the environmentalists on your side to put pressure on Congress. Don't leave us.

Week ahead: EPA braces for Trump budget
The Trump White House is due to release its 2018 budget proposal on Tuesday, a document expected to contain deep cuts for the Environmental Protection Agency (EPA) and other programs.
The EPA saw one of the largest cuts in the White House's "skinny budget" in March, a precursor to the formal proposal that Office of Management and Budget Director Mick Mulvaney says is coming out on Tuesday.
While the White House could have changed its budget targets between then and now, the March proposal hints at the type of cuts the EPA and other agencies should expect to see on Tuesday.

Under the March proposal, the EPA was due to absorb a 31 percent funding cut. If enacted, that plan would discontinue funding for programming, research and diplomatic efforts related to climate change, end more than 50 EPA programs and cut 3,200 of the agency's 15,000 jobs.
Trump's budget proposal is just that: a proposal. Congress will have a say over federal spending, and while deep EPA spending cuts have divided some Republicans, the party has looked to cut the EPA's budget for year

Hello ... my name is Ex. 6 Personal Privacy (PP) and I live in Rapid City. Thank you for these hearings. I am not a scientist, but I am a mom and a grandmother. I read quite a bit, except for twitters, and it concerns me that our current President - and - Head of the EPA, both seem more interested in supporting fossil fuel companies, rather than getting serious about climate change and protection of the environment. It makes it even harder for people within the agency to do the right thing. We can no longer write a carte blanche approval to greedy, poison polluters who have done the **paper work** right. We know better. What is your role now?
[...]
Thank you again for listening. The United States does not need this and the only way we con keep our water safer, is simply to NOT ALLOW the permits.
What is the role of the EPA -

Every other UIC mine in the country is governed by an individual state regulatory scheme. This is the first time EPA is directly permitting and regulating a UIC mine. EPA has neither the specific regulations nor the expertise to permit the UIC mine. In this instance, the EPA should tread especially carefully and create a thorough process in order to best protect the environment and communities EPA serves.

Subject: Storage of uranium in aquifer

Are you seriously considering this? I cannot believe the agency designed to protect the environment is actually asking civilians this question and not going to science...oh wait I forgot under Trump you can forget reality and be completely stupid!!!

So as a body of Environmental Protection, I think you're beholden to not allow things like this to happen. But then I don't know how much power the EPA has these days since the new government. So I'm kind of wondering why we're all doing this and not just doing something else more, like, direct or something.
But, yeah, mostly I just wanted to register that it's -- I -- it's -- it doesn't make any sense to me. I don't know if -- I'm currently a resident in South Dakota with the Sicangu. I have relatives there. And, yeah, so on many levels, not just a physical level and a cultural level, it, I think, is completely inappropriate, and I hope that you will stop it.
Thanks.

And the EPA, being a cheerleader for things like this, making it look nice and pretty is wrong. You're supposed to be there for the people, and I expect you all to be here and make decisions for us, the people that live downstream and around these areas.
This -- I oppose this, and I hope you'll do the right thing.

You know, I don't like to get up here at these hearings and get angry, but you're messing with a gift of life. You're messing with the lives of children, generations not yet born, and those are the ones we have to consider. Seven generations hence. We listen to our Native American brothers. We should know that by now.
But we seem to be damn slow learners. South Dakota has been considered probably the second or third most corrupt state in the nation. For two bits, they'd sell their mother or another buck. Years ago, before they ever come up with the Environmental Protection Agency, I remember when a river burned in Detroit --
AUDIENCE MEMBER: Cleveland.
MARVIN KAMMERER: Yup, Cleveland.
I remember another incident where Love Canal, they -- horrible things happened to people who lived there. And the government decided we needed to do something to protect the people. To protect the people, not to be speakeasies for the corporate powers. And that's what I think the Environmental Protection Agency is becoming, unfortunately.
But it takes backbone. It takes principle. It takes even threats. If you stand up to them, I'm sure all of you here representing the government have got a family, kids, maybe grandkids. I've got seven great-grandkids, and they are pretty damn precious to me. Five of our kids -- of our seven kids are still on ranches. We have to survive, and the most precious thing this year is water and grass.

MARY JO FARRINGTON: Hello. My name is Mary Jo Farrington, and I live in Rapid City. I want to thank you for these hearings. I am not a scientist, but I am a mom and a grandmother, and I read quite a bit, except for Twitters, and it concerns me that our current President and head of the EPA both seem more interested in supporting fossil fuel companies rather than getting serious about climate change and protection of the environment.

And I realize it makes it even harder for those of you who are working in the EPA to do the right thing when you have that kind of leadership. But we can no longer write a carte blanche approval to greedy, poison polluters who have done the paperwork right.

We know better now. We know that mining has been both a plus and a very bad thing for our environment. And as I've sat today and listened to all the different people, most of us are talking from our heart about the morality of this, about, you know, the craziness of hurting our environment, and it makes me wonder what your role is in the EPA.

When I heard you do the PowerPoint up there, I really kind of thought you were representing Azarga. You know, you were explaining this all.

I have been told that your Agency has not denied any permit of one of these permits, even though we all know better about their toxic harm and ruin to our environment.

We ask you, the EPA, whose work I value -- I don't value who your leader is or who's the head of you. I think that's a very big conflict for all of us, and I think it is for you, too. But we ask you to help us achieve that moratorium of uranium mining in our state by refusing to grant these water permits.

Thank you for the opportunity to speak to you today.

You say you're charged with environmental protection. Show us.

[...]

You're supposed to be a protection agency. Thank you.

CAROL HAYSE: I'm Carol Hayse, and I live near Nemo, South Dakota. My theme today will be lies, cowardice, laziness, hypocrisy, cynicism, Native rights, and Azarga's and the EPA's role in environmental destruction or protection.

First, let us say that there are good people in the EPA who want to do good things and have done a few good things. Perhaps some are in this room.

But my message to you, the EPA, today is, Don't be lazy, don't be a coward, stand up to Trump's war on the environment. Be like the employees at the Badlands Park Service who posted the truth about climate change on the website. When you rule on this draft permit, speak truth to power.

Today, those of you from the EPA will be hearing or reading some good science, and some bad science. The good science will be from community members opposed to pollution of our precious Black Hills aquifers. The bad science -- call it alternative science -- will be from Powertech.

[...]

Now let's talk about the opposite of cowardice, courage. Let's talk about what real environmental protection looks like. I think it looks like the Native folks who stood tall at Standing Rock, defending the earth and the water against scum like the Dakota Access Pipeline and those who stood against the KXL Pipeline as well.

We here in this room need to follow the leadership of those proud Native folks and their allies to defeat Dewey-Burdock. We community members here in this room are all allies against environmental destruction.

We invite you, the employees of the EPA, to stand for Mother Earth, to stand for clean water, to stand for the principles that probably caused you to seek employment there in the first place.

Stand against these mining permits.

And you, the EPA, whose mission it is to protect human health and the environment, seem to be on the other side, on the -- the side of a foreign industrial company who's likely to contaminate our groundwater.

BRANDON SAZUE, SR.: Good afternoon. My name is Brandon Sazue. I'm Chairman of the Crow Creek Sioux Tribe.

The United States of America is absolutely, unequivocally nuts, plumb crazy. I sat here, and I watched this lady over here give this whole thing on this is what we're going to do to the earth, this is what they plan on doing to the earth, injecting this in here, and injecting that in there, and coming out of here and, oh, radon and all this stuff. That's nuts. That's absolutely crazy.

With the way the United States is going right now, you've got oil pipelines, you've got corporations beating the normal people down. You've got people changing regulations that are in high power. You've got all that just for money. Can you eat or drink money? No, we can't. No, we can't.

You know, we're here for the future of our children, we're here for the future of this planet, we're here for the future of this earth and everybody in it. You as EPA, you're going down. You're going to go down because of this administration.

But why not go down fighting? Go down fighting with us. Do what you believe in. And you know as well as we do that this is wrong, that this isn't right. Because after you, there's war. This is real. This is the truth. It's coming. It will come.

So what I want to say to you is, go down fighting. Fight for what you believe in. Stop this madness. Stop this craziness. Why is it that we're here? Why is it that we're speaking to you? Why is it that some of us traveled long ways to talk to you? Why are we even here today?

This is madness. This world is full of madness. Here we are, going to let a company halfway across the world or across the world drill right here in South Dakota and put -- put uranium in there, mess with drinking water. This is supposed to be the United States of your America, our America, not theirs.

I'm going to stand for what I believe in, and I hope you stand for what you believe in. So each one of us in this room is only worth five minutes of your time. Each human being in this room who gets up here and talks is only five minutes of your time. Think about that.

[...]

You know, before I would write stuff down. Now I'm just speaking from my heart. Because this means the end, this means the apocalypse. I'm sure you've read the Bible. I'm sure you've read all that stuff. You're just helping it come true. Our government is helping that come true.

War with North Korea, the Russians hacking the United States, but yet we're allowing foreign countries to come in here and inject your lands, inject our lands with poison.

But we say we're going to regulate it. We're going to do this, and we're going to keep it confined, and it's not going to get out. Haven't you been reading the news lately? All those oil spills, all those leaks, those are real. Those are real. So that's what I want to talk to you about and hopefully get it -- get it through to your hearts, into your minds.

When you go to bed and sleep at night, can you honestly say -- go to bed and go to sleep at night knowing that this is what companies are doing? I can honestly go to bed and sleep at night and say, Well, I stood up for our children, I stood up for what I believe in. I could sleep good at night, but I'll have nightmares because of this.

I want you to go to bed and think tonight before you go to bed. Go down fighting. Don't give up. Stand with us. Let's not stand against each other.

So what I propose to the EPA, who I understand is an organization that is in a tough spot because you've chosen to protect the environment, but yet you're still withheld by these laws of the federal government that you are a part of.

So as double agents, I urge you to please take into account your own future. Because these water jugs in the back here that we're all drinking out of are clean right now. But soon they won't be.

All these people are going to suffer, all their children. Look. Look at all these people. They have kids, like you. All of them, families. They are one big family because they had to stick together and unite against -- where were you for the pipeline? Your own president doesn't honor you. He signed an executive order saying you have no power. So who do you represent? Who represents you?

I encourage the Environmental Protection Agency to go back to their core purpose, and rather than mitigating and minimizing damage from things like uranium mining, to indeed protect our environment.

The EPA has proven itself to have devolved into nothing more than an $8 billion agency dedicated to supporting and promoting exemptions for the very industries that continue to cause massive environmental contamination, the legacy of which is left to the local residents for generations.

I'm thinking about the history of the EPA. Why was the EPA created? The EPA is charged with protecting the environment and protecting people. I don't believe that the EPA's mission should be to experiment with how much environmental destruction can we accomplish before we all die.

LILIAS JARDING: Greetings. My name is Dr. Lilias Jarding. I live in Rapid City. My Ph.D. is in political science with an emphasis on environmental policy.

I started studying uranium mining in 1979, when about two dozen large corporations that wanted to mine uranium here were convinced to leave empty-handed. In recent years, 11 uranium companies have expressed an interest in the Black Hills.

My dissertation considered tribal, federal, state, government relationships around natural resources. Part of that research was conducted under an EPA fellowship. I have published on these topics in peer-reviewed journals and presented the results of my research at a number of professional conferences.

I focus on policy and the roles of the government agencies on the uranium issue. I am on my third day of observing your hearings on the Dewey-Burdock proposal, and I have read large chunks of the related documents.

My preliminary conclusion is that some of the EPA has been captured by the uranium industry. For those in the audience who don't know this term, when I say "captured," I mean that the Agency has come to relate too closely to the companies it regulates to the detriment of the general public. This is a difficult thing to say, and you deserve to hear my reasons for this conclusion.

The first reason I say this is the use of language by representatives of the Agency at these hearings. Instead of saying that parts of the Inyan Kara aquifers are under consideration for exemption, your staff said, and I quote, "the areas that we are exempting," unquote, as if the exemption has already been granted or at least as if the decision has already been made.

In the PowerPoint that I have now observed several times, the slide on the roles of the various agencies makes it sound as if the permitting process is all but complete. In fact, the NRC license is under litigation. The state DENR has only held one week of hearings on the proposed large-scale mining permit, and that happened several years ago. In fact, the process has been on hold since then.

[...]

I know that the Agency is likely to get sued whether it issues final permits or not. But this one-sided consideration of the situation simply increases the probability of extended litigation, at taxpayers' expense.

[...]

I would strongly suggest that the EPA refocus its efforts with full consideration of the easily available information on the problems associated with ISL uranium mining and the deep disposal wells.

As I think has been abundantly clear during these hearings, only then can the Agency really do its job to the benefit of the public rather than a foreign corporation. You are supposed to be accountable to us.

Thank you for this opportunity to comment.

I plan to submit further comments by May 19th.

When is it really about the environment? Isn't that what EPA stands for, the Environmental Protection Agency? Who's protecting the earth on your side? Because I don't want them -- I'm just standing for them. We are all water-protectors. We are all earth-defenders. See, because without her, we have nothing. What happens when we use everything she has?

[...]

And I'm not putting -- placing a specific blame on you, but you're the representatives of the entity we stand against. And it's really sad that the people are standing -- have to stand against the EPA for the same thing that you guys should be standing with us for. You know, I'm going to pray for you.

And you gave up your environmental impact statement up at Standing Rock, just let them roll over you. You know, you don't do your job and protect and clean up.

You might give a little, teeny fine to a company, but that's about it. And they continue doing what they want to do, and they leave behind their mess. And all of us in this room and everyone we care about, and our family and our tribe are all collateral damage for a corporation to make a buck.

[...]

Now it's in your water. What do you do? You going to give Powertech a fine? And it's still in the water. And nothing is going to happen. Do you know how many Superfund sites you guys have that you know are sites but no cleanup is happening?

LYDIA BEAR KILLER: Good afternoon. My name is Lydia Bear Killer, and I currently serve on the Oglala Sioux Tribal Council. I come here today and recognize this as just a listening session, and because there is violations of federal laws that you people are supposed to protect and pursue, and it's your responsibility to take care of those federal laws.

And on top of that, the Environmental Protection Agency is supposed to protect, as we've heard. What about the 10,000-plus uranium mines that are already out there? Many of them, there's no sign. There's no anything. They're wide open. They're leaking and leaching toxins now. So if you truly want to do your job, begin cleaning up the mess that's already there.

The EPA has proven itself to have devolved into nothing more than an $8 billion agency dedicated to supporting and promoting exemptions for the very industries that continue to cause massive environmental contamination, the legacy of which is left to the local residents for generations.

Make a stand. Do something with what you're supposed to, you know. It's your job to protect these lands and protect all this. Like, otherwise we have to. That's when we have to come out here and do that. We have to come make a stand.

And you know, if the government agencies that were overseeing this stuff did what they were supposed to do, we wouldn't have to do that at all. It's completely ridiculous.

[...]

But at least do your jobs correctly. At least, you know, see things the way they should be seen instead of overlooking these things, just putting them under the rug, whatever, you know. It's just -- it's not my family, it's not my people.

The EPA has proven itself to have devolved into nothing more than a taxpayer $8 billion dollar agency dedicated to supporting and promoting exemptions for the very industries that continue to cause massive environmental contamination, the legacy of which is left to the local residents for generations.

You don't live here. You're only paid to come here and tell us what you can do. You are the Environmental Protection Agency. Do your job.

That's what you are set up to do is protect all of us from the corporations coming in here, raping us.

And for you to be the agency that is going to either grant or deny this permit, you're either granting or denying racism in your country yet again, and inflicting genocide on our people yet again.

[...]

Don't be that part of history where you're going to be the ones to blame. When we're all contaminated, when we're all dying of cancer at skyrocket rates. Don't be that. Be somebody that we can actually trust. You're the Environmental Protection Agency. Live up to your damn name, please.

And this is the reality. We can't come here, you know. You're supposed to protect the environment, you know. You have this in-situ leach mining program, and it destroys our aquifers.

And the EPA is supposed to protect the environment. And I don't think it's right that I have to stand up against the EPA granting permits. I feel that you guys should stand with the people. I feel that you should protect the environment and the future that comes with this.

With the demand for water ever increasing due to continued world population increases, it's imperative that the protection and careful usage of our water supplies be our guiding light. To actually embrace the opposite behavior is to violate the EPA stated purpose -- where am I?

It is no longer possible to deny the threats to our remaining water supplies driven by in-situ mining and ruination. It is the EPA's responsibility to make sure the water and environment remain safe.
[...]
How am I to explain to my granddaughter that her government decided that it was safe and reasonable to exchange her healthy drinking water for a few pieces of silver in the pockets of a few profiteers? Thank you.

Our relaxed standard for contaminated water is not proper stewardship of our natural resources and turns the EPA into an oxymoron.

Letter ID	Commenter Name	Text
30	Ex. 6 Personal Privacy (PP)	We saw how your business, your EPA was slashed and know about the things you as the EPA are required to do by court order in Flint alone. We know there is no physical way that settlement can be honored based on your deployment of agents, because the number of houses doubled in count testing positive for poison. You simply don't have the man power.
113		I understand that your organization is currently facing opposition, due to the current Administration's total disregard for science and the well being of humanity in general, but I beg you to do what you can to not allow this project to move forward. Short term-private wealth is not worth the cost of radioactive waste.
137		With massive cuts to EPA funding, I'm terrified by the possible repercussions one small error could have on this very important water supply. As a scientist yourself, I'm certain you know much more about this than I do.
169		Subject: aquifer exemption for uranium mining project in southwestern South Dakota Ms. Shea, I am writing to comment on the uranium mining project in Edgemont, South Dakota. I am opposed to the project for a number of reasons. You were quoted in the Black Hills Pioneer as stating, “The best permit in the world isn’t a guarantee that nothing will happen,” she said. “But there will be extra monitoring and remediation so if anything did happen, we would catch it early and fix it.” I find this a troubling statement especially given the current political climate where science is being dismissed in the interest of monetary gain. I by no means wish to question you personally as a scientist, but I feel that there would be a lot of plausible deniability from Powertech should something go wrong with this project and do not have confidence in the EPA as it currently exists that it would sufficiently enforce remediation should something happen.
174		Subject: Opposition to Dewey Burdock Uranium Aquifer Mining [...] Because the EPA’s funding has been reduced, our government's ability to monitor the project is limited. If standards are not met, the consequences are dire.
188		1. Even with regulatory approvals that the aquifer would be ‘protected’, there are no guarantees that the process would not contaminate the aquifer. Companies that undertake these operations are known to cut corners and costs in order to assure their profitability. With EPA’s diminished funding I fear there will be little or no oversight of the process. Any contamination of the aquifer by uranium or its radioactive daughters should be considered permanent. We cannot take that chance.
191		Subject: permission to allow Uranium mining waste disposal in SD aquifer "Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Under its obligation to comply with the National Historic Preservation Act and under EPA’s Tribal Policy on Consultation and Coordination with Indian Tribes, EPA has been consulting and coordinating with several interested Tribes to identify the potential effects of the proposed project on traditional cultural places, historic and sacred sites." - these are your own words in the press release and it should answer the question...NO IT IS NOT GOOD – you are unleashing the potential for another "Flynt, Michigan" debacle...and being the EPA is lead by someone who doesn't believe in CO2 emissions is actively helping climate change; Plus is planning on cutting 1/4 of the EPA's budget....NO - I can't trust the EPA to safely and effectively enforce the restrictions necessary to make the uranium retrieval safe. Please!!! Leave Native Lands Alone!!! haven't we given them the short end of the stick enough?!? Thank you
219		It is my sincere hope and desire that the EPA remains intact; that regulations such as these types of permitting processes and monitoring and remediation regulations, will remain strong and continue to provide oversight of these and other operations. Without the professionalism and dedication of you and others at the EPA, our air, water, and environmental quality will suffer to an alarming degree. Thank you for all of your hard work and diligence. This citizen is appreciative of your efforts.
245		4. Can the EPA guarantee, in this age of deregulation and budget cutting that they will have the means to keep the water uncontaminated and the people of South Dakota safe?
277		I am concerned that the current administration’s planned cuts to the EPA will result in insufficient funding and personnel to monitor these wells.
308		I'm very concerned in general about the EPA's ability to do its mission, protecting the environment under the leadership of Pruitt. Reading about this particular issue didn't increase my confidence at all.
308		The news release on this says the waste must meet radioactive waste and hazardous waste standards, and monitoring will take place to make sure drinking water isn't protected. But in a time when the EPA's leader denies the effect of humans on climate change, effectively denying science, and when science and even the mention of science is under siege by the new administration, why in the (imperiled) world would I believe that anyone will actually hold anyone accountable or test anything?
331		Trump Please discuss the effects of the following 3 points on the EPA and NRCs promises to protect the public, water and ecological resources and on the ability of EPA/NRC to function at it's duties during the permitting & oversight & restoration of Dewey Burdock In-Situ Leach Mining Project.: 1. Scott Pruitt appointment to head of the EPA with his ideology and past actions, indicating hostility to federal environmental protection. - has he and will he impede EPA's competence. 2. Proposed budget cuts of 30% to the EPA in Trump proposed budget. 3. Trump passing executive order saying that federal agencies must remove 2 regulations for each new regulation approved and that the incremental cost for new regulations in 2017 will be $0. Limits on federal regulation costs to be imposed in 2018. Quotes from "The Hill" on-line web site: http://thehill.com/homenews/administration/316839-trump-to-sign-order-reducing-regulations "President Trump on Monday signed an executive order that would require agencies to revoke two regulations for every new rule they want to issue.... "The order requires agencies to control the costs of all new rules within their budget. Agencies are also prohibited from imposing any new costs in finalizing or repealing a rule for the remainder of 2017 unless that cost is offset by the repeal of two existing regulations."..... "Starting in 2018, the order calls on the director of the White House Office of Management and Budget to give each agency a budget for how much it can increase regulatory costs or cut regulatory costs."
423		I am concerned that the current administration’s planned cuts to the EPA will result in insufficient funding and personnel to monitor these wells.

445		With the impending demise of the EPA, we need restoration of state oversight, repeal of 58158, and new laws in place to prevent heavy hazardous waste tankers from destroying our roads and jeopardizing our clean Black Hills environment with accidents and spills on icy roads, hitting deer etc., and causing a permanent dirty bomb forever at these sites. We need laws now that will prohibit the transportation of these radioactive toxic wastes on our roads, through our state, and bringing in other mines' toxic wastes from other states
445		***2.)*** **Other common problems with deep injection wells are non approved hazardous wastes being dumped in there, as there is essentially no daily oversight.** Wells are not maintained well and over pressure causes pipes to crack, dispersing the toxins in higher levels than they are supposed to be. Spills are common on the surface and accidents when truck hauling the toxins slip *off* road in icy roads, hit deer etc. and cause an instant dirty bomb at the site, that is not able to be cleaned up as it soaks into the ground. In this case, toxic and heavy metals and radiation.
470		President Trump has signed an executive order to "ease burdensome regulations," gutted the EPA's budget & personnel, & fired the advisory committee of scientists who will most likely be replaced with members of industry, whose interests are not those of the residents who live & work near polluting industries. Given the current political climate, it is high likely that the few protections for clean water & regulations for radioactive waste cleanup will be relaxed or abolished entirely, leaving SD with contaminated land, water, ill citizens & little legal recourse. A further implication of Trump's dismantling of the EPA is the question of policing & inspecting the uranium mining & water cleanup. If the EPA does not have the funding or staff to inspect, test, & monitor the wells & water quality, it will be up to SD taxpayers to pay for monitoring, & it is also highly likely that inspections will be fewer or less thorough, resulting in contamination not being discovered & arrested quickly. The supposed millions of increased tax revenue to the county & the state resulting from the min will quickly evaporate. If the EPA cannot guarantee thorough oversight of the mine for the next 12 years proposed by Powertech, it really should not in good conscience, approve the permits. Further, the EPA's 2015 site inspection only sampled surface water & sediments; if the mine source areas have not been inspected, how can we know that t the deep in-situ mining, & previous mining that has already occurred will not further pollute the entire water table? There is a guaranteed bleed of just under 1% with in-situ mining; it may meet the legal threshold of <3x background concentrations, but that does not mean this water is safe for the land, much less potable. Regarding the aquifer exemption, if the Safe Drinking Water Act can be readily set aside with an exemption, what is the point of the Act at all? The entire point the Act is to prevent the types of contamination under proposal here. Water in western SD is so precious & scarce that even if some wells are not used for human or animal consumption now, that is not to say they will not be desperately needed in future & should be protected. Especially since if there are unanticipated malfunctions, natural disasters, or simple shoddy workmanship that result in cracks in the aquifers, leaking in the pumping & reclamation process, the entire water table can be irrevocably contaminated for not just our lifetimes, but those of our grandchildren's grandchildren. The only benefits of the Dewey-Burdock project will be realized by Powertech's China-based parent company; the costs, however, will be borne by SD's residents; Please reject the mining permits
487		4. The *political* reality that the EPA may become weakened and gutted by leadership who is supporting businesses versus protection of clear air, water and lands. A report today indicates that President Trump's March proposal would have the EPA absorb a 31% funding cut; part of that would be less monitoring and efforts related to climate change. This is going to make it even harder for environmentalists within the agency to stop unnecessary projects. **STAY STRONG.** You know how to delay unwanted projects.
07459 (Valentine hearing)	Ex. 6 Personal Privacy (PP)	That's part of -- anytime we sit down and talk to each other, we have to offer solutions. And that's what the EPA -- I don't know what impact or power you have. The President is going to overpower those like he did in the --like Trump did in the Dakota Access Pipeline. Even though the Keystone XL -- all of these are all interconnected. That's why I'm mentioning them. That he's overturning things that are set for the EPA. And I also understand that he is trying to abolish the EPA. So I hope -- I hope that doesn't happen. As the EPA, it says environmental protection, so I ask you to protect the environment and do your job and make that connection with Mother Earth. (Speaking in indigenous language.) Thank you.
7460 (5/8 Rapid City hearing)		I'm also concerned that the EPA right now does not particularly seem to have a lot of support from our current administration, so I'm not sure you're going to have the manpower to invest in monitoring the progress of these wells. So I'm concerned about that
7460 (5/8 Rapid City hearing)		You have corporation monitoring corporation; no oversight. And it seems like every time certain parties get into the White House, the EPA gets under attack. Under previous, previous administration, I think the EPA was -- the director changed three times. So it's coming from Corporate America, a representative of Corporate America in the White House.
7461 (5/9 Rapid City hearing)		The other thing that's -- and this is completely unrelated, but that's been in my head, is that we're under an administration right now that is playing political football with a lot of different things, and they're becoming pretty fast and furious. We've been having trouble keeping up. But one of the things that's in the political football arena right now is the EPA, and I know you guys are more than aware of that. And I don't think anyone goes into the EPA without caring about the environment. It's -- if you didn't care about the environment, you would have gotten a job somewhere else. But the current administration is looking at this kind of hearing with this kind of regulation as binding business and trying to keep business from being free to do what they want, and that's one of the reasons they would like to be rid of the EPA. And you know, if the EPA goes down or if it just gets hamstrung and can't regulate, then the regulation is going to get thrown back to the states, and that means the State of South Dakota. And quite honestly, I -- I trust the federal EPA more than I trust our state legislators and our state governor. They're going to rubber stamp things for the mines. And they are not going to -- you know, if something goes wrong, the state budget already is in trouble. They're not going to have the money to do a cleanup because they're already being stretched to the limit and having to cut programs. And I think that all matters to what happens with whether this company gets permitted or not, because we have to think of the future. It's not just what's happening today. It's what's happening in -- within four years. And it may be that close because the administration may be changing what happens drastically that fast. Thank you.
7461 (5/9 Rapid City hearing)		Now we are at this time in history where we are under full-fledged attack. So when we speak about the EPA holding quality assurance of this process, we know today that Trump is trying to undermine the EPA by -- through budget cuts and just eliminating who is going to oversee this process. The EPA may not be here this time next year, and yet we're going to stand in here and say that the EPA is going to watch over the quality of your groundwater. No, they're not. They don't have the capacity today, and they haven't had the capacity up to this point in history.
7461 (5/9 Rapid City hearing)		CARLA RAE MARSHALL: Hello. Thank you for coming here and doing public comments. I just want to say that I understand the EPA is only appropriated so much money and struggling to help keep the environment clean. You guys are struggling; our tribes are struggling.

7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	The EPA generally agreed with the GAO's findings and characterization of the challenges the agency is currently facing. Concerns have mounted recently about potential water contamination from injection wells. This report was done when EPA had a fuller staff and budget. And what upgrades to inspections and oversight have been made since 2012? And now, how will these new budget cuts under the Trump administration affect oversight and regulation of injection wells? If EPA depends on permit fees from industry to make up a significant portion of their budget, as FDA and NRC do -- in fact, 95 percent to be exact -- then how can we be sure the EPA does not just issue, and in this case, permits dangerous areas that should be -- not be issued just because they have to underwrite their paychecks? If the circumstances of the past have not been rectified, then no new permits for any injection wells of any sort should be issued, period.
7462 (Hot Springs hearing)		Please take note of this, Fall River residents. The EPA doesn't have enough funding, and neither does the Nuclear Regulatory -- Regulatory Commission -- there you go -- have the ability to take care of us. We are a small county, and we need help. Your permits probably will not cover that. [...] And the EPA, I know. I feel for you. I know exactly how everything goes as far as funding, but I doubt it will be able to take care of us.
07463 (Edgemont hearing)		When Mark Hollenbeck was a representative here, House Bill 154 took away the rights of the State to regulate and do the water and gave it to you. And you can't even get on the project area.
7642 (Hot Springs hearing)		I will say, with all due respect, the EPA has got a terrible track record when it comes to overseeing cleanup. Again, I mentioned the cleanup, and we've been places where there's messes. The fracking around Chaco Canyon, you could not believe it, and the EPA is supposedly watching that.

Notes	Response

added to HydroFracking topic

look this up
http://www.hcn.org/articles/land-near-chaco-canyon-leased-for-oil-and-gas-development
The BLM leases lands near Chaco Canyon for $3 millio
The controversial parcels are the first auctioned online in New Mexico.
Jodi Peterson | Jan. 27, 2017 | High Country News
On January 25, the Bureau of Land Management leased nearly 850 acres of land for drilling in northwest New Mexico, netting close to $3 million. The agency offers leases on millions of acres of public land per year, but this latest sale was unusual. Not only was it the first time that the BLM has conducted a lease sale online rather than live in the New Mexico region, the sale had also been postponed three times over the last five years, because its lands are just 20 miles from Chaco Culture National Historical Park (also a UNESCO World Heritage site and an International Dark Sky Park).
While Chaco Canyon and its ruins, such as Pueblo Bonito, are protected from development, as is a 10-mile buffer around the park, surrounding areas are not. Chaco is the core of a much larger Ancestral Puebloan civilization that extended for hundreds of miles in the central San Juan Basin from about 900 to 1150 A.D. The land today is sacred to Navajo, Hopi, Zuni and other Pueblo Indians, and bears remnants of a system of 30-foot-wide roads radiating outward from Chaco Canyon, as well as extensive ruins, artifacts and even lunar calendars etched into boulders. None of those have yet been studied thoroughly by archaeologists.

The EPA does not regulate hydrofracturing.

Letter ID	Commenter Name
3	Ex. 6 Personal Privacy (PP)
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527	Ex. 6 Personal Privacy (PP)

07459 (Valentine hearing)	
7460 (5/8 Rapid City hearing)	
7460 (5/8 Rapid City hearing)	
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7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)
7461 (5/9 Rapid City hearing)	
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7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)
7461 (5/9 Rapid City hearing)	
7462 (Hot Springs hearing)	
7462 (Hot Springs hearing)	
7462 (Hot Springs hearing)	
7464 (mass mailer text)	N/A
7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)
7642 (Hot Springs hearing)	

Text
My major concern with the permits being issued is that Powertech is going to be responsible for their own monitoring of the underground drinking water. This to me seems a bit outlandish. What about checks and balances? It seems that if anything were to go south with this project this would be this instance. Who will hold them accountable? I appreciate that the EPA is going to be holding this company to specific standards for their waste and the surrounding source water. I think it's a good idea that they will be testing the water before, during, and after the project. But I think a third party with no financial ties to the project or company should be in charge of these regulations. Corruption and cover ups are too common in situations like these and the people that pay for it are the local citizens. I would feel much more on board with this project if some of these concerning issues were taken care of. Projects like these are a tricky situation on all sides and everyone wants to be happy with the end results. I think many people would feel more inclined to support this if the idea of corruption wasn't looming over their heads. Thank you for your time,
Who will be at the site to ensure that the water injected into Class V wells meets ClassV standards? Where is the guarantee that the chemical laden water can even be filtered to acceptable ClassV standards. Radioactive minerals should not be allowed in Class V wells. And if Azarga goes bankrupt and they don't cap the wells, what happens? Will there be continued monitoring when Azarga is done with the site and the wells are capped? NO! Who monitors these sites 20 or 30 years from now to know if the wells crack and leaking occurs?
I am also concerned that adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be inadequate, and groundwater WILL be contaminated.
I understand that the water would be monitored for safety throughout the process. Still: no. Completely and emphatically no. What happens when the water in the aquifer is found to be contaminated? How long would the remediation process take, if it's even possible?
The companies cannot and should not be trusted with this activity [monitoring]. We all know about companies who have historically not provided accurate information to the public when water has been contaminated. This withholding of information has resulted in serious illness or death for people who have been exposed to contaminated water.
Who will be doing the monitoring of the water? [...] What happens when the injection material gets into the aquifer? Will the companies pay to clean it up or does that fall on tax payer to clean up their mess.
It is a known fact that several executives of Powertech previously worked with other uranium companies that were cited for mining violations. One company went bankrupt and left tons of radioactive mill tailings along the Colorado River in Moab, Utah. That mill is now a superfund site whose cleanup is funded by your tax dollars. Why should we trust them to clean up future operations? Is this why they want to send their waste water deep underground; Out of sight, out of mind?
They claim that In-situ mining is safe, there is no safe, clean in-situ mining. Crawford, NE had violations that were discovered by their State oversight.We can assume, from past experience, that our State of SD will not be actively involved with monitoring this project. By the time we realize there is a problem, it will be too late. The water will never be returned to its current state. The EPA standards are merely lowered to make it OK once the water is contaminated.
How much control or manpower is available to oversee that the injections do not include toxic chemicals being purged into our precious water supply.
The EPA nor any other governmental agency seems to be able to protect the American citizens from mining companies. When all the old mines and dumps are cleaned up and programs to monitor and enforce rules agains the mining companies such that the companies and their share holders can be held responsible for what they destroy, I maybe can understand a time when we could consider such actions, but that time has never happened yet and seems to be a long ways off before we get there.
I am also concerned that groundwater is likely to be contaminated due to inadequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells.
I am very concerned that continuous oversight of the mine and the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible. If this is allowed to proceed, there must be a qualified third-party monitor who is continuously on-site during operations. Thanks for this opportunity to comment.
• Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.
• Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.
I am not comfortable with this action. The presence of monitoring is an admission that contamination can take place. If such contamination occurred, it would not be possible to thoroughly remove it. The aquifer would be tainted.
Subject: Permits for Dewey-Burdock Uranium Mine [...] I am also concerned that adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be inadequate, and groundwater is likely to be contaminated
Plus we are dealing with a foreign holding company and they will not think protection our water is that important. And you do not have the field personnel to monitor this mine in an adequate manner. I urge you to not grant the permits for this mine. Thank you for your time and consideration
Subject: draft UIC Dewey-Burdock permitting [...] Providing adequate well monitoring and maintenance programs for all the wells, including the monitoring wells, will ensure well operational efficiency and extend the life of the wells throughout the project. Among other water constituents, high TDS and sulfate levels that exist in the formations, as well as the process water, will tend to clog well screens and gravel filter packs over time without vigilance. In addition to the required step tests for fracture determination discussed in section 5.9, routine pump/step tests can be useful for monitoring well efficiencies and the need to treat the wells before problems occur. The flowing artesian wells present within the area will remain a concern and should be watched.
Subject: Stop Dewey-Burdock Uranium Mine [...] It concerns me that adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be inadequate, and groundwater is likely to be contaminated. Further, these permits should not be issued until it can be demonstrated that groundwater resources will be protected.
I find that the series of 'monitoring bore holes' around the perimeter of the proposed project is misleading and moot. If contaminating fluids reach these monitoring holes it is too late. The underground would already be contaminated. From maps of the proposed project area I see that the proposed 'holding dams/ponds' are in the area of possible flash flooding. A few years ago I was traveling the gravel road from Dewey to the Jewel Cave area. This would be northwest of the proposed project. As I came around a curve I encountered many burned logs, trees and debris covering the road. This debris had been swept down a basin in a flash flood from a forest fire many miles distant. A similar flash flood would destroy these holding ponds and further contaminate the environment. I submit that if the go-ahead for this uranium project was to be submitted to a vote of the local and area residents, the people would adamantly vote against the project.
The operation of this project will cause hundreds of trucks and truck convoys, carrying potentially lethal cargoes to move through the Black Hills and the Edgemont/Hot Springs area.

These trucks, if a wreck occurs could cause a "dirty bomb" type of accident, in which radio-active material would be spread throughout the area. It would be impossible for local law enforcement to monitor these trucks or effectively keep their cargo (yellow cake) from heading north toward the porous Canadian Border.

Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated.

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I am also concerned that adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be inadequate, and groundwater is likely to be contaminated.

Subject: Comment on the Dewey-Burdock class III and class V injection well draft area permits.
[...]
Adequate oversize of the quality of liquid wastes pumped into the Minnelusa Formation through the Proposed deep disposal wells will be impossible, and our groundwater is likely to be contaminated...

Adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be impossible, and our groundwater is likely to be irreversibly contaminated.

Adequate oversight of the quality of liquid wastes pumped into the Minneusa Formalion through the proposed deep disposal wells will be impossible, and our ground water is likely to be contaminated...

As you are probably aware, in the 2011 legislature, SD gave up its statutory authority to oversee wastewater aquifer injection in ISL uranium mines at the urging of Powertech now Azarga Uranium. Other types of mining in South Dakota such as gold, oil/gas are regulated much more thoroughly than ISL uranium mining.

It will be impossible to have adequate oversight of the quality of liquid wastes pumped into the Minnelusa formation through the proposed deep disposal wells, resulting in likely groundwater contamination.

I listened to Powertech and their plan to monitor contamination. I do not believe they can do what they say they can.

IF groundwater is contaminated – what does the "clean-up" process entail? It's a given that water quality will be "monitored" with what is done to clean up the mess? How long from the time "contamination" is detected till mining is stopped?

In addition, as trucks come in the dark of night and dump toxic waste into the deep holes, who oversees what is being dumped and where did it come from? Is there going to be a 24 hour security guard (in peprituity sp?) and how would he be even able to know what awful stuff is in those containers?
As one lady said yesterday, if something bad happens at that site, it could take several hours for law enforcement to get out there.
Thanks.

The permit requires monitoring. Who will be doing the monitoring?

The Class V wells according to the EPA site are for waste that has been cleaned and will not contaminate USDW. The problem is monitoring this procedure. The mining industry cannot be trusted to self monitor and the EPA has not done a good job in the past. Mistakes and violations once made cannot be remedied.

Another important omission is that the draft permits beg the question of who is going to do on-the-ground regulation of the proposed mine and deep disposal wells. In 2011, the State of South Dakota suspended its ability to regulate in situ leach uranium mining, so it has no authority to do that regulation at this time. The NRC has two inspectors based in Texas, who visit ISL mines once or twice a year. There is no indication that their regulation can be competent or complete.
This is tremendously important. The draft permits include some very critical actions, such as testing the Minnelusa Aquifer to determine its water quality before deciding whether the company can proceed with deep disposal wells. This is a high-stakes test that can impact the future of the southwestern Black Hills. First of all, the water quality test should have been done under EPA's direct supervision before a draft permit was issued. If the Minnelusa's water turned out to be appropriate for drinking water, the time and expense of creating the application and the Class V draft permit would have been avoided.
Second, if the permit is issued, the testing of the Minnelusa aquifer's water should be done under EPA's direct supervision, rather than allowing the company to do a test in the area of its choice using equipment it supervises, sending the sample to the lab of its choice, and expecting the people who use the Minnelusa Aquifer in the southern Black Hills to believe the results.

Another document issue is located in the Class III Fact Sheet (p. 108). The EPA, following Section 2.2.2 of *The Unified Guide* , described performance standards that Powertech must follow in its statistical analysis of groundwater monitoring data. One of the standards is that, when using a tolerance interval or prediction interval, that interval must be "protective of human health and the environment." The EPA should know that the science as to what is "protective" when it comes to in situ leach uranium mining is in dispute. There is very little science on the subject, and some of what has been done was completed with improper or inadequate methodology or was paid for by the uranium industry. Before any further steps are taken in working with this process, additional research needs to be completed.

These are some of the general problems with the EPA documents on the proposed project. Others will become apparent as we move into process issues and omissions.
[...]
Second, if the permit is issued, the testing of the Minnelusa aquifer's water should be done under EPA's direct supervision, rather than allowing the company to do a test in the areas of its choice using equipment it supervises, sending the sample to the lab of its choice, and expecting the people who use the Minnelusa Aquifer in the southern Black Hills to believe the results.
Similarly, the following must be done under the direct supervision of a knowledgeable regulator:

- pre-mining water quality testing in the proposed mining area,
- testing designed to determine the likelihood of down-gradient excursions,
- information underlying decisions about what holes and wells should be plugged,
- mitigation of air quality impacts,
- pump tests,
- well construction,
- reports on and handling of vehicle accidents involving hazardous or radioactive contaminants,
- groundwater level measurements,
- injection fluid characteristics,
- post-restoration monitoring,
- determination of the corrective response that must be taken when an excursion happens (this is currently left to the regulated company),
- well plugging and abandonment,
- analysis of radiological issues,
- disposal of hazardous wastes,

- regulation of a variety of soil issues (Section 7.0 of Draft Cumulative Effects Analysis),
- programs to minimize the impacts to land use,
- fugitive dust control, and
- all measurements related to the presence, monitoring, and impacts of excursions, and of attempts to measure or cure

Note that Raymond H. Johnson, the lead author of the two articles that are the basis for the section related to down-gradient excursions in the Class III Fact Sheet (p. 62), appeared as a speaker at an event hosted by Powertech that was designed to promote the Dewey-Burdock project. He worked for the USGS at the time, which gave the audience the impression that the USGS was promoting the project, according to people who were there. This occurred in Hot Springs and in Custer in the Spring of 2013. I note that he was also in communication with EPA staff on this project. He then went to work for a firm that serves the uranium industry. While the "revolving door" phenomenon is not uncommon as people move from government to the private sector – and sometimes back again – the impartiality of Mr. Johnson's research has been questioned by some people in the Black Hills. For more information, see http://www.argusleader.com/story/news/2015/03/07/ex-federal-scientist-center-uranium-fight/24581135/

Also -- also, with the quality of the -- the waste that the water -- where the water is going to be distributed, it's how the monitoring system is going to be determined with that.
That depth, I would like to have a full, detailed report listed on that. Because, as we know, every pipe, every system that has to do with any kind of permitting like this eventually does break or leak.
And the monitoring system must be, you know -- I would like to know how you're going to monitor up to 3,000 feet below the surface of the earth and have that be adequate.

And now this new development of having disposal wells will make Azarga a fortune because they are not going to make their money on uranium now, but disposal wells that no one is going to really be able to monitor after a while. This leaves us once again with a possible irretrievable mess.

It will be impossible to have adequate oversight of the quality of liquid wastes pumped into the Minnelusa formation through the proposed deep disposal wells, resulting in likely groundwater contamination.

To them it's nothing. And, yeah, they might care, but it's our future generations that is what's really important. You can look at the facts on Crow Butte, Nebraska, Cameco -- I think that's how you say it -- the company mining, was underreporting a lot of incidents.
Who's to say Powertech will do the same? Can we trust them to watch over their own actions as rookies in the mining field? Let's not do this. Let's keep this place clean and free from the industrial footprint.

RICK BELL: Good afternoon. My name is Rick Bell. I'm a resident of Rapid City. I'm a professional engineer in the state of South Dakota. I'm chairperson of the local Black Hills Chapter of Dakota Rural Action, and president of a local firm, Sustainable Environmental Energy Engineering, LLC.
Now, before moving here and starting my own company, I worked for more than 40 years in the environmental cleanup field for a variety of industrial companies and as a consultant. My remediation experience is global. It's led me around the world, working on projects on five continents.

I worked for the -- here in the U.S. on private cleanups as well as state and federal CERCLA and RCRA sites. I've installed thousands of groundwater monitoring wells, injection and recovery wells, and I've -- I understand that the most critical component of the work that I've done has been in groundwater monitoring in all of its facets, including the analytical data, data management, risk assessments, et cetera.

In addition, while employed by a chemical company which had multiple production facilities in the Gulf Coast, I became a deep well injection expert, and I've installed or operated many wells, Class I injection wells in Texas, Louisiana, and Florida.
I'm speaking to you today in opposition to EPA's approval of Powertech's Class III injection well permit. It's my fervent hope that this permit will be denied or at least materially changed, modified substantially.
With all my industrial and consulting background, perhaps you're surprised that I'm here on the side of permit denial. But many, many times I've sat across the table from EPA representatives or your contractors arguing -- or should I say, discussing whether or not we had adequate contamination -- excuse me, let me go back here -- the pros and cons of a particular set of actions regarding the proposed cleanup actions that my company or client had proposed.

And more often than not, it's come down to many questions about whether we had sufficient data to demonstrate that groundwater contamination plume had been adequately characterized, and whether the risk assessment assumptions and conclusions were justified.

We were required, often by various regulators, to install more and more wells, to collect more and more data, and understand better the fate and transport of contaminants in the subsurface.
And one thing that I've learned over my career is that it's impossible to know with absolute certainly where and how groundwater is actually flowing.

Now, it seems kind of ironic that I'm on the other side of the table. EPA is on the other side of the table from us in this situation. I find that your recommending -- I want to -- now I find myself on the side of recommending that you deny this final Class III injection well permit.

You have already heard other testimony that we cannot trust this company. Powertech/Azarga's lobbyist wrote legislation and got it passed, whether by ignorance or corruption, that has made the project a self-monitoring operation. This was intentionally introduced to make it easier for them to self-monitor.

This was an underhanded and arrogant thing to do to South Dakotans.

[...]
Many people use the very same Inyan Kara aquifer that the mining will be done in and -- or, at lower elevations. The deep disposal of waste into the lower aquifers is just an easy means for disposal of toxic waste, out of sight, out of mind, and too deep to be monitored.
Will it flow into other aquifers? What happens after they are finished and long gone? Who monitors it then?

LINSEY MCLEAN: My name is Linsey McLean. And I'm concerned about the lack of oversight of UIC wells.

And I'm quoting a report that criticizes EPA oversight of injection wells from ProPublica published in 2014, which says: The Government Accountability Office says environmental regulators are failing to adequately enforce rules for wells used to dispose of toxic waste for drilling.

And it goes on to say that: Injection wells used to dispose of the nation's most toxic waste are showing increasing signs of stress as regulatory oversight falls short and scientific assumptions prove flawed.

Federal environmental officials have failed to adequately oversee hundreds of thousands of wells used to inject toxic oil and gas drilling waste deep underground, according to a new congressional report. That report by the U.S. Government Accountability Office is critical of the Environmental Protection Agency's inconsistent handling of safety inspections, poor recordkeeping, and failure to adjust its guidelines to adapt to new risks brought by the recent boom in domestic drilling, including the understanding that injection wells are causing earthquakes.

The GAO's findings echo those of the 2012 ProPublica investigation which found that the nation's injection wells were often poorly regulated and experienced high rates of failure, like leading to pollution of underground water supplies.

ProPublica's investigation found that the EPA did not even know exactly how many wells existed in the United States, or even what volume of waste was being injected into them, and that it did not possess complete records required to be collected under the Safe Drinking Water Act.

These wastes, often euphemistically -- and we've heard this, too, here -- referred to as "saltwater," commonly contain a mixture of water, hazardous chemicals, and radioactive minerals.
[...]
LINSEY MCLEAN: Okay. I've just got a little bit more.

The lack of oversight. I quote a report that criticizes EPA of oversight injection wells from ProPublica published in 2014. "The Government Accountability Office says environmental regulators are failing to adequately enforce rules for wells used to dispose of toxic waste from drilling." It goes on to say, "Injection wells used to dispose of the nation's most toxic waste are showing increasing signs of stress as regulatory oversight falls short and scientific assumptions prove flawed."
The report says that the -- let's see –
[...]
I cite cases of water contamination just in the two years that were recorded between 2008 and 2010: The cases of unauthorized injection of toxins that were not permitted, 859; cases of overpressurized injection resulting in damage to well casings and equipment, 1,199; test failures for significant leaks, 6,723; and total wells with violations in just two years, 60,467.

So -- but in just looking at this slide here -- and I'll try to speak to it because I know we're on the record here verbally -- I was thinking about, if this was an NRC site and this was a nuclear plant, they would have Plans B and C, and I don't think the EPA has that in this case.

When I looked at this drawing -- and I know it's sort of a schematic -- I see this is 120 feet from the -- the aquifer exemption boundary is 120 feet. This row of wells is supposed to capture whatever goes wrong in here in the Class III ISL wells.
So that distance appears to be about 360 feet. So I don't know how long it's going to take for you guys or the -- Powertech operating the site to finally figure out that there's a problem in this, what I call, amoeba shape.
Somewhere in here there's something that's gone wrong, and suddenly you have of a well 360 feet away that has contamination in it. You have no further, you know, Plan B or Plan C. What are you going to do when that happens?
I think EPA needs to put in the permit all of these kinds of situations, specifically what happens. When I heard Ms. Shea in her presentation, if I heard it correctly, that they would immediately go in to a restoration situation.
And if that's to be done, you know, specifically how many of these wells are going to get turned into recovery wells and are you going to turn off the injection? I -- if I was designing this, I would have another series of monitoring somewhere in this -- in this circle so that you had the first indication that there's a problem, not wait until it gets 360 feet away and then throw your hands up and say, You know, Powertech you've got to do something about it. I don't know what you're going to do.
All of those things need to be in the permit. So, I just am very concerned about this operation without that level of detail in the -- in the plans.
So that was my parting shot tonight.
Thank you.

And what we're asking you today is to be a decent human being and please just deny these permits. Because the plan that you put up there, while it was well-researched, all it does is monitor. Is there any barrier? Have you got anything that's going to stop this from communicating and getting in the water? No. You monitor. Okay.

The bonding permits that will be given, if given to the holders, cannot save the fall -- the Water Drinking Act of 1974. We will continue to drink our water. We will not know if it is safe or not, I'm sure, because it will be monitored probably by hydrologists that are hired by the company.

You need to really regulate them. You need to have an NRC person on every well if they are going to continue to do that because you need to have some stern controls. They are not controlling themselves, and probably because they are an outside company.

And that's all I have to say. Thank you.

LINSEY MCLEAN: My name is Linsey McLean, and I am an environmental biochemist in toxicology for the last 40 years. I was born and raised in Flint, Michigan, and lived there for the first 55 years of my life with over 450 Class VII industrial dump sites in each of the counties in southwest Michigan, so I am well acquainted with environmental contamination of all kinds.
In fact, this is the reason that I actually sought my course of study and pursued a career in the effects of environmental pollution on the living body of both humans and animals. I am also a federally approved expert witness.
I am submitting testimony on why it is necessary to include uranium in the metals tested for the MCL, for the maximum contaminant levels.
Currently, uranium is not one of the monitored metals in wastewater for uranium mining sites, but should be.
Even if the other metals are under the MCLs, uranium can be nearly off the chart, as has been found to be in the old ISL sites that are attempting restoration. This has already been shown for several mines in Wyoming and Nebraska.

I am also concerned that adequate oversight of the quality of liquid wastes pumped into the Minnelusa Formation through the proposed deep disposal wells will be inadequate, and groundwater is likely to be contaminated.

[...] and continuous independent monitoring of the waste should be required.

The Class V wells, according to the EPA site, are for waste that has been cleaned and will not contaminate the U.S. drinking water. The problem is monitoring this procedure. The mining industry cannot be trusted to self-monitor, and the EPA has not done a good job in the past. Mistakes and violations once made cannot be remedied.

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07463 (Edgemont hearing)	
07463 (Edgemont hearing)	
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07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)
7642 (Hot Springs hearing)	
7642 (Hot Springs hearing)	

Text
Don't allow Cameco/Crow Butte uranium mine to dump their toxic waste into well holes in the Black Hills punched by Powertech/Azarga.
Subject: Fw: Fw: New Hazardous Waste Dump in the Black Hills? Valois, I got this email and it says Powertech/Azarga is applying for 8 injection wells at the Dewey-Burdock site in South Dakota. It also says that the company can pull "in mining wastes from other regional mines and/or sell those waste disposal rights to another company later on." Are these things true??
3. There is nothing in the permits that prevents Powertech from selling "space" in the injection wells to other companies for waste disposal of toxic materials. Since the price of uranium is so low, is this their prime objective and who regulates what may be disposed?
Finally, the recent reports of outside waste being brought in to be disposed of in this area are very disconcerting. If true, these mining byproducts would only add to the potential for contamination in the region.
Subject: Dewey Burdock Hello Valois, I came to see you with my son back Dec 5, 2016 about Dewey Burdock injection well permits. At that time, you and Douglas Minter told us that with those permits, that mining waste of the same class as the wells in question could be brought in for deposition at Dewey Burdock legally from other mines, even in other states. You also said that the permits could be sold to another company should the holder of the permits choose, or go bankrupt, as long as the waste deposited was of the same class. Please confirm the legality of that for me. Thank you for your time.
Subject: Re: answers to your questions Thank you Valois, But are they also allowed to bring in waste from other mines or is the permit for their own wastes only? And why do they say they need two deep injection wells right away if they have no mining planned or started at this time? They have to fulfill the requirements of NRC to find and close all prior bore holes and then redo pump tests to show that the aquifers are contained. No work has been started on that and they have no funds to do so. Will you also require that ?
In addition, these hazardous waste wells will legally be able to take in the water of the hazardous wastes, containing radioactives, with toxic and heavy metals from other mining sites, to make our aquifers a toxic waste dump, and ruin the water we have there. These permits are also able to be sold to another company once issued, if the original company Azarga/Powertech files bankruptcy or sells the permits. These permits, once issued, can be renewed indefinitely. Since the wastewater will contain radioactives and toxic heavy metals, the ultimate destination as to which class of deposition well is required, is determined by the proximity of the drinking water aquifer near it, above or below. Powertech / Azarga has played a semantics game with the determination of the class of disposal well required, however the toxicity of the ultimate wastewater is still the same. See "From the Permit" below.
What the EPA has also not disclosed to local residents is that once approved, the class III underground injection disposal wells approved for uranium mining waste water disposal will also be made available for injection disposal of other radioactive waste fluids from other sources such as Municipal water treatment plants well past when uranium mining activities stop. Thank you,
If these permits are given to Powertech/Arsargo, then there are 10 more companies that will file for the same permits all around the Black Hills. Also the companies that are approaching from the plains for deep hole disposable wells. Are we trying to make South Dakota the next uranium dumping area?
We in Sioux county are at the gateway of Wyoming's movement to dump out of state waste from these operations into Nebraska soils.
And who says Powertech won't supplement their profits margins by allowing other waste from outside companies. It's their permit to do whatever they want. project is expected to last between seven and twenty years.
According to communication you had with Fall River County Commissioner Joe Allen on March 24, 2017, the current draft Class V permit would allow other ISL uranium mines to send wastes for disposal at the Dewey-Burdock site. These wastes could arrive without documentation or information on the origin of the wastes. First of all, wastes should not be brought to the Dewey-Burdock site from other sites under any conditions. This adds transportation risks to the scenario and makes our area a dumping ground. It is our position that pertinent South Dakota Statutes forbid this, and consideration and analysis of these laws should be part of the draft permit review process. Second, if outside wastes are allowed to be brought to Dewey-Burdock, then their chemical composition, location of origin, mine of origin, company of origin, and other pertinent information should be required to be reviewed by EPA before transportation to Dewey-Burdock begins. This information should also be public, so people know what is arriving in our area. Testing should be required upon arrival to insure that the waste meets Class V water quality standards. All of this should have been part of the draft permits and Cumulative Effects Analysis. This is another example of why the current analysis is grossly incomplete.
Comments on the 2 Underground Injection Control (UIC) Draft Area Permits to Powertech (USA) Inc. & the associated aquifer exemption & Cumulative Effects Analysis, -- One Permit is a potential UIC Class III Area Permit for injection wells for the ISR of uranium; the second is a a potential UIC Class V Area Permit for deep injection wells that will be used to dispose of ISR process waste fluids into the Minnelusa Formation From page xxx of the Executive Summary of SEIS on Dewey Burdock: *"The purpose and need for the proposed federal action is to either grant or deny the applicant a license to use ISR technology to recover uranium and produce yellowcake at the proposed project site." From page xxx of Executive Summary" Environmental Impact Statement for the Dewey-Burdock Project in Custer and Fall River Counties, South Dakota Supplement to the Generic Environmental Impact Statement"* How is any intention to deposit ISR wastes from other facilities part of the SEIS's "Purpose and Need"? If actions allowed under license are additional to and not included in the SEIS's - Purpose & Need, how is that justified? How can NRC have created a sufficient "range of alternatives"?
If ISR wastes from other remote ISR mining sites are allowed to be injected, then mining at those sites would be "connected actions" and/or "cumulative actions" and the remote sites and all the impacts from them must be also considered. For example Uranium mines in Wyoming may be closer to active greater sage grouse leks, than in SD. Future processing of the mine's yellow cake is also a "connected actions" and/or "cumulative actions" as is the waste disposal of stuff from the mine site. The eventual use of the processed mineral and the waste and exposures that future unknown use will create and the future radioactive wastes generated by future use is also a cumulative or connected action. Radioactive material is not benign and it can keep on releasing pollution -- sort of like the energizer bunny. If it is the NRC who has ordered/concluded that third party remotely generated ISR waste is allowed into injection wells, why did they not discuss that in their SEIS? The NRC has authority over radioactive material..so how can they have jurisdiction to make decisions in ISR mining wastes from other recovery of a mineral that is not radioactive (such as potash or copper).
RICK BELL: Hi. My name is Rick Bell. I spoke earlier this afternoon, so you have all my CV, my resume. I'm going to be brief. I talked earlier this afternoon in opposition to the Class III wells, and this evening I just wanted to say I'm also opposed to the Class V wells. It's my fervent hope that they will be denied as well, or at least modified extensively.

I'd like to submit for the record an article that was in yesterday's Rapid City Journal paper. I'll give it to you in a minute here.
It was entitled in my newspaper that I got at home, "Charges fly before the EPA hearing." And then when I went to the Website to print it out this morning, it says, "Claims, counterclaims fly before the uranium mine hearings," but I think it's the same article that I got in the paper. It's just I couldn't make a copy of it, a good copy of it.
What I wanted to point out with regard to this Journal article is there made reference to a video posted by Facebook by the Council for Responsible Mining in which the narrator says that if Powertech -- if the Powertech mine is permitted, the company will bring in waste from other mines. It also says that, according to the EPA, this area permit would not restrict Powertech from bringing in waste fluids from other mines.
[...]
My fear is that they want these -- I think it's already been posited here this evening, they want these Class V wells in order to become a waste disposal site. There are hundreds of mines within a few-hundred-mile radius, and I think it would be possible for them to be bringing in waste from other sites.
What I wanted to talk about this evening, it's unfortunate that Powertech people are not here, as they were earlier today, to confront them in some regard because the article that I referenced to the Rapid City Journal, it goes on to say that they spoke with Mark Hollenbeck, an Edgemont area rancher, and the project director for Powertech by phone.
And he denied the claim made by the Council for Responsible Mining. He said that is absolutely false in reference to bringing in -- their intention to bring in mining waste from other sites.
So if this statement was made by an official representative of the company, we should hold Powertech to their word. Therefore, if the EPA does decide to grant final five -- Class V well permits to Powertech, the Agency should insist that no other company's waste fluids be allowed to be brought into this site for disposal.
[...]
So I would just make reference to those articles that are in public papers. In case you guys don't have any, I'll give you a copy.

And they did business with GDF Suez for a while, which was the largest water development company in the world outside of Nestle. And then they might want to sell the permit to somebody that could dump some kind of radioactive or otherwise toxic materials into those wells.

And there are some local people in our area who have already tried to have a waste dump for fracking waste.

And of course, to get this into perspective for you, Wyoming and North Dakota have now decided -- and Montana have decided that they don't want the highly toxic fracking waste dumped in their states, so they are looking for a place to put it, and I suspect that South Dakota has been figured out as a place.
So once we give these guys the permit, they will have the ability to do something with this permit other than do uranium.

Despite all your monitoring, what the EPA has also not disclosed to local residents is that once approved, per NRC declaration, the Nuclear Regulatory agency, the Class III underground injection disposal wells approved for uranium mining wastewater disposal will also be made available, without their independent application, for injection disposal for other radioactive waste fluids from other sources, such as municipal water treatment plants, well past when uranium mining activities stop.

So the business of hazardous waste deposition becomes the only way to make money and likely why the original request of eight hazardous waste injection wells was done. Normally mines like this need only one.
So still, the request for four Class V wells is still ridiculous. And without the ability or clear permit to mine and they say they need two right away, what in the world for?

In addition, we've also given, in these permits, the right to become a toxic dump sight. So as trucks come in the dark of night and dump toxic waste into the deep holes, who oversees this? How do we know what's being dumped?
I mean, you know, if there's this box or a can or whatever it is and it says, you know, dump site waste, well, we don't -- how do we know what it is and where it came from?

I mean, is China going to -- you know, they'll make a fortune if they can ship over Chinese toxic dump, and put in our containers and -- how do we know? It would have to be 24-hour security at that site because we become then a site that has to be monitored in terms of that.

All right. I've heard that there are -- also is now third-party waste being -- in-situ leach waste being allowed by the NRC. That was not part of the action alternative in the SEIS or the GEIS. Okay. So this is a NEPA oversight. Whether it's your responsibility or the NRC, who knows -- and the BLM. Okay.
I have a question. When you're being allowed these third-party waste disposal actions, there are other forms of in-situ mining besides uranium. It's been used for copper, potash, experimentally for gold. I've read also possible nickel, manganese.
When there's this variance being allowed for this to be a waste disposal site instead of a mine, is that just limited to in-situ leach uranium, or is it other forms of in-situ?
However, if the second option is, that is not discussed in the NRC, NEPA documents. And they don't have authority over that anyways, and they couldn't. That would rest with you. So if the NRC is allowing third-party waste disposal from -- not related to the radiation exercises, where's the NEPA document on that?

It would appear that the only way for Powertech/Azarga to profit by their permits is to make deep injection wells available to outside sources of toxic waste. Powertech denies the idea of outside sources of waste saying they do not plan -- that's in quote -- they don't plan to take in outside toxic waste, despite the fact that their permit allows it and profit demands it.

[...]

They say they only need one and a half percent bleed, which is somewhere around 300 gallons a minute. So why ask for a 1000 gallons a minute? If they will not take in outside waste, why allow for it?

KATHLEEN BAILEY: Okay.

What the EPA also has not disclosed is that residents -- is that once approved, the Class III underground injection disposal wells have been approved by the NRC for uranium mining wastewater disposal to be made available for injection disposal of other radioactive waste fluids from other sources, such as a municipal water treatment plant, well past when uranium mining activities has stopped.

These deep disposal wells, they are maybe not just for Azarga. Maybe they want to bring in Cameco's waste from Wyoming, from Nebraska.

You don't know because they didn't line that out, did they? They didn't line that out in their application. I don't trust these people. They are fat, taker corporations, and they want to encroach on us.
Corporations come in to little communities that want jobs, nice homes, a future for their children. That's what Powertech and Azarga did. They came in here. Now they have people standing up saying we're encroaching on Edgemont.

One of the things I heard today was that they have the option of bringing in outside nuclear waste and storing it here. There may not be a market for uranium anytime shortly, but if they are bringing in outside nuclear waste, my concern is, Mr. Hollenbeck has complained about having to jump through countless hoops.
Now, if we start bringing in outside people who have not been reviewed and have not had to jump through those countless hoops, what is happening to our protection?
I would suggest that if outside nuclear waste comes in, that it should be only somebody who has had to jump through every stinking hoop that Mark Hollenbeck has had to jump through.
Because they may not have the reliability that Mark has. And that's my final comment.

To me it seems more like an issue that is, where -- where are they going to put this? And what happens if an outside company comes in and purchases, you know, money rights. Are we just going to become a toxic dump here?

What about other people's wastewater, is it going to be allowed to be dumped down the holes? Nobody is answering these questions. Nobody can answer them.
It's just -- it's scary. I've seen way too much. And yeah, I'm emotional. I have a right to be emotional. Thank you.

What the EPA has also not disclosed is that the Nuclear Regulatory Commission has approved that the Class III underground injection disposal wells approved for the uranium mining wastewater disposal will also be made available for injection disposal for other radioactive waste fluids from other sources, such as municipal water treatment plants, well past when the mining activities stop, which will be an ongoing continuous source of income for Azarga/Powertech.

If there are permits -- if these permits are given to Powertech/Azarga, then there is ten more companies that will fly -- will file for the same permits all around the Black Hills, also the companies that are encroaching from the plains for deep hole disposable wells. Are we trying to make South Dakota the next uranium dumping area?

Now, the proposal before us is to have another 4,000 wells drilled. And these can ultimately be sold, the permit can be sold, and we can use this for dumping oil and gas fracking waste and radioactive sludge from the operations of a uranium mining operation that may or may not take place here, or ones that are already taking place in other places.

Response

Powertech has not proposed injecting waste fluids from offsite into the Class V injection wells. The updated permit restricts the Class V injectate to treated ISR waste fluids generated at the Dewey-Burdock site.

The NRC has not approved this activity.

clarify number of wells proposed:
2,330 injection/production wells
3 deep wells injecting into the Minnelusa Formation

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565	Ex. 6 Personal Privacy (PP)
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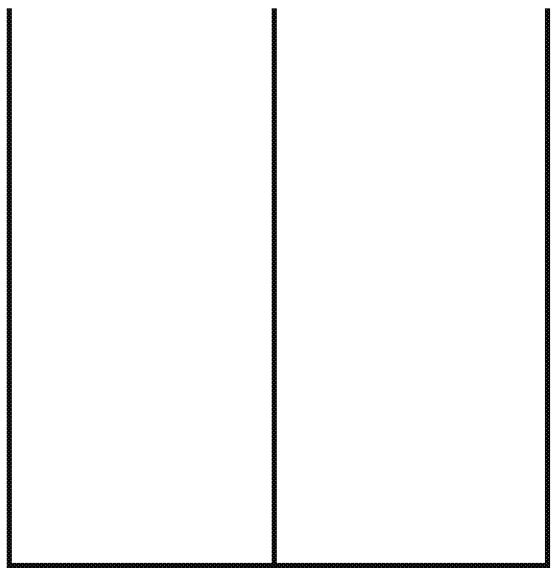
7461 (5/9 Rapid City hearing)	
7461 (5/9 Rapid City hearing)	



Text

1. Introduction

In April of 2017, the US Environmental Protection Agency (EPA) released draft permits for uranium recovery and wastewater disposal associated with the proposed Dewey-Burdock in-situ recovery project. In accordance with EPA policy and Executive Order 12898, the EPA also conducted an environmental justice (EJ) analysis concerning the mine's possible environmental or health impacts on minority and low-income communities. The report finds that "the city of Edgemont is a potentially overburdened community" based on its low-income status and accumulation of environmental health risks, but that the Dewey-Burdock project is not expected to meaningfully change this status. The EPA also recognizes the need for consultation with tribal communities for whom "the Black Hills is an area of cultural importance," although it recognizes that consultation activities are not a part of the EJ analysis. Finally, the EJ analysis mentions several times that the EPA will conduct "enhanced public participation and outreach activities" given that UIC wells have the "potential for significant public health or environmental impacts." These included several public comment sessions in the Black Hills area.

We find the EJ analysis deficient in several connected ways. First, the analysis appears at odds with broad public understandings of environmental justice, scholarly expansions on public understandings, as well as the narrower, pragmatic definition of EJ used by the EPA. Second, although the draft EJ analysis and the EPA's actions seem to suggest an understanding that the project might affect Lakota and other tribal relationships with the Black Hills, the draft EJ analysis as written does not allow the EPA to acknowledge the possible burden the proposed project might place on the culture, religion, or health of Native peoples.

2. Defining environmental justice

The concept and practice of environmental justice emerges directly from the activism of people of color and Native peoples directly affected by extractive industries, refineries and processing plants, and hazardous waste repositories. In fact, much of this activism was responding to uranium mining, processing, waste disposal, and nuclear weapons testing. In South Dakota, Native and non-Native groups alike devoted many years in the 1970s and 80s to proving that drinking water on the Pine Ridge and Cheyenne River reserves had been contaminated by past mining activities, resulting in undue health burdens for their people. The organization Women of All Red Nations (WARN) conducted many of the first drinking water tests on South Dakota reservations and fought for environmental justice on a national and international scale (LaDuke and Churchill 1985). The Indigenous Environmental Network (IEN) emerged to help facilitate the extremely influential 1991 People of Color Environmental Justice Summit, which directly led to Executive Order 12898, signed by President Clinton in 1994.

Based on EO 12898, the EPA defines environmental justice in the following way.

"Environmental justice (EJ) is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation and enforcement of environmental laws, regulations and policies.

Fair treatment means no group of people should bear a disproportionate share of the negative environmental consequences resulting from industrial, governmental and commercial operations or policies."

The EPA goes on to define the meaning of meaningful involvement:

- People have an opportunity to participate in decisions about activities that may affect their environment and/or health
- The public's contribution can influence the regulatory agency's decision
- Community concerns will be considered in the decision making process
- Decision makers will seek out and facilitate the involvement of those potentially affected

We will return to this definition in a moment, but first it is important to contrast these principles originally agreed upon at the 1991 Summit (which can be viewed in full at http://www.ejnet.org/ej/principles.html). These include, most notably,

4) Environmental Justice calls for universal protection from nuclear testing, extraction, production and disposal of toxic/hazardous wastes and poisons and nuclear testing that threaten the fundamental right to clean air, land, water, and food.

7) Environmental Justice demands the right to participate as equal partners at every level of decision-making, including needs assessment, planning, implementation, enforcement and evaluation.

11) Environmental Justice must recognize a special legal and natural relationship of Native Peoples to the U.S. government through treaties, agreements, compacts, and covenants affirming sovereignty and self-determination.

In contrast to the EPA's definition of environmental justice, the 1991 Summit identified the specificity of particular activities (e.g., uranium mining) and the specificity of particular communities and their relations with land and law (e.g., Native peoples) as fundamental to achieving environmental justice. Here, environmental justice did not simply mean the absence of harms or equality of distribution of risks, but also the proactive recognition of historic relationships with specific land and environments as well as industries.

Scholars of environmental justice have focused closely on the twin problems of distribution of environmental harms and benefits and participation in public decision-making processes (Holifield 2001, Holifield et. al. 2010, Schlosberg 2009, Young 1996). What both social scientists and political theorists commonly argue is that public contribution rarely has the chance to influence the regulatory agency's decision. Nonetheless, individuals and organizations participate wholeheartedly and without pay in public hearings like those conducted by the EPA in South Dakota and Nebraska for the Dewey-Burdock project. In the case of the Dewey-Burdock project, public comments were overwhelmingly against the project. Although not always couched in this terminology, we would suggest that many of the speakers were attempting to demonstrate to the EPA that the proposed Dewey-Burdock project does not produce just outcomes for marginalized populations in South Dakota. Whether their public comments meet the threshold for 'meaningful participation' depends on how willing the EPA is to modify its approach and adhere to its own principles.

The EPA has continued to expand upon its definition of environmental justice through its EJ 2014 and 2020 Action Agendas. EJ 2014 went a long way toward strengthening the EPA's capacity to recognize possible overburdened communities, as the Dewey-Burdock analysis via EJ Screen and expanded use of participation and outreach meetings demonstrates. However, the EPA has also recognized the difficulty of integrating EJ into all aspects of agency practices, including permitting, public relations, and actual results. This includes understandings of treaty rights, which the EPA admits has been "a major evolution in EPA's understanding of environmental justice and tribal rights" (EPA 2016, 43). The EJ 2020 Action Agenda sets out 4 strategies for enhancing environmental justice towards Native peoples. These are:

1. Strengthen consideration of tribes' and indigenous peoples' issues, their involvement in EPA's decision-making processes, and responsiveness to their concerns when EPA directly implements federal environmental programs.
2. Help federally recognized tribal governments build capacity and promote tribal action on environmental justice.
3. Address disproportionate impacts, improve engagement, promote meaningful involvement, and improve responsiveness to the environmental justice concerns of indigenous peoples.
4. Promote intergovernmental coordination and collaboration to address environmental justice concerns in Indian country and in areas of interest to tribes and indigenous peoples throughout the United States.

Is the permitting process the EPA is conducting for the Dewey-Burdock project consistent with these strategies and goals? Although enhanced public participation was conducted in the spring of 2017, this outreach focused almost completely on the potential health and water quality impacts of the project. While we find these very important, information from the draft environmental justice report was only mentioned, but not explained or referenced in any substantial manner by EPA officials. Although we took the time to download and comment on this report, it is likely that many more participants would have done so if the EPA representatives had explained their findings more substantially.

The EJ analysis is insufficient in the EPA's own standards. Yet ultimately the standards of environmental justice today, as thirty years ago, should be responsive to debates and actions in the public sphere, including proposals emerging from social movements. Our next section examines in more detail perspectives on environmental justice elaborated by Native peoples.

3. Native American perspectives on environmental justice

Environmental justice scholarship and activism features various assertions of (and mobilizations against) environmental (in)justice in the US from the perspectives of Native peoples, ranging from industrial pollution and contamination (Johnston, Dawson, and Madsen 2010; Voyles 2015) to hydroelectric power (Howe and TallBear 2006; Lawson 2009) and oil and natural gas development (Estes 2014; Allard 2016) to the threats which climate change poses to traditional food sources and ecosystems (Doerfler, cited in Scheman 2012; Dittmer 2013; Whyte 2017; Wildcat 2009). Importantly, nearly all Native-led engagements with questions of environmental justice are grounded in claims and relationships to land, some aspects of which are legally enshrined by treaties with the US government. Many scholars and activists, including Tsosie (1996; 2009), Whyte (2013), and various Lakota, Dakota, and otherwise-affiliated Native individuals who testified during the EPA public comment sessions, have noted that their communities' complexly reciprocal relationships with the land escape capture by the narrowly defined terms of federal treaties. Despite this important caveat, treaties remain an important ground from which Native individuals and communities have articulated their visions for environmental justice. This emphasis on land, water, and treaty rights extends to Lakota articulations of environmental justice. Contemporary Lakota concerns with the impacts of proposed uranium mining activities, including the proposed Dewey-Burdock project, are grounded in a longer history of negative fallout from and concerted opposition against harmful mining projects in the Black Hills region.

[...]

It wasn't until the 1970s that the health effects of uranium mining began to be noticed by people in the region. A South Dakota Department of Health study in 1976 already found elevated cancer rates around Edgemont (Tupper 2015). Downstream on the Pine Ridge reservation, WARN was conducting the first water tests, which found elevated levels of radioactive elements consistent with toxicity from uranium mining. It would be more than 25 years before an alternative water source was finally in place. Throughout the 1980s, WARN, the Black HIlls Alliance, Defenders of the Black Hills, and other Native and non-Native led groups sought to connect treaty rights to environmental justice in a meaningful way based on their histories of contamination, activism, and experience with the EPA and other federal institutions as well as private corporations.

Since the initial wave of activism in the 1980s, groups such as Owe Aku and the Black Hills Clean Water Alliance have been working to amplify both Native and non-Native concerns related to uranium mining into advocacy for clean water. Just as these groups' organizing and advocacy strategies are built upon previous iterations of the environmental justice movement in the Black Hills, so too are their concerns with potential environmental harm from the proposed Dewey-Burdock project grounded in and made more significant by past and ongoing experiences of contamination from historic uranium mining activities. The cumulative effects of past uranium mining, which remain in South Dakotan waterways, bodies, communities today, have been repeatedly cited by the public as one of the most meaningful reasons that contemporary uranium mining is seen as an environmental injustice. The lack of understanding of this history of local and regional environmental justice movements and their connection with the fight for treaty rights (Ostler 2011) is one of the most troubling aspects of the EPA's draft EJ analysis.

5. Conclusion

Outlined above is a broad understanding of the environmental justice concerns the Dewey-Burdock raises for two scholars of environmental politics in South Dakota. Our expertise comes from being students and scholars learning from the individuals and organizations expressing concerns about the Dewey-Burdock project and from a commitment to do our part in amplifying and translating these concerns into concepts recognizable to the EPA. We have attempted to enhance the picture of what environmental justice could look like if the concerns of Lakota and other tribal communities were properly recognized as part of the permitting process. Our brief outline is insufficient to be counted as an environmental justice analysis in its own right; we only seek to highlight the striking absences within the EPA's draft EJ analysis.

With this in mind, we do not see how the proposed permits for the Dewey-Burdock project can be issued and retain any valence of environmental justice. In addressing some of the problems highlighted above, the EPA has a chance to set a precedent for working with Native communities in a manner more consistent with the goal of creating environmental justice.

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ENVIRONMENTAL JUSTICE AND NATIONAL HISTORIC PRESERVATION ACT ISSUES

The issues involving the EPA's DRAFT Environmental Justice (EJ) Analysis and its National Historic Preservation Act (NHPA) report are linked and will be discussed briefly in this section.

The primary shortcoming of the DRAFT Environmental Justice Analysis is its limitation to a 20-mile radius. While it is true that Edgemont qualifies for impacted status, the 20-mile limitation effectively eliminates people who live downstream and on the Lakota reservations and who are impacted by the destruction of treaty, historical, and cultural sites. Note that both EJ and NHPA analysis should have been completed as part of a full tribal government-to-government consultation before the draft permits or aquifer exemption were released. There has, at this point, already been a violation of trust by the EPA that will be difficult or impossible to remedy.

[...]

The EJ analysis includes Table 12, which purports to list "Additional State and Federal Permits Powertech is required to obtain" (p. 24). This Table is misleading in several ways that make it look like the company faces few hurdles. First, the table does not include the Clean Air Act permit that the EPA says is required. Second, it does not indicate the current status of either the state water appropriation permits or the state Groundwater Discharge Plan. These permits have not just been "recommended for approval"; they have been put on hold for several years. And third, the NRC's Source Material License is under appeal in federal court, and this is not mentioned.

The EPA also states conclusions about the mining process and its outcomes that are not supported by experience or science in the EJ analysis. This is discussed elsewhere in these comments.

The EJ analysis mentions that the public in the White Mesa mill area, where the company wants to take its 11e wastes, is 49% American Indian and Native Alaskan. After making this statement, the agency fails to do an EJ analysis of that site, simply saying that the Dewey-Burdock waste would be a small percentage of the waste at the site. This begs the question – What are the impacts of the mill on the nearly half of the population of the area that should be protected under EJ guidelines? There should at least be a reference to a complete analysis of this issue and, if one doesn't exist yet, it should be done as part of the Dewey-Burdock process and before further action is taken by the EPA.

8. COMMENTS ON THE DRAFT ENVIRONMENTAL JUSTICE (EJ) ANALYSIS FOR THE DEWEY-BURDOCK UIC PERMITTING ACTIONS

The Town of Buffalo Gap, SD, with a history of high uranium levels in the water (higher than found in Edgemont, SD) should be included in the EJ analysis to the same extent as Edgemont, SD.

[ATTACHMENT: "Location of the Study Area, which includes the Dewey-Burdock Project Area and a 20-mile buffer measured from the approximate Project Area Boundary, and the Edgemont Area, which includes a 5-mile buffer around the City of Edgemont" (image)]

Section 1.3 of the EJ Analysis states that the EPA used a 20-mile buffer zone measured from the location of the Dewey-Burdock Project Area Boundary without considering the flows of water or related aquifers that impact areas farther away such as Buffalo Gap, SD. The EPA found that 'Based on the preliminary screening processes, the City of Edgemont, South Dakota was identified as a community for which the EPA should conduct additional evaluation to determine if the area is a potentially overburdened community as discussed in Section 2.5."

[ATTACHMENT: "Drinking Water Systems Radiological Chemical Data Proximity of Cheyenne River" (image)]

The Town of Buffalo Gap, SD, shown in close proximity to the Project Area

Boundary, should be included in the EJ Analysis. Like Edgemont, SD, the Town of Buffalo Gap, SD, is a potentially overburdened community.

Section 11.0 of the EJ Analysis describes additional, enhanced public participation and outreach requirements that should be made available to the residents of Buffalo Gap, SD.

11.0 Conclusions

The screening process using EJSCREEN identifies the City of Edgemont as a potentially overburdened community. Thus, the EPA has determined that it is appropriate to conduct enhanced public participation and outreach activities with the aim of encouraging public involvement in the permitting process. The EPA is exercising its discretion to hold a number of public informational meetings and public hearings following issuance of the draft UIC permits and to allow for a longer comment period than that required by regulation. The EPA also proposes to implement appropriate permit requirements intended to ensure protection of the underground sources of drinking water and to facilitate public notification and access to information in the event of noncompliance with permit requirements. The EPA will continue to assess potential EJ considerations and is inviting review and comment on this draft EJ analysis.

[ATTACHMENT: "00528_DavidFrankelARMCommentsEPADBJune2017-7.0final.pdf"]

Buffalo Gap, SD tested 500% higher for Uranium in its water than Edgemont, SD. Based on the foregoing, the Town of Buffalo Gap, SD should be included in the EJ Analysis.

For the foregoing reasons, and based on the foregoing comments, the undersigned hereby object to the issuance of the proposed permits to Powertech.

Besides these general concerns, I would like to discuss several issues with the draft permits. The first is that the Environmental Justice (EJ) section does not adequately consider the impacts of the proposed mine and deep disposal wells on Lakota people. The area covered in considering EJ issues is inadequate, as they include no reservation lands. Environmental Justice concerns should clearly include the Pine Ridge and Cheyenne River Reservations, which will be directly impacted if this project is permitted, as they are downstream.

I want to support the comments from the two University of Minnesota students on your analysis of environmental justice. You need to look at how your Agency's actions, your permits, your inactions are affecting or how they are not considering an already marginalized people.

JULIE SANTELLA: Hi. My name is Julie Santella. I'm a graduate student in geography at the University of Minnesota in Minneapolis. I grew up in Sioux Falls, eastern part of the state. And I am humbled by all the people who have spoken yesterday and today, and a lot of what I am going to say is to reiterate what other folks have said.

And while the stated focus of these public hearings is on these draft permits and the exemption from the Safe Drinking Water Act for parts of the Inyan Kara aquifer, I want to focus my comments on another draft document being presented, the so-called Environmental Justice Analysis for this proposed project.

I'm troubled by the way that public input on the EPA's EJ and tribal consultation processes has been underemphasized here when, in fact, these proposed permits and proposed aquifer exemption are questions of environmental justice in really important ways, and these considerations of environmental justice or injustice ought not to be bracketed off from the rest of the project approval process.

So my concerns with the EJ process are many. First, as many people have been noting yesterday and today, the proposed project area as well as this place where we are meeting today is contained within treaty territory, as defined by the 1851 and 1868 Fort Laramie Treaties.

And therefore, when developing the National Historic Preservation Act draft compliance and Environmental Justice draft analysis documents, the EPA's analysis is already flawed in saying that the site in question is not located on tribal lands.

[...]

So even if I agreed with the bounded nature of the EPA's considerations with regard to environmental justice, considering only a 20-mile buffer zone around the proposed project area, even within those bounds I would consider its environmental justice process inadequate. But I don't agree with those boundaries.

And I'm concerned about the way that this analysis for environmental justice fails to account for potential impacts of this project beyond these geographic boundaries, and also the failure to recognize the way the environmental follow-up in this project stands to build upon layers of historic environmental injustice experienced in this region.

[...]

I am no expert when it comes to geology, and I'm hopeful that you will listen to the many scientists, hydrologists, geologists who are working hard to understand the geology of this region better and have reason to question the safety of this proposed project and its -- and its ramifications for communities beyond this bounded 20-mile area.

But I'm also concerned about the EPA's failure to recognize that the communities who stand to be harmed by this project have experienced significant historic injustice when it comes to land and resource development. Even if we look only to past uranium projects, we find a more nuanced understanding of injustice in this region.

Just yesterday we heard further confirmation that the Cheyenne River is in fact polluted as a result of past mining activities with impacts for downstream communities, including Pine Ridge, Cheyenne River, and other Native communities.

[...]

I'm also not -- no expert on lived experience of these layers of injustices, and this is not just as a result of uranium mining, but of land theft, logging activities, other mining operations that all over have been, continued to be made possible by colonial dispossession of native lands and resources.

And my hope is that you will listen to all these people gathered here today, explaining these layered impacts of these projects on their communities. I hope that you will listen when they tell you that your mechanisms for tribal consultation are inadequate at best and insulting at worst. And I hope you will rethink your definition of environmental justice.

KAI BOSWORTH: Okay. Thanks a lot for allowing me to speak today. My name is Kai Bosworth. I'm also a graduate student in the Department of Geography at the University of Minnesota. I hold an M.A. in Environmental Studies with an interdisciplinary focus on Environmental Justice from Macalester College, as well as a B.A. from the University of Minnesota. And I grew up in Spearfish, South Dakota.

So today I also want to make comments with respect to the draft Environmental Justice Analysis that the EPA produced for this project.

Environmental justice is defined by the EPA as "the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies."

But the concept and definition of environmental justice were developed not by the EPA itself, but by social movements led by Native nations, black activists, migrants, poor people, and women, namely the people standing behind me here today.

Environmental justice was institutionalized via executive order in 1994 and '95 and developed and expanded via agency plans. But while the EPA's definition of environmental justice has narrowed significantly, ours, for those social movements, has expanded drastically.

The two parts to the EPA's Analysis of the Dewey-Burdock Project on Environmental Justice primarily concern first the assessment of the project area, which is defined as 20 miles surrounding the Dewey-Burdock project itself, and even within this area that includes the community of Edgemont, the EPA concludes that there are, in fact, communities that qualify as overburdened and face -- have significant health impacts related to past environmental activities on the land.

But mostly what I want to talk about today is whether participation and consultation are adequate to the EPA's stated standards of fair treatment and meaningful involvement of the folks who have gathered here today.

And so I guess my question, my main question is why limit environmental justice analysis to these communities, the 20 miles surrounding Dewey-Burdock, when historically and legally, we all know that this is tribal land and, at the very least, that the project does indeed impact Native nations.

The EPA, it seems to me, implicitly agrees with this sentiment for in the EJ analysis, in the second part, they attempt -- they state that they attempt to take enhanced measures to collect input from Native peoples, including, they argue, these very public participation meetings today which were located, supposedly, closer to tribal communities so that -- to facilitate their appearance here today.

Many speakers have already commented on consultation, and I think that they are far more qualified to do so than I. So I just want to use my remaining time to comment on public participation in environmental review.

And I think what we need to ask ourselves is -- and the EPA, is whether participation today qualifies as meaningful. What is a meaningful contribution and comment to this project?

The gracious EPA agents are at pains to tell us that we -- that our comments are being listened to and heard and will be responded to in the final permits that they will grant, but we all know that actions speak louder than words.

And the inadequacy of the EPA analysis could be fixed based on our comments that we give today, but I hope you understand our extreme skepticism that it will be. For example, after the head of the EPA's EJ division, Mustafa Ali, resigned two months ago and indicated that the department's future could be at risk under the current administration.

So to me and many EJ scholars, what meaningful commitment and -- or, comment and participation might do would recognize the participants who are speaking here today, especially those who come from Native nations, as the experts on the region, its water and its land.

And possible conditions that you could all attach to future permitting that would create meaningful participation would recognize this: By expending -- expanding the spatial and historical parameters of the Environmental Justice Analysis beyond the immediate 20-mile radius; to include the long history of dispossession, broken treaties, and contamination of Native land and bodies.

This would recognize that what justice means is something far more than what goes on in this five-minute speech or anything like that, but much longer, a process of redress and reconciliation.

I think that in order to do this, you would have to recognize that the expert analysts are the people in this room and who have spoken to you over the last few days and not the experts from Powertech and their consultants.

So I suggest that perhaps one thing you might think about doing is, instead of using us and our free time to supplement their income and projects, is instead to hire everyone in this room to complete the consultation process of the environmental justice draft permit. I think that this would begin to develop a meaningful participation by including us in a real dialogue.

Thank you to everyone who has spoken today, and I look forward to submitting longer written comments to this panel.

Letter ID	Commenter Name	Commenter Org.
519	Ex. 6 Personal Privacy (PP)	Black Hills Clean Water Alliance
527		Clean Water Alliance
527		Clean Water Alliance
527		Clean Water Alliance

546	Ex. 6 Personal Privacy (PP)	Oglala Sioux Tribe
556	Ex. 6 Personal Privacy (PP)	South Dakota Department of Game Fish, and Parks

556		South Dakota Department of Game Fish, and Parks
556		South Dakota Department of Game Fish, and Parks
556		South Dakota Department of Game Fish, and Parks
556		South Dakota Department of Game Fish, and Parks
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
329		Individual

7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Prairie-Hills Audubon Society
527		Clean Water Alliance

Text

The EPA also omits important issues from its Draft Cumulative Effects Analysis. Two that are glaring are the potential for mining wastes to be transported from other areas to Dewey-Burdock Class V wells and the potential for uranium mining to expand onto Powertech/Azarga's contiguous claims on the Wyoming side of the state line (the Dewey Terrace project). It's important to consider climate change, but it's also important to consider cumulative impacts that are on or adjacent to the proposed mine site.

The next omission is that the treatment of radiological wastes from the drying cycle at the Central Processing Plant is not specified. The Cumulative Effects Analysis says that "off-gases generated during the drying cycle will be filtered through a baghouse" (p. 86), and it also mentions a "sock filter" (p. 87). However, the document does not give any information on where or how the wastes in the filters/baghouse would be disposed. It is assumed that these wastes will be radioactive, so should probably be 11e wastes. But readers (and the company) should not have to guess about such things. This situation should be the subject of comprehensive analysis, and the entire waste cycle should be specified clearly. There is also no discussion of potential accidents during processing (which have occurred) or the remediation or mitigation that might be needed as a result.

Much of the mitigation sections appears to be vague, incomplete, or based on stock language picked from other documents, such as the discussion of soil impacts mitigation on page 78-79 of the Cumulative Effects Analysis. The mitigation sections of EPA documents should offer a complete and detailed analysis of the required mitigation that is site specific at the Dewey-Burdock location.

To top it off, the EPA makes use of the Draft Cumulative Effects Analysis difficult, as the document has neither a Table of Contents nor an Index. In the future – and before further action is taken on the proposed mine, Class V wells, and aquifer exemption -- we hope that the EPA will rectify this and the other omissions.

[...]

Another issue is that, because the EPA documents downplay the amount of water that would be consumed by this project, the cumulative impacts do not adequately consider the proposed project's use of large amounts of water. As a result, the EPA also does not adequately consider the actual drawdown of water or the long-term impacts that this water use could have on the environment and economy of the southwestern Black Hills. The southern Black Hills is a semi-arid area that will need all its ground water in the future. This need will grow with climate change and with the ongoing depletion of the High Plains (Ogallala) aquifer a bit to the south.

A third major problem is the admission that injectate from the Class V wells will mingle with Madison aquifer water and come to the surface 20 miles away. While the EPA says this will happen "on the scale of 10,000 years" in its Cumulative Effects Analysis, remember that the calculations of water movement underground at the Dewey-Burdock site vary widely. The information offered by Powertech's contractor suggests that water movement is many times slower than independent estimates. Also, there are other wells into the Minnelusa and Madison aquifers to the south and east, over the 20-mile span between the project site and Cascade Springs. This admission should negate the entire Class V application and send Powertech back to Canada, China, and the Cayman Islands.

The sections on ground water use in the Draft Cumulative Effects Analysis rely overly-much on the opinion of one person, the former South Dakota State Engineer. Other people should be consulted.

[...]

The statement that "radon-222 itself has very little radiological impact on human health or the environment" (p. 85, Cumulative Effects Analysis) runs counter to what can probably be called common knowledge. It certainly runs counter to the EPA's website on the topic: https://www.epa.gov/radon/health-risk-radon The UIC Program needs to go back to the drawing board and do a comprehensive, science-based analysis of this issue.

Along the same line, in its discussion of the Central Processing Plant, the Cumulative Effects Analysis says both that "ventilations systems will exhaust outside the building" and that there will be "open doorways" on processing buildings (p. 86). One would hope that, for the safety of workers, the open doorways are nowhere near the exhausts. This should be specified by the EPA, and potential employees should be fully informed of the situation.

Section 3.3.1 of the Cumulative Effects Analysis (p. 19) is vague on key aspects of the impacts that will occur to ground water quality in the ore zone. The second-to-last sentence of this section say that the company "will monitor groundwater using standard industry practices." This is repeated in the section on post-restoration monitoring (p. 22). These standard practices, of course, have been associated with all sorts of problems, including the ongoing failure to return even one ISL mine's water to baseline. The EPA can do better.

Similarly, the section ends with a statement that the EPA "concludes that impacts to ore zone water...should be minimal." How is "minimal" defined? Is it what the EPA will allow? Is it minimal to the company? Or is it minimal to the impacted communities? This term should receive better explanation.

We also disagree with the statement in Section 3.3.2.1, in which the EPA says that an excursion can be left as is, if it is not corrected within 60 days; instead, the company can increase its financial assurance obligation in a manner that is suitable to the NRC (p. 21). This is not acceptable.

As for other companies, there are 11 uranium companies that have expressed an interest in the Black Hills, and one – Peninsula Minerals – recently started an ISL mine on the northwestern edge of the Hills in Wyoming. If the Dewey-Burdock project is not abandoned and if Powertech acquires all the needed permits (at least 10 at last count, including the Clean Air Act permit), then this would be the first ISL mine in South Dakota. If Powertech is allowed to move forward – especially on such flimsy permitting documents – a precedent would be set. We do not want to open South Dakota to a stampede of ISL uranium mining companies, for all the reasons discussed in this document. However, for the EPA's documents to be complete, the existing Black Hills mine and the potential for a much larger number of ISL uranium mines must be fully considered. This need is even greater for the Class V draft permit, which might allow wastes from other mines to be injected into ground water in the Dewey-Burdock area.

And as for the third item, Powertech has claims to the east of the current project boundary, and it has contiguous claims just across the border in Wyoming. This is very clearly a topic that should be considered under any discussion of cumulative effects. According to our research, the company has approximately 744 federal claims in Wyoming, with the majority being across the border from the Dewey-Burdock project area.

Another important omission is that the draft permits beg the question of who is going to do on-the-ground regulation of the proposed mine and deep disposal wells. In 2011, the State of South Dakota suspended its ability to regulate in situ leach uranium mining, so it has no authority to do that regulation at this time. The NRC has two inspectors based in Texas, who visit ISL mines once or twice a year. There is no indication that their regulation can be complete or happen often enough to catch problems.

This is tremendously important. The draft permits include some very critical actions, such as testing the Minnelusa Aquifer to determine its water quality before deciding whether the company can proceed with deep disposal wells. This is a high-stakes test that would impact the future of the southwestern Black Hills. First, the water quality test should have been done under EPA's direct supervision before a draft permit was issued. If the Minnelusa's water turned out to be appropriate for drinking water, the time and expense of creating the application and the Class V draft permit would have been avoided – as would have the stress on people in the area who use and rely on the aquifer.

The EPA omits important issues from its Draft Cumulative Effects Analysis. Three that are glaring are the potential for mining wastes to be transported from other areas to Dewey-Burdock Class V wells, the presence of other uranium companies in the Black Hills, and the potential for uranium mining to expand onto Powertech/Azarga's contiguous claims on the Wyoming side of the state line (the Dewey Terrace project) and to the east on National Forest Service land. It's important to consider climate change, but it's also important to consider cumulative impacts that are on or adjacent to the proposed mine site.

Lastly, the cumulative impacts analysis prepared by EPA does not appear to account for (1) the September 2014 two-page announcement from U.S. EPA stating that it has completed a Preliminary Assessment (PA) of the Darrow/Freezeout/Triangle abandoned uranium mines located within the area of the proposed Dewey-Burdock project; and (2) the September 24, 2014 document from Seagull Environmental Technologies captioned as "Preliminary Assessment Report regarding the Darrow/Freezeout/Triangle Uranium Mine Site near Edgemont, South Dakota, EPA ID: SDN000803095." Attached, labeled Ex. OST-026.

Specifically, EPA's analysis must analyze the causation link not just between the unreclaimed surface mines and surface water contamination, but also ground water contamination. These EPA documents raise the issue of a causal link to the contamination of ground water and nearby ground water wells. The lack of analysis of these issues demonstrates a lack of basis for any findings regarding the baseline hydrogeology, and particularly groundwater connectivity issues at the site.

EPA concedes in these documents that additional data and sample collection for soils and surface waters is needed beyond what NRC Staff required or EPA has yet obtained. EPA states further that this data collection is necessary to better characterize and define source areas at the unclaimed uranium mines. Ex. OST-026 at 30. Importantly, these are the "source areas" for the "observed release to groundwater" that "has occurred at the site." Id. Thus, the fact that the proposed new sampling includes only soil and surface waters does not disconnect this issue from the "observed" ground water contamination.

Further, EPA's analysis reveals that "[s]ome significant data gaps exist within the information reported." Exhibit OST-026 at 29. BEPA analysis reveals for the first time that while "[g]roundwater samples were collected within the area of the Site from various wells; however, lack of ground water sampling data from near and upgradient of the Site limited availability of reliable background concentrations." Id. Also, EPA points out that although soil samples were collected at the site by Powertech, "of the 25 samples collected, only three were analyzed for additional radionuclides including uranium, Pb-210, and Th-230 – the other known contaminants on site." Id. Together, these EPA documents demonstrate that additional investigation is necessary at the site in order to establish the scientifically credible baseline analysis required by the SWDA, UIC regulations, NEPA, and the APA.

All considered, the discussion presented herein demonstrates that the applicant, and EPA, have failed to provide an adequate baseline geology and hydrogeology analysis and as a result fails to adequately analyze the impacts associated with the proposed mine, particularly on groundwater resources and with respect to the applicant's ability to contain mining fluid.

[...]

VI. INADEQUATE ANALYSIS OF DISPOSAL OF SOLID 11E2 BYPRODUCT MATERIAL

The EPA and applicant documentation indicate an intent to use the White Mesa Uranium Mill near the White Mesa Ute Community in Utah as the site for disposal of the radioactive wastes (known as 11e2 Byproduct material) generated by at the proposed Powertech Facility. The EPA analysis fails to acknowledge that the White Mesa Mill is not licensed to receive or dispose of all forms of Powertech's 11e2 Byproduct Material. EPA's draft permits do not, and cannot, authorize Powertech to dispose of 11e2 Byproduct Material at White Mesa. EPA appears to have failed to compare the impacts of transporting and disposing of the solid 11e2 Byproduct Material in Utah against any other alternative disposal site. Further, EPA's cumulative impact report fails to address the cumulative impact or alternatives to Utah licensing the White Mesa Mill as the disposal facility for the ISL wastes.

The EPA documents fail to provide a meaningful review of foreseeable impacts of generating many tons of solid 11e2 Byproduct Materials. Instead, EPA relies on blanket statements that permanent disposal will simply occur in conformance with applicable laws. This uncritical approach does not analyze any of the applicable criteria of regulations applicable to such 11e2 Byproduct Material disposal.

A proper review by EPA must ensure that the impacts and alternatives of creation, storage, and disposal of mill tailings – aka 11e2 Byproduct Material - are fully analyzed and addressed. Permanent disposal of solid 11e2 Byproduct material is a central feature of the proposed mining operation and a competent review must include an analysis of the impacts or alternatives to shipment and disposal at White Mesa. The NRC environmental documents confirm that White Mesa lacks a license approval from Utah to accept and dispose of the wastes created by the draft license or other NRC-licensed ISL facilities in the region. However, neither NRC's nor EPA's analysis includes a review of the impacts such disposition would entail, compares those impacts to other reasonable disposal alternatives, or assess whether disposal at White Mesa facility can be accomplished in accordance with applicable State and federal requirements.

The EPA's cursory discussion of the disposal of Powertech's 11e2 material contains no analysis of whether or not Utah law or the Mill owner's (Energy Fuels) license would allow the interstate transport and disposal of this waste given the history of leaks and violations at the White Mesa facility. Interstate transportation impacts across the Intermountain West are evident, but are dismissed without specific analysis. The EPA presents no information on the type of containers that would be required for the shipments to White Mesa and no corresponding information on the moisture content of the solid 11e2 Byproduct Materials or the anticipated decommissioning wastes.

EPA identifies no other site that is currently licensed to dispose of 11e2 Byproduct Material, implying that no other licensed facility exists in the United States that could accept the Powertech 11e2 Byproduct Material. Whether or not this is the case, White Mesa is not currently licensed to accept Powertech wastes. The failure to address and license the disposal of solid 11e2 Byproduct Material is not a technical deficiency that can be ignored or pushed off until a later time. EPA has a duty to provide specific information, analysis, and alternatives regarding this major feature of an ISL operation in order to allow the Tribe, the Ute Mountain Ute Tribe, the public, and other government decisionmakers to conduct a meaningful analysis of the full scope of environmental impacts involved with Powertech's proposal.

Upon selecting the White Mesa Mill as the proposed destination for the waste from this proposal and the region, as the EPA documentation has done, EPAmust follow through with the necessary analysis. The cumulative impacts report lacks analysis of disposal alternatives, including, but not limited to, access, geology, hydrogeology, quantitative impacts upon water supplies for domestic use, livestock, agriculture, non-domesticated plants and animals, and qualitative on-going and subsequent impacts to water supplies due to releases of chemicals into the surface, groundwater and aquifers flowing through the disposal site. Without such an analysis, EPA, the public, other governmental entities, and the Tribe have no basis to identify and assess alternatives to the license application and find ways to avoid or mitigate possible adverse environmental impacts of the proposed mine.

EPA must provide extra scrutiny to the packaging and transport of these wastes. Other NRC-licensed ISL projects have sent unspecified liquid radioactive wastes in leaking trucks.

The apparent violations involving the Smith Ranch include:

1. the failure to accurately assess the activity of pond sediment and barium sulfate sludge waste shipments;
2. the failure to adequately report the total activity for waste and resin shipments on the associated shipping documents;
3. the failure to accurately label waste shipment packages;
4. the failure to classify and ship the waste packages as Low Specific Activity level two (LSA-II) material;
5. the failure to ship LSA-II waste material in appropriate containers;
6. the failure to ensure by examination or appropriate tests that packages were proper for the contents to be shipped and closure devices were properly secured;
7. the failure to perform evaluations or perform tests that ensured the transportation package would be capable of withstanding the effects of any acceleration and vibration normally incident to transportation;
8. the failure to provide the name of each radionuclide listed and an accurate chemical description of contents; and
9. the failure to provide function specific training to a hazmat employee concerning the requirements that are specifically applicable to the functions the employee performed.

http://www.wise-uranium.org/umopuswy.html#SMITHR (NRC Inspection Report Apr. 3, 2017) The WISE-Uranium site reports a series of problems indicating the ISL industry appears to be plagued with irregularities and other problems that question NRC's licensing and regulatory diligence. Id., see also http://www.wise-uranium.org/new.html (ISL Spill of the Day). Under these circumstances, EPA must not simply rely on NRC's assumptions and must instead diligently investigate and carry out its own analysis of the radioactive and hazardous waste stream involved with the SDWA permitting.

South Dakota Department of Game Fish, and Parks (GF&P) reviewed information provided in the Public Notice: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area and "Additional Administrative Record Documents." Agency comments result exclusively from evaluation of the analysis found in the Additional Administrative Record Documents and specifically the Draft Cumulative Effects Analysis (Administrative Record). Our evaluation identifies issues listed below.

- South Dakota Mine Permit
- Avian management planning
- Affected environment

- Species of state concern
- Waste disposal options
- Process pond mitigation

[...]

If you have question please contact me at any of the numbers listed.

Avian Management Plan

The Administrative Record identifies an avian management plan. At this time, the management plan is conceptual, has not undergone agency review and essentially does not exist; therefore the extent and effectiveness of mitigation cannot be substantiated.

The Dewey Burdock Project proposes a plan to mitigate impacts to avian species during operations, however, special emphasis is given to bald eagles. Monitoring wells, a processing plant, production well fields, disposal facilities, and a supply water well are all currently proposed within a buffer established for an active bald eagle nest. During the life of the project, seasonal restrictions and unspecified mitigative measures are proposed for the facilities. The Administrative Record does not analyze the viability of seasonal mitigation measures on continuously operated facilities. Analysis also does not consider the questionable effectiveness of seasonal mitigation during times of urgent maintenance or situations requiring emergency repairs on continuously operated facilities. Mitigation measures also rely on individual eagle tolerance; as tolerance is known to vary greatly among individuals. Unsuccessful mitigation risks a disturbance take. Analysis in the Administrative Record does not recognize the necessity of bald eagle take permitting.

Administrative Record fails to recognize or establish the relationship between the site's prairie dog colonies and avian management. The site's prairie dog colonies are the presumed forage base and home range for bald eagles and other avian species. The Administrative Record does not describe the project's direct and cumulative effects on prairie dog colonies, and collateral impacts on bald eagles and other avian species.

Authorization of UIC activities on the site provides a reasonable risk of unpermitted bald eagle disturbance take. Seasonal mitigation in the discernible method of nesting bald eagle protection but USFWS take permitting is done "only" if necessary. Obtaining a permit out of necessity implies a response to a situation that may already has constituted disturbance or take. Operation of UIC permits in important bald eagle habitat, and the uncertainty associated with a seasonal mitigation strategy continuously operated facility will result in the probability of take. The Administrative Record does not assess the probability of bald eagle take during project operation.

Species of state (South Dakota) concerns

Section 14.2, "Species of State and Tribal Interest: The Short-Horned Lizard" does not describe species of state interest. For a complete listing of state threatened, endangered or rare species see: http://gfp.sd.gov/wild life/threatened-endangered/.

Waste disposal options

The Administrative Record does not analyze the potential for combined disposal methods (deep well and land application), or the potential for onsite disposal of wastes produced off site. Section '10.1 Overview of Operations' in the Class III permit states that Powertech may use land application in conjunction with deep disposal wells or by itself.

Process Pond mitigation

The Administrate Record is silent on the ecologic impact of process ponds containing toxic solutions or viability of mitigation measures. Section '14.0 Impacts To Ecological Resources' did not include analysis of direct and cumulative impacts to migratory birds and bats exposed to toxic solutions contained in the projects process related ponds.

RODNEY KNUDSON: Yeah. I'm Rodney Knudson. And I addressed my paper to "Dear Sirs"; I should have said "Mademoiselles."

But in any case, my experience is -- dealt -- deals with teaching physics, chemistry, and biology in high school. My master's degree is -- basically was done on, what is it, environmental, ecological curriculum. So anyway, my past experience involved working in a psychopharmacology lab on a tranquilizer.

It was called reserpine, and I worked on it for a year and a half, you know, whacking the heads off of rats and so on. And come to find out later, after all these 40 years later, looked it up in the Merck Index and find, oh, definitely a human carcinogen. So science at work. All right.

Anyway, I'm addressing the problem today, opposing the permit. Yesterday I printed off the 151-page EPA summation entitled "Draft Cumulative Effect Analysis of the Dewey-Burdock Uranium In-Situ Recovery, Underground Injection Control Permit." I took the time to read it all day. And it was a good report.

And it says -- the report pointed a rather benign -- painted a rather benign picture of the mining process, ending with kudos for the small carbon footprint left by the power plants that produce that electricity from the enriched uranium.

Not mentioned was the enormous amount of electricity required to isolate uranium-234, -235, -238, generated by coal, oil, or gas power plants, but more importantly, toxic products of this process that we are creating with no safe place to put them.

JONI TOBACCO: Good afternoon. I want to welcome you to Lakota territory.

(Speaking in indigenous language.)

My name is Joni Tobacco. I am an enrolled member of the Oglala Sioux Tribe, and I'm also an employee with the Tribe's Natural Resources Regulatory Agency. I want to make some comments and express my concerns about this draft permit.

You've issued a 151-page draft Cumulative Effects Analysis. I was hoping to see more than seven sentences on tribal concerns. Seven sentences is what was given to the Great Sioux Nation.

Dakota Access, Keystone XL, Crow Butte, and Powertech, where is the cumulative effects analysis for all of the permits and aquifer exemptions that have the potential to impact the tribes of the Great Sioux Nation? I don't see your Agency fulfilling any type of trust responsibilities in this regard, and it falls on us to fight. It seems that all we do is fight for our water, for environment, for our survival.

Do you have any idea the impacts that has on a society of people? I don't see that in your socioeconomic impacts analysis. I want to make a request, that you do an assessment of the psychological impacts your Agency's actions, and maybe inactions, have on the Great Sioux Nation.

Also, please consider the impacts these mining activities have on the cottonwood forests on the Cheyenne River and the White River.

Our tribe struggles with identifying whose responsibility it is to identify these impacts, these cumulative impacts on our tribe when it comes to these two mines, one in Crow Butte, Nebraska, and one -- the one up here.

Is it the NRC? Is it the EPA? It's unclear at this point. And I think it's the federal government's responsibility to figure out whose job it is to identify just how your actions are impacting my people.

Here are links to species petitioned to List or down-list under the Endangered Species Act

Of special significance in the Dewey Burdock mining proposal, is the petition to list the Sturgeon chub, which is in the Cheyenne River and the White River. You may wish to pay attention to that one.

RECENT LISTINGS

rusty patched bumble bee petition - Listed in February 2017 - as an endangered species under the Endangered Species Act

https://www.federalregister.gov/documents/2017/02/10/2017-02865/endangered-and-threatened-wildlifeand-plants-endangered-species-status-for-rusty-patched-bumble-bee

Petition by Xerces Society

http://www.xerces.org/wp-content/uploads/2013/01/Bombus-affinis-petition.pdf

STATUS PENDING

PETITION TO DE-LIST

Scroll down further for more info on the petition to delist the American Burying Beetle, look for photo of the beetle

Petition to de-list:

https://www.fws.gov/southeast/candidateconservation/pdf/petition-to-delist-american-burying-beetle.pdf

USFWS 90 Day Finding:

https://www.fws.gov/midwest/endangered/insects/ambb/90DayFinding16March2016.html

PETITIONS TO LIST

BIRDS

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Black Backed WoodPecker, DPS
Chad Hanson , BCA, CBD
(deadline - USFWS decision in fall 2017)
http://ecos.fws.gov/docs/petitions/92210/416.pdf
The Golden Winged Warbler,
Anna Sewell
https://www.fws.gov/midwest/es/soc/birds/goldenwingedwarbler/goldenwingedwarblerpetition.pdf
MAMMALS
The Plains Spotted Skunk
https://www.fws.gov/midwest/es/soc/mammals/pdf/PetitionList4SppGrasslandThicket.pdf
BUMBLE BEES
==========
western bumble bee petition
Defenders of Wildlife
http://ecos.fws.gov/docs/petitions/92000/679.pdf
Docket
http://www.regulations.gov/#!docketDetail;D=FWS-R6-ES-2016-0023
yellow banded bumble bee petition
Defenders of Wildlife
http://ecos.fws.gov/docs/petitions/92000/681.pdf
docket
http://www.regulations.gov/#!docketDetail;D=FWS-R5-ES-2016-0024
BUTTERFlIES
==========
petition to list Monarch butterfly
Center for Biological Diversity, Xerces Society, Center for Food Safety
http://ecos.fws.gov/docs/petitions/92210/730.pdf
petition to list regal fritillary butterfly
Wildearth Guardians
http://ecos.fws.gov/docs/petitions/92000/462.pdf
Status of review
https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=I075
FISH
Petition to list Sturgeon & Sicklefin Chub, Wildearth Guardians,
petition link:
http://www.wildearthguardians.org/site/DocServer/Sturgeon_SicklefinChubPetition8_11_16.pdf?docID=17346
REPTILES/AMPHIBIANS
==========
Reptiles/Amphibians (lots-53 species)
One species within 53 species, includes - Blanding turtle is in SD
Center for Biological Diversity
http://ecos.fws.gov/docs/petitions/92210/662.pdf

The sturgeon chub, which is a fish in the Cheyenne River, was petitioned for listing in August of 2016. And when Linsey McLean -- she's a member of ours that we're very proud of -- when she talks to you about adequate testing for speciation analysis of chemicals and concerns about -- when -- the ion exchange, the glorified water purifiers are going to have a hard time with elements and metals that are organic. I hope you'll listen to Linsey.

Thank you.

PROCESS ISSUES
The basic process issue in this case has been the failure of the EPA to adhere to the NEPA process. While the NRC has attempted to follow that process for the possession of nuclear materials, its actions have not adequately covered a variety of issues that are under the EPA's purview, particularly water issues. The EPA needs to complete its own NEPA process.
[...]
At the end of the Class V Fact Sheet and the Draft Cumulative Effects Analysis, the EPA indicates that the Endangered Species Act will be complied with, but gives no information on how it intends to do this. When will this be done? What species will be considered? Who will do the analysis (not the company)? This should already have been completed before draft permits were issued.

The EPA mentions the presence of a short-horned lizard, which is rare and protected in South Dakota, in the proposed project area. After stating that the species is "important in some tribal cultures," it offers the solution "Once construction activities begin at the site, the EPA expects that the [sic] any short-horned lizards that were in the area will seek less disturbed locations." This is pure conjecture, without any back-up information on the size or habits of the lizards. Are they territorial, or is it species-appropriate for them to move? Are they large enough to move fast enough to out-run a bulldozer or pick-up truck? Or are they, in reality, unprotected?

This and similar information must be provided and backed by scientific research at the Dewey-Burdock site for this and other species. Animals should not simply be expected to move out of a site that's over 10,000 acres in a systematic and comprehensive process. And the EPA then expects them to just move back in after mining is complete – as if the same animals will be alive and remember their former homes after as many as 20 years. This is beyond unacceptable in the direction of ludicrous – and is certainly unacceptable.

Species other than animals are not considered in this discussion. Plants cannot simply move off the site. Some of them are important to tribal practices and customs, such as medicinal plants and timpsila (prairie turnips). Full scientific information should be gathered, and full analysis must be done, for non-animal species. Species that are important to the long-term residents of the area -- the Lakota, Cheyenne, and other native nations – require special protection. There is already information on protection of some species in project documents that could serve as a base for part of this analysis. However, a full and independent analysis is also needed.

This analysis would include close consideration of the opinion of the South Dakota Department of Game, Fish and Parks. This opinion was stated in an October 17, 2008, letter written by Stan Michals. Michals said that exploratory activity should not take place on some parts of the project area between February and August (inclusive) due to the presence of a bald eagle nest (a state-protected bird) and a redtail hawk nest. Mining, deep disposal wells, land application, and reclamation, which are more long-lasting and disruptive than exploration, should clearly also not take place during those seven months of the year in raptor nesting and other protected areas.

The sturgeon chub must be included in the discussion of wildlife concerns. It is present in the Cheyenne River and may be threatened or endangered in areas downstream from the proposed mine. Additional silt, heavy metals, and radioactive materials would be potential threats.
[...]

In addition, the EPA should not rely on the NRC's analysis, recommendations, or regulations. The processes by the two agencies should be independent, so that the proposed mine, disposal wells, and aquifer exemption receive the benefits of the expertise and different regulatory focuses of both agencies.

[...]

We support the conclusion of EPA's statutory analysis that the Dewey-Burdock mine is subject to the Clean Air Act and subpart W. If the project goes forward, we request that public education sessions and public comment periods be held as part of the subpart W regulatory process.

Letter ID	Commenter Name	Commenter Org.
565	Ex. 6 Personal Privacy (PP)	Thunder Valley Community Development Corporation

Text
Unfortunately, the National Historic Preservation Act (NHPA) Review is not much better. In its current form, it is little more than an outline of a few of the relevant issues. [...] The EPA suggests the possibility of relying on the Nuclear Regulatory Commission's NHPA analysis. This would be disastrous. The NRC has floundered for years in its feeble attempt to do a NHPA analysis. It began the analysis without taking the need for full tribal consultation seriously, and it has dragged its feet through a piecemeal and incomplete process since then, despite legal direction to do a proper analysis. The EPA can - and should - do better.

Letter ID	Commenter Name	Commenter Org.
3	Ex. 6 Personal Privacy (PP)	Individual
4		Individual
9		Individual
31		Individual
219		Individual

361	Ex. 6 Personal Privacy (PP)	Individual
362		Individual
435		Individual
444		Individual
446		Individual
470	[Name blank]	Individual
470	Ex. 6 Personal Privacy (PP)	Individual
470		Individual
470		Individual
470		Individual
470		Individual
470		Individual
470		Individual

474	Ex. 6 Personal Privacy (PP)	Individual
507		Individual
517		Argentine Township, South Dakota
566		Edgemont Area Chamber of Commerce
7460		

(5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		

		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	Individual
07463 (Edgemont hearing)		Individual

Text

Subject: Dewey-Burdock Project

Good morning,
I want to start off by saying that I support the mining of uranium in South Dakota. I think nuclear energy is a smart investment for the future as we begin to move away from fossil fuels. The amount of energy that can be produced is just too great to look past and it's one of the better options for energy production for the future. Ieer.org has a fact sheet comparing fossil fuels and nuclear power. Some of the high points include nuclear power having no incremental climate change while fossil fuels are rated as potentially catastrophic and nuclear power has relatively low air pollution and fossil fuels have severe tendencies to air pollution.

I also believe that uranium mining could be very good for South Dakota's economy. The mining itself has potential to create many jobs for the area as well as bring in new people to fill our cities. The Richmond Times-Dispatch published an article titled "New Uranium Mining Study Assesses Economic, Social Impacts." In it they state that the uranium mine in Virginia offered 1,000 annual jobs and could bring in $135 million a year over 35 years. One can't really look at a possible financial boom in a bad light. It can only bring in good things for the citizens and their home state.

References:
http://www.ieer.org/ensec/no-1/comffnp.html
http://www.richmond.com/news/article_c5e6f300-59f4-5566-a1eb-ea56e4144556.html

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RE: Dewey-Burdock Public Comment

Dear Ms. Shea:

The U.S. Environmental Protection Agency (EPA) Region 8 is requesting public comment on two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption decision for the Dewey-Burdock uranium in-situ recovery (ISR) site located near Edgemont, South Dakota.

I wish to voice my support for the Dewey-Burdock Project, and it is my hope that swift approval of these permits will be granted.
I recently attended one of the public hearings in Rapid City, and listened to the parade of detractors who spoke against the issuance of these permits. Most were concerned that irreparable damage would occur to drinking water aquifers and that contamination would spread throughout the land and harm wildlife. Very few speakers backed up their claims with credible scientific evidence to support those claims. Certainly, we all want to have clean water, clear air and healthy soil, and I believe that with proper management and oversight, both sides can achieve their respective goals. Public comment periods and hearings provide both the opponents and the proponents a forum in which to voice concerns, facts and opinions, and in the end, it creates a more robust permit that promotes safety and environmental awareness.
As a former Senior Geologist at Cameco's Crow Butte Operation near Crawford, Nebraska, I am intimately familiar with the ISR process of uranium extraction and waste disposal proposed by Powertech. For 20 years, I designed, installed, maintained and abandoned Class III wells at an operating ISR mine. The process CAN be done safely and responsibly, with limited environmental impacts to only the permitted areas. The impacted groundwater, wellfields and surrounding lands are regularly monitored during and after mining to ensure public safety and regulatory compliance. Extensive pre-mining baseline data provides data that sets the restoration standards for groundwater and land surface clean up. EPA and the South Dakota Department of Environment and Natural Resources can ensure that proper precautions are enacted in these permits to protect the water, lands, wildlife and people of South Dakota and the surrounding area.
In August 2015, I provided expert testimony for the Crow Butte License Renewal to the U.S. Nuclear Regulatory Commission's Atomic Safety Licensing Board (ASLB) in response to contentions filed by many of the same detractors present at the Rapid City meeting. Many of the same allegations concerning groundwater quality, uranium and heavy metal mobilization, contamination of drinking water, and public health impacts were presented by the intervenors during five days of testimony before the ASLB judges.
Before the hearing concluded, after hearing the facts, even the intervenors' own geologic expert agreed that the modes of uranium transport and contamination raised in the contentions were unlikely to occur. In the end, the ASLB judges ruled that the intervenors' contentions concerning groundwater quality and groundwater movement were not plausible, and ruled in favor of the Crow Butte license renewal.
Again, I support the acceptance of the Dewey-Burdock UIC Draft Area Permits, and the proposed aquifer exemption for uranium mining. This is a sound project run by competent, responsible people that will provide jobs to a struggling community.
Thank you for your time and consideration.

Sincerely,

RE: Proposed Uranium Mining Site near Dewey, SD

Dear Valois Shea:
I am writing to express my approval of the mining operation near Dewey, SD. My family has lived in the Black Hills for 5 generations. My relatives homesteaded just east of the proposed location of the mine. I am an environmental consultant that has worked in the Black Hills area for over 30 years and have extensive background in mining activities in the Black Hills area, specifically in environmental monitoring. I am also a local businessman with three businesses located in Custer, SD that include consulting, a retail shop, and wholesale products sales.
I have conducted groundwater sampling for Powertech over this last 10 year period. I have extensive knowledge of the mining plan and believe the plan to provide adequate protections to the environment. The Nuclear Regulatory Commission and the South Dakota Department of Environment and Natural Resources have approved the mining plan and I trust their/your expertise in regulating this operation.
Personally, I feel we need to develop this resource. The United States as a whole will need more energy because of increased demand. Nuclear energy is needed as much as any other energy source. Solar energy, wind energy, petroleum energy, fossil fuel energy are all important sources but nuclear energy needs to be developed right alongside these sources to provide a reliable, carbon dioxide free energy source.
I have been reading a lot of misinformation about the operation. I think many of the negative claims about the operation are misleading and downright false. I encourage you to review those comments using good scientific thought.
The southern Black Hills needs the jobs created by this operation. We have witnessed a steady decline in year round jobs in Custer, Hot Springs, and Edgemont. While this operation will not
balance the loss of jobs, it will certainly help.

In short, I support the approval of Powertech's mining application.

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2. Overview of proposed action

This action by the EPA would allow Powertech to conduct in situ recovery mining that utilizes a series of wells to inject groundwater enriched with oxygen and baking soda into the uranium ore area. By doing so, the mixture dissolves the uranium ore and is then drawn out by a pump and sent to a processing plant. Once at the plant, the uranium can be removed using ion exchange techniques, while the leftover water is refortified with oxygen and baking soda again. By doing so, Powertech is able to create a sustainable extraction method that reuses the injected groundwater. This process eliminates the need for mining machines, open pits, mine waste, mine shafts, and mine workers who previously have been required to use explosives in previous extraction methods. From their purchase and surveying of the 11,000 acres Powertech bought in 2005, the company has reported an estimated 11 million pounds of recoverable uranium that would take over two decades to fully recover. The site itself has a few key natural characteristics that have prevented the uranium from contaminating further including good geological confinement and natural upward groundwater gradients that prevents dissolved uranium and mining solutions from traveling down the water gradient. In addition, engineering controls will be established including well field design and the implementation of monitoring wells that measure groundwater levels and water chemistry. Finally, the operation will implement a technique known as bleed pressure which creates a pressure gradient in the injection process that causes the groundwater to flow towards the production wells, ensuring as much of the treatment water is recovered. Powertech has determined they will need roughly 190 employees for the operation and has estimated a rough investment of $51 million dollars. Once the operation is complete, Powertech has stated that all wells will be sealed/capped, pipelines and process facilities will be removed, and the site will be re-vegetated. Finally, freshwater will be pumped through the aquifer to ensure it is restored to NRC standards.

Dear Mr Valois,
I have read the fact sheet for public comment of the two UIC Area Permits to Powertech, for injection wells for uranium recovery and aquifer exemption, for the disposal of treated ISR process waste fluids into the Minnelsusa Formation.

As expected, the EPA permitting process is very thorough. At this writing, I also find myself very aware of, and thankful for, this permitting process, and more importantly, that regulatory oversight exists! It is almost secondary to this thought that I offer my public comment on the permit!

Comment: The relevant issues concerning environmental impacts were addressed by the USNRC in their EIS and source material license.

Subject: Re: Public comment period extended through Monday, June 19 for the proposed EPA actions at the Dewey-Burdock site
Issue the permits to Power tech for their uranium recovery project. As a USNRC project manager I licensed uranium mills using EA, an EIS covers Power tech in the 80s.

To Whom it may concern:
I was unable to attend the comment session regarding the Dewey Burdock Injection Well Project in Edgemont SD. However, as the Edgemont Area Chamber of Commerce President, I felt it was my duty to express our dismay at the EPA's continued postponement of the Powertech permits.
We believe it is time to let science and level heads lead this decision not emotion without foundation. Science has proven this project to be safe. It is time to let it move forward.
I have attached a resolution from the Edgemont Area Chamber of commerce in support of the Powertech Inc Dewey Burdock project. This resolution was adopted on 2/27/2013, at our last chamber meeting we renewed our commitment to this project.
Thank you
[NOTE: This comment is a Word file; the commenter mentions an attachment but none is present]

Petition in support of in-situ recorvery (ISR) extraction of uranium by Powertech (USA) Inc. in Southwest South Dakota.

We, the undersigned ranchers and owners of property in the vicinity of the proposed dewey-burdock project in southwest south dakota acknowledge:

- Certain areas of fall river and custer counties in southwest south dakota have been endowed with teh natural resource uranium which is an alternative source of energy which can help the United States and meet an increasing demand for electricity without emitting greenhouse gasses into the atmosphere; and
- ISR is the most modern and environmentally firnedly method of extracting uranium; and
- ISR extraction of uranium is highly regulated by the state of South Dakota, the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency; and
- ISR can be conducted in our area without harming our land, air, water, or quality of life.

Therefore, we support and encourage the granting of the permits and licenses required by the state of South Dakota, the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency that allow ISR extraction of uranium by Powertech (USA) and its Dewey-Burdock site in Fall River and Custer Counties in southwest South Dakota.

Good day to each of you. My name is Ex. 6 Personal Privacy (PP) and I am a former Mayor of Edgemont, South Dakota, the host community for the Dewey-Burdock Project.

With few exceptions, this community is strongly in support of Powertech's proposed in-situ uranium project.
The Dewey-Burdock site is about 13 miles northwest of our community and we expect that our schools, our infrastructure and our businesses will see the benefits of this project.
Powertech has been a good corporate citizen of Edgemont since they opened their office here 10 years ago.

They have been very open with us and explained the project in detail. We look forward to the economic activity this will bring to our small community.

Over the years, we've had an awful lot of kids from our area earn engineering and science degrees and then have to go elsewhere to find meaningful work. Others have gone to Wyoming or North Dakota to work in technical and service oriented jobs.
Personally, I look forward to having good jobs nearby so that our young people can stay here or return here to work and raise a family.
As an elected official, I took my office and responsibilities very seriously. **And I think our Citv Council did that when they passed a Resolution of Support for the Dewey-Burdock Project.** I have a copy of it right here.
Jim Turner was our mayor when this was signed, but Jim has since passed away. So, I will do the honors of presenting you with this copy of the Resolution of Support for the Dewey-Burdock Project, and ask that it be included in the record of this hearing.
In conclusion, I want to emphasize my personal, strong support for the Dewey-Burdock project and I hope you will finalize the subject permits quickly and without unduly burdening the company.
More than 10 years is more than enough time to get a project like this started.
Thank you

RESOLUATION 2013-03-05

Supporting Responsible Uranium Recovery in Fall River and Custer Counties, South Dakota

WHEREAS Powertech (USA) Inc. desires to extract uranium on the Dewey-Burdock Project site in Fall River and Custer Counties utilizing the *in situ* recovery method; and

WHEREAS the Dewey-Burdock Project has been analyzed by knowledgeable independent parties and demonstrates excellent economic characteristics as well as safe and environmentally sound capacity to be mined such that it meets the requirements of South Dakota and Federal oversight agencies; and

WHERERAS the economic base of the State of South Dakota and Fall River and Custer Counties will be significantly enhanced as Powertech (USA) Inc. directly or indirectly employs over 80 workers, provides an influx of more than $50 million in non-payroll capital expenditures, and pays mineral severance taxes estimated to be more than $10 million to the State of South Dakota and more than $5 million each to Fall River County and Custer County; and

WHEREAS uranium mining in Fall River and Custer Counties will be strictly regulated and overseen by the State of South Dakota, the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency so as to protect the public health, worker health and the surrounding environment; and

WHEREAS it is the belief of this entity that energy production and economic development will be balanced with environmental stewardship in Fall River and Custer Counties.

NOW THEREFORE BE IT RESOLVED that upon demonstrating to state and federal regulators that operations at the Dewey-Burdock Project can be done in a manner that is protective of the public health and the environment, the City of Edgemont Common Council supports and encourages the granting of state and federal licenses and permits to Powertech (USA) Inc. to commence *in situ* uranium recovery activities at the Dewey-Burdock Project site in Fall River and Custer Counties, South Dakota.

Dated this 5th Day of March 2013.

I am a resident of Edgemont and have been for several years. I have two children and I am employed at the Edgemont School. I believe the uranium project is an excellent thing and will boost our economy. I fully support this project as I believe the check and balances are in place for safety

I trust the science and research behind this project. Please move forward with the project if it is safe and best for our community and country.

I support the science and I'm in favor of this project.

I am a teacher in the Edgemont School District. I have lived in the area for over 24 years. I have a strong belief in science and bettering our world – clean fuel is the way! Please use SCINCE and a real common sense in your decisions-not illogical statements and feelings fueled by emotions. Please understand and use science and not emotions in decisions. Yes to Powertech and the harvesting of uranium for clean fuel.

I am a teacher in the Edgemont School District. I was born here, attended school and graduated from here, and have lived here my entire professional career. I do my best to respect the cultural traditions of all nations. It is a hard decision to choose right and wrong in disputes of culture and tradition vs. changes. I do not envy your decision-making. As an educator and an optimist, I choose to trust science and the studies that the EPA has conducted. I trust the EPA to make these hard decisions. There is no easy fix to cultural differences. Science and technology has changed a lot over the years and will continue to change. It has improved and will continue to improve. Again, I ask you with an optimistic view to use science to guide your decisions. Thank you for what you do.

I do support this project and can see no reason not to except for being misled.

I am a science teacher and an environmentalist. The uranium mining is a safe method based on the facts presented. These decisions should be based on the facts and not on emotions. Believe in the science and trust the science experts. Good science is unbiased and this is good science.

As an educator, I support his project. I hope that the decision towards this project listens to the science and realizes that this moves us closer to a better and cleaner way of using our sacred earth's resources and can help make our future better for our future students.

Good Afternoon, Your Honor and Ms. Shea,

Thank you for the opportunity to make a statement here today in support of the draft permits and in support of the Dewey-Burdock Project.
My name is Ex. 6 Personal Privacy (PP)
I am here to present you with a copy of this Resolution of Support for the DeweyBurdock Project from Argentine Township.
My bet is that not one of the opponents who spoke at the other hearings this week have even heard of Argentine Township. But I can tell you it is the MOST IMPORTANT name you will hear this week.
You see, much of the Dewey-Burdock ISR project is located on and below Argentine Township.
It is where we live and ranch. We and our families depend on the groundwater for our livelihood and everyday life.
If anyone's livelihood or quality of life were at risk with this project, it would be us.
There is not a single person who has ever testified who has more at stake than us and WE SUPPORT the licensing, construction and operation of the DeweyBurdock Project.
As property owners, we have RIGHTS as well as a vested interest being good stewards of our land and respecting the property rights of others. I've lived my whole life here and taken good care of my property and will continue to do so during ISR operations and long after the project has been completed.
Before I close, there is one more issue I'd like to address and that is regarding Powertech, the company. While opponents have done their best to denigrate them, I'd like you to know that the Powertech folks I've met over the years have been good, honest people.
I especially want you to know about Mark Hollenbeck, the Dewey-Burdock project manager. I grew up with Mark. He's is my neighbor and my friend. He is honest and trustworthy. He's a topnotch engineer, a community leader and a nice guy.
The land, the water and the quality of life here is foremost to him and his family and I have no doubt that his support of the project is based on science and fact. I trust him and I trust that this project will be good for our area.
Thank you.

ARGENTINE TOWNSHIP, SOUTH DAKOTA

RESOLUTION OF SUPPORT FOR POWERTECH (USA) INC. DEWEY-BURDOCK URANIUM PROJECT

WHEREAS Powertech desires to extract uranium utilizing the *in situ* recovery method from ore bodies located under the land owned by the residents of Argentine Township; and
WHEREAS this is the land where we ranch and depend on groundwater for our livelihood; and
WHEREAS we, along with our families, live here and depend on groundwater for everyday life; and
WHEREAS our research indicates the Dewey-Burdock Project has been analyzed by knowledgeable independent parties and demonstrates safe and environmentally sound capacity to be mined such that it meets the requirements of South Dakota and Federal oversight agencies; and
WHEREAS mining activities that occur at the Dewey-Burdock Project will be strictly regulated and overseen by the State of South Dakota, the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency so as to protect our families' health, our livelihoods, the environment and most all, the water resources we use for ranching and our families' personal use.
NOW THEREFORE BE IT RESOLVED that the Argentine Township supports and encourages the granting of state and federal licenses and permits to Powertech (USA) Inc. to commence in situ uranium recovery activities on our land at the Dewey-Burdock Project in South Dakota.
Argentine Township Board of Directors

Good afternoon:
My name is Ex. 6 Personal Privacy (PP) I have lived in Edgemont for the past 33 years. I teach high school math here in town. Prior to doing that, I received a Mining Engineering degree from the South Dakota School of Mines and Technology.
I am here today to publically say that I am in favor of the proposed uranium mining project. I trust the science presented and the experience and expertise of those individuals that conducted the studies put before us.
Science:

- Doesn't involve emotions - it involves facts
- Doesn't take sides
- Doesn't care about the economy- one way or the other
- Can be proven - and it proves this to be a safe proposition.

I ask you to read the facts and only the facts. When you isolate yourself from all the false information, speculation, and rumors, you can clearly see the facts in front of you will prove this is a safe project for humans, plants, and animals.
I have known Mark and Suzanne Hollenbeck for over 30 years. I know that they would never risk the health of their children, the ranch on which they live, the ground water, or their future. Nor would they risk any of ours. I firmly believe the science is sound - please trust it, as I do.
Thank you

WHEREAS Powertech desires to extract uranium utilizing the *in situ* recovery method from ore bodies located under the land owned by the residents of Argentine Township; and
WHEREAS this is the land where we ranch and depend on groundwater for our livelihood; and
WHEREAS we, along with our families, live here and depend on groundwater for everyday life; and
WHEREAS our research indicates the Dewey-Burdock Project has been analyzed by knowledgeable independent parties and demonstrates safe and environmentally sound capacity to be mined such that it meets the requirements of South Dakota and Federal oversight agencies; and
WHEREAS mining activities that occur at the Dewey-Burdock Project will be strictly regulated and overseen by the State of South Dakota, the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency so as to protect our families' health, our livelihoods, the environment and most all, the water resources we use for ranching and our families' personal use.
NOW THEREFORE BE IT RESOLVED that the Argentine Township supports and encourages the granting of state and federal licenses and permits to Powertech (USA) Inc. to commence in situ uranium recovery activities on our land at the Dewey-Burdock Project in South Dakota.

Edgemont Area Chamber of Commerce
RESOLUTION
Supporting Responsible Uranium Recovery in Fall River and Custer Counties, South Dakota
WHEREAS Powertech (USA) Inc. desires to extract uranium on the Dewey-Burdock Project site in Fall River and Custer Counties utilizing the in situ recovery method; and
WHEREAS the Dewey-Burdock Project has been analyzed by knowledgeable independent parties and demonstrates excellent economic characteristics as well as safe and environmentally sound capacity to be mined such that it meets the requirements of South Dakota and Federal oversight agencies: and
WHERERAS the economic base of the State of South Dakota and Fall River and Custer Counties will be significantly enhanced as Powertech (USA) Inc. directly or indirectly employs over 80 workers, provides an influx of more than $50 million in non-payroll capital expenditures, and pays mineral severance taxes estimated to be more than $10 million to the State of South Dakota and more than $5 million each to Fall River County and Custer County; and
WHEREAS uranium mining in Fall River and Custer Counties will be strictly regulated and overseen by the State of South Dakota. the U.S. Nuclear Regulatory Commission and the U.S. Environmental Protection Agency so as lo protect the public health, worker health and the surrounding environment; and
WHEREAS it is the belief of this entity that energy production and economic development will be balanced with environmental stewardship in Fall River and Custer Counties.
NOW THEREFORE BE IT RESOLVED that upon demonstrating to state and Federal regulators that operations at the Dewey-Burdock Project can be done in a manner that is protective of the public health and the environment, the Edgemont Area Chamber of Commerce supports and encourages the granting of state and federal licenses and permits to Powertech (USA) Inc. to commence in situ uranium recovery activities at the Dewey-Burdock Project site in Fall River and Custer Counties, South Dakota.
Edgemont Area Chamber of Commerce

CRYSTAL HOCKING: Crystal, C-R-Y-S-T-A-L; Hocking, H-O-C-K-I-N-G.

I have a bachelor's and master's degrees in geology, geological engineering. I am a registered professional engineer and professional geologist. And I originally was working on this project -- just a disclosure -- approximately nine, ten years ago, collecting fieldwork for groundwater, surface water, and geology.
I have also reviewed ISR permits for the state of Wyoming, and so I'm really familiar with the entire process. And I would just like to say that there -- I believe in science and the engineering technology that, you know, can make this process safe and effective, and that I have no insecurities or issues with this project going forward.
I think it's one of the safest locations in the U.S. to have this location. I have sampled the water out there. I've seen the results of the radium and the radon in the samples that are already way above EPA standards. I mean, this is not, you know, drinking-water quality that we're dealing with.
This is water that's in a uranium ore body. And that's why I feel like, you know, this project is not going to contaminate the water. It's not going to make it worse. It's already worse. And so I just wanted to say I approve of this project, and that's it.

And anyway, has anybody ever driven the million-dollar highway between Durango and Ouray, Colorado? Okay. Beautiful, isn't it? And I loved it. And to me, mining is a great attraction to me, and I like the old mining sites. They provide mineral collecting and other exciting opportunities, for those that haven't been squeezed out or, you know, covered off.
But anyway, the worst part of that drive to me was, you have the beautiful waterfall coming down cliffs all along the road, and there'd be a house on either side of the waterfall. It's those houses to me that are going to be there forever, unlike a reclaimed mine, that is the pollution to me.
Okay. Is there anything in this room that anyone can point out that hasn't been mined or grown? If there is, I'd like to know about it. And my point in asking that question is, you know, we have to mine. It's basic. None of us got here with a vehicle without the steel in our car, right, or truck. So mining is good. It's got a horrible rep, but mining is good and necessary for civilization.
I'm not bothered at all by the extremely minimal surface disturbance of the Dewey-Burdock project. What a beautiful thing to be able to mine underground without going underground yourself. Very cheap way to do it and efficient, and I like that.
I heard "baseline" mentioned yesterday and a little bit today. When I was mining engineering at the Black Thunder Coal Mine in Wyoming, we had to put -- plant -- replant sagebrush, and there's a question whether that sagebrush got there in the first place from overgrazing of sheep when the white man first came through.
So the baseline is kind of an ephemeral idea that way. But I contend the baseline, you're not going to put this room back as it was, just from people breathing and being in here, exactly like it was. So I hope that the baseline isn't too tough on this project either.
I contend Yellow Thunder Camp by Victoria in the Black Hills or that North Dakota protest over Dakota Access Pipeline would be a lot tougher to put back to baseline than a lot of things.

Talking about disturbance of mining, Cameco, near Crow Butte -- or Crow Butte project down by Crawford, Nebraska has been quietly mining in-situ uranium the same way since 1991. Nothing earth-shattering that I've heard out from them. Pumpkin Buttes, Wyoming and places in Texas, the same way.

Let's talk about water, seems to be a big concern. The water within the aquifer exemption areas is currently unfit for human consumption. So the beauty of this project is it is going to remove the uranium from that water. And there's some EPA literature I hope you read here. It's good.
But the NRC has said with -- in approving this project in 2014, like they did -- I see my time is up. I'm going to go over maybe a minute. I saw somebody go over about five minutes earlier today, if that's okay.
[...]
RAY GREFF: Okay. The report concludes that there are no environmental impacts that would preclude licensing the facility. That's from the National -- or Nuclear Regulatory Commission, the NRC. I assume they are the professionals on this. And here we're getting a lot of heartfelt, novice, amateur hour, not as scientifically based.
To me, Jimmy Carter had a chance as a nuclear engineer to put the fear of uranium away from the country, failed to do so. So people are afraid of the unknown, and uranium is unknown to people.
But to me, environmentalists are missing the boat by not clamoring for more nuclear power that is an amazingly dense, God-given, emission-free way to generate electricity.

I would much rather have the Dewey-Burdock project mine its uranium here than buy it from the Russians elsewhere. Thank you very much for the time.

MARK HOLLENBECK: Good afternoon, and welcome to our area. We're glad to have you here and, as well, taking testimony.
My name is Mark Hollenbeck. I ranch with my four small children and my wife north of Edgemont near the Dewey-Burdock project. We operate an organic ranch. We do grass-fed organic beef.
We use a grazing system that mimics the movement of the buffalo so we can improve our soils instead of degrade our soils. I believe over the years we have degraded our soils with modern ranching methods, so we have to return and look at new ways of doing that.

I also have a degree in chemical engineering from the School of Mines. And so what is the connection between organic beef production and nuclear power? In a word: Footprint. Organic grass ranching is the smallest food-raising footprint that I think I can make on the land in this environment.

When all forms of electric generations are evaluated, you'll find none of them are perfect. So which one are we going to use? Are we going to use coal or use hydro? Hydro is a very clean way of producing electricity, but we have to dam up our rivers, and we have to ruin all the riparian areas. And there's not a lot of rivers left to be dammed.
We can use solar. Solar is very clean. It's also a very expensive electricity. We have to have rare earth mineral mines in order to make solar panels. And solar power must be backed up by fossil fuels because it is not produced 24 hours a day.
We could use wind power. Personally, I find the blight of wind power on the landscape very ugly. And when I realize the massive numbers of birds that the wind power kills, the bats, the eagles, and it also must be backed up by fossil fuels because it does not operate 24/7.
Or we can do what most of use is coal. We can have large strip mines. We can have lots of transportation, by far the largest CO_2 emitter of all of our methods, and we also produce huge amounts of ash waste with coal.
Nuclear is the only carbon-free method of producing large-scale, 24/7 electricity. It has the smallest footprint. And when you look at the amount of gigawatts it does generate, it's the safest method of making electricity as well.
Nuclear has its problems. We have to have waste storage for nuclear power, and that has not been solved, although I think that's more political than science. We need to have recycling in nuclear power so that we can reuse the fuel instead of getting more new fuel.
But as we talk about the greenhouse effect, the last two days I've heard lots of people complaining that we weren't doing anything about the greenhouse effect. Nuclear power is the only large-scale method of generating electricity that can greatly reduce our carbon footprint.
There is no perfect solution. So when I started studying this -- I live there, and I went and visited ISR mines throughout the United States, and I have found that to be, by far, the smallest footprint of any generation facility that we have. I think it is very protective of the environment, and there are several misconceptions that I think I need to address.
One that was mentioned several times was that it will be fracking. We do not frack. If you fracked, you'd ruin the whole ore body, and it would be useless. Sulfuric acid would be used. Sulfuric acid is not going to be used. Oxygen and carbon dioxide is what we're going to use.
There's also been some wide exaggerations on the water use. We're going to recycle 8,000 gallons a minute through the formation. We're not going to pump 8,000 gallons a minute out of the formation.
The water quality, I envy you people on this side of the county that can drill a Minnelusa well and get nice water. When we drill a Minnelusa well, we get saltwater and oil and usually not enough oil to recover.

And so that's one of the problems with communicating this, is that the formation is called the Minnelusa. Occasionally it's an aquifer, but not always.

But we refer to all the Minnelusa, and it sounds like it's an aquifer. Over here it's an aquifer. Over there, it's a saltwater and oil formation on the other side of the Black Hills. And so if you were having communication, you wouldn't have your pure water, you would have saltwater and oil in there right now.

And I know I'm out of time. I would just say that I've had my office on Main Street of Edgemont for ten years. Anybody is welcome to stop in at any time, and I'll be happy to discuss any issues that you have. And by the way, I agree with the Hot Springs Resolution.

PAUL NABHOLZ: I'm Paul Nabholz. I live just north of Battle Mountain here in Fall River. In the late '70s, I worked at Los Alamos in modeling fracture flow hydraulics at the Fenton Hill Geothermal project, so that was some of the early fracking.
I was a drilling engineer on a National Science Foundation drill ship doing geologic research worldwide in the late 1980s. And as a South Dakota professional engineer, I've attended about ten years' worth of the hydraulic -- western hydrology conferences up at Rapid.
And I've been very impressed with the look of the in-situ mining. It's such a low-impact mining compared to the old open pit mines.

And then, I guess here about six or seven years ago, I drilled my own personal water well into the Inyan Kara that's 580 feet deep, and I've really enjoyed the water and don't expect it to change much.
I've been off-grid for more than a dozen years. I've been on solar electric power, and I installed solar hot water heating in the last three years.
Given that, I support the injection of wastewater into the Minnelusa because it's a cleaner solution than surface application via center pivots. And so I think that's a good way to handle the in-situ mining waste.
And I've been disappointed in most of the opponents that have not taken the time to study the mining issue with the Inyan Kara formation.
At the most recent Western South Dakota Hydrology conference, Professor James Stone's research showed that the majority of the freed uranium after mining is trapped in the formations within 100 feet of the mining zones, so it keeps it out of the rest of the water. It's not going to contaminate the entire aquifers by any means.
And finally, I think that the Powertech project makes a lot of sense and will provide needed jobs.

BILL CURRAN: Anyhow, I have a small hobby ranch up in the general area of where this mining project is going to take place, so it's kinds of near and dear to my heart. I don't have anybody leasing my land. I do own mineral rights, but I'm not entertaining any offers from mining companies or anything of that nature.
I did take an interest in this because it is so close to my property, and it appeared to me that we had a lot of people who were objecting to the project on the basis of the emotion. We had government looking at this with science and saying, Yeah, it looks safe. And it appears that way that most of the permits have now been issued.
A few years ago, there was a hearing that I believe the State held. If Susan Henderson was here, I would be able to ask her because Susan has been to every one of these. But I can't remember how many years ago it was. It was up at Rapid City at, I believe, the Ramada Inn.
And before the hearing, I went up and down the road and talked to every one of my neighbors and asked them if they were in favor of the project. All of them but one signed a petition in favor of the project. The one that didn't sign it had just moved to the area and didn't know anything about it up or down or whatever.
What I did want to get across today to these folks who have come here to hear us is that all of the local people are in favor of it. The people most directly affected by this mining project are in favor of it. And I want to turn this petition over to them.
They actually are the same -- pretty much the same landowners today that were there then. And like I say, everyone here in the area is in favor of it. I am still in favor of it. I would certainly hope all those were. Thank you.

CARL SHAW: Good day to each of you. My name is Carl Shaw. I am a former mayor of Edgemont, South Dakota, the host community for the Dewey-Burdock project.
With few exceptions, this community is strongly in support of Powertech's proposed in-situ uranium project. The Dewey-Burdock site is about 13 miles northwest of our community, and we expect that our schools, our infrastructure, and our business will see the benefits of this project.
Powertech has been a good corporate citizen of Edgemont since they opened their office here two years ago. They have been very open with us in explaining the project in detail.
We look forward to the economic activity that it will bring to our small community. Over the years we've had an awful lot of kids from our area earn engineering and science degrees, and then have to go elsewhere to find meaningful work. Others have gone to Wyoming or North Dakota to work in technical and service-oriented jobs. Personally, I look forward to having good jobs nearby so that our young people can stay here or return here to work and raise a family.
As an elected official, I take my office and responsibilities very seriously. And I think our city council did that when they passed this resolution of support for the Dewey-Burdock project. I have a copy of it right here.
Jim Turner was our mayor when this was signed, but Jim has since passed away. So I will do the honors of presenting this to you with this copy of the resolution in support for the Dewey-Burdock project, and ask that it be included in the record of this hearing.

In conclusion, I want to emphasize my personal strong support for the Dewey-Burdock project, and I hope you will finalize this subject and commence quickly and without unduly burdening the company. More than ten years is more than enough time to get this project started. Thank you.

CAROL HARDING: I'm Carol Harding. I have lived in Edgemont about maybe 43 years. I'm a school teacher. I've been a teacher for probably 30 years here in our system, and this isn't typical of me at all. And thank God none of my family is here.
So, but I came as a school teacher here. I married a hometown boy, who has grown up here and lived here all his life except for when he went to college. And so we've made our home here. We've raised three kids.
They are adults and they come home all the time. They drink our water all the time. I would never, ever advocate something that I felt would harm my children or my grandchildren, because now I have two precious babies. And they come home to our house still.
And I'm passionate about where I live, and how I feel our community is. And it saddens me when other people come from other places and put down our community when they don't live here.
And I'm also very sad about whoever the young people were that said racial slurs to you, because that is not typical of the majority of our kids. And I'm sorry that they did it.
I wish I knew who it was, because I'm also a huge advocate for our kids here. But I'm also -- I clomp on them pretty hard when they don't respect adults or other nationalities or whatever it is. There's no excuse for rudeness, and I'm sorry. I apologize for them.
But anyways, I'm very happy to live here. I'm very happy to raise my children here, and now our grandchildren come. And I support the project. I don't know a lot about it, that's very true.
But I do know some of the people involved, and I trust their judgment with the scientific knowledge they have and who they have turned to for evidence and the answers. Thank you.

CLARENCE ANDERSON: My name is Clarence Anderson. I've lived in this area most of my life. I began working at the uranium mill in 1960, and I worked there until we shut it down in -- shut the property down in 1989. I had raised my family here. I have four children, nine grandchildren, I have eleven great-grandchildren that have been raised in this area.
And I want you to know that in all of the work experience I've had, one thing or another, I have no concern whatsoever about the technology being used on this project. I also want you to understand that I was able to raise a family here because of the income that was provided at this job for me and hundreds, hundreds of other people that have worked through this uranium industry over the years.
I think that one of the things that come to light for me, we were operating in the '50s, '60s, and '70s, the old mining time when we would have went underground, extract the ore, and then bring it into the mill and, press it and grind it, leach it, and strip it.
The same thing that's going to be done by Powertech, but it'll done in place. It won't be the disturbance to the ground, the material. When we were going to mine, we would have drained the aquifer. We would have had to pump the aquifer dry to get in there and mine.
This won't be the case here. There is a lot of talk about the water permit and how much water is going to be extracted in this. Valois said earlier, a big share of that will be put back into the aquifer, so -- but I just want to say that I think this is an extremely safe method of operation, and I'm very strongly in favor of it. Thank you.

HUNTER HOLLENBECK: My name is Hunter Hollenbeck. My dad is Mark Hollenbeck. And he's been the manager of Powertech since I was two years old. Right now I'm 12 years old.
Besides working on this uranium project, my dad is a certified organic rancher. Very close to this project site.

I love ranching. I try to help my dad with it every chance I get. My long range plan is to live and work off the ranch, too. However, I'm going to need a job.

Do you think it'll be operating by the time I'm out of college? If all goes well, that will be about eight years from now.
The main reason I wanted to speak here today is to let you know that not only do my parents, my three sisters, and the ranch by Dewey-Burdock, but so does my uncle, my grandma, and my grandpa who used to live in Dewey until my grandpa died a couple years ago, and now Grandma lives in Edgemont. Also my aunt and her family live in this area, and I know almost everyone who ranches near us, and a good many people in town.

My mom is a teacher in Edgemont, and she knows that our school could use a few more students. So I hope people with kids would get some jobs here.

The main point I wanted to make is that my dad would never take any risks with our water or our land or environment or anything. Our family and land is what makes it all happen.
Over the years I've learned a lot about in-situ mining process, and I know it would be safe and our water will be fine. I want people from other towns to learn more about it so that they could quit trying to stop it and let it get started.
That's it for now. I appreciate you letting a teenager voice his strong opinion on this.
Thank you.

JOHN PUTNAM: John Putnam. I have an aversion to microphones, just so you know.
Good evening. Thank you for the opportunity to speak here today. My name is John Putnam, and I'm from the heart of Dewey-Burdock. I live and work on my ranch, which was homesteaded by my great-grandfather about 120 years ago. I am one of only two people that live inside the boundaries of the mine permit area.
I am also a resident of Argentine Township. Much of the Dewey-Burdock ISR project is located in Argentine Township. And I just deposited the resolution for the -- in the box over there. So Argentine Township has signed a resolution in support of the project.
We live and ranch there. Our families depend on the groundwater for our livelihoods and our everyday life. If anyone's livelihood or quality of life were at risk with this project, it would be us.
I request that you rule on the side of science and not emotion on these permits. Thank you.

KEITH ANDERSON: My name is Keith Anderson. I'm a professional engineer and licensed in South Dakota, Wyoming, and Nebraska. I also live on a ranch 20 miles northwest of Edgemont.
I don't think you've heard from a lot of people with sincere concerns about this project over the past several days. I doubt you'll hear from anybody who has more educational background, personal experience, and direct personal interest in the Dewey-Burdock property than I have.

I was born and raised on that ranch. It's been in our family since 1908. I moved there in 1952, and I've lived there off and on ever since. We have a pretty direct connection to the uranium properties. My dad worked -- went to work in the mines in the late 1950s and 1960s to supplement the ranch income.

I worked at the uranium mill while I was going to college to pay for my college education. I got out of South Dakota State University with a degree in engineering and no college debt, so I have been very much involved with the uranium business over the years.
My second job after college, I was hired as a hydrologist on the Dewey-Burdock project in 1976, and I worked there in various capacities until 1989. Some of you may have reviewed the hydrology work that was done on the Dewey-Burdock property in the 1970s and '80s. That was done by me or people under my direct supervision.
The aquifer testing that you guys have reviewed in considering this permit was aquifer testing that I did. So I feel I have direct, firsthand knowledge of the project and hydrogeology and geochemistry of this project.
You've heard from a lot of people who have sincere emotional concerns about this project, and I understand that. In a lot of cases, people are fearful for things they don't understand.

I guess what I would hope would be that this country, these kinds of decisions are based on the facts and on knowledge and not based on fear and emotion.

So I appreciate your taking the time to listen to us today, and I just want to speak in support of granting these permits for Powertech.

KENNETH BARKER: Thank you for this opportunity to speak. My name is Kenneth Barker. I didn't come prepared to speak. I've been branding calves this afternoon, so I'm not dressed for it, but I -- I just feel compelled to let you know that if wasn't for uranium, I wouldn't be here in Edgemont.
I've lived here for pretty close to 60 years now. I'm 83 years old now. And also, I have some land in -- down near Crow Butte mining at Crawford, Nebraska, adjoins that. And the well is okay, everything is good.
And I'd just ask you not to let this emotional propaganda overpower our engineering studies. Thank you.

KURT BARKER: Hi. My name is Kurt Barker. I'll put it right next to my mouth. How does that sound? Your Honor, Ms. Shea, Mr. Minter, thank you for the opportunity to speak. I commend you for the patience and the discipline to sit through these hearings.

And I can't help but think about the priest who was responsible for the construction of this building. He used to have a very clever way of acknowledging people who volunteered for very difficult tasks. He would say, "There are a lot of ways to get to heaven, you certainly didn't pick the easiest one."

And I think if he were here today watching what you are doing, he would probably be thinking that again. So I just hope the folks here from all over remember that. But thank you for hosting this and entertaining all of our comments.

I grew up in the Edgemont area. My wife and I live west of Edgemont and west of the project area. And as ranchers, we work every day to triangulate concerns about water, grasslands, and cattle in a way that builds soil health, because soil health and water health is the basis of our livelihood and our future.

Accordingly, if this project wasn't protective of our health and environment and especially our water, we wouldn't consider supporting it.

So as you reflect on the many hours of testimony that you've heard so far, four days already, I believe, because this is the fifth day, and the testimony you'll continue to hear, I would simply ask that you consider the real stakeholders in this process, the people who live here and ranch in the project area.

As a stakeholder myself, two thoughts come to mind. The first one is the Nuclear Regulatory Commission has established that -- and I'm going to quote -- that "there are no environmental impacts that would preclude the licensing of this facility." That is a very succinct, clear statement: "There are no environmental impacts that would preclude the licensing of this facility."
The second thought that comes to mind is a broader thought, and that is that uranium is the fuel for nuclear power, of course, and nuclear power is the only carbon-free, large-scale source of power that's available 24 hours a day, seven days a week.
So as I think of these two points -- no environmental impacts and fuel for the only carbon-free, large-scale source of power -- I wonder, shouldn't the property rights of the owners of this fuel be considered?
This uranium is not the property of the horse in town over by Hot Springs or the amateur environmentalists who were shipped in from outside the county. It's the property of the landowners, of which I am one.
The economist Adam Smith said: "The first and chief design of every system of government is to maintain justice to prevent the members of society from encroaching on one another's property or seizing what is not their own."
Powertech -- Powertech has complied with all the requirements of the law. They have prepared and submitted a full-blown environmental impact statement. They have prepared and submitted a site-specific supplemental impact statement.

The scientists at NRC and at your agency have reviewed both and concluded, again, there are no environmental impacts that would preclude licensing of the facility. Or, to use words that Adam Smith might have used, it would say, There are no environmental impacts that encroach on another's property.

So typical teams at your Agency and at the NRC have determined that this project doesn't encroach on our neighbors, but despite that, you've been asked to deny property rights that help make this country great. That's what it amounts to.
So we urge you to deny the request of others to encroach on our property. I urge you to issue the final permits for this project. And once again, I thank you for your very kind and polite attention.

LINDA TIDBALL: My name is Linda Tidball, and I have taught here in the Edgemont school system for 25 years now.

I moved to the Dewey area when I was five months old, and so I grew up in Dewey on a ranch, and I'm actually the fifth generation of rancher. And I would consider my relatives to be good stewards of the land. Ranchers are not very successful if they don't have water and do not take good care of the land.

I totally support this project. I have been to numerous presentations on how it works. I listened to engineers and people who are educated in this deal, and trust that they, too, know the science and would not want to contaminate our water.
There was some misconception that all of us standing back there were paid by the corporation. I think there were two people here that are paid by corporations. So the rest of us were totally community members volunteering.
I also enjoy natural resources. I didn't see any horses or bicycles out there today. So I'm assuming everyone used oil products to get here. I do that, too. And I'm so glad that technology has brought us as far as it has so that we are able to use natural resources.
And I know previously some of the uranium mining had spills and mishaps and it wasn't as safe as it is. But many, many things in our lives are different because of advanced technology and education.
And I was fortunate to go to the School of Mines on Monday for the math contest. I got to take a group of our wonderful kids from our area, and it was interesting visiting with math and science teachers.
And they were questioning why, why would people be opposed to that. In-situ is one of the safest mining processes there are. And I was sitting with engineers who have been educated on this process.
And so I am in total favor. I've lived here, with the exception of the time I went off to college. I wanted to come back and raise my kids here, my grandkids. So I want it on the record that I totally support this project.

MARK BROWN: Good afternoon. I'm Mark Brown. I grew up in Edgemont. I recently got a nuclear engineering degree, and I happen to be in town for this thing.

So I don't really understand the opposition to the water. You say you're going to poison the water, but uranium is already in the ground, it's already poisoning the water. Why do you think there's radon in the basements? The alpha decay there -- uranium decays, and then it decays into radon, and then it ultimately decays and gives you cancer.
Why wouldn't it make more sense to get rid of the uranium in the water already? You're cleaning the water. It does not make any sense to -- to do it. And it works. It works in Uzbekistan. It works in Kazakhstan. It works in Australia. It works in Wyoming. It works around the world. It's a tested, tested method of uranium -- removing uranium, so I don't understand.
You say you don't poison the water. I lived in Flint, Michigan. I have seen water being poisoned. This is not it. This is cleaning the water. You say it's like Fukushima or like Chernobyl. I was in Chernobyl eight months ago. It is nothing like that. Nothing at all. I do not understand the opposition to this. It doesn't make sense to me.
Thank you.

MIKE KOOPMAN: Good afternoon.
Let me start with, I was born here in South Dakota. South Dakota gave me an education, which I followed up at the School of Mines. And because of that background, I first started -- when I left college, I worked for Homestake, and then I was offered a chance to join the -- what would be Wyoming's version of the DENR, which they call -- over there it's the DEQ.
And I think I'm probably unique in that being -- having a background in soft rock, I am a geological engineer. I am also a registered professional geologist. I went to work for the state of Wyoming. Some of these in-situ projects were interesting over there.
And some of the early mines were, as you can imagine with any early mining thing, there was heap leach things where they would take the minerals, put them on a rubber sheet, pour that full of acid, and then pull off the remaining solution. That was okay. That was in its infancy.
And as in-situ went along, the department I was with, we were responsible for looking at more and more in-situ practices. In fact, we were responsible for being part of the siting, part of the construction oversight, part of the -- watching the production returns, monitoring that, and in some cases part of the closure.

So I think I'm probably one of the few, if any, here in South Dakota that has seen the aspect of uranium from not only the enforcement aspect, the environmental aspect. I also worked in the industry and Shirley Basin out of Casper for many years. So I've seen the loop of industry and regulation, et cetera.

From what I've seen, from the projects that I was involved with, directly permitting and the mine plans, et cetera, this project being proposed right here is probably the optimum from what I have seen as far as safety, as far as recovering most, if not all, of the solution that's being injected.

Some of those early ones were not necessarily covered by state and federal regs, which is why some of them were pretty bad. This one has a whole slew of constraints. And the opinion by anybody who has looked at this so far from a scientific point is that it's valid, it's safe, and it will work.

And I can tell you, having had hands-on, been in the trenches checking pipes that carry solutions and everything, I can tell you that it's valid and it's safe. And from what I can see from this project, this one would be far above my expectations.
So I know emotions run high when you start talking about water and its availability, but I would encourage the EPA and others involved here to look at the background scientific information, what it supports.
If you need, step to those agencies -- and I would say one would be that agency in Wyoming who has done several of these -- to find out, you know, how things went over there. Do you have a hiccup once in a while? Sure, you have a hiccup once in a while, as with any mining operation.
[...]
MIKE KOOPMAN: I see a lot of you mouthing objections out there, but I doubt that you've been in the trenches.
So I would encourage you to proceed with permitting, to do all you can so this thing gets going soon. It would have a -- such an economic benefit in Fall River and Custer Counties, and we could surely use all the above.
Thank you very much.

MILES ENGLEBERT: Hello. My name is Miles Englebert, and I live and ranch on Dewey Road with my family. I've been a part of that community my whole life with going to preschool and graduating from Edgemont two years ago.
My ranch is on the proposed Dewey-Burdock site, and I support the Dewey-Burdock project. My support may come as a great surprise to the opponents who live in Rapid City, Nemo, Pine Ridge, Hot Springs, and other areas. In reality, they have very little at stake except they will likely share the economic benefits to the state and local region.
I've taken the opportunity to become familiar with this project. And I am comfortable with it proceeding on our property. I'm saying this as a rancher who values water as much or more than anyone, as water is imperative to our way of life, to our very existence here.
I want to have the opportunity to come back here and ranch. And if I thought this project would jeopardize my chance of coming back and ruining my family ranch in any way, I would not have any support with this project at all.
[...]
And I look forward to having good jobs nearby so myself and my brothers have the opportunity to come back and ranch and work off the ranch as well so we can live here. Thank you.

Letter ID	Commenter Name	Commenter Org.
361		Individual
470		Individual
518		Uranium Producers of America
529	Ex. 6 Personal Privacy (PP)	Uranerz Energy Corporation (an Energy Fuels Company)
534		AUC LLC
535		Ur-Energy Inc.

549	Ex. 6 Personal Privacy (PP)	Powertech (USA) Inc.	

550	Ex. 6 Personal Privacy (PP)	Powertech (USA) Inc.
551		Strata Energy, Inc.
07463 (Edgemont hearing)		Individual

Text

Subject: COMMENTS ON DRAFT PERMIT

Below is my question and public comment on two Underground Injection Control (UIC) Draft Area Permits and one associated proposed aquifer exemption dec

Burdock uranium recovery project

Question: You have had the permit applications for many years. Why has it taken so long to issue the draft permits?

Thank you for providing this public form in which to speak. I forgot to mention in my comments that it has been 11 long years of trying to permit the Dewey-Bu

Powertech/Azarga. It took years to secure the NRC license. It is too slow, and I fear America today could not even build the Hoover Dam. With the EPA, multipl

On behalf of the Uranium Producers of America (UPA), the national trade association representing the domestic uranium industry, we are writing in opposition and unwarranted new requirements the Environmental Protection Agency (EPA) is proposing for the Dewey-Burdock ISR operation. These requirements are arl supported by the governing statutes, existing regulations, or long-standing agency guidance. EPA has not provided any scientific or factual justification for the ii unwarranted and costly requirements.

UPA is unaware of any Class III permits for uranium ISR operations in the U.S. for which similar conditions have ever been imposed. Among our concerns are EP requirements to:

• Conduct post-restoration groundwater monitoring for each wellfield after the Nuclear Regulatory Commission (NRC) approval that groundwater restoration h completed;

• Install a new down-gradient compliance boundary monitoring well network for each wellfield inside of that currently required by NRC license requirements a determine initial baseline values;

• Collect core samples prior to operations, storing these for years and then testing these in "pass/fail" laboratory column tests, where a single constituent meas concentration would signal a failed test;

• Additional monitoring and corrective action requirements for an excursion detected in a non-injection interval monitoring well beyond those reviewed and ap

• Additional monitoring and corrective action requirements for an "expanding excursion plume" and a "remnant excursion plume", despite citing no evidence t occurred at an ISR facility.

It appears the Region 8 Office is attempting to apply similar standards to those included in a proposed rule issued by the EPA in January 2017 – Health and Envir Standards for Uranium and Thorium Mill Tailings (82 FR 7400). However, as you know, that rulemaking is not finalized and has serious flaws. In fact, it is still ope

We urge Region 8 to re-evaluate its proposed requirements to ensure they are scientifically justified and in line with the existing rules and regulations.

On behalf of Energy Fuels Resources (USA), Inc. (Energy Fuels), we appreciate the opportunity to comment on the EPA's Dewey-Burdock Uranium In-situ Recov Area Permit. Energy Fuels is a domestic uranium mining company and we own and operate the last operating uranium mill in the United States, the White Mes

As an experienced operator of uranium in-situ projects we have serious concerns with the EPA's Draft UIC Class III Area Permit. The EPA draft, as presented, con exceeding those established in 40 CFR 144.33. Energy Fuels primary concerns lie with the following overarching issues presented in EPA's draft

1. Insertion of permit conditions that are duplicative of proposed rules currently in the rulemaking process.

2. Misapplication of the regulatory requirements set forth in 40 CFR §144.12(b) and 40 CFR §142.

3. Overlap and Exceedance of the Nuclear Regulatory Commission's (NRC) authority as defined in the Uranium Mill Tailings and Recovery Act and existing rules.

Permit Conditions that are Duplicative of Current Rulemaking

In Part I, page 1, paragraph 2, first sentence, the EPA draft permit states, *"Because this permit authorizes more than one injection well, it is an Area Permit and requirements found at 40 CFR §144.33"*. That is a true statement; however, EPA has an authority to place additional requirements extending beyond those esta

An example of EPA's backdoor approach to implementing unapproved regulations, by inserting duplicative permit conditions, is found in Part IV of the draft Pe

restoration", it is to be completed following approved restoration by the NRC. While the draft permit does not contain any specific requirements directing the D

Furthermore, the draft permit includes a requirement to install a Down-Gradient Compliance Boundary. The Down-Gradient Compliance Boundary S

monitor wells located between the production area and the monitor well ring. To this unjustified requirement, for installation of an additional set of monitorin

Misapplication of 40 CFR §144.12(b) and 40 CFR §142

Part IX, Section E of EPA's draft permit also addresses "post-restoration" monitoring, indicating it is required to demonstrate no ISR contaminates cross the aqui

...into the water quality USDW in a concentration above the baseline water quality limits of the USDW or of any contaminant from the aquifer. Again, this monitoring is outside of curre

40 CFR §144.12(b) indicates the Director shall prescribe such additional requirements for conformity as a consequence of negative monitoring results or actions (incl

exemption; whereas, EPA is requiring all of the additional monitoring at the start of mining. It is obvious this regulation, as written, has a specific course of actio

Another part of 40 CFR §114.12 the EPA has omitted is the language from 40 CFR §144.12(a) which states:

"...if the presence of that contaminant may cause a violation of any primary drinking water regulation under 40 CFR §142 or may otherwise adversely affect the

§144.12(a) is important because of its relationship with 40 CFR §142, and should be cited in the draft permit document. 40 CFR §142 not only includes the natio

standards but also the application of MCL's that must be considered when analyzing the aquifer exemption boundary.

among other factors, the pressure in the injection zone, the waste volume, and injected waste characteristics (i.e., specific gravity, persistence, etc.) in the life of

Overlap and Exceedance of NRC Authority

The Uranium Mill Tailings Radiation Control Act (UMTRCA) grants EPA the authority to promulgate *generally applicable standards* (not regulation). The NRC th

review or submitted in the future. This policy includes reviews of applications for new ISR facilities, reviews of restoration plans at existing, licensed ISR facilities

Criterion 5B(5) goes on to say:

"At the point of compliance, the concentration of hazardous constituents must not exceed-

(a) The Commission (NRC) approved background concentration of that constituent in the ground water;

(b) The respective value given in the table in paragraph 5C if the constituent is listed in the table and if the background level of the constituent is below the valu

(c) An alternate concentration limit established by the Commission (NRC). "

Implementation of restoration requirements are presented in NRC Regulatory Issue Summary 2009-05 Uranium Recovery Policy Regarding (1) The Process for S

Reviews of Applications for New Uranium Recovery Facilities, and (2) the Restoration of Groundwater at Licensed Uranium In Situ Recovery Facilities (April 29, 2

10 CFR Part 40, Appendix A, Table 5C *maximum values for groundwater protection*. (By the way, even in EPA's proposed rulemaking for 40 CFR §192 (January 2

3. The EPA has added these requirements without a clear understanding of the risks or benefits of implementation and even acknowledges ISR doesn't inject w

Exemption ROD statement *"waste fluids are not being injected into the exempted portion of the aquifer"*. Therefore, since waste isn't being injected the risk of

"the Agency does not have sufficient information to document a specific instance of contamination of a public source of drinking water caused by an ISR."

And further states,

"the EPA is unable to quantify the potential benefits ."

In conclusion, it is Energy Fuels opinion that EPA should revise the draft permit with conditions that are limited to those requirements specifically described in 4

should remove any overlapping and/or additional restoration requirements that come under the purview of UMTRCA and NRC. Nor should the draft permit con

Energy Fuels appreciates the opportunity to comment on the Dewey-Burdock uranium in-situ recovery (ISR) draft UIC Class III Area Permit.

AUC LLC, a holder of an NRC Source and By-Product Materials License and of a Class III UIC Permit and Aquifer Exemption for Uranium Mining, hereby objects t

unwarranted new requirements the Environmental Protection Agency (EPA) is proposing for the Dewey-Burdock ISR operation. In addition to not being support

(approved and authorized by EPA). Nowhere in any of the previous Class III permits was there such conditions and obligations listed. The most fundamental pr

extensive investigation that no off site underground sources of drinking water have ever been contaminated by ISR mining of Uranium.

We summarize below our most substantial concerns:

• Conduct post-restoration groundwater monitoring for each wellfield after the Nuclear Regulatory Commission (NRC) approval that groundwater restoration h completed;

• Install a new down-gradient compliance boundary monitoring well network for each wellfield inside of that currently required by NRC license requirements a determine initial baseline values;

• Collect core samples prior to operations, storing these for years and then testing these in "pass/fail" laboratory column tests, where a single constituent meas concentration would signal a failed test;

• Additional monitoring and corrective action requirements for an excursion detected in a non-injection interval monitoring well beyond those reviewed and ap

• Additional monitoring and corrective action requirements for an "expanding excursion plume" and a "remnant excursion plume", despite citing no evidence t at an ISR facility.

• The conditions are also highly prescriptive, being focused on nuts and bolts activities rather than creating successful outcomes in uranium mining and restora creates a strong disincentive to innovating and research currently being carried out by the uranium industry and academia, some with EPA funding.

It also appears that Region 8 is attempting to apply standards similar to those included in a revised proposed rule issued by the EPA in January 2017 - Health and

Protection Standards for Uranium and Thorium Mill Tailings (82 FR 7400). That rulemaking is not finalized and the comment period is still open. The EPA previo

We urge Region 8 to revise the draft permit in light of the above, and issue the Permit in a form that is scientifically justified and in line with the existing rules a

Ur-Energy, whose scientists and engineers have decades of experience permitting, constructing, operating, and reclaiming in situ uranium mines, provide the fo specific comments on the Draft UIC Class III Area Permit for the Dewey-Burdock Project

General Comments

Ur-Energy is concerned that despite decades of successful regulation of in situ uranium mining by various states and the Nuclear Regulatory Commission ("NRC devise a new regulatory scheme for the Dewey-Burdock Project. The new and unprecedented requirements include:

- Conducting post-restoration groundwater monitoring for each wellfield after NRC approval that groundwater restoration has been successfully co
- Installing a new down-gradient compliance boundary ("DGCB") monitoring well network for each wellfield inside of that currently required by NR
- Collecting core samples prior to operations and testing these in "pass/fail" laboratory column tests, where a single constituent measured above ba
- Quarterly groundwater sampling from the DGCB monitoring wells to establish initial baseline values before injection begins in the wellfield;
- Additional monitoring and corrective action requirements for an excursion detected in a non-injection interval monitoring well beyond those revi
- Additional monitoring and corrective action requirements for an "expanding excursion plume;" and
- Additional monitoring and corrective action requirements for a "remnant excursion plume"

The EPA's attempt to create a new regulatory approach seems to be based largely on concerns that post restoration residual contaminates will damage USDWs

is aware of the 2009 NRC staff memorandum to the Commission in which they stated they were unaware of any situation indicating that: (1) the quality of grou

argument is short on technical merit and shouldn't be given serious consideration by a science driven agency such as the EPA. If, however, despite a lack of cre

In conclusion, we strongly encourage the EPA to remove all unprecedented permit conditions and consult with the NRC and states to develop a draft permit th

~~standing regulatory practices that have proven to be protective. Failure to do so will place Powertech, as well as any future in situ uranium mines in South Dak~~

This letter and attachments represent Powertech (USA) Inc.'s (Powertech's) written comments on the Draft Class III Area Permit for the Dewey-Burdock Project

[illegible]

[illegible]

Project operations include:

- conducting post-restoration groundwater monitoring for each wellfield after NRC approval that groundwater restoration has been successfully co
- installing a new down-gradient compliance boundary (DGCB) monitoring well network for each wellfield inside of that currently required by NRC l
- collecting core samples prior to operations and testing these in "pass/fail" laboratory column tests, where a single constituent measured above ba
- quarterly groundwater sampling from the DGCB monitoring wells to establish initial baseline values before injection begins in the wellfield;
- additional monitoring and corrective action requirements for an excursion detected in a non-injection interval monitoring well beyond those revi
- additional monitoring and corrective action requirements for an "expanding excursion plume"; and
- additional monitoring and corrective action requirements for a "remnant excursion plume".

The only justification that EPA has ever offered for considering such requirements has been presented in support of the Agency's ongoing but uncompleted rule

[illegible]

[illegible]

[illegible]

comments, these forays would impose requirements that are not only unnecessary because already addressed by NRC, but also requirements that are in confli

General Comments

G-1. As a general matter, there is no evidence of off-site impact to non-exempt groundwater even after decades of uranium ISR operations in the U.S. There is

[illegible]

discontinued, or (3) a well has been relocated because of impacts attributed to an ISR facility.

The same document describes NRC staff's evaluation of excursions at historically operated ISR facilities and concludes that no excursion has resulted in environ

With regard to the migration of production liquids toward the surrounding aquifer, each licensee must define and monitor a set of nonhazardous parameters to

movement toward the surrounding aquifer. Exceedances of those parameters result in an event termed an excursion; excursion events are not necessarily envi

Second, as noted above, EPA itself acknowledged this in January 2017 (Exhibit 025 at 7404):

Focusing on the area of surrounding or adjacent aquifers, the EPA acknowledges that the Agency does not have sufficient information to document a specific im

of a public source of drinking water caused by an ISR.

Third is NUREG/CR-6733 (Exhibit 002 at 4-38), which addresses the history of excursions at U.S. ISR facilities and documents the finding that:

[T]here were no reports of extraction fluid excursions being detected in off-site water supplies in any of the documentation for U.S. uranium ISL sites reviewed

Fourth is documentation from the Texas Commission on Environmental Quality (Exhibit 003 at 22) that no such impacts have been documented in Texas:

With regard to research on the effects of similar mining projects on neighbors, the Executive Director is not aware of a documented case of off-site groundwat

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

[illegible]

public water system of any contaminant, and if the presence of such contaminant may result in such system's not complying with any national primary drinking

U.S.C. § 300h(d)(2)(emphasis added).

EPA's regulations establish the general fluid movement limitation in 40 CFR §§ 144.12(a) and 144.1(g), which closely track the language of the statute:

No owner or operator shall construct, operate, maintain, convert, plug, abandon, or conduct any other injection activity in a manner that allows the movement

contaminant into underground sources of drinking water, if the presence of that contaminant may cause a violation of any primary drinking water regulation u

40 CFR § 144.12(a) (emphasis added).

In carrying out the mandate of the SDWA, this subpart provides that no injection shall be authorized by permit or rule if it results in the movement of fluid cont

into underground sources of drinking Water (USDWs - see § 144.3 for definition), if the presence of that contaminant may cause a violation of any primary drin

40 CFR § 144.1(g) (emphasis added).

These provisions adopt the statutory non-endangerment standard into the regulations. They clearly condition the prohibition of fluid movement on the potenti

[illegible]

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23740 (April 20, 1979). EPA "decided that since 'endangerment' is defined in the Act, it need not be redefined in these regulations." 44 Fed. Reg. 23753 (April 2

Instead of writing a new definition of "endangerment" in its UIC regulations, EPA developed "an operational test." *Id.* But this test was not intended to change

EPA still intends to accomplish the statutory goal of preventing endangerment to underground sources of drinking water – no change in this regard is contemp

intention has been to fashion a test of 'endangerment' that is workable and reduces uncertainty.

44 Fed. Reg. 23740 (April 20, 1979). EPA described the proposed test as follows:

The test in these reproposed regulations is whether injection operations will cause the migration of injected or formation fluids into an underground source of

[illegible]

(June 24, 1980). "The technical requirements of Part 146 are designed to insure that such movement will not occur." 45 Fed. Reg. 33436 (May 19, 1980).

The standard was spelled out in 40 CFR § 122.34(a) (the predecessor to section 144.12(a)):

(a) No UIC authorization by permit or rule shall be allowed in the following circumstances:

(1) Where a Class I, II, or III well causes or allows movement of fluid into underground sources of drinking water.

EPA later called this standard "a blanket prohibition ... against movement of fluid into underground sources of drinking water for Class I, II, or III wells." 46 Fed.

1981).

If this had been the end of the rulemaking process, there might have been more support for EPA's assertion in the fact sheet. But this was not the end of the ru

[illegible]

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regulated. Since EPA does not cite any site-specific concerns with the Dewey-Burdock Project as the basis for the proposed additional permit requirements, Pov

Table G-1: Proposed Permit Requirements Apparently Stemming from Previously Proposed but Discarded 40 CFR Part 192 Rulemaking

Proposed Requirement

Post-restoration groundwater monitoring for at least 30 years under natural groundwater gradient1

Geochemical modeling if column testing does not conclusively demonstrate attenuation of all contaminants

Monitoring for an extensive list of parameters in the event that an excursion is confirmed

Quarterly pre-operational baseline sampling for down-gradient compliance boundary monitoring wells

Notes:
1 Refer to Attachment A-3, which shows that the minimum time required for groundwater to reach down-gradient compliance boundary monitoring wells insta
wellfield would be 33 years

G-6: The NRC staff prepared the Supplemental Environmental Impact Statement (SEIS) for the Dewey-Burdock Project, which evaluated potential impacts to gr
expected adverse impacts. As noted in Appendix A of the Draft Cumulative Effects Analysis, EPA reviewed the draft and final NRC SEIS. However, at no time we
informed of the proposed permit conditions that extend significantly beyond – and are inconsistent with – NRC license requirements, including, but not limited

G-8: The draft permit contains inconsistent conditions that overlap with NRC license requirements. Some examples include:

1) Excursion monitoring during ISR operations (Part IX, Section C.1)

2) Excursion monitoring during groundwater restoration (Part IX, Section C.2)

3) Corrective actions during a confirmed excursion event (Part IX, Section C.3)

4) Annual monitoring of domestic wells within the Area of Review (Part IX, Section B.5.a)

5) Quarterly sampling of stock wells within the permit area (Part IX, Section B.4.b)

6) Quarterly monitoring of additional monitoring wells located upgradient and down-gradient of the ISR wellfields in accordance with NRC regulatory guidance

By specifying the monitoring well locations, sampling frequency and parameters for all of these overlapping monitoring requirements, Powertech will have to r
licensing and Class III Area Permit in a manner inconsistent with NRC's regulations. For example, if a monitoring well is drilled near the area of review, EPA also would specifically
expressly amended the Atomic Energy Act of 1954 (AEA) with the Uranium Mill Tailings Radiation Control Act (UMTRCA) in 1978 to specifically address a new c
hazards to health and the environment from the processing of uranium ore and the disposal of byproduct material. 42 U.S.C. § 2022(a) ("The Commission shall
from the potentially hazardous radiological and non-radiological hazards associated with the processing, storage, and disposal of byproduct material. 42 U.S.C. § 2022(
the responsibility of the Commission in the conduct of its licensing activities under this Act." In addition, Congress expanded NRC's regulatory authority under S
(i) that the Commission deems appropriate to protect health, safety, and the environment from the potential radiological and non-radiological hazards associat

(ii) that conforms with the generally applicable standards developed by EPA; and

(iii) that conforms with the general requirements established by NRC, comparable to standards applicable to similar hazardous materials regulated under the S
By way of example, NRC's 10 CFR Part 40, Appendix A, Criterion 5 incorporates the basic groundwater protection standards as promulgated by EPA in 40 CFR Pa
which expected adverse impacts at the Dewey-Burdock Project, in the text below, and which address both the mine operations and the final disposal. The primary stroke
"increasingly" and therefore fall under the provisions of UMTRCA. Operation 2000, the Commission determined that restoration fluids from ISR operations can
drinking water source at any time before, during or after ISR operations are complete. In some cases, states such as Wyoming, Texas and Nebraska through the

It is completely unnecessary for EPA to impose duplicative regulatory requirements on ISR projects, especially where the Commission already imposes detailed based on the successful monitoring program, the documentation of the detection of excursions, and the estimated mass of excursions in the project, which is adequate to conclude beyond regulating the proposed public notice and comment on an aquifer exemption application. As discussed in the environmental assessment (GEIS) and approved in the NRC staff concluded that the NRC approved project's regulation and license condition for any constituents exceeding the baseline concentration or an MCL after groundwater restoration. In order to approve an AQ

G-11: EPA acknowledges the effectiveness of the excursion monitoring system that will be conducted under NRC license requirements on page 116 of the fact s

The monitoring well detection system described in Section 12.5 is a proven method used at historically and currently operating facilities.

In spite of this acknowledgement, EPA proposes significant revisions to the excursion monitoring program such as monitoring for a potential "expanding excurs "Groundwater excursions are unlikely" or "the risk of high chloride or chloride concentrations is the first alert to a new excursion" at historically operated ISR facilities for post-restoration excursion tracking and additional excursion monitoring wells and sampling, and can require resources. This includes the Project permit issued by the State of Wyoming, which ev the presence of the groundwater excursion monitoring wells is the source of the exemption aquifer exemption have been located a great distance from the ISR wellfield. In fact, for the Dewey-Burdock Project that warrant additional monitoring and corrective actions, the draft permit would impose millions of dollars in additional well insta

Table G-2. Itemized Life-of-Mine Cost Estimate for Proposed Permit Requirements beyond NRC License Requirements

Item
Groundwater Monitoring – Laboratory Analysis1
Groundwater Monitoring – Sample Collection
DGCB Monitoring Well Installation
DGCB Monitoring Well Reclamation
Core Collection and Storage
Core Leach Testing
Geochemical Modeling
Contingency at 20%
Total Life-of-Mine Cost2

Notes:

1 Includes DGCB monitoring wells plus additional laboratory analysis costs for analyzing non-injection interval monitoring wells, nearby domestic wells, operati

2 Based on a very conservative assumption of 5 years of post-restoration groundwater monitoring for each well field, assuming pumping of DGCB monitoring wells a two closest monitoring well clusters indicated on the drawings in the Project. Inclusion of the cost of reporting, planning, fir

Dewey-Burdock Cumulative Effects Analysis 2015 (Exhibit 26). The estimated mass of requirements, including the cost of installation, operation, maintenance and reclamation of additional monitoring wells, would be a minimum of $2,000,000 and would be the equivalent of the Director's discretion to require additional monitoring wells, would be a minimum of $2,000,000 and would be the equivalent of the Director's discretion to require additional monitoring wells. Powertech appreciates the opportunity to provide these comments and would be happy to discuss them with EPA. We request that EPA give these comments r

PART A: Revised permit that is for the Area Permit regulations and includes recommended permit language revisions that, if made, would make this a more acceptable Area Permit

Comments"; "Table 3. Draft Aquifer Exemption Boundary Record of Decision Specific Comments"; "Table 4. Draft Cumulative Effects Analysis Specific Comment

This letter and attachments represent Powertech (USA) Inc.'s (Powertech's) written comments on the Draft Class V Area Permit for the Dewey-Burdock Project comment in March 2017. The written comments pertain to the draft permit and Draft Class V Area Permit Fact Sheet. Table 1 includes specific technical comme provided as PDF files in Attachment A.

Powertech appreciates the opportunity to provide these comments and would be happy to discuss them with EPA. We request that EPA give these comments r request that this be done within a reasonable time frame.

[ATTACHMENT: "Table 1. Draft Class V Area Permit Specific Comments and Recommended Permit Language Revisions"; "Attachment A Exhibits"]

This letter provides comments by Strata Energy, Inc. (Strata) to the Dewey-Burdock Draft Class III Area Permit. Strata Energy is the operator of the Ross Uranium

Strata's concerns the Draft Class III Area Permit includes many unprecedented requirements that are not included in Class III permits for any other ISR facilit include water restoration, groundwater monitoring requirements, aquifer exemptions, and additional excessive monitoring and corrective actions, and are sufficient to conclude that there will be no impacts to groundwater quality outside of the proposed aquifer that would affect its suitability for the current rulemaking. The Region 8 office is attempting to apply similar standards to those included in a proposed rule issued by the EPA in January 2017 – Health and En

I urge Region 8 to re-evaluate its proposed requirements to ensure they are scientifically justified and in line with the existing rules and regulations.

It would be nice to get these permits finalized as quickly as possible without making Powertech jump through a bunch of new hoops. This has taken far too long

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Draft Permit Section	40 CFR Part 192 Section (Exhibit 007)

Part IX, Sec. E	§ 192.53(e) (p. 4187), which would have required post-restoration monitoring for 30 years, or at least 3 years with geochemical modeling
Part IV, Sec. D.1.e	§ 192.53(e)(iii) (p. 4187), which would have allowed post-restoration groundwater monitoring duration to be shortened based on geochemical modeling using site-specific data
Part IX, Sec. C.3.f Part IX, Sec. C.4.b.ii	§ 192.53(b)(2) (p. 4186), which would have required immediate sampling of all Table 1 constituents if an excursion
Part IV, Sec. C.1 Part IX, Sec. B.3	§ 192.53(a)(4) (p. 4186),

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Letter ID	Commenter Name	Commenter Org.
23	Ex. 6 Personal Privacy (PP)	Individual
44		Individual
118		Individual
131		Individual
178		Individual
186		Individual
189		Individual
190		Hot Springs Star
246		Individual
259		Individual
313		Individual
330		Individual
355		Individual
399		

	Ex. 6 Personal Privacy (PP)	Individual
400		Individual
401		Individual
402		Individual
459		Individual
466		Individual
470		Individual
470		Individual
470		Individual
471		Individual
519		Black Hills Clean Water Alliance

541	Ex. 6 Personal Privacy (PP)	Prairie Hills Audubon Society
546		Oglala Sioux Tribe
553		South Dakota DENR
564		Black Hills Dakota Rural Action
7446		

		Individual
7452		Azarga Uranium Corporation
7453		The Hot Springs Star
07459 (Valentine hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
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7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7642		Individual

(Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Individual
527		Clean Water Alliance

Text
Re: Public comment period extended through Monday, June 19 for the proposed EPA actions at the Dewey-Burdock site Would you please provide us with an appropriate letter template from which we can personalize to submit our comment? That would be very helpful.
I also question the legality of the current permit application process as I believe the application by Powertech (USA) should be null and void since the official name is now that of Azarga Uranium, and Azarga hold 100% ownership of the Dewey Burdock uranium project. However, on the EPA's public notice Powertech (USA) Inc. is listed as the operating company. If ownership has changed, shouldn't Azarga Uranium now be the "Official Company" in which Azarga would need to go through the official permit application process from the very beginning?
Dear Ms. Shea: Recently, I sent along a request asking the EPA to consider reviewing the Dewey/Burdock site and the surrounding area of Edgemont with an eye towards designating that area as a SuperFund Site. I believe Susan Henderson did as well. You may have also received a water sample from an Edgemont resident from the Madison aquifer showing contamination of that water source. (You may already be aware of the contamination in the Cheyenne River from the area runoff through the Wild Horse Sanctuary, the Angostora reservoir, through Pine ridge Indian reservation and on to the Missouri River.) My question is simply whether you or your office has received said mailings and if anything is planned to deal with it.
Subject: RE: EPA Region 8 Underground Injection Control Program-Permits for Proposed Dewey-Burdock In-Situ Recovery Site Thank you Valois and I'm sorry that I missed your call. I would very much like to tell you why I'm interested in this area , but first I would like you to know that I'm not running for office , nor do I want to pull a Erin Brockovich…take on a big corporation …win …and then have a movie made about me. I just want to help. The Dewey_Burdock in-situ recovery site is here , and even if God came down and shut the operation down…we would still have to put everything somewhere else. I would like to learn as much about the history and the current conditions as I can to see if there is anything that I can do to help. If you know of a good archive…if you know of a good contact , I would appreciate getting them . As far as you are concerned , what needs to be done there ? Thank you very much
Subject: public comment on uranium mining in southwestern South Dakota Thank you for accepting comments other than at the hearings that you had set up. It is good to have the hearings and have that resource available, but sometimes the meeting times and places make it hard for those concerned and potentially affected, who are employed, to attend. Thanks again for your time.
Subject: Uranium Hearings RC, SD Hello Shea, I volunteered for Dakota Rural Action several years ago on a petition against giving the permit to Powertech for access to the aquifer for mining. I was at a couple of the hearings back then and was wondering if this time it will be the same. Will people be able to sign up to speak or is it something that has to be requested for ahead of time. Please, let me know. Your response is appreciated.
Subject: Receipt of Powertech response on Draft UIC Class III/V draft permits for Dewey-Burdock. Valois and Doug, You should have received today a package from us with our entire response. (UPS shows it was delivered at 9:44). I was hoping you confirm you received everything today. I would be glad to bring down a flash stick today otherwise. Please let me know and would glad to hand deliver this if needed. Just one note. In a few places, there are a few typos on Table 5 labeling this for cumulative effects, which it is not for. Table 5 represents our specific comments on the draft environmental justice document.
Subject: Questions about what happens at Dewey Burdock/Azaraga hearings … Ex. 6 Personal Privacy (PP) Editor, Hot Springs Star Valois: I'm the editor of The Hot Springs Star, a weekly paper in the heart of the Dewey Burdock project – we are the paper of record for Fall River County—and I'd like to do a preview story for this coming week's edition about what people can expect to experience at the impending hearings on Azaraga/Powertech's plans for Dewey Burdock. Could you please answer the questions below? My deadline for a response is Thursday, April 20, at midday. Email is probably best, since I'm a one-man show here and out of the office frequently. But that doesn't work for you, I'll do my best to accommodate your schedule. 1) Take a reader through the thumbnail sketch of what happens at these hearings – You go there, various sides present their information, then there's time for Q&A? 2) What will EPA do with the comments submitted by various people? How much does this enter into EPA's decision to grant Powertech/Azarga final permits. 3) How will EPA review the comments… transcripts, video footage? Anything else you want to add…. Tips for making sure comments get heard, in particular.
Also, your email link does not work. Perhaps the parenthesis have something to do with that.
Subject: Aquifer Contamination Does this paragraph actually state that despite the comments about treating the water in the preceding paragraph that you are requesting an exemption from treating it? What waste products are in this water? And who owns these uranium recovery mines? "EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur." Thank you for answering my questions. Ex. 6 Personal Privacy (PP)
Why was this [public comment period] extended?
Subject: Comment on Dewey- Burdock in situ leach uranium mining injection well licensing Please explain why you did not have a hearing in Newcastle, Wyoming. Dewey-Burdock is next to the Wyoming Border. Don't people living nearby in Wyoming deserve a hearing? Are their roads going to be used to transport stuff? If their water or air more or less at risk than SD's?
I also request that you make me part of the notification list for tribes. Our organization is chartered by the Rosebud Sioux Tribe to oversee treaty related issues and report back to our tribal council. Thank You for any assistance.
Subject: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits Hi Valois,

I am reviewing information provided for in the 'Public Notice: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits' https://www.epa.gov/uic/administrativerecord- dewey-burdock-class-iii-and-class-v-injection-well-draft-area-permits . I'm unclear if the "Additional Administrative Record Documents", specifically, the 'Draft Cumulative Effects Analysis' are considered a component of the Class III and V draft permits and thus subject to review and comments. The statement below is copied from the website and if read literally, it could be understood to mean that comments are sought only for the Class III and V draft area permits, and the identification of traditional cultural properties...My agency would like to provide comments on both the contents of the permits and Draft Cumulative Effects Analysis. Please provide us with an explanation of the scope of EPA's request.

> In addition to seeking comments on the Class III and V draft area permits, the EPA is seeking public comment on the identification of traditional cultural properties at the Dewey-Burdock Project Site Area of Potential Effects, on the potential adverse effects of the proposed project, and on measures to avoid, minimize or mitigate potential adverse effects on historic and traditional cultural properties pursuant to Section 106 of the National Historic Preservation Act and 36 CFR § 800.2(d) and § 800.6(a)(4).
>
> The EPA is also seeking comment on two options for approval of the aquifer exemption that Powertech requested related to the Class III permit application. The two options are discussed in the Aquifer Exemption Draft Record of Decision available on the EPA Region 8 UIC Program website.

The EPA has performed an Environmental Justice (EJ) analysis for the Dewey-Burdock UIC permitting actions and is seeking comment on the Draft EJ analysis document.
[ATTACHMENT: "removed.txt"]

Subject: RE: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits
Thanks Valois,
Which EPA program administers the injection well program?
[ATTACHMENT: "removed.txt"]

Subject: RE: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits
Hi Valois,
A NEPA related question for you: Will EPA's "decision" / Administrative Record provide analysis of various alternatives? That is, consideration of No Action (no permit), and alternative actions (permit with various conditions).

Subject: RE: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits - EPA has extended the public comment period through June 19

Morning Valois

144.4 includes state wildlife agency consultation as well as federal ESA. Was that consultation complete with sending SD GF&P the notice back in March 2017 or should we expect something more formal? GF&P intends to submit comments as a part of the scoping/public hearings. Submitting comments ensure our concerns are recognized but if you require consultation with us that also offers a better opportunity to present them.

Thanks for your help.

MY NAME IS Ex. 6 Personal Privacy (PP) I LIVE IN RAPID CITY. MY PH.D. IS IN POLITICAL SCIENCE, WITH AN EMPHASIS ON ENVIRONMENTAL POLICY. I STARTED STUDYING URANIUM MINING IN 1979, WHEN ABOUT TWO DOZEN LARGE COMPANIES THAT WANTED TO MINE URANIUM HERE WERE CONVINCED TO LEAVE EMPTY-HANDED. IN RECENT YEARS, 11 URANIUM COMPANIES HAVE EXPRESSED AN INTEREST IN THE BLACK HILLS.
MY DISSERTATION CONSIDERED TRIBAL-FEDERAL-STATE GOVERNMENT RELATIONSHIPS AROUND NATURAL RESOURCES. PART OF THAT RESEARCH WAS CONDUCTED UNDER AN EPA FELLOWSHIP. I HAVE PUBLISHED ON THESE TOPICS IN PEER-REVIEWED JOURNALS AND PRESENTED THE RESULTS OF MY RESEARCH AT A NUMBER OF PROFESSIONAL CONFERENCES.

I FOCUS ON POLICY AND THE ROLES OF GOVERNMENT AGENCIES ON THE URANIUM ISSUE. I AM ON MY THIRD DAY OF OBSERVING YOUR HEARINGS ON THE DEWEY-BURDOCK PROPOSAL, AND I HAVE READ LARGE CHUNKS OF THE RELATED DOCUMENTS. MY PRELIMINARY CONCLUSION IS THAT SOME OF THE EPA HAS BEEN CAPTURED BY THE URANIUM INDUSTRY. FOR THOSE IN THE AUDIENCE WHO DON'T KNOW THIS TERM, WHEN I SAY "CAPTURED," I MEAN THAT THE AGENCY HAS COME TO RELATE TOO CLOSELY TO THE COMPANIES IT REGULATES, TO THE DETRIMENT OF THE GENERAL PUBLIC.

THIS IS A DIFFICULT THING TO SAY, AND YOU DESERVE TO HEAR MY REASONS FOR THIS CONCLUSION.
THE FIRST REASON I SAY THIS IS THE USE OF LANGUAGE BY REPRESENTATIVES OF THE AGENCY AT THESE HEARINGS. INSTEAD OF SAYING THAT PARTS OF THE INYAN KARA AQUIFERS ARE UNDER CONSIDERATION FOR EXEMPTION, YOUR STAFF SAID, "THE AREAS THAT WE **ARE** EXEMPTING" -AS IF THE EXEMPTION HAS ALREADY BEEN GRANTED -OR AT LEAST AS IF THE DECISION HAS ALREADY BEEN MADE. IN THE POWER POINT THAT I HAVE NOW OBSERVED SEVERAL TIMES, THE SLIDE ON THE ROLES OF THE VARIOUS AGENCIES MAKES IT SOUND AS IF THE PERMITTING PROCESS IS ALL BUT COMPLETE. IN FACT, THE NRC LICENSE IS UNDER LITIGATION. THE STATE DENR HAS ONLY HELD ONE WEEK OF HEARINGS ON THE PROPOSED LARGE-SCALE MINE PERMIT. AND THAT HAPPENED 3 YEARS AGO. IN FACT, THE PROCESS HAS BEEN ON HOLD SINCE THEN.

If a petition for review of the new permits is filed, the new permits are not in effect pending final agency action. If a petition for review of the permit modifications is filed, the permit conditions subject to the modification would be deemed not to be in effect pending a final agency action.

Within a reasonable time of receipt of the petition for review, the EAB will either grant or deny the appeal. The EAB will decide the appeal on the basis of the written briefs and the total administrative record of the permit actions.
If the EAB denies the petition, EPA will notify the petitioner of the final permit decisions. The petitioner may, thereafter, challenge the permit decisions in Federal Court. If the EAB grants the appeal, it may direct the Region III office to implement its decision by permit issuance, modification or denial. The EAB may order all or part of the permit decisions back to the EPA Region III office for reconsideration.
In either case, a final agency decision has occurred when a permit is issued, modified or denied and that decision is announced. After this time, all administrative appeals have been exhausted, and any further challenges to the permit decision must be made to Federal Court.

I would appreciate being kept up to date with the decision that are being made that the potential to affect, not only this generation, but also genetically, many generations to come.

In 1979, we the people of SD passed an initiative into law that states that anyone who wants to mine uranium in SD has to go to a statewide vote for a license. Has that happened?

After all the hearing, does it even matter to what we think? Are no not going to mine?? Is that is done deal already?? If we all say NO?? will you go away?? Who did the big money people already buy out?? Will you drink the water? After you leave – we will be here after you all to home. Listen to the people. NO MINING!! You're destroying our earth, water, environment. Listen B-4 it's too late. NO URANIUM MINING.

I am writing to express my grave concerns in allowing Arzaga to receive a permit to mine in our precious, sacred Black Hills. Water is a precious resource that belongs to all of us and needs our protection.
State regulations do not duplicate federal regulations. Our state regulations are more detailed and tailored to our area. They require ongoing monitoring for safety, notification of state officials in case of an accident (and accidents are common in this industry}, insure that in situ mine facilities are built according to strict safety standards, and insure that mine sites are cleaned up properly.
[...]

The South Dakota Department of Environment and Natural Resources has a responsibility to regulate the local mining permit process. Federal government offices are hundreds of miles away. This is why this uranium company wanted to stop state regulation and push for federal approvals.

This brings us to another problem. Large portions of the documents used to support the EPA's draft permits are based on other permits that do not exist or that were prepared inadequately. For example, the EPA's documents defer repeatedly to the NRC's SEIS for the Dewey-Burdock project. This document echoed Powertech/Azarga's submissions in all important respects, rather than taking a hard look at the situation. The EPA documents also refer repeatedly to the requirements of an NPDES permit that has not even been applied for. And they refer frequently to a state Large Scale Mine Permit that has just barely begun the hearing process and is far from issuance. To rely on non-existent regulatory instruments for large portions of the permitting documents

indicates both problems with the regulatory process and a lack of analysis of the proposed mine, deep disposal wells, and aquifer exemption.

The public notice says:

"Written comments must be received by midnight on May 19, 2017."

How does this apply to comments sent by postal mail... must they be in your mail box arriving during the work day on May 19th?

Sometimes Federal agencies.. require it received and sometimes they require it postmarked by a certain date for postal mail.

Denver may have a post office open till midnight... so what is the rule for postal mail deadlines.

How does this apply to faxes... must faxes be sent during the working hours, or does the fax record transmissions till 11:59 pm on May 19th?

II. DE FACTO RULEMAKING

A full review of the documents relevant to the proposed Dewey-Burdock project demonstrate that EPA Region 8 has taken efforts to develop what it has referred to in internal documents as "guidance" with respect to how the agency will implement its permitting authority under the Safe Drinking Water Act ("SDWA"), 42 U.S.C. §§ 300h, *et seq* ., Underground Injection Control ("UIC") program, as it relates to ISL mining and processing of uranium. This information came to light in documents obtained via a Freedom of Information Act (FOIA) request submitted in February 2009 on behalf of multiple conservation and Native American organizations in both Colorado and South Dakota. Several significant documents from this period are omitted from the records EPA has made available publicly with respect to this project. The Tribe asserts that all of the documents and records, including all emails, reflecting the coordination between EPA and Powertech and any of its consultants must be made part of the administrative record for this proceeding, and must be disclosed to the public during the public comment process in order to allow for meaningful public review and comment of the proposed Draft UIC permits. Several of these documents are attached, which represent examples of the discussions improperly omitted from the existing public record.

The full set of documents reveal EPA's and Powertech's close coordination in developing regulatory requirements for the UIC permitting process. A draft of the resulting "guidance" is attached. This "guidance" was developed in consultation with the uranium mining industry and without public notice or public involvement. As discussed herein, this process was unlawful. In order to ensure compliance with the federal Administrative Procedure Act ("APA"), 5 U.S.C. §§ 701, *et seq.* , EPA must initiate a national rulemaking to ensure strong involvement from the public and stakeholders for the protection of underground sources of drinking water from the impacts of ISL uranium mining. In the meantime, while this rulemaking process is carried forward, EPA should suspend processing of currently filed applications for ISL uranium mining.

According to the agency's documents, the Dewey-Burdock UIC permit process currently underway through EPA Region 8 is the first instance in the nation where the EPA will be the direct permitting agency for a UIC Class III injection well for the purpose of injecting chemical fluids for dissolving and extracting uranium ores, through ISL uranium mining. The agency's documents also reveal EPA Region 8 staff concern with respect to the adequacy of the existing UIC regulations to provide the specificity necessary to directly implement the program. EPA Region 8's assessment is correct in this regard, which gives rise to serious concerns as to whether the regulations are sufficient to provide protection of underground sources of drinking water from threats posed by ISL uranium mining.

As EPA Region 8 is aware, the proposed Dewey-Burdock ISL project has created considerable controversy and drawn opposition from citizens, local governments, Native American tribal groups and governments, medical organizations, local business, agricultural interests, and conservationists based on the significant threats these ISL uranium mines pose to groundwater, local economies, public health, and cultural resources.

Overall, the documents obtained from EPA Region 8 via FOIA, including extensive email communications between EPA Region 8 staff and mining industry interests, reveal a troubling lack of transparency and public involvement in the development of the so-called "guidance" documents. Importantly, the proposed "guidance" is highly substantive in nature and, at the least, sketches out several policy conclusions with respect to EPA's regulation of ISL uranium mines. For example, the proposed "guidance" effectively defines the terms "area of review" and "aquifer exemption boundary" as they will apply to all future EPA Region 8 UIC Class III applications. Such decisions will not only establish the equivalent of an obligatory policy for Region 8, but also have national policy implications and long-term environmental impacts. Thus, it appears that Region 8 was engaged in drafting needed changes to the UIC regulations without the benefit of the substantive and procedural protections of notice and comment rulemaking. This process neglects the rulemaking requirements of the APA and the SDWA requirement that only the Administrator may promulgate SDWA regulations. See 42 U.S.C. § 300h(a).

As noted above, there has been a lack of transparency and public involvement. The EPA Region 8 documents demonstrate that while the uranium mining industry and its scientists and consultants were extensively involved in the drafting and development of the new policies from the earliest stages, there were no efforts by EPA Region 8 to include the public or any public interest organization in the development of these important policies. An EPA Region 8 description of its activities in relation to its regulation of ISL uranium mining, including the extensive interaction with uranium industry representatives, is attached. This lack of public participation is difficult to harmonize with EPA Region 8's direct acknowledgement in the documents of the high level of public interest and controversy surrounding the subject of Powertech ISL uranium mining proposal, and its potential impact on local communities, economies, and natural resources in South Dakota. Indeed, as evidenced by the EPA's decision to revisit the uranium recovery standards, these are issues of national significance and interest.

In order to comply with both the APA and SWDA, and especially given the controversial impacts of ISL mining and the precedent-setting nature of any new regulations in this area, EPA (Region 8 or Headquarters) must suspend processing of currently filed applications and initiate a Tier 1 Rulemaking. Such an action is well grounded in past agency practice and will provide the benefit of the sound science, public participation, and careful review of available technologies and SDWA standards which are conducted during formal rulemaking. The regulatory changes are required before any further or final permits are issued. The regulatory deficiencies and changes and details included in the Region's proposed guidance represent a substantive and controversial regulatory development that implicate the agency's obligations under the SDWA and the Administrative Procedure Act ("APA"), 5 U.S.C. § 553. As the EPA is no doubt aware, the APA requires public notice and comment rulemaking whenever a federal agency embarks on substantive changes in or development of regulations. Id. The SDWA itself specifically states that "[a]ny regulation under this section shall be proposed and promulgated in accordance with section 553 of title 5 (relating to rulemaking)...." 42 U.S.C. § 300h(a)(2).

While not all federal agency policy pronouncements require APA notice and comment rulemaking, the federal courts have held that the critical factor in whether an agency policy is properly considered an agency rule requiring APA compliance on one hand or mere guidance on the other is the extent to which the policy is binding on future agency conduct. Compliance with the APA's notice and comment rulemaking provisions is required whenever such a policy establishes a "binding norm" that effectively dictates the agency's regulatory discretion with respect to individual permitting decisions. See *Pacific Gas and Electric Co. v. Federal Power Commission* , 506 F.2d 33, 38 (D.C.Cir.1974); ***American Min. Congress v. Marshall*** , 671 F.2d 1251 (10th Cir. 1982).

The "guidance" developed by Region 8 constitutes a "binding norm" in this instance. As noted above, EPA Region 8's "guidance" contains detailed analysis defining critical terms in the EPA's UIC regulations, which are to be applied to future UIC Class III permit applications (as evidenced by their application in this instance). Such definitive terms create binding norms, and these concepts must be defined by regulations promulgated through notice and comment rulemaking and approved by the Administrator, as required by law. Such notice and comment rulemaking is critical to the protection of groundwater in any proposed ISL uranium mining area. As such, APA notice and comment rulemaking in this instance is beneficial and legally required. At minimum, given the sharp controversy the Powertech ISL uranium mining project has generated in South Dakota, public involvement and participation in this rulemaking process is essential.

2. DENR recommends EPA make the final Injection Authorization Data Package Reports and approval documents for the Class V and Class III permits publically available on EPA's webpage.

Has the public comment period been extended for the Dewey-Burdock uranium mining? This page has been brought to our attention, so wanted to verify. Thanks.

Public Notice: Extension of Public Comment Period for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits
https://www.epa.gov/uic/extension-public-comment-period-dewey-burdock-class-iiiand-class-v-injection-well-draft-area-0

Subject: Dewey-Burdock Fact Sheet Question

Hi, Mr. Minter --

In the Fact Sheet for the Class V wells for the proposed Dewey-Burdock uranium mine, it says that the Class V area permit would last for 10 years, "unless terminated for reasonable cause under 40 CFR s 144.40."
Do you know how often a Class V permit has been terminated by EPA?
Do you know how often a Class III permit has been terminated by EPA?

If you don't have this information, please let me know who might have it. It's important to clarifying the meaning of the information in the Fact Sheet.

Thank you --

You should have received today a package from us with our entire response. (UPS shows it was delivered at 9:44). I was hoping you confirm you received everything today. I would be glad to bring down a flash stick today otherwise. Please let me know and would glad to hand deliver this if needed.

Also,
Just one note. In a few places, there are a few typos on Table 5 labeling this for cumulative effects, which it is not for. Table 5 represents our specific comments on the draft environmental justice document.

I'm the editor of The Hot Springs Star, a weekly paper in the heart of the Dewey Burdock project – we are the paper of record for Fall River County—and I'd like to do a preview story for this coming week's edition about what people can expect to experience at the impending hearings on Azaraga/Powertech's plans for Dewey Burdock.
Could you please answer the questions below? My deadline for a response is Thursday, April 20, at midday. Email is probably best, since I'm a one-man show here and out of the office frequently. But that doesn't work for you, I'll do my best to accommodate your schedule.
1. Take a reader through the thumbnail sketch of what happens at these hearings – You go there, various sides present their information, then there's time for Q&A?
2. What will EPA do with the comments submitted by various people? How much does this enter into EPA's decision to grant Powertech/Azarga final permits.
3. How will EPA review the comments... transcripts, video footage?
4. Anything else you want to add.... Tips for making sure comments get heard, in particular.

And then there's procedures that are followed. Who makes the procedures? EPA probably makes your own procedures, so your procedures are something you guys make and follow.

I did this similar talk in 2007 when you were here down at the Radisson, but apparently it didn't -- was swept under the rug, and I hope this doesn't do the same thing. I can feel that in the air that we're just here, and it's all going to be recorded and pushed under the rug again. I hope this doesn't happen.

And so what I want to speak about right now -- oh, and just for the record, if you're not very tall, you can't even see what the timer says, so maybe a hands up or something.

MARVIN KAMMERER: From Meade County, South Dakota. Five minutes isn't enough, as the lady said, as you told me before.

In addition, if permitted, I would say that no more than two Class V wells should even be considered here. If more wells are needed in the future, let Powertech submit additional applications and undergo the review process in accordance with 40 CFR, et cetera, et cetera.

SUSAN HENDERSON: Well, I can't get it back in there, so I'll give it to you.

And for the record, five minutes is a ridiculous amount of time.

UMA JOANNE WILKINSON: Good afternoon. My name is Uma Joanne Wilkinson. My Indian name is (Speaking in indigenous language).
And I want you to know, to the Environmental Protection Agency, that I'm sure there are good people among you, but I have little to no faith in your process.

I wish I had more than five minutes. Thank you.

I say no to granting Powertech USA, Inc., which, by the way, shouldn't the permit application be in the name of Azarga Uranium since now the Dewey-Burdock project is 100 percent owned by Azarga? Which they do name that on their -- Azarga's website. They say, We're 100 percent owned, the Dewey-Burdock area.
So should that be changed over? Shouldn't Azarga have to start from A to Z like Powertech? They came in, and they applied for applications under their name. Now it's changed over to -- changed hands.

CHERYL ROWE: Hi. My name is Cheryl Rowe. That's C-H-E-R-Y-L, R-O-W-E.

And I believe I speak for many that cannot be here today. They just simply could not take off work or they have family obligations.

Having hearings during the week when people have to work makes it very difficult. I wonder if a lot of the frustration we have here is because people are frustrated that they have to fight for what is rightfully theirs.

And again, we heard people talk today about this seems like a done deal already. Saw one lady clap for the gentleman that was here. Only one. Is this already a done deal? Because if it is, then where do we go from here?

We've got so many people here willing to put their names on the line and spend hours and days out of their week attending these hearings, making these comments, not to mention the time spent organizing, reading the published documents and policies to put together these comments, and et cetera.

The current story of our nation, the United States, seems to be that a project is set up; the real people, the local people who are affected show up and give their voice when they're allowed to do so; and the people with the money and the power steamroll ahead anyway.

MARY JO FARRINGTON: Hi. Again, I want to thank you very much for listening for ten hours these last two days. I know you've got ten more hours these next two days, and we really appreciate it.
I wanted to -- having been here most of the time, I think there's something that needs to be cleared up. It's not clear to me who owns this organization. We use the word "Powertech" sometimes and then "Azarga," "Powertech/Azarga."
And several people have made the comment if Powertech has been bought out by Azarga, then it would seem to me that they would have to restart this process.
[...]
Finally, as you probably heard, you know, as you know, the EPA was going to be gutted and the Senate and the House were able to restore the money. And -- but as you probably heard, the FBI now has been fired tonight, and so this is troubled times.
And there's a lot of anxiety and fear going on, and uncertainty. And I would suggest that this is not the time to fast-forward a decision. This is a time to delay it and let this nation cool down a little bit, because everybody is pretty scared and jumpy.
So thank you very much.

RICK BELL: Good evening. My name is Rick Bell. Continuing on from what I had a few times to talk yesterday. And these five-minute segments are limiting, and so I was trying to decide what else I wanted to talk about tonight.

CINDY BRUNSON: Also, there was a lot of reference to this, and I would strongly suggest you get a copy of this because it would be very helpful to explain a lot of these comments that these people have been giving to you today.

[Cadmus note: This is from p. 172 of the Hot Springs hearing transcript. It's not clear from the transcript what document the commenter was referring to.]

In fact, any of these public hearings I've ever been to related like this, it's more of an opportunity for the EPA to make a check in a box on a checklist than it

is to listen to your comments. So I encourage you to make your comments and make them strong. Thank you.

The citizens of the area that would be most impacted by this project spoke loudly and clearly at the hearings in April and May. As many as 700 people attended the hearings. 212 people spoke (omitting duplicates in Valentine and Rapid City, but counting duplicates in Hot Springs and Edgemont). Of those 212 people, only 15 (7%) supported the proposal to mine uranium in the Black Hills and in our water supplies. The vast majority – 93% -- opposed the project. In a democracy, the will of the people counts.

The EPA should act consistently with the voices of the vast majority of the people at the hearings, rather than approving a project that is poorly considered, ill-advised, full of gaps, and dangerous to the health, the economy, the cultural resources, and the environment of the Black Hills.

Clean Water Alliance respectfully requests that the EPA halt the permitting processes for the proposed Dewey-Burdock project by denying the permits and the exemption.

explain permitting process

Letter ID	Commenter Name	Commenter Org.
121	Ex. 6 Personal Privacy (PP)	Individual
141		Individual
219		Individual
262		Individual
445		Individual
523		Cheyenne River Sioux Tribe
527		Clean Water Alliance
528		Aligning for Responsible Mining
528		Aligning for Responsible Mining
528		Aligning for Responsible Mining

535	Ex. 6 Personal Privacy (PP)	Ur-Energy Inc.
539	Ex. 6 Personal Privacy (PP)	Prairie Hills Audubon Society
553		South Dakota DENR
7460 (5/8 Rapid City hearing)		Individual
7461		Individual

(5/9 Rapid City hearing)		
7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7462 (Hot Springs hearing)		Individual

Text
12). Previous mining operations, such as the TVA some decades ago found no further viable sources of uranium
It is not only a matter of damaging lands that can't be replaced. We must also take into consideration the negative effects that the project can have on the surrounding populations. There are several risks listed in the official report, two of which stand out to me. The first is stated as follows: Because there will have been no well field scale pilot testing completed prior to construction of a full production facility, there is a risk that the total resource recovered, presently projected based on laboratory studies, may be overestimated. (133). It is not worth risking our health and earth for something that might see results. If they are going to compromise sacred lands and increase the chance for health risks of individuals they should make sure their output is going to be worth it.
I agree with the additional pump tests in the Burdock Area wellfields targeting the Chilson sandstone, mentioned in section 3.4.2.
Subject: the 4000 injection well no in Dewey Burdock application Hello Valois, Here is a quote from the Aquifer Exemption Draft Record of Decision, page 3 -- "The project will involve the injection of lixiviant, consisting of injection interval groundwater with added oxygen and carbon dioxide, into the uranium ore deposits targeted by 14 proposed wellfields consisting of approximately 4,000 Class III injection wells." Shouldn't there be just 84 class 3 injection wells for 14 wellfields? Where do the 4,000 fit in? Or is this a typo?
3.) In addition, ISL technology was available back in the 1950's and 60's when the exploration was done, but the amount of "recoverable" uranium at Dewey Burdock was not deemed sufficient by TV A for mining in any form, as they said that the roll front was gone. So by these former experts, upon extensive exploration, there is no recoverable uranium at that site left. Powertech/ Azarga's own testing showed that the highest levels of uranium found were in the alluvial wells that are surface, and not mine-able, as they cannot be contained. With the extensive mixing of aquifers and the 7650 open boreholes that contaminate the aquifers, there is likely organified uranium and other toxic metals by bacteria that create a form of organic uranium that is not recoverable by ISL anyway. Organic uranium does not bind to the resin beads in the "glorified water softeners" of ISL recovery. So the only money to be made at this site is from taking in hazardous toxic mining wastes from other mines to dump into our aquifers and make the Black Hills a toxic waste dump [...] Further, the 14 production well fields are not on a uranium rich roll front, as per TV A documents. (uranium ISL mines are typically situated on a uranium rich roll front so that extraction is efficient and the mine is profitable. Remember, the roll front was found by TVA to be mined out prior by surface mining)
Furthermore, the Preliminary Economic Assessment related to this project notes uncertainty in whether the Dewey-Burdock Mine is even economically viable. This is a grave concern to the Tribe for two reasons. First, it raises the concern that the project proponents will not have the financial resources to provide contingency funds for future remediation or if the project proponent will even maintain responsibility for such activities.
One omission is simply the failure to provide a very important definition in the section of the Class III Fact Sheet related to mechanical integrity. This is the statement that internal mechanical integrity and external mechanical integrity will both be confirmed if "There is no significant" leak or fluid movement. The document needs to provide a clear, measurable definition of "significant" in each case. [...] OTHER ISSUES In addition to problems with documents, omission and process, there are statements that we simply disagree with in the EPA's project documents. First, the Class III Fact Sheet states, "There is no limit in the Class III Area Permit as to how many injection and production wells Powertech may construct" (p. 14). There certainly should be a limit, and that limit should be conservative and set by the regulator, i.e., the EPA. This should be corrected. [...] There should also be clarification of the length of time that the proposed Dewey-Burdock project would be active. This goes directly to the potential impacts of the project. The estimate in the State Mining Permit Application is seven to 20 years of uranium recovery, maybe more, with the Central Processing Plant likely to operate longer. The Class III draft permit is for the "operating life of the facility" (p. 7). At 14 wellfields, each operating for two years, this could be as long as 28 years, if the company ran them consecutively. There is also the potential for the company to expand the project to include its contiguous claims to either the east or west of the current project area. There's a difference between regulating a project that lasts seven years and regulating a project that lasts over 20 years. As stated repeatedly, the draft permits and Cumulative Effects Analysis should discuss the full range of potential impacts and scenarios. There are two statements in the Class III Fact Sheet that apparently involve the EPA being prescient. Especially given the critical topics that these statements are about, they should, instead, be made factual. The first is that "the Lower Chilson is expected to provide adequate confinement...." (p. 66), and the second is that "The distance between the Chilson Sandstone potentiometric surface and the targeted ore zone...is expected be [sic] adequate to allow the drawdown required...." (pp. 68-69). These statements should be proved, not "expected" into existence. There is also a question about the rate of pumping of water during the mining process. In Section 5.2.1 of the Draft Cumulative Effects Analysis, the text says that the "header piping [would be] designed to accommodate injection and production flow rates of 2,000 gpm...." (p. 56). On the next page, the document says that there would be 100 wells per header house. The schedule for the project indicates that as many as five wellfields will be active at one time. As each wellfield is likely to have more than 100 wells, these numbers add up to more than the 8,500 gpm that the company has asked to use in its more recent documents. This situation needs to be carefully researched and analyzed before any further action is taken on the proposed project.
Specific comments to the proposed Class III Permit follow: A. Proposed wellfields 6, 7 and 8, located in the eastern part of the Burdock area, are very close to or on the outcrop / subcrop of the Fall River Fm. In these areas the Fall River Fm. is either partially saturated or dry. **This greatly complicates the ability to hydraulically control mining fluids.** In addition, geochemical conditions are very different from downgradient portions of the Fall River aquifer, which complicates the ability to rely on natural attenuation to remove residual ISR contaminants. Powertech has indicated that they will not mine Fall River ore in these three wells fields – only ore in the middle and lower Chilson will be mined.
F. The permit application and the draft area permit are both silent on the issue of reduced groundwater flow in the Fall River and Chilson aquifers downgradient of the mining wellfields. **There should be a water budget analysis to estimate reductions in flow and a discussion of groundwater discharge from the Fall River and Chilson aquifers.** **G.** Apparently **Powertech is not planning on active treatment as part of the groundwater restoration. Instead they will rely on natural attenuation, which will be assessed by collecting cores and conducting laboratory column testing.** If the leaching data do not indicate an adequate decrease in ISR contaminants –Powertech will need to submit a treatment plan. There should be concern about implementing this approach – the leaching data might very well be inconclusive and the time and money required to design and operate a treatment method may be unreasonable.
Powertech/Azarga predicts that its Dewey Burdock project has measured uranium resources of 4,122,000 pounds of U3O8 and indicated uranium resources of 3,528,000 pounds U3O8. But this estimate ignores recent research which indicates that the amount of recoverable uranium could be, and probably is, substantially less than that amount.[7] The Bhattacharyya study (2017) indicates that there is far more organic uranium in roll front deposits, such as those at the Dewey Burdock site, than previously believed. This impacts both estimates of the amount of recoverable uranium at the site and the ability to restore the impacted aquifers post-mining. These factors need to be properly understand and evaluated for this site prior to permitting.

[...]

Further, Powertech has estimated 3700 tU ISL production over 11 years, with $27 million capital investment. Not only has Powertech over-estimated the amount of recoverable uranium, it has no realistic way to finance the required $27 million to actually mine it.

1. Part I Section B, pg.2. The first paragraph references 40 CFR §147.2100 which pertains to Class II wells in South Dakota. It appears the reference should be to §147.2101 which discusses EPA's authority with respect to Class III wells.
2. Part II, Section A, pg. 6. Requires wellfields to be at least 1,600 feet from the Permit Area boundary (0.3 miles). The determination of this distance seems arbitrary and is overly restrictive while providing little or no benefit. We believe this distance sets an unreasonable precedent that will likely prevent the complete recovery of mineral resources at future mines. A science based approach to determine this distance is in order. We suggest the EPA work with the proponent to determine an appropriate minimum distance between the wellfields and the permit boundary that is protective of surrounding USDWs (with sound technical justification consistent with requirements of the NRC and other states) while at the same time allowing for recovery of the majority of the resource.
3. Part II Section E(2)(b)(i)(A), PG. 13. Requires the use of Low-Stress (Low Flow) purge/sampling methods. We believe this is too prescriptive for a Class III permit; especially since there are other EPA approved methods for purging of wells which may be more appropriate based on the circumstances. Did EPA consider that some wells may be too deep to be sampled utilizing this technique (this type of pump relies on air pressure to push the water to the surface and there are practical limitations on air compressors as wells as this type of pump)? We suggest replacing this language with a statement that requires the Permittee to sample wells using any appropriate EPA approved method. Further to this discussion, section (C) requires purging three to six casing volumes if stabilization doesn't occur prior to sampling. If a Low-Stress (Low Flow) pump is used to purge three to six casing volumes, it could take an inordinate amount of time to sample a well. For example, a common low flow pump advertised on-line has a maximum pump rate of 100 ml/min. If a monitor well has 230 gallons per casing volume it would take over 400 hours to purge three casing volumes utilizing the low flow pump.

4. Part II Section E, Table 8, pg. 14. This table lists a total of 45 parameters, several of which are not typically found in this geologic setting or are typically not found at levels of concern. We urge the EPA to remove the following parameters from Table 8 or require only one round of analysis to demonstrate the ions aren't present in baseline conditions (Aluminum, Antimony, Beryllium, Boron, Fluoride, Mercury, Nickel, Silver, Strontium, Thallium and Thorium). We suggest the EPA review the list of parameters that NRC requires in Table 2.7.3-1 of NUREG 1569 (also see language immediately above Table 2.7.3-1 that discusses the selection of parameters). Table 8 in the draft permit should more clearly specify if the analysis is to be performed for particulates or dissolved fraction. Finally, the EPA should clarify that gross alpha excludes both radon and uranium in accordance with drinking water MCLs.

5. Part II Section G. It appears the EPA is attempting to establish an experimental method to demonstrate downgradient waters won't be negatively impacted by residual contamination. However, the core testing described in this section is fraught with technical problems that will likely render the results meaningless. For example, it is not reasonable to draw conclusions based on testing a relatively finite sample for a finite period of time. Instead of attempting to develop an experimental method with no previous field verification, we recommend this entire section be deleted. In its place, EPA should rely on geochemical modeling, perhaps based in part on data collected from core samples, to ensure that any residual contamination of concern, if it exists, will not harm downgradient USDWs. We recommend that the EPA consider the NRC's and state's approaches to this matter since they have many decades of experience successfully regulating in situ mines.
6. Part IV. We are concerned that the EPA is attempting to develop a down-gradient monitoring scheme that is inconsistent with requirements currently implemented by any state program or by the NRC. We wonder why the EPA feels the need to implement such onerous standards when we know of no evidence that such drastic measures are warranted; even though commercial in situ mining has been utilized in the U.S. since the mid 1960's. We strongly encourage EPA to delete this entire section and consult with the various states who have primacy as well as the NRC to determine a course of action that is commensurate with the hazard. Implementation of this section will, in our educated opinion, significantly harm the economics of in-situ mining in the state of South Dakota.
7. Part V, Section E(4), pg. 33 requires 120% of the calculated volume be used. This statement isn't clear since I assume the EPA isn't requiring the cement be forced with pressure into the open hole. We assume the statement means the permittee must prepare at least 120% of the calculated volume. This practice will result in the waste/disposal of cement. We encourage the EPA to allow the permittee to prepare 100% of the calculated volume. Any remaining void should be top filled after the cement has cured.

8. Part VII, Section C(4)(d) states the permittee may use air to induce pressure during an MIT. Instead of using "air" we suggest the permittee be allowed to use "compressed gas" which could include air.

Part VIII, Section F(4)(b)(i), page 44, requires the water level at the perimeter monitor wells be consistently lower than baseline levels to demonstrate hydraulic control. While it is possible to generally maintain the water level at these measurement points lower than baseline, it will be impossible to keep the water levels below baseline values "consistently." For example, if a single downhole pump breaks down, a resulting pressure wave will quickly migrate out to the monitor well ring and could cause the local water level to temporarily exceed baseline. A temporary pressure wave like this does not indicate that hydraulic control has been lost. However, extended time periods with elevated water levels is an indication that hydraulic control has been lost or may be lost. We recommend the wording be changed to either require a specified percent bleed rate (typically 0.5 to 1%) or allow the permittee a specified time to bring the water level below the baseline level (on the order of one week).

Where is the ACTION ALTERNATIVE that that envisions a 4,000 well well field instead of 642 wells?

Comments on the Draft Class III Area Permit

9. Page 40, Part VII, Section C - DENR recommends EPA have an inspector on-site to witness the initial and ongoing mechanical integrity testing of the Class III Area Permit wells.

10. Page 40, Part VII, Section C.3 - South Dakota's Underground Injection Control Class II rule ARSD 74:12:07:18 requires a minimum 15 minute time period for pressure fall-off and wellhead pressure tests. Based on the rule and to ensure testing procedures are consistent with existing Class II wells in the vicinity of the proposed project, DENR recommends EPA require the internal mechanical integrity tests to run for a minimum of 15 minutes rather than the 10 minutes proposed in the draft permit.

11. Page 45, Section H - DENR recommends EPA add a fifth sub-section to this section stating the permittee is prohibited from injecting fluids received from facilities or operations other than those associated with the Dewey-Burdock Uranium In-Situ Recovery Project.
12. Page 72, Section D.11.i - Revise this section to include the following contact information for reporting oil and chemical releases to DENR. DENR Ground Water Quality Program, Spills Section, (605) 773-3296 or after hours at (605) 773-3231.

So in conclusion, I would like to ask the EPA that if you do grant this Class III injection well permit, that you insist upon two things. Before approving them, much more work should be done with pilot wells in this location and transparency with regard to distributing the results of those tests.
Secondly, I would ask that Powertech/Azarga must place a large sum of money -- I'm thinking millions of dollars -- in reserve or an escrow account for the eventual cleanup of this site that is likely to occur.

Since the recovery of the uranium is not 100 percent and they are not holding the other harmful elements out for production, arsenic, which is a known cancer-causing metal and contaminates wells, molybdenum and vanadium, et cetera, are other elements that could be extracted, but I see no indication within permits to recover anything other than uranium.

All that would be waste. We recycle plastics, glass, and cardboard. Why wouldn't it be feasible to insist on the recovery of all heavy metals and elements that are extractable from this process?

There's essentially no economically recoverable uranium left in the area to mine and why the TVA abandoned the site twice. This roll front is gone, mined out.

And as stated by others, the business model of Powertech is not actually uranium mining. But by their own admission, they lack funds to mine and even fulfill the requirements of the NRC, before they can mine, of closing those boreholes.

There should be very elevated levels of organified uranium and other metals in the Inyan Kara because of the contamination of the aquifer with microorganisms from open boreholes and decaying fence posts placed in the old boreholes so that -- and I emphasize this -- little recoverable uranium is there.

There should be minimum levels of actual mining uranium shown for the permit speciated and inorganic.

[...]

EPA should require additional pump tests. Existing data is admittedly incomplete. The EPA should also require, prior to permitting, no staged process. And also very important, this is EPA's first UIC permit. You've got to do it right, got to be careful what you do.

Letter ID	Commenter Name	Commenter Org.
513	[No name provided]	Individual
527	Ex. 6 Personal Privacy (PP)	Clean Water Alliance
528	Ex. 6 Personal Privacy (PP)	Aligning for Responsible Mining

546	Ex. 6 Personal Privacy (PP)	Oglala Sioux Tribe
553		South Dakota DENR
7445		Individual
7460 (5/8 Rapid City hearing)		Individual
7461		

(5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7642 (Hot Springs hearing)		Individual

Text
Class V wells are for non hazardous waste disposal What non hazardous material will be injected in these class V wells?
Another process issue is that EPA has gone through all sorts of contortions in its Fact Sheet on the Class V application in an attempt to define what is clearly a Class I well as a Class V well. The disposal would clearly take place above a USDW, the Madison formation, which is a large aquifer of broad use in the Black Hills. It is used by, among others, Edgemont and Rapid City. The EPA justifies its labeling of Class I wells as Class V wells by treating them as Class I wells for construction and monitoring purposes and by requiring the company to treat the injectate until it is "at or below radioactive waste standards" (Class V Draft Area Permit Fact Sheet, p. 8). The fear of many people in the area, as expressed in the public hearings, is that this is not sufficient, and our water would become irretrievably contaminated. [...] Next, deep disposal well integrity should be tested at least once per year, not as infrequently as every 5 years, as EPA suggests in the Class V Fact Sheet (p. 56). And injectate should be monitored and analyzed regularly, as the characteristics of wellfields will differ, and as the functioning of the RO system may also vary in effectiveness. Records should be maintained until at least five years after the end of the project, in case problems develop over time, not for as little as three years, as the Fact Sheet suggests (p. 59). Similarly, EPA calculations indicate that "the pressure within the Minnelusa injection zone resulting from injection activity is **not** [bold in original] below the critical pressure needed to move fluids out of the Minnelusa injection zone into the Madison Formation" (p. 28). The EPA correctly requires the company to recalculate in light of this fact, but must also hold firm if the resulting injection rates are even near the critical pressure, with the potential result that the permit would not be granted. Again, it is critical to protect the Madison aquifer, and the nature of the upper portion of that aquifer is particularly concerning due to the presence of rapid water movement.
3. COMMENTS SPECIFICALLY RELATED TO DRAFT CLASS V UIC AREA PERMIT A. Powertech is required to demonstrate that the injectate will be contained within the injection interval by confining zones above and below. The upper confining zone is identified as the Opeche shale which overlies the Minnelusa Fm. The lower confining zone is identified as the lower part of the Minnelusa Fm. **Calculations performed by EPA staff indicate that the injection induced pressure within the injection zone will exceed the critical pressure needed to move waste fluids into the underlying Madison USDW for a distance of 3.5 miles from DW1 and 2.5 miles from DW-3. This means that there is a significant potential for waste fluid injectate to migrate downward through natural geologic pathways (faults, fractures, high permeability zones) or anthropogenic features (abandoned oil/gas wells). There is significant disagreement on this between EPA and Powertech based on very different calculations of the critical pressure.** **There is also significant uncertainty regarding the porosity of the injection zone, the elevation of the potentiometric surface of the Madison Fm. and the effect of pumping by two proposed Madison water supply wells. These data are necessary for calculating the distance over which the injection-induced pressure exceeds the critical pressure needed to move waste fluids downward to the Madison. To be conservative the Area of Review should extend at least 3.5 miles from each proposed class V well.** Currently the lack of hydrologic data for the Minnelusa Fm. injection zone and, especially the Madison Fm. results in uncertainty that is too great and does not support a decision that there is an adequate lower confining zone. It may also mean that more than 4 injection wells will be required to limit injection rates and pressures. B. Lack of Site Specific Data. Calculations were made to estimate the radius of fluid displacement, which is an indication of how far from the injection well the waste fluid will move. The calculations were based on a simple model which consider only porosity and thickness of the injection zone. **Powertech used a porosity value of 21% and EPA used a porosity value of 10%. Neither are based on site specific data**. These analyses did not consider transport of the waste fluid plume by ground water flow. The waste fluid plume will not be static –but will migrate in a downgradient direction once it is emplaced in the injection zone. C. EPA is relying on data that will be obtained from drilling and testing the two proposed Madison water supply wells (***which have not been approved by SD DENR***) and drilling and testing the Class V wells. EPA is also relying on data on formations underlying the Minnelusa from well DW-1 ***if*** it is drilled to the base of the Deadwood Fm. as Powertech indicated in the Class V permit application ***(unclear if Powertech still plans to do this).*** **This results in a difficult problem if Powertech cannot obtain any data hydrologic/ geologic on the Madison USDW or if data obtained indicate that the proposed injection zone does not meet the criteria specified in UIC regs. It would be very difficult for EPA to deny a permit once the wells are drilled and completed. This means that more data is needed before a permit is issued.** [...] G. **Class V fact sheet. What about the arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver?** The EPA Document states: 7.8.1 Hazardous Waste Permit Limits The Area Permit requires the injectate to be below the concentrations for the hazardous waste toxicity characteristic limits found at 40 CFR § 261.24 Table 1. The Table 1 constituents that could be expected in the injectate are the following metals: arsenic, barium, cadmium, chromium, lead, mercury, selenium and silver. The Area Permit requires that the injectate samples be analyzed quarterly for these metals. Arsenic and selenium are present in the uranium ore deposit mineralogy. The hazardous waste permit limits the injectate must meet are listed in Table 19. Permit SD52173-00000 51 Dewey-Burdock Class V Draft Area Permit Fact Sheet USNRC, NUREG-1910, Vol. 1, GEIS, Section 2.7.2 describes typical liquid waste from ISR facilities: Liquid wastes from ISL facilities are generated during all phases of uranium recovery; construction, operations, aquifer restoration, and decommissioning. Liquid wastes may contain elevated concentrations of radioactive and chemical constituents. Table 2.7-3 shows estimated flow rates and constituents in liquid waste steams for the Highland ISL facility. Liquid waste streams are predominantly production bleed (1 to 3 percent of the process flow rate) and aquifer restoration water. Additional liquid waste streams are generated from well development, flushing of depleted eluant (the fluid that removes uranium minerals from the resin) to limit impurities, resin transfer wash, filter washing, uranium precipitation process wastes (brine), and plant wash down water. Table 19. Hazardous Waste Concentration Limits for Class V Deep Disposal Wells Constituent Total Metals Concentration Limit (mg/L) Arsenic 5.0 Barium 100.0 Cadmium 1.0 Chromium 5.0 Lead 5.0 Mercury 0.2 Selenium 1.0 Silver 5.0 7.8.2 Radioactive Waste Permit Limits

The Area Permit requires that the injectate be treated to decrease radionuclide activities to levels below the established limits for discharge of radionuclides to the environment, which are listed in 10 CFR Part 20, Appendix B, Table 2, Column 2. These limits are presented in Table 20. Waste streams containing radionuclides below these regulatory limits are not classified as radioactive waste per UIC regulations.

The radioactive constituent limits included in Table 20 are the limits set in Table 16 of the Area Permit that injectate will have to meet. Liquid wastes will be treated to achieve uranium effluent limits in the ion-exchange columns. It is not anticipated that thorium-230 and lead-210 will be present at concentrations above the limits; however, if concentrations are above the limits, the effluent will be treated as necessary to satisfy the Table 16 limits. Radium-226 will be treated in radium settling ponds by adding barium, which will cause the radium to precipitate out of solution.

Table 20. Radioactive Effluent Limits for Class V Deep Disposal Wells.

Radionuclide Effluent Limits

10 CFR 20 App B, Table 2, Column 2 µCi/ml Permit Limit pCi/l

Lead-210 1.00x10-8 10

Polonium-210 4.00x10-8 40

Radium-226 6.00x10-8 60

Uranium (Natural) 3.00x10-7 300

Thorium-230 1.00x10-7 100

EPA and Powertech documents continues to rely on Powertech's intent to dispose of its liquid chemical waste via a Class V underground injection control permit. However, the disposal of waste, and particularly radioactive waste, below the lower-most aquifer that serves as an Underground Source of Drinking Water (USDW), as proposed here, is not a Class V activity. Rather, such disposal is a Class I underground disposal well. Compare, 40 C.F.R. § 144.80(a) (Class I – deep injection) with 40 C.F.R. § 144.80(e)(Class V – shallow injection).

Further demonstrating this fact is the SD DENR which classifies any well that proposes to be used for injection of either hazardous or non-hazardous liquid waste, or municipal waste, as a Class I UIC well. Importantly, the State of South D 9 akota specifically and unambiguously precludes operation or construction of any Class I UIC wells within its borders. Indeed, the applicable regulatory provision is even broader, stating in its entirety: "Class I and IV disposal wells prohibited. No injection through a well which can be defined as Class I or IV is allowed." S.D. Admin. R. § 74:55:02:02 (emphasis added). This is a significant issue, which the EPA analysis must address.

On December 8, 2016, Powertech expressed concern that removing the Deadwood Formation as an option for injection of treated ISR waste fluids would greatly diminish the capacity for waste fluid disposal. A few days later, Powertech withdrew its request to inject into the Deadwood Formation.

Therefore, based on Powertech's own statements, its proposed capacity for waste fluid disposal is greatly diminished which increases the likelihood of land application. However, the Application does not address the cumulative impacts of land application of toxic waste fluid including selenium which is highly toxic to people and wildlife. These impacts require a full and complete analysis.

Lastly on this point, the EPA and Powertech documents continues to rely on Powertech's intent to dispose of its liquid chemical waste via a Class V underground injection control permit. However, the disposal of waste, and particularly radioactive waste, below the lower-most aquifer that serves as an Underground Source of Drinking Water (USDW), as proposed here, is not a Class V activity. Rather, such disposal is a Class I underground disposal well. Compare, 40 C.F.R. § 144.80(a) (Class I – deep injection) with 40 C.F.R. § 144.80(e) (Class V – shallow injection). Further demonstrating this fact is the State of South Dakota's Department of Environment and Natural Resources, which classifies any well that proposes to be used for injection of either hazardous or nonhazardous liquid waste, or municipal waste, as a Class I UIC well. See, Chart located on the State of South Dakota's website: http://denr.sd.gov/des/gw/UIC/UIC_Chart.aspx. Importantly, the State of South Dakota specifically and unambiguously precludes operation or construction of any Class I UIC wells within its borders. Indeed, the applicable regulatory provision is even broader, stating in its entirety: "Class I and IV disposal wells prohibited. No injection through a well **which can be defined as** Class I or IV is allowed." S.D. Admin. R. § 74:55:02:02 (emphasis added). This is a significant issue, which the EPA analysis must address.

Comments on the Draft Class V Area Permit

3. Page 4, Section A.1.d - DENR recommends EPA evaluate the total dissolved solids (TDS) concentration on a well-by-well basis due to the variability of TDS concentrations in the area and to be consistent with the existing aquifer exemption process for the Class II disposal wells in the vicinity of the proposed project.
4. Page 27, Section D - DENR recommends EPA have an inspector on-site to witness the initial and ongoing mechanical integrity testing of the Class V Area Permit wells.
5. Page 27, Section E - DENR concurs with the permit limitation described in Section E - Class V disposal should only be authorized in non-USDWs (Underground Source of Drinking Water with TDS greater than 10,000 mg/L).
6. Page 28, Section K - DENR recommends EPA add a third sub-section to this section stating the permittee is prohibited from injecting waste fluids received from facilities other than from operations associated with the Dewey-Burdock Uranium In Situ Recovery Project.
7. Page 38, Section A- This section states EPA will not approve the plugging and abandonment (PA) of any Class V well until all Class III wellfields have been decommissioned by the Nuclear Regulatory Commission (NRC). DENR recommends EPA revise this section to include the authority to authorize the immediate PA of a Class V well in the event a well loses mechanical integrity or otherwise fails and threatens a USDW.
8. Page 44, Section D.11.i - Revise this section to include the following contact information for reporting oil and chemical releases to DENR. DENR Ground Water Quality Program, Spills Section, (605) 773-3296 or after hours at (605) 773-3231.

Subject: Dewey-Burdock Project Question

Greetings --

We are getting conflicting information here in the Black Hills of South Dakota, and I'm hoping you can clarify things. The topic is deep disposal wells in Fall River and Custer Counties in the general area of the Dewey- Burdock uranium mining project. I am preparing expert testimony for the draft permit process and want to be operating from accurate information.

Linsey McLean, who met with you in December, says that you indicated that there are as many as twelve deep disposal wells planned in the general area of the Dewey-Burdock project. The recently issued draft permit for the project says that there will be two to four DDWs. Are there other projects planned that we haven't heard about here yet? Or is there some other way to account for the 8 "missing" DDWs?

Thanks much for your help in clarifying things.

My second concern has to do with the aquifer restoration plan. According to Azarga/Powertech, the company proposes to restore the contaminated aquifers by treating water pumped from production wells using reverse osmosis, membranes under high pressure, thus removing 90 percent of the dissolved constituents. Restored water will then be returned to injection wells, and the RO reject, the brine, will be disposed of in the Class V wells.

The company has concluded that minimal benefit, if any, is derived from the groundwater sweep prior to deep well injection and suggests eliminating groundwater sweep as an unnecessary, ineffective, and consumptive step in the restoration process.

According to the EPA, "High pressure reverse osmosis can only be employed after groundwater sweeping, because high concentrations of contaminates during the initial stages of the restoration process tend to disrupt and rupture the RO membranes."

GENA PARKHURST: Good evening, Judge and EPA officials. My name is Gena Parkhurst -- G-E-N-A, P-A-R-K-H-U-R-S-T -- and I live in Rapid City. And I spoke yesterday, and I'd just like to clarify a comment that I made about the number of drinking water wells in the Minnelusa aquifer.

After speaking with Ken Buhler -- B, as in boy, U-H-L-E-R -- of the South Dakota Department of Environment & Natural Resources, or DENR, he said that in November of 2014, the DENR started identifying which aquifer a well draws from on their permit forms, and this means that for many wells in use it is unknown which aquifer they draw from.
Mr. Buhler said there are hundreds to thousands of domestic wells using water from the Minnelusa Aquifer. The exact number of wells is unknown at this time. However, Mr. Buhler said it is known that there are 196 appropriated water rights permits in the Minnelusa, which include municipal, commercial, industrial, and housing use.
In addition, the USGS -- that's United States Geological Survey -- Water-Resources Investigations Report 01-4119 abstract starts with this statement: "The Madison and Minnelusa aquifers are two of the most important aquifers in the Black Hills area of South Dakota and Wyoming."
The USGS Water-Resources Investigations report 01-4226 abstract begins with: "The Black Hills are an important recharge area for aquifers in the northern Great Plains. The surface-water hydrology of the area is highly influenced by interactions with the Madison and Minnelusa aquifers, including large springs and streamflow loss zones."
In Valois Shea's presentation yesterday, she mentioned that a Class V injection well permit could not be used for an aquifer that is an underground source of drinking water, if I understood correctly.

The Minnelusa is being used as a such, so I think it is safe to say that it is considered an underground source of drinking water.

The EPA's website defines an underground source of drinking water as the following: One, it supplies any public water system, which the Minnelusa does; two, the source of water contains a sufficient quantity of groundwater to supply a public water system, which it appears the Minnelusa does; three, it currently supplies drinking water for human consumption, which it sounds like the Minnelusa does; and four, it contains fewer than 10,000 milligrams of total dissolved solids, which according to USGS tables that I found online applies to most parts of the Minnelusa; and five, the source of water is not an exempted aquifer, which I believe the Minnelusa is not.
So I just wanted to update you with those findings since yesterday. And I thank you for your time.

The ability to purify the wastewater to Class V standards is not being considered. Simply putting the wastewater in a pond to air out the radon gas and then precipitating out the radium with barium chloride does not remove the other radioactive and toxic components.
The toxic metals that have been mobilized are still there. And that includes vanadium, strontium, thallium, thorium, some radioactive forms of lead, and organified uranium that has been documented to build up in recycled wastewater and is not recoverable by ion exchange. And all are radioactive as well as toxic as heavy metals in biochemistry.

This does not constitute the level of safety equal to stormwater or sewage effluent that a Class V well is limited to. If Powertech were able to clean this water to levels they boasted about in the NRC and ASLB hearing, so pure you could almost swim in it, then that water would be valuable for agriculture, irrigation, and farm use in this high, dry area of the country.

It does not meet the qualifications for a Class V UIC, not for the concentration of toxic metals and radioactivity of such.

And I want to pick up a little bit on what Ms. Parkhurst was referencing, which is the wide use of the Minnelusa aquifer for drinking water purposes.

I think it's been well documented. I would ask the EPA, how many wells have you determined through surveys to be downgradient from this Dewey-Burdock site? I know you can't answer questions tonight, but I'd like to have that in the record.

Because of this drinking water use of the Minnelusa, I would ask that the EPA require the Class V injection well wastewater to meet drinking water standards, not hazardous waste standards as is currently in the draft permits.
I did a little research and will read to you some of the numbers that I came up with. Right now, the hazardous waste concentration limit in the Class V permit, for instance, for arsenic is 5 milligrams per liter.
If you follow the maximum contaminant -- the MCL for drinking water for arsenic, it would be .01. So that's a factor of 500 times more than what's in the MCL, the primary MCL.
I could go down the list. Barium, you guys give them 100; the MCL is 2. So that's 50 times. Cadmium is 1, and then in your -- in your current limit, it's .005 MCL. So that's 200 times more than the drinking water criteria. Chromium, you gave them 5; it's .1 MCL. That's 50 times. Lead doesn't have a primary MCL, as you know, but it has -- there's a new lead rule, we've heard all about Flint. That concentration is .0015 milligrams per liter, and you guys gave them 5. So that's 3,333 times what's in the drinking water regs.
Mercury, selenium, silver.
I'm wondering why uranium is not in there. I know you have a uranium radioactive standard measured in microcuries per milliliter, or whatever the units are. But there is an MCL for uranium, and it's .03. So why isn't that in the standard -- in your current concentration limit for the Class V wells?
So these are just some of my recommendations. And furthermore, I know that Powertech can meet these levels. They can treat these waters to these kinds of levels. In fact, the EPA's best available treatment, the BAT for Small System Compliance Technologies, SST -- SSCT, it can be found in your final radionuclides rule 40 C.F.R. 141.66, specifies that at least three technologies should be used in combination to achieve these low levels.
So not only should Powertech be required to use reverse osmosis, they can also -- they would also couple this with a tertiary type of treatment, including activated carbon and ion exchange.
All of these things are technologically possible, in which case we would be -- or they would be injecting drinking-water-quality water because people are drinking this water, and I think that's where this should end up.
I'm an engineer. I'm practical. I'm trying to help you guys meet the criteria. I mean, we've heard tonight and yesterday all the heartfelt -- people's, you know, we're not going to contaminate the earth, and we don't want that to happen.
But I know we have to have rules, and I'm trying to help you guys pick the right rules so that we can maintain what we need as far as drinking water quality in this area.
So thank you very much.

Present ion exchange technology will not remove organified heavy metals, including uranium. Disposal of this waste fluid should require permitting for a Class I well, not a Class V well

Letter ID	Commenter Name	Commenter Org.
217	Ex. 6 Personal Privacy (PP)	Individual
470		Individual
527		Clean Water Alliance
528		Aligning for Responsible Mining
7461 (5/9 Rapid City hearing)		

	Ex. 6 Personal Privacy (PP)	Individual

Text
Subject: Public comment for the proposed EPA actions at the Dewey-Burdock site Proposed Underground Injection Control (UIC) Program actions at the Dewey-Burdock site located near Edgemont, SD. These actions include two draft UIC permits and a proposed aquifer exemption decision. PUBLIC INFORMATION SESSIONS AND HEARING Written Statements PROPOSED DEWEY-BURDOCK PROJECT ISL MINE NEAR EDGEMONT, SOUTH DAKOTA ENVIRONMENTAL IMPACT STATEMENT The SEIS Fails to Consider Connected Actions [ATTACHMENT: "EPA_PUBLIC.May17.doc; P_TriangleDeweyBurdockBHAD.png"; "A_cwa_sec404doc.pdf"; "B_Beaver Creek Final Fecal Coliform TMDL.pdf; C_SoBlackHills.pdf"; "D_The_Black_Hills_Hydrology_Study.pdf; E_DeweyBurdock.jpg; F_hwysdakotaDewey.jpg"; "G_map_Beaver_Creak_Watershed.pdf"; "H_source_of_missouri_river_missouri_basin_map-1200.jpg"; "I_Dewey Potential Wellfield.pdf"; "J_Dewey Wellfield Wide.pdf"; "K_GPS Drainage Though Dewey Well Field.png"; "L_Dewey Wellfield Medium.pdf; M_GPS Cls-up Dewey Well Field.png"; "N_Dewey Wellfield Closeup.pdf"; "O_GPS Wide Shot DeweyBurdock.png"]
What is half-life of constituents going into the deep injection wells?
The applicant's project has also changed in important respects between the time the NRC began considering it and the time the EPA began considering it. Examples include: • NRC documents consider the use of 4,000 gallons of water per minute for the mining and reclamation process. The EPA applications consider the use of 9,000 gpm, more than twice as much water. • This project was originally described as involving 1,500 injection, recovery, and monitoring wells. By the time the EPA issued its draft permits, this had grown to 4,000 wells, nearly three times more wells. • The projected bleed rates have varied over time, from .5% of the water used to 17% of the water used. In addition, the reverse osmosis process makes at least 30% of the water put through the RO process into waste, and this is not fully considered in the EPA documents. This seriously weakens all the assumptions and calculations on water use in the Class III draft permit and in the Draft Cumulative Effects Analysis. • Documents prepared by Petrotek for Powertech/Azarga set subsurface water movement rates at 6 to 7 feet per year (without offering peer-reviewed sources). NRC documents set the transmissivity rate in the Fall River formation at 255 $ft.^2$ per day and in the Lakota formation at 150 $ft.^2$ per day. Dr. Perry Rahn's 2014 article, mentioned above, concluded that the average ground water velocity for the Lakota and Fall River formations in the Dewey-Burdock area was 66.1 ft./year. But, he said, groundwater velocity in the Inyan Kara Aquifers at the Dewey-Burdock site might be as much as 5,480 feet per year – over a mile -- which "might indicate fast groundwater movement through very permeable units or through fractures," although he considered this number "very high." The draft permits omit this critical information that could have very real impacts on wells that are downgradient of the proposed mine site. This issue is critically important, and further independent studies should be done before any permit is issued. • Powertech talked about the possibility of doing open pit mining at the NRC hearings, and this possibility is not raised in the EPA documents. These changes in the parameters of the proposed project go to the heart of the information that informs the process in this case. The NRC and the EPA have had different projects submitted to them. The processes are not functional equivalents, and consideration of both projects would not be redundant – it would be sensible. The EPA should begin a thorough NEPA process to assess the project as it is currently proposed. [...] This letter provides comments from Clean Water Alliance on the EPA's draft Underground Injection Control permits for the proposed Dewey-Burdock uranium project, as well as the associated proposed aquifer exemption. We oppose the EPA's proposed issuance of permits and an exemption for the following reasons. There are a number of problems with the EPA's documents and with the process surrounding the draft permits and draft exemption. The items we have identified as key issues are explained below. The first part of the comments will discuss the problems with EPA documents. We will then turn to the EPA process and omissions. Then we'll discuss environmental justice and National Historic Preservation Act issues. And finally, we'll consider other types of issues. DOCUMENT ISSUES A glaring problem with the EPA's documents on the proposed project is that large portions of the documents used to support the EPA's draft permits are based on other permits that do not exist or that were prepared inadequately. For example, the EPA's documents defer repeatedly to the NRC's SEIS for the Dewey-Burdock project. This document echoed Powertech/Azarga's submissions in all important respects, rather than the NRC taking a hard look at the situation. The EPA documents also refer repeatedly to the requirements of a state NPDES permit that has not even been applied for. And they refer frequently to a state Large Scale Mine Permit and a state Groundwater Discharge Permit (GDP) that have just barely begun the hearing process, are on hold, and are far from issuance. To rely on non-existent regulatory instruments and what are essentially the applicant's documents for large portions of the permitting documents indicates both problems with the regulatory process and a lack of analysis of the proposed mine, deep disposal wells, and aquifer exemption. These non-existent "permits" are relied upon for major aspects of the proposed mine and associated facilities. For example, the GDP and NPDES permits are relied upon for statements that the land waste disposal option will be safe and that there will be no contamination. This runs counter to the research on this topic, which indicates a build-up of highly-toxic selenium at a similar site. And then the EPA signs off on Powertech's proposal to grow crops on the land disposal sites without any analysis of the safety of this practice for wildlife, domesticated animals, or humans. This is a problem. Similarly, the EPA relies upon an "NPDES permit" that hasn't even been applied for to discuss the Emergency Preparedness Program and Environmental Management Plan that are the basis of its discussion of impacts from spills and leaks, worker safety, and other topics. The agency concludes "Because the project site will be reclaimed and released for unrestricted use," there won't be impacts to land use. It's a long way from a non-existent "permit" to full reclamation twenty years down the line. This use of speculative information should not be allowed as part of the application, cumulative effects, draft permit, or aquifer exemption documents. Some other examples of the reliance upon non-existent "permits" for key aspects of the Cumulative Effects analysis can be found pages 36, 39, 51, 53, 54, 55 (3 times!), 60, 61, 67, 71, 72 (3 times!), 74, 75 (3 times!), 79, 83, 88, 96, 109, 125, 132, 137, 138, 139, 140, 142, and 143. Until if and when the suggested permits are issued, information based on non-permits should be omitted from the EPA's documents. A realistic, complete EPA analysis should be done.
F. The permit application states that there will no monitoring using dedicated monitoring wells to monitor injectate migration based on "site-specific conditions".
KRISTINA PROLETTI: Proletti. So mine is more of a suggestion. I know you can't answer questions because I heard that earlier. Has anyone done any 3D modeling of the existing injection wells, the toxic injection wells of the toxicity plumes? I know you can do those in Vulcan or Civil 3D.

If that hasn't been done, you need to it. It'll be cheaper in the long run to get that taken care instead of waiting for it to be a Superfund site.

The other thing is, if you do let this move forward, I guess, so to speak, if that's the word you want to choose for this, any leach ponds, I would require to have a double detection set, like a double leach detection layer, like a secondary. In the EPA, you have guidelines for that.

And the other thing I would say, in the modeling, you can actually put in the rock type. Like, we are mostly sandstones and limestones. They do crack. And so there's, like, the 25-year, 50-year, 100-year modeling progressions, and you can choose a percentage cracks in your rock and whatnot. And it just seems like if it's not done, you need to.

So, thanks.

Letter ID	Commenter Name	Commenter Org.
262	Ex. 6 Personal Privacy (PP)	Individual
461		Individual
488		Individual
527		Clean Water Alliance

546	Ex. 6 Personal Privacy (PP)	Oglala Sioux Tribe

7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7460		

(5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7460 (5/8 Rapid City hearing)		Individual

Text
EPA should require the additional pump tests that will be necessary (the existing data is admittedly incomplete) – NRC is requiring these tests prior to operations – EPA should hold the same requirement prior to full permitting under UIC (EPA should not be pressured to permit this project in order to obtain the necessary data on its environmental safety parameters).
I am writing to express my concern for a proposed mining activity in the southwest corner of Custer County, S.D. and northwest corner of Fall River County S.D., in and around the area of Dewey and Burdock S.D. The proposed in-situ mining of uranium, water extraction for that purpose, processing, and disposal of waste, in my opinion, has not been adequately researched prior to consideration for permitting this operation. The potential impact to life and environment possess a significant threat. I learned of this concern from public opinion, the Black Hills Clean Water Alliance (BHCWA), and the population that would be impacted by this activity. Unable to attend any public hearings that addressed all the concerns and their recording, I explored these issues by reading a formal research report compiled by BHCWA. I believe there is, validity for opposition; particularly that detailed in the report performed by Dr. Hannan LaGarry and his assistants, which was recorded and submitted to the NRC in November 2014. A copy of Dr. LaGarry's research is attached for your consideration. This report captured my attention mainly because of my education; I am a geological engineer with an emphasis in hydrogeology. I found this research/report to be quite appropriate and significantly accurate enough to reconsider any permits that may have already been issued or are now being considered to allow this proposed mining, water extraction, and waste disposal to take place. [...] [ATTACHMENT: "WRITTEN SUPPLEMENTAL TESTIMONY OF DR. HANNAN LAGARRY"]
I have been told your agency has not denied any of these · permits .... even though we ALL know of their toxic harm and ruin to our environment. So, I guess what I am asking you to do is to DELAY any permits until you get all of the facts. Many other people here will be talking about the scientific research that still needs to be done...
As part of any new or continued process, the EPA should consider more than one alternative action. Although there are places where more than one alternative is considered for a minor action, the major actions only offer one alternative – giving the company a Class III permit, a Class V permit, and an aquifer exemption. The agency must also rely on its own work, not just the information provided by Powertech, for critical information such as the "maximum volume of liquid wastes injected into the deep injection wells during aquifer restoration" (Cumulative Effects, p. 76). This number is central to the discussion of the Class V wells and should be determined independently of the applicant. If this number is wrong, so are all the assumptions and mitigation measures offered in the draft permits and other project documents. [...] The other glaring process issue is that the EPA has rushed the process, creating draft permits and exemption without going through the proper rule-making process. This is the first time that the EPA has issued draft permits for Class III wells for an ISL uranium mine. It seemed to be in a hurry to do so. There has been extensive discussion of the process with the applicant and the uranium industry, resulting in a procedure, guidance, and draft documents. The draft permit and draft aquifer exemption documents often mimic others, including documents from the applicant, rather than creating a thoughtful analysis of the situation. (See Document Issues). However, there has been no public process on the de facto regulations created and used to craft the draft permits and draft exemption – no public notice, no public hearings, no analysis of public input. This violates the Administrative Procedure Act (APA), as well as the spirit of American government If allowed to stand, the entire process would fail to fully consider the project, provide adequate public input, leave western South Dakota with contaminated water, set a bad precedent for future proposed projects, and violate the APA. Process issues are not, however, the only shortcomings of the draft documents for the Dewey-Burdock project. There are also notable omissions. [...] We contend that, if the RO process and the actual costs of full aquifer restoration were considered, this project would not be feasible economically, technically, or environmentally. The history of the uranium industry includes abandonment of almost 200 mines and prospects in the southern Black Hills and over 3,000 in the Upper Missouri River basin, plus thousands more in the Southwest. Given this history, the applicant should be forced to provide an economic analysis using current uranium prices that shows that this project is feasible before they are given permits or an exemption. They should also provide a copy of a contract with a buyer for the uranium that would be produced at the mine. Even at a modern ISL mine, the Smith Ranch-Highlands mine in Wyoming, aquifer restoration took place for 10 years, and the water quality was about the same as when mining ended, according to a Violation issued by the Wyoming Department of Environmental Quality. Part of the reason appeared to be cost. This situation should not be allowed to happen again. A detailed analysis that includes strict, regular, on-site regulatory enforcement must be an important part of the permitting and exemption process. The EPA wrongly leaves the completion of key tests until after a permit would be issued. These omissions include: • wellfield delineation drilling, • establishment of current water baselines, • identification of faults, • tests of the integrity of the confining zones, • identification of leakage in the Fuson confining zone, • how to deal with a 10" leaking TVA well, • information on unsaturated groundwater flow (this should be done in real life, not using a model that can be easily manipulated), • collecting drill cores to determine the characteristics of down-gradient aquifers' geochemistry, • measurement of confining zone thickness, • all of the work leading up to and including the Authorization Data Package Reports (Class III Fact Sheet, pp. 70-71), • radiological impacts analysis (independent of Powertech analysis), • demonstration of the effectiveness of vertical and horizonal monitoring systems, • identifying and creating a contract for disposal for 11e wastes and solid wastes, • the establishment of down-gradient compliance boundary wells (these should not be moved in case of an excursion, but should be maintained at their original locations), and • pump tests. It appears that additional drilling in the alluvial deposits to determine whether there is upwelling groundwater should also be done before further regulatory action is taken. The "several" drillholes suggested in the Class III Fact Sheet seems inadequate, but the number of drill holes is not specified (p. 39). None of this information will be subject to public review or comment, and key information would become available only after permits have been granted. This turns the regulatory process on its head. All testing should be done, subject to professional review, public review and comment, before any draft permit or exemption is issued. [...] As mentioned above, modeling is a weak alternative to on-the-ground testing. The EPA should certainly not rely exclusively on models for any decision or requirement in the case of such a complex, controversial project – especially models developed by or for Powertech. There should be independent analysis of any information currently left to modeling. As the EPA notes in the Cumulative Effects Analysis, "there is inherent uncertainty in the results" (p. 108) when modeling is involved.

V. INADEQUATE HYDROGEOLOGICAL ANALYSIS TO ASSESS POTENTIAL IMPACTS TO GROUNDWATER

The EPA analysis fails to provide sufficient information regarding the hydrologic geological setting of the area. As a result, the documents and information provided, ding the data included in the application materials, similarly fails to provide sufficient information to establish potential effects of the project on the adjacent surface and ground-water resources, as required.

As with the NRC process, EPA relies on the applicant to submit adequate hydrogeologic data – but only **after** the public process is completed, after a final permit is issued, and with no chance for any public review. This approach violates the SDWA, EPA's UIC regulations, NEPA, and the APA because of the lack (and deferral of collection and review to a later date) of necessary data and analysis to ensure a credible review of impacts to groundwater. The evidence in the record demonstrates that the applicant has not conducted the necessary studies to identify "significant discontinuities, fractures, and channeled deposits."

This issue is addressed head-on by Dr. Moran, who provided expert testimony on the significant contradictory evidence in Powertech's data. Exhibit OST-001, at 18-22. Specifically, Dr. Moran opines on the overwhelming body of evidence undermining the conclusion that the production zone is hydraulically isolated from surrounding aquifers. Id. at 18-19. Dr. Moran further demonstrates that numerous potential pathways for groundwater conductivity, including inter-fingering sediments, fractures and faults, breccia pipes and/or collapse structures, and the 4000 to 6000 unidentified exploration boreholes present at the mine site. Id. at 20. Dr. Moran concludes that "these inconsistencies make clear that Powertech . . . failed to define the detailed, long-term hydrogeologic characteristics and behavior of the relevant Dewey-Burdock aquifers and adjacent sediments." Id.

The lack of data extends to the lack of analysis of evidence of "fault zones" in the proposed mining area (Exhibit OST-001, p. 20-21) as well as the existence of a "trench" in the potentiometric surface of the Fall River aquifer. Id. at 21. Breccia pipe formations and collapse features round out the list of potential migration pathways for which the application fails to address. Id. at 21-22.

Similarly, Dr. Moran's attached Rebuttal Testimony reinforces this issue, pointing out that Powertech's own witnesses in the NRC process have contradicted the scientific integrity of the pump test data which form the basis of the applicant's analysis. Exhibit OST-018 at 4. The Powertech consultants also contradict themselves with regard to the impact of the unidentified boreholes, arguing in some places that they may have closed by themselves, but then also that they are open, and that the effect of the boreholes have rendered the existing pump test data suspect. Id. at 3. Further, Dr. Moran affirms that the data currently forming the basis of the hydrogeological analysis underpinning the EPA's draft permits is "inadequate to establish a hydrogeological … baseline." Id. at 3. Dr. Moran concludes based on an extensive review of the information presented, including conclusions by every other scientist (except Powertech's) that has reviewed the historic pump tests at the site, that the supposed aquitards at the site are indeed leaky. Id. at 6. Dr. Moran goes into extensive detail as to the particular bases for the lack of acceptable industry-standard methodology and assumptions employed by Mr. Demuth in his conclusions as to the lack of confining ability of the formations at the site. Id. at 6-7.

These issues of fluid containment were also explored during the NRC hearing, during which serious question was cast on whether the existing analysis and assumptions relied upon by the applicant could demonstrate an ability to contain the mining fluid. As a starting point, Powertech's witness Mr. Lawrence readily admitted that in order to ensure containment of the fluid, the operator would need for the Fuson Shale to be relatively impermeable. August 20, 2014 Transcript at p. 1047, lines 20-23. However, as observed by Judge Barnett, "[i]nterpretations of both the 1979 and 2008 pumping test results were found to be consistent with a leaky confined aquifer model. … Based on the results of the numerical model, the Applicant concluded that vertical leakage through the Fuson shale is caused by improperly installed wells or improperly abandoned boreholes. So it does appear in the FSEIS that it acknowledges that it is leaky, whether it is coming from boreholes or whatever else, it is leaky." Id. at p. 1050, line 18 to p. 1051, line 5. In response, NRC Staff witness Mr. Prikryl responded: "Yes, that's correct." Id. at p. 1051, line 8. Applicant witness Mr. Lawrence also agreed: "Yes, there were certainly conditions that demonstrated communication." Id. at 1051, lines 15-16.

The applicant witness Mr. Lawrence attempted to explain that such a "leaky" condition would have to be rectified in order to successfully contain the mining fluids. In doing so, applicant witness Mr. Lawrence stated "[t]hat goes back to the development of the wellfield data package. If you run a specific test in the area that you plan to mine, and identify leakage that is occurring, particularly if you can identify that it is an improperly abandoned borehole or improperly constructed well, as was the case in these tests, you can remedy that situation, plug the borehole, rerun the tests and show that basically you have retained confinement." Id. at p. 1051, line 22 to p. 1052, line 5. Critically, however, Mr. Lawrence then admitted that any such additional work of actually demonstrating the ability to contain the fluid would occur "outside of the FSEIS." Id. at p. 1052, lines 6-8. This admission is critical because it demonstrates that, although the applicant has admitted that impermeability of the Fuson shale is critical to effective fluid migration, and that the Fuson shale is leaking, all additional review of that significant problem will be deferred until after the EPA's draft permit process, and after any ability of the public to review and/or comment on this critical information.

Such a scheme negates the ability of the public to provide meaningful comment on the EPA's UIC permitting process. The applicant's materials and EPA draft permits provide no information on where these mysterious leaking boreholes are, or why the applicant and EPA could not have conducted available analyses described by Dr.Moran's written expert testimony to demonstrate whether they in fact could find and plug the boreholes, rerun the test(s) and demonstrate the ability to retain confinement. This lack of analysis unacceptably leaves the public in the dark as to whether this mitigation will work or what the potential impacts may be should the remedy not be successful.

Upon further questioning by Judge Barnett, the applicant witness Mr. Demuth admitted that the applicant's test data did show a lack of sufficient confinement at least in portions of the project area "where we have a well which is completed in both zones and allows it to communicate." Id. at p. 1054, lines 11-13. In that case, Mr. Demuth states, "there may be one or two unplugged exploration boreholes which are identified in the application. So in that area, the wellfield, any wellfield test is going to have to be examined very carefully." Id. at 1054, lines 12-17. Thus, the applicant witnesses admit that sufficient study has not been completed to demonstrate the ability to contain the mining fluids, but rather a later, post-permit, detailed scientific review will be necessary to "examine" this issue "very carefully." Where such serious questions exist as to such fundamental issues as the ability to contain mining fluids, those issues must be explored and resolved prior to the close of the public's ability to comment on EPA's draft permits.

Tellingly, when NRC Staff witness Mr. Prikryl was asked the same question about how NRC Staff reconciles the past tests, admitted into evidence in that proceeding and attached here, which show leaks in the supposed confining layers at the site, Mr. Prikryl responded: "Well, I'm not familiar with this pump test, what shaft they're talking about or what the location of the pump test itself." Id. at p. 1056, lines 5-12. When queried further as to whether NRC Staff had reviewed this fundamental piece of evidence, NRC Staff witness Mr. Lancaster could not give a satisfactory answer, stating that "we requested this information is our [RAIs] and I think as I recall their conclusions were it's leaky because of a variety of reasons. And one could be the boreholes not being properly abandoned or not being abandoned at all with the correct procedure for plugging and that sort of thing. We recognize that the pump tests show that there is leakiness." Id. at p. 1056, line 25 to p. 1057, line 8.

Consistent with the admissions of NRC Staff and applicant witnesses, the FSEIS fails to conduct the analysis necessary to determine the actual cause of this leakiness or verify the borehole theory. For this reason, EPA's reliance on the NRC Staff environmental and hydrogeologic reviews is unfounded. See also Exhibit OST-018 (Rebuttal Testimony of Dr. Moran) at 3(opining that such lack of investigation fails to meet accepted scientific standards). At minimum, the Board questioning at the hearing confirms that significant questions still remain as to the hydrogeology at the site, and that instead of addressing them prior to issuing the draft permits, EPA Region 8 appears to be content to issue final permits and make these determinations only after the applicant submits its wellfield hydrogeologic data packages – long after all opportunities for public review and comment have expired. Deferring the collection and review of this critical, and admittedly necessary, information until after the permits are issued violates the SDWA, UIC regulations, NEPA, and the Administrative Procedure Act.

Similarly, testimony given by Dr. LaGarry at the NRC hearing demonstrated that the applicant's analysis, which also forms the basis of its UIC application materials, failed to account for faults and fractures in the geology at the site which could cause similar leaky conditions as have been confirmed in the confining layers at the site. See August 20, 2014 Transcript at p. 1065 line 7 to p. 1067, line 10. Upon follow up from Judge Cole, Dr. LaGarry confirmed that in his professional opinion, "that one [report] that was just shown that we were just discussing, the TVA concluded that the leakage might have been caused by an unplugged borehole or some previously as yet undescribed structural feature in that very page we were just reviewing." *Id* . at p. 1069, line 24 to p. 1070, line 4. Indeed, the TVA report referenced demonstrates faults and fractures are prevalent in the area. Exhibit OST-009 at 60. Applicant witness Mr. Lawrence responded that the study does not conclusively demonstrate fractures in the precise permit area at issue, but his testimony falls far short of demonstrating the absence of such fractures. August 20, 2014 Transcript at p. 1071, lines 2-3. Thus, Mr. Lawrence's testimony confirms that applicant's data and analysis provided to date fails to provide a credible explanation for the TVA's leakage conclusions.

[...]

Instead of conducting the rigorous scientific review necessary to determine the hydrogeology conditions of the area, as noted by Dr. Moran, Dr. LaGarry, and others in testimony and during the hearing, EPA simply proposes to allow the applicant to collect this information in the future, after all public commenting is complete and after the permits are issued, through the use of a Safety and Environmental Review Panel (SERP). Notably, this post-permit SERP review is not just a confirmation of information already in existence – including production and injection well patterns and location of monitor wells; documentation of wellfield geology (e.g., geologic cross sections and isopach maps of production zone sand and overlying and underlying confining units); pumping test results; sufficient information to demonstrate that perimeter production zone monitor wells adequately communicate with the production zone; and data and statistical methods used to compute NRC-approved background water quality. As Dr. Moran testifies, this approach to defer the meaningful collection of data to a future, post-permit, non-public process is not scientifically-defensible. Exhibit OST-001, at 22-23.

The only additional information the applicant appears to have provided is a 2012 report from Petrotek regarding numerical modeling of the hydrogeology and the bore hole data. As EPA is aware, the NRC Staff's FSEIS, upon which EPA relies heavily, in turn relies heavily on the Petrotek report throughout its discussion of confinement issues, as well as geology and water usage impacts. Dr. Moran discusses this Petrotek modeling report and shows that it is not sufficient to resolve the issues with the existing project data. See Exhibit OST-001, Moran Opening Testimony at 23-26. Specifically, the Petrotek Report relies on inadequately detailed inputs into its model, including for hydraulic conductivity and assumptions of no water flows vertically, which is contradicted by the scientific literature, and unsupported assumptions as to the effect of unplugged boreholes in the area and the lack of any faults or fractures. Id. at 23-24. Dr. Moran further points out the contradictions between the Petrotek Report and NRC Staff conclusions in the FSEIS, upon which EPA relies, with regard to the existence of fractures or other flow paths. Id. at 24. Dr. Moran completes his review with a litany of unsupported assumptions made in the Petrotek model that skew the results and render it unreliable as a scientific tool to predict hydraulic conductivity at the site – the ability of the hydrogeology to contain the contamination associated with ISL mining. Id. at 24-26.

At the conclusion of the NRC hearing, it was divulged that Powertech had withheld significant data regarding bore holes at the proposed mine site. EPA must affirmatively request and conduct a comprehensive review of this data in order to make any conclusions regarding bore holes with regard to the SDWA and UIC requirements. Any failure by EPA to conduct its own review of this information would violate its statutory and regulatory responsibilities under the SDWA, UIC regulations, NEPA, and APA.

[...]

V. FAILURE TO ADEQUATELY DESCRIBE OR ANALYZE PROPOSED MITIGATION MEASURES

Although EPA lists various mitigation measures that may be used to lessen the impacts from the proposed mining operations, these lists lack any detail necessary for the decisionmakers or public to assess the likely effectiveness of these measures. Further, many of the most crucial mitigation proposals are simply proposals to develop mitigation plans in the future. Reliance on a future, as yet-unsubmitted, mitigation to prevent/mitigate adverse impacts to the resources at the site fails to provide the detail necessary to gauge the impacts of the proposed mining operation.

The as-yet developed mitigation relied upon in the EPA's analysis even includes such basic and critical things as post-permit issuance pump tests and hydrologic wellfield packages to determine the ability to contain mining fluids and future consultation under the National Historic Preservation Act to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties. These represent fundamental aspects and impacts of the mining and in order to assess the impacts of the mine proposal cannot be simply deferred to a later date.

Similarly, the application material and EPA analysis inappropriately defers meaningful review of mitigation until later permits to be considered by the State of South Dakota. These deferred analyses include detailed monitoring and mitigation plan for the state of South Dakota permits associated with the potential land application of wastes, as well as the groundwater discharge permit for the land application. Definition of critical features are left to the future, such as the monitoring program with wells that define the perimeter of operational pollution.

Other mitigation plans left to future development include an avian and wildlife impact and mitigation plans that are being developed in concert with state and federal agencies necessary to keep wildlife from risking contamination from mine site facilities. However, the details of these plans are not proposed to be developed until approved by the South Dakota Department of Environment and Natural Resources and Game and Fish as a permit condition before any construction begins. Thus, instead of analysis in the EPA documentation, the agency simply lists possible mitigation measures without a meaningful review of the details or the effectiveness of the proposed measures. This in turn leaves the public without the ability to provide meaningful input on the mitigation plans.

Instead of presenting well-developed mitigation plans and analyzing their effectiveness in eliminating impacts, the EPA and applicant simply list and mention mitigation measures, and assert that they may be successful in eliminating or substantially reducing the Project's adverse impacts. Under relevant administrative law, a competent cumulative impact review requires that assertions of effectiveness must be supported by substantial evidence in the record. Without the necessary analysis in the impact review, EPA conclusions are arbitrary and capricious in relying on mitigation to conclude that there would be no significant impact to impacts resources.

Review of EPA's impact reviews reveals that disclosure and analysis of impacts are insufficient where the mitigation analysis consists largely, if not exclusively, of a list of plans to be developed later, outside the permitting process and the public review. For instance, with regard to the cultural resources impacts, the agency concedes that consultation is not complete, although that is the process through which impacts are assessed and mitigated. As discussed herein, reliance on a discredited Programmatic Agreement ("PA") is insufficient. Indeed, the PA itself simply defers mitigation planning to some future time.

So I guess what I'm asking you to do today is to delay any permits until you get all the facts. Many other people are going to be here talking about the scientific research that still needs to be done as well as we need more information from tribal consultation.

[...]

I urge you to require the necessary research before giving any more permits. Check out the cancer rates in Edgemont and Crawford, Nebraska. Require the water testing that several organizations want to do. And remember, practically every one of us in here are volunteers, and water testing is expensive. EPA could help us greatly with doing the correct amount of testing.

The science that you are looking at has only been presented to you by this company. I want to know your independent scientists. I want to hear from environmental experts, conveniently left out, but you're the Environmental Protection Agency. You have not done due diligence.

[...]

And there's nothing. You don't talk about any true environmental impacts. There's no long-term studies that you've presented. There's no research on the biological health impacts of uranium and all the other isotopes that are released.
[...]

You can sit there very nicely. You have all the facts. But, you know, I don't trust the research, and I think that you failed the people with due diligence. I already know Trump fails the American people, especially with his EPA nomination. We will be living the results.

So I would ask you guys to really consider some more thought go into this whole process. Thank you.

Letter ID	Commenter Name	Commenter Org.
498	Ex. 6 Personal Privacy (PP)	Individual
00557 - 00563	Ex. 6 Personal Privacy (PP)	Native Sun News Today

Text
Claims, counterclaims fly before uranium mining hearings Waste in focus as big week looms for Edgemont proposal Seth Tupper Journal staff 18 hrs ago [Photo] The Powertech Uranium Project building sits on the north end of Main Street In Edgemont. The Environmental Protection Agency is holding hearings about the mining proposal this week. Opponents of a proposed uranium mine near Edgemont claimed prior to this week's public hearings on the project that waste fluid from other mines will be disposed of there, while a mining company spokesman denied the claim and a federal agency called it a possibility. The unverified claim, and subsequent adamant denial, illustrate the rising tensions as the proposal to mine for uranium in the southern Black Hills moves closer to possibly being permitted after a years-long process. A video posted to Facebook by a South Dakota-based nonprofit, the Council for Responsible Mining. includes a narrator saying that if the mine is permitted, the mining company will bring in waste from other mines. "They want to haul in waste from other states and possibly even other countries to permanently inject it right into our water," the narrator·say's in the video. The video is part of a campaign by opponents of the mining proposal to encourage attendance at federal regulatory hearings Monday and Tuesday in Rapid City, Wednesday in Hot Springs and Thursday in Edgemont. Gardner Gray of rural Pringle, chairman of the Council for Responsible Mining. admitted in a Journal phone interview that he has no direct knowledge of a plan by the mining company, Powertech, to bring other companies' waste fluid to the mining site. "I haven't heard it from them, but I have heard it," Gray said. Gray referenced uranium prices, which were $50 to $60 per pound five years ago but are now $20 to $30 per pound. He predicted Powertech will not mine uranium if prices stay so low but will instead seek revenue by accepting and injecting waste fluid from other mines at the Edgemont-area site. Mark Hollenbeck, an Edgemont-area rancher and project director for Powertech, spoke with the Journal by phone and denied the claim by the Council for Responsible Mining. "That is absolutely false," he said. Hollenbeck said Powertech - a U.S. division of the global Azarga Uranium Corp. - does not plan to accept waste fluid from other mines. But even if it did, Hollenbeck said, other mines already have their own disposal permits and would have no economic incentive to haul their waste to the Edgemont-area site. Powertech has received two draft permits from the U.S. Environmental Protection Agency, including one that would allow the company to inject mining waste fluid underground. According to the EPA, the permit would not restrict Powertech from bringing in waste fluid from other mines. The waste-disposal issue and others will be aired this week as the EPA conducts 28 hours of public hearings on the draft permits before issuing a final decision sometime after May 19. This week's hearings will be from 1 p.m. to 8 p.m. each day - Monday and Tuesday at the Best Western Ramkota Hotel in Rapid City, Wednesday at the Mueller Center in Hot Springs, and Thursday at St. James Catholic Church in Edgemont. During the first hour of each hearing. EPA officials will be available to meet individually with members of the public and answer questions. The EPA officials will then make a brief technical presentation and open the hearing to public comments. Attendees who wish to speak will be asked to sign up and speak in the order of the sign-up sheet. The first hearing was April 27 in Valentine, Neb., and drew about 50 people. The EPA located the meeting there to accommodate residents of Native American reservations in South Dakota and Nebraska. The proposed mine location is in a sparsely populated area 13 miles northwest of Edgemont, near the old Dewey and Burdock townsites along the southwestern edge of the Black Hills. Instead of extracting uranium-bearing ore with traditional pit and tunnel mining, which was conducted extensively in the Edgemont area from the 1950s to the 1970s, Powertech wants to use a method known as "in situ" - a Latin phrase meaning "in its place." The company would capture underground water, mix it with oxygen and carbon dioxide, and inject the solution into underground ore bodies to loosen deposits of uranium. The uranium-bearing solution would then be pumped to the surface, where the uranium would be removed and dried into yellowcake for eventual refinement and use in nuclear power plants. The water-based solution would be reused until all the uranium at the well site is extracted. The solution would then be treated and disposed of by injecting it into a deep underground body of water known as an aquifer. A similar system is now operating near Crawford, Neb., about 120 miles due south of Rapid City. The Council for Responsible Mining video describes the waste fluid as toxic and radioactive. Hollenbeck, of Powertech, said regulations require the waste fluid to be treated and made safe before it is injected underground. "It's basically saltwater," Hollenbeck said. Powertech acquired its Edgemont-area mining rights in 2006 and has been attempting to begin mining ever since. It already has a license from the U.S. Nuclear Regulatory Commission. If Powertech's EPA permits are finalized, the company would still need additional permits – including from the state of South Dakota - to begin mining. One of the EPA permits would allow Powertech to drill as many production wells as the company desires - potentially 4,000 of them, according to one EPA document - within 14 designated well fields. The production wells would go hundreds of feet underground into the Inyan Kara formation of aquifers. The other EPA permit would allow Powertech to drill up to four disposal wells, from 1,615 to 2,540 feet underground in the Minnelusa formation of aquifers. The Council for Responsible Mining has claimed that Powertech is seeking eight disposal wells. That was originally true, but Powertech has since withdrawn its request for four of the disposal wells, leaving only the remaining four wells in the draft EPA permits. The EPA is also proposing to exempt the portion of the Inyan Kara aquifer in the project area from the Safe Drinking Water Act, which is necessary for mining to occur there. Critics of the project say the mining solution and the injected waste fluid could migrate and contaminate other underground water sources. "No money is worth that," Gray said. "If we don't have water, we don't exist down here." Hollenbeck said Powertech's project is environmentally sound, and while he will attend this week's hearings, he does not plan to comment orally and instead plans to submit written comments prior to the EPA's May 19 deadline.
I think you will enjoy reading my investigative news feature series about the proposed uranium mining at Dewey Burdock. It was first published in the Native Sun News, South Dakota's largest circulation weekly. It won the first place award for its genre in the South Dakota Newspaper Association annual contest in 2013-2014. I am submitting it for your consideration during the EPA public comment period on the Safe Drinking Water Act exemption requested and the two injection permits, as well as the environmental justice analysis considerations. You will notice there are two inaccuracies in Part I in the third to the last paragraph, where I used the word "or" when it should have been "and" connecting Class 3 and Class 5 UIC applications. I also erroneously said Clean Water Act, when it should have been Safe Drinking Water Act. See attached. [ATTACHMENT: “Non-Indians choose sides in uranium fight”; “Tribal members rally against uranium mine”; “Tribes prepare for more uranium hearings”; “Uranium mine threatens wild horse sanctuary”; “Oglala Sioux Tribe intervenes in water dispute”; “Tribal opposition puts hold on uranium mine”]

Notes
Newspaper articles-No response needed

Letter ID	Commenter Name	Commenter Org.
13	Ex. 6 Personal Privacy (PP)	Individual
44		Individual
83		Individual
83		Individual
98		Individual
123		Individual
124		Individual
130		Individual
162		Individual
177		Individual
234		Individual
245		Individual
00306, 00307		Individual
321		Individual
336		Individual
382		Individual
430		Individual

448	Ex. 6 Personal Privacy (PP)	Individual
451		Individual
455		Individual
470		Individual
476		Individual
483		Individual
497		Individual
499		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual

07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7460 (5/8 Rapid City hearing)		Individual

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7460 (5/8 Rapid City hearing)		Individual
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7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual

7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (5/9 Hot Springs hearing)		Fall River Conservation District
7462 (Hot Springs hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
7642 (Hot Springs hearing)		Individual

Text
Please don't risk the tourism economy and the livestock economy and the American people's livelihoods of Western South Dakota for a foreign company.
My Name is Ex. 6 Personal Privacy (PP) I am a resident of Rapid City, SD. I am also a enrolled member of the Cheyenne River Sioux Tribe (however, this is my own personal statement and not to be a part of any "official" Tribal consultation). I am a mother and grandmother and I am deeply concerned about what future we are leaving for our future generations. I say NO to the proposed Uranium In-Situ Recovery Project operation in the Dewey-Burdock located in the Southern Black Hills. I say NO to granting Powertech (USA) Inc. or Azarga Uranium, or any other similar mining operation any permits what-so-ever. This ISL uranium mining operation is Not in our Nation's Best Interest, nor is it in the best interest of South Dakota.
We have great possibilities for being an extensive organic farming and ranching area. A few years ago the city of Hot Springs purchased Evans Plunge, a world-famous natural spring mineral water pool. The city has invested millions. The Evans Plunge would being damaged beyond use if the powertec Azarga permits would be given. This area would be unfit to live in due to the fact of having unsafe water quality for human, livestock and farming purposes. I say start up a Superfund Site in the Dewey Burdock site instead.
Having attended the state of South Dakota tourism meetings, we in hot springs in Fall River County have more to offer in tourism than any other part of the Black Hills. Hot Springs was the only city in the Black Hills that got its start in tourism rather than mining as in the other cities.
Subject: No to Azarga Here are my comments on the Underground Injection Control Program's Draft Permits for the Proposed Dewey-Burdock Uranium Mine and Deep Disposal Wells: I live in and own property in the Black Hills. I work in the tourism industry and know that the economic impacts of hosting millions of tourists and being a premier retirement area far outweigh any economic and environmental promises a poorly-funded company like Azarga/Powertech (Stock at .28 a share on Jun 16, 3:46 PM EDT) might have made over the years.
This a boom/bust scenario which if approved will provide 100 or so temporary jobs for a year or so and then only a handful of maintenace/mining operators. Whatever gain there might be for the employees and towns and counties will be more than offset by the cost for cleanup which will be borne not by Azarga but by those same towns and counties to the tune of scores of millions of dollars. The sad truth is that it cannot be remediated as it is well known that no In Situ mining operation, whether in Texas, Nebraska, or Wyoming or any other place ,has ever been cleaned to original condition. It is not difficult to imagine that real estate values will drop, tax revenues for the towns and counties will drop if this ill- conceived rape of the land and aquifers is appoved by the EPA. Thank you for your attention. I hope this has been of some value in making your decision and I can only hope that you will make the right one.
The Board finds that any probable adverse socioeconomic impacts of the proposed mining operation outweigh the probable beneficial impacts of the operation. Contamination would affect tourism, ranching, domestic water supplies, and the future economic health of the region.
Profits are not to be placed above people. Period. Push these companies to abide by new regulations and hold them accountable for damaging our country, our welfare and overall quality of life.
2. Powertech is an unproven foreign company that has no vested interest in keeping the area safe. The uranium produced will be sold to foreign markets, the jobs created will be minimal and mostly short term. This mine will not benefit the US or it residents and can only harm our environment.
Subject: Proposed Dewey-Burdock Injection Wells [...] Second, there is nothing besides a few low-paying, short term jobs in this for South Dakota, but great threats to our two largest industries, agriculture and tourism. Third, Azarga is a foreign-owned entity that hopes to exploit our resources for their short-term profit, but which will have no loyalty or long-term commitment to the region. [...] Fifth, the long history of companies (mostly foreign companies) exploiting our resources, then declaring bankruptcy and walking away from their messes should tell us that this cycle is likely to be repeated if Azarga is allowed to proceed. In summary, there is no good reason to approve this permit, and many valid and critical reasons to say no. Please reject Azarga's permit request.
Third, this is yet another out-of-state (or, in this case) foreign company seeking to exploit our state's resources. Fourth, this enterprise would not bring significant economic benefits to the state or its people.
3. Having a Chinese Company dump nuclear waste in Fall River - or even mine for uranium – does not benefit any South Dakotans - not the tribe, not Edgemont, not Fall River and not South Dakota. [...] 5. The Black Hills of South Dakota are a unique landscape - literally an island of green in the lains. Tourism is one of the states major industries. It seems foolish to jeopardize that industry for the sake of another country. I have a different vision of a great country than the current administration.. Public lands, environmental protection, the importance of science and education are concepts under the gun. I'm hoping our government agencies, like our courts will step up and do the right thing. Keep uranium mining and waste out of the Black Hills. Thank you for listening.
Knowing that the outcome of any kind of contamination stands to put many people as well as the environment itself In harm's way and allowing them to do it anyhow tells the general public that the State is not interested in their well-being and will in fact do whatever is necessary to make that dollar! The last time I checked life was more valuable than money but big corporations don't seem to think so that is why it is up to us, you and I, to remind them!
Furthermore, this is a foreign company that is not acting in the interest of the United States or the long-term environmental health, or economic well being of this region. Please deny these permits.
This new mining scheme provides no benefit to the local or regional community but poses a significant and permanent risk to the water system and environment of the region in question in western South Dakota.
Subject: uranium mining in southern Black Hills Given the track record of mining in the Black Hills, gold and other, and of global corporations which are more interested in the bottom line than in the common good, I would definitely oppose any such mining, no matter what the method, in the southern Black Hills. The Cheyenne River already has pollutants from gold mining flowing through it to communities which rely on that river for drinking water. The fiasco of dumping uranium tailings near Saint Stephens, WY, and their subsequent costly removal, and the millions of dollars spent by the DOE to monitor ground water and provide clean water for those who were affected by in the area, convince me that uranium mining is of no practical benefit to the nation, and much less to those in South Dakota who potentially will be affected by it. Refuse the permit. The risk is not worth the money to be generated.
Azarga/Powertech consists of investors who are not uranium miners as such. Yes, they may hire people who know what they are doing, but some things they are proposing have never been done before. We only get one chance at this. If it doesn't go well, it could destroy a large part of the Southern Hills and associated agriculture. In this rural area, we depend on agriculture and tourism. I know a few people are in favor of this project for the jobs, but that is not the reason to approve something that is this potentially damaging. This proposal trades long term incomes for many and the health of the larger environment for the potential short term financial gain of a foreign company.

4) Furthermore, our city was founded and continues to be dependent on our water supply for our economic well-being. So much so that our City Council recently approved a Resolution 2017-10: A Resolution to Reaffirm a Citywide Commitment for Clean Water and Water Resource Protection. From May 1st 2017 minutes: https://drive.google.com/drive/folders/0B9KAiHzXN8kVVTRwMTB0VzJUQms

One of the reasons for this is that our small City's invested approximately $1.9 million to purchase Evans Plunge Mineral Springs, one of the Black Hills' oldest & popular tourist attractions. This resource generates an income of approximately $800,000 per year according to our finance office at City Hall. We can simply not afford to risk one of our major resources.

There are concerns for the safety of our tourists, our second largest economic sector. We have so many scenarios of accidents going through our minds. What would happen if one of our vacationers had an accident with a truck filled with uranium heading to Canada?

What if there was a fire at the accident? Who would respond? What if there was a fire at the operation? Who would respond? Are the first responders equipped and trained to deal with such accidents? The trucks would have to be marked as radioactive. How does that look to people vacationing here? What would be their Perception of the Black Hills then? Would that deter them from a return visit? The company, when asked at the hearing prior to this, they were unclear on many safety issues.

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* The Black Hills region is dependent on Tourism as one of our prime sources of income. Contamination of our water sources would render this a "Dead Zone" to tourism, not to mention total evacuation of the local population would follow.

The power behind the uranium mining is not even American. It will not create jobs for our people. No one but the mine owners will make money, and they do not live here. Our major income is derived from ranching and tourism. If you approve the permits you will be responsible for destroying our economy and our lives. It is time for all of us to do the right thing & this includes the EPA. You can telephone me, Ex. 6 Personal Privacy (PP) Thank you

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Recent history has made it clear that our government does not have adequate systems in place to keep uranium mining companies accountable for how their projects negatively impact the public.
Why should we approve a project that is going to benefit a few financially in exchange for irreparable damage to water supplies, untold suffering from the health impacts of radioactive contamination, and the resulting expensive healthcare costs shouldered by both individuals and by the community?
[...]
Thank you for considering the needs of the whole community. I have two children I am raising in this community and I am concerned about their future and the future of all of my neighbors and all of the surrounding communities in the Black Hills. This project will not benefit us, and it will do irreparable damage. Sincerely,

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Future generations will not be grateful, nor will tourists, and the flow of tourism will dry up. And there goes the local economy.

"And the last state shall be worse than the first."

Dear EPA,
My wife and I feel it very important that we inform you of our strong opposition to allow Powertech to drill for uranium in the Black Hills area.
We realize all EPA agencies and personnel may be getting pressure from the current administration for "jobs and economic growth" but uranium mining will have little short term impact in that area.

The benefits to the communities are not what they seem once the in-situ leaching starts. There are many chemicals that will be in the well water, ground and in the air. This project is about making money for the shareholders. The Chinese Investment Fund will get their profits and the surrounding communities will suffer the ill effects. always said they are environmental sensitive. But; that isn't the truth.
[Handwritten note] Crloride Sulfate, Radium, and Iron

You know, the deer -- we shouldn't -- you know, people make a lot of money in South Dakota off deer hunting, both the tribes and the state. But if that meat is bad, you know, they give it to the food pantries, and the food pantries, those people can't eat that.

So it's taking food away from the many, many food pantries from feeding South Dakota because that meat will no longer be edible for these people.
So you, you're destroying the poorest of the poor people, the people that are on the land, living there, and trying to maintain clean water. It -- you know, they want it for their animals, for their people, and we want it -- we do not want a uranium mine that's going to be sold to foreign countries.
[...]
So I would request that this be denied. My mother is 90 years old. She spent the last three days calling everyone, sending things to the radio, sending, you know, e-mails to every coun- -- she had a girl that sent e-mails to every councilman on Rosebud. And they are all, from what she heard back, were against this.
So you think of a lady that's lived 90 years, and she's fighting against it. And those are her great-grandchildren that want to carry on and live out there.
And that little young man that came up here, I work with those children, and I don't want to see them suffer. I do testing for psychological needs. And I can guarantee you that I see more and more children coming forward that are really being -- I don't -- I can't prove that it's what it's coming from, but I see that they're no longer able to maintain their skills in school..

And so if we continue to pollute and cause problems for these children, we're ruining generations and generations of children.

And so I would -- I do implore that you stop this and keep this money for things that are needed in our area, not for a few individuals that come in for the short-term.
Thank you.

And finally, you know, one of the things that really struck me throughout the whole Standing Rock thing was when they were all snowed in and things were really tough, I thought, Man, these -- these folks really lack infrastructure. You know?
And I started thinking about it, and I saw this great, big, you know, 30-foot pile of snow out in their casino parking lot. And I felt bad, and I said, "You know what? These guys don't even have the infrastructure to move that pile of snow. How are they going to clean up a river?"
And I think we need to remember that, you know. What color we are at this moment doesn't matter. We're all living in a rural community. And in these rural communities, we don't have that kind of infrastructure. We don't have the machinery.
And if there's one thing that we know is that anytime there's an environmental disaster, it's the community that resides there that is charged to clean it up, and we simply do not have those resources.
The same thing when our waters are contaminated and people's rates of cancer begin to rise in these communities, we don't have a cancer care clinic here. We have to travel many, many hours to treat our families in cancer clinics. That goes for everybody here in Valentine, too. They have to go all the way to Omaha.

So it's a lot deeper when we look at this issue of contamination, because the residual effects on those communities are very simple. We are not equipped to clean anything up, and we don't have the resources to treat our people when they get sick.

Thank you.

How do you invite people to visit or live in a radioactive-contaminated area? Informed consent is vital to ethical human population care and development. Is it not human trafficking to invite uninformed people to get sick?

Up north near South Dakota borders some people are saying they want the economic advantages uranium mining and milling proponents boast about. The economically advantaged up there must be talking about tax relief and school funding because Crawford is dilapidating. The waterworks infrastructure is giving way, and costly repairs are undertaken to keep the city water system functioning for a high-poverty and declining population due to the health and economic evacuation.

It is heartbreaking more for me when I think that shortsighted land managers and property owners tied our schools to an unlicensed nuclear waste dump and a future Superfund site.
[...]

My husband and I put our life savings into our sus- -- sustainable build at Glen, Nebraska near the headwaters of the White River.

The Nuclear Regulatory Commission's Atomic Safety and Licensing Board hearing made it clear to us what had been allowed on the landscapes of Nebraska's garden beyond the Sandhills.
We believe we contribute to the recovery of the Pine Ridge White River Basin, but our community needs help. Decision-makers need to stop the denial and start to take action against an industry that exploited our rural environs.

We have this political idea that we have private property rights and we have local control. But we have landowners turning over our land-use decisions to EPA, to NRC, to the state, who is, in our case, in Lincoln. And you know, these are all land-use decisions being taken out of local control.
And like Ms. Colombe said earlier, from the Sicangu, we don't have cancer care units close by us. We don't have infrastructures to take care of these kind of operations, cleanups. They are going to cut and run, and we won't have cancer care if we don't start fighting for ourselves and make our elected officials fight for us, too.
Thank you for having this public forum. I didn't thank you earlier, but I appreciate it. It's helpful.

You know, so when you look at it, nobody cares. No one says nothing. It's like the silent genocide that's happening to us. We can't stop it. EPA, you're not going to come in and clean our water. You know this is happening, and you want to go and talk for Dewey-Burdock and tell us about this in-situ mining.
And, what, you want to worry about jobs and all this, and it's just going to keep contaminating us?

And for him and for all the children, all the generations out there that are unborn, I think it's just wrong for so little reason to jeopardize their safety and their health.
It would be different if there was some kind of national emergency and we really needed the uranium. But this is just for profit, and not even for American profit. It makes no sense at all. So I hope it'll be disapproved.

KARIN EAGLE: Good evening. My name is Karin Eagle, and I'm member of the Oglala Sioux Tribe. My home is in Pine Ridge. And I'm here for -- here in Rapid City for a different reason, but I had to come here.
And I wasn't going to speak, but I got a message from a family member who told me that when we don't speak, then we risk -- run the risk of becoming part of the problem.
[...]

KARIN EAGLE: We -- I can only speak for myself and how I was raised. But in our family, song was everything. And all our songs are sacred to us. Even our thanksgiving songs and our honoring songs, and even just our social songs, they have a special meaning for us.

And I've learned by becoming somewhat involved in our tribal government and reaching further out into the national government, that there's a certain language that we have to speak to each other, and so I've taught myself how to speak your language.

And so rather than giving you one of our songs, I wanted to remind you of one of your songs. And the words are written by Katharine Lee Bates. And I won't sing it.
O beautiful for spacious skies, for amber waves of grain, for purple mountain majesties, above the fruited plain! America! America! God shed His grace on thee and crown thy good with brotherhood from sea to shining sea!
O beautiful for pilgrim feet, whose stern, impassioned stress a thoroughfare of freedom beat across the wilderness! America! America! God mend thine every flaw, confirm thy soul in self-control, thy liberty in law.
O beautiful for heroes proved in liberating strife, who more than self their country loved and mercy more than life! America! America! May God thy gold refine, til all success be nobleness, and every gain divine!
And as you know, it goes on for many, many stanzas.
But the reason why I chose that song to remind you of is because there's something here in America that's more important than money, because money is very, very temporary. We all know that. It's more important than politics, because politics change every two, four, six eight years. It changes with every generation.
But the one thing that's so important that every school that I went to taught me in civics class was our citizenry. And tonight I was fortunate enough to be here to catch two amazing speakers. One person who spoke to my heart, because I'm all -- I love facts. I love knowledge. I love the truth. And so that empowered me to come up and speak.
And we also saw -- heard from a gentleman who literally risked life and limb to protect all of us. And so I think that what this song, you know -- and it's a bit archaic language, but the real meaning comes through.
And I think that if we're going to seek nobleness, if we're going to seek liberty and we're going to seek law and divinity, then I think we need to start listening to the people -- not corporations, not CEOs or CFOs.
We need to start listening to every single person who runs a ranch, every single person who's raising children or grandchildren, every single person who has an emotional tie to the land.
Because if we take that away from them, then what are we left with? We are left with people who literally lose their spirit and their soul when you take that away, when you take something so precious as their connection to the land.
We see so many things desecrated across this country because people have lost that connection. And then you see our tribes coming forward who have maintained that connection and hang onto it and are standing in a state that's pretty divisive at times along racial lines.
You see people coming from different races, ethnicities, classes, genders, age groups. We're all standing together, and that's because we're coming together as people.
And it's really sad to me to explain to my kids why we have to fight our own government just to make sure that they -- when they're grown up that they have clean water and that they have sacred land that is un- -- beyond undesecrated. We need to start listening to each other.

And so in conclusion, what I want to do is I'm going to let you know that you and all those people who are going to be making this decision, I'm going to pray for you. And I'm going to pray that your eyes are opened and your ears are opened and that your heart is open enough to receive this message that's coming from people's hearts, people's very spirit crying out that this is wrong.

It's not going to do anybody any good except for a very few people, and this country deserves to live by that song. This country deserves to have liberty, life, health, happiness, even if it's just the pursuit of it. We still -- we all deserve that, and so I'm going to hold you guys all in my prayers. And hopefully that's going to -- I know it's enough. I just hope that you're receptive to it. Thank you very much.

Foreign companies are not going to benefit anybody. They are not going to benefit anybody in South Dakota. And most of them are from Canada, want to mine local uranium. Currently the largest market for uranium is in China and India, so none of that's really going to benefit any of us.
Uranium One, which is an in-situ leach uranium project in East Wyoming, is being bought by RMZ, a company that is controlled by the Russian government. So there's -- I think that there is -- there's going to be no benefit -- local benefit, and I think that's, you know, really something to consider, especially coming from, you know, my perspective as a state senator.

And I come into this -- you know, I served eight years in the legislature -- with this understanding, no local controls are being issued to anybody in this region, and understanding local input is something that's really needed for a lot of our communities.

So, I just want to the stress that, you know, I do stand in opposition to this. And, you know, I know that some members of our tribal community are going to be here tomorrow. But as a state senator, I just wanted to come and express my thoughts and feelings.

Thank you again for hosting this hearing, and I appreciate giving me the time to do this. Thank you.

And my final comment is that I really have a question as to what benefit these wells have to South Dakota residents. We're putting our water at risk, and there's no benefit to the state. There's no particular benefit to the United States. So I just -- also want to stay informed as to the progress of these hearings.

Thank you.

These permits do not benefit the United States. We don't need any uranium. The United States has a 200-year supply of uranium. So for us, it's all about protecting the water. For Azarga, it's all about the greed.

[...]

So I'd like to submit that to the record as well. And thank you very much. And just my last comment: The United States does not need this, and the only way we can keep our water safer is simply to not allow these permits.
Thank you very much.

SUSAN HENDERSON: Good evening. My name is Susan Henderson. You may know me as a cattle rancher for some 23, 24 years. I run an 8,000-acre cattle ranch that has been in my family since 1902, that is just south of the Dewey-Burdock area. My hometown was Edgemont, South Dakota, where I went to high school and where I still have many friends and classmates.

I have a long history of working hard. I went to college. My father sent me out to get a job. I started working in advertising. I worked for some 30 years in places like New York, Chicago, Houston, Atlanta for Fortune 500 companies and some of the biggest advertising deals that we ever have done in that time frame.
After I quit that, I came out to run my family ranch, and I became the chairman of the Restoration Advisory Board for the cleanup of the Black Hills Army Depot from 1991 to 2001. I served as the chairman of that for that ten years, and I learned more about chemical warfare agents and water than I ever thought I ever wanted to know.

I also served for ten years as the chairman of the Igloo Provo Water Project District. In the process of all this, I have come to know that Hippocrates, the noted Greek doctor that died in 370 B.C. had a very important thing that has -- that he gave to the world that has transcended through the centuries and all new doctors take this oath, and it is basically this: "First, do no harm."

Well, I have news for you. This project will do immeasurable harm. It will harm agriculture. It will harm wildlife. It will harm tourism. It will probably destroy the water table in our area. I would tell you that most of the ranches in the Custer-Fall River County area, which there are some 2500 wells, depend on underground water for their livestock and for their drinking water. My ranch is no exception.
Without my natural spring and my deep well, I would not be able to run my cattle most of the time. Because this is an arid area, it is near desert part of the time. We never know what it's going to be like, and many years we would run out of water.
I can remember going around my ranch with my father. He had a -- some hip boots in his pickup, and he would wade out into our dams with a little vial of -- a collection vial to collect water, and we would drag it to Rapid City in a mad fire to see if the water had gone toxic from just the normal runoff. And if it had, we'd move the cattle in the next few hours. He had a deal with the lab here in Rapid City that turned these reports around.
So water is a very, very important thing, not only agriculturally, but to all the other people that have farms and homes in these two counties.
[...]

I really question whether a deputy sheriff in Fall River County -- a sheriff in Fall River County and four deputies can adequately police this. For example, if there were a call at the proposed Dewey-Burdock processing site, which they want to build at the west end of their 10,500-acre plot there, and you called in 911 and you wanted help, the sheriff, who is based in Hot Springs, would take close to an hour and a quarter to get there. That's if he had a deputy that was available, da-da, da-da, da-da.

I mean, there is not adequate fire protection for this. There is nothing that makes this thing work out well.
Now, the business of South Dakota is agriculture, the second business of South Dakota is tourism, the third business of South Dakota is hunting, and the rest of it is a small piece of the action. There is no real reason why we should take this risk with our environment and our water for a little uranium mining that's going to benefit a few families, Mr. Hollenbeck, and the people in the Powertech/Azarga Company.

Uranium mining is mainly for the benefit of foreign investors, nuclear power plants, and corporations, not us in South Dakota.

The governing council of the South Dakota Medical Association has voted unanimously to oppose uranium mining because of the risk to public health. Thousands of people from all over the world have signed a petition to the South Dakota Secretary of Tourism opposing uranium mining because it harms tourism.

You know, this is all to make a company out of Hong Kong money at the expense of the citizens of the United States and the citizens of all of our tribes and the citizens of the state of South Dakota? Just to send money to Hong Kong.

[...]

So how -- how could this even be considered safe, viable, or even something that should be done? It's all in the name of making profit for a company out of Hong Kong. You know, it's not going to benefit anyone here, anyone, anyone in this room, anyone who lives in this state, you know.
It might benefit the hospital industry with their rising cancer rates, but it's not going to benefit anything else. I don't understand why this is even being considered for permitting.
Thank you.

Both of those are, of course, very bad for South Dakota, and I think both South Dakota and the U.S. gets very little benefit out of this project. It's a foreign company, as has already been mentioned.

The other thing that we're concerned about is... Let me gather my thoughts.

Well, actually I've said everything I want to say, so thank you for your time.
[...]
ALAN MCCOY: Oh, I do -- I do remember one more thing that I wanted to mention, and that has to do with the -- no.
I've said enough. Thank you.

And I had some more thoughts that I had written out after listening to the comments yesterday, but then I read on my phone just minutes before we started here, the headline that's breaking across the nation, "Emergency declared after nuclear waste tunnel collapses in Washington."

By the way, if Rapid City Journal is publishing a story on the environment, then you know it's bad.

And I can't help but read that and think, if that headline had come out today and "Washington" was replaced with "South Dakota," our tourism season just started, and that is a majority -- well, maybe not -- you know, I'm not an expert in economics, but that is a good portion of our economy around here.
It provides jobs. It gives us a name. And I just -- that has me worried. And I do have some numbers on tourism locally.
A recent report shows that there are about 4.5 million visitors to South Dakota's national parks in 2016. They spent almost $300 million in the communities near the parks, which supported over 4,900 jobs in those local communities, and the spending had a cumulative local benefit of $377 million.

So we rely on that. And if the headline was to go out about our area like this, then we would take a huge hit. And this is a vulnerable state. South Dakota is a poor state. It has a very sometimes dark and difficult, complex history. There are very vulnerable people here that need to be heard and needs -- whose lives need to be taken into account.
Someone spoke yesterday about how the company is going to come in and do this and wouldn't have the money to clean it up if something were to happen. And South Dakota doesn't have the money to do anything about it.

Uranium mining does not make America great again. The mining that is going to happen in the uranium field, that's to sell uranium to Japan and Russia, Korea. That is not for the benefit of South Dakotans. It's not for the benefit of Americans.

I say no to this proposed uranium in-situ recovery project operation in the Dewey-Burdock.

[...]

I say no that -- no to either one of these companies, whoever they are. No more raping of Mother Earth. This is not in our best interest, not in our nation's best interest, nor is it in the best interest of South Dakota.

I'm getting tired of corporations coming in here, into this state, that will sell their mother for another buck. I'm getting sick and tired as a person who has paid their dues here, and so have these people -- my God Almighty what they have given us, what we've taken -- I'm getting sick and tired of corporations coming into this state and when they're pissing on my back, telling me it's only rain.

Thank you.

SARAH KEPPEN: Good afternoon. Can you hear me okay?

So my name is Sarah Keppen, and I'm a concerned citizen here in Rapid City. I'm also a science enthusiast, and I was co-organizer of our local Rapid City March for Science that we did in conjunction with the National March for Science on April 21st.

So I stand before you today as a concerned citizen hoping that you will have done all your appropriate things from your end. As scientists, I entrust that you have researched the data and have looked at all the facts.
Well, I come to you today as a personal matter, that this affects me locally, and this affects everyone in this room, and it affects many more people that you will not see or hear from that will show up that just hope there are plenty of facts.
We have seen many locations all over the country -- one all the way up in New Mexico -- of uranium mining being done and affecting the local water. And it's inevitable that these things are going to happen, that you are not going to be able to prevent in every instance of an -- of the environmental impacts, that something is going to happen, because it will if there is any kind of spillage from the mine.
This is going to affect our agriculture. The market value on agricultural products sold in Fall River, Custer, and Shannon Counties was sold directly via the -- in the direct path of this uranium mine is one point -- $31.1 million in 2007.
This is going to directly affect agriculture if there's any kind of spillage from the mine, which is one of our largest -- which is one of our largest industries here in South Dakota.

This is also going to affect our tourism. If we have any kind of impact, it's not just going to affect people right here in South Dakota, it is going to affect our tourism industry. That is also one of our largest industries, especially here in the Black Hills.

Annual tourism in the Black Hills was $1.4 billion dollars in 2012, a rate of 5 percent per year. So this is not only affecting us; this is going to affect our tourism.
I work for one of the largest employers here in the area, Regional Health, and we depend greatly on tourism dollars as they come in through the summer, especially during the rally.

We have tour- -- we have special meetings that different operational staff are involved in to help prepare for this. And so we do, as a local employer, greatly depend on those tourism dollars, as does everyone in this area depend on those tourism dollars.

JEFFREY LARIVE: Show biz.

So my name is Jeffrey LaRive. I'm fourth generation here in Hot Springs. I admire the preparedness of the previous speakers. I am not prepared. But I am here to say that once this resource is extracted and the coffers have been lined for Powertech, they will move on. They are not concerned about your drinking water or your children's drinking water or your quality of life here in Hot Springs.

They will be living in a gated community in Vail or an alpine lodge in Switzerland. So if you're mistaking this for energy independence or caring about our community, you're kidding yourselves. This is about using us and moving on. And that's all I can see. Thank you.

In addition, the heavy truck traffic that is essential for a mining operation would be very damaging to the road systems of this county. This cost -- this would cost the county and taxpayers extra dollars that it simply does not have for road repair and maintenance.

And then beyond that, we have ranchers here who raise beef to send out on the market that your families across this country are going to consume. Please consider these things.
Have a good day.

So mostly, I just want to say that, really. I don't know why to be strongly for getting uranium out of the ground other than to give profit to a corporation, the corporation of the United States, the corporation of whatever it's called, Azarga or whatever it's called.

So yeah, the best -- the best I can hear is it's not that bad for you from the people from the industry. Oh, uranium, it's not that bad for you. You know, we're -- you're going to die of cancer. The water is contaminated anyway.
It's like -- so I don't know why that is enough for this project to continue. I don't know why the premise is that the people who aren't getting paid have to come here and say stop. I don't know why it isn't the other way around. I don't know why the corporation isn't coming to the people and asking, is it -- does this make any sense? Can we do this?
So maybe -- maybe -- I was at Standing Rock. I'm English. This is a global issue. There are some local people here. I want to respect local settlers who own title to land. You don't own land. We all know you don't own land.

But these -- it's a global issue. It's a local issue. It's uranium. It's not a local -- uranium isn't local. It affects the whole world.

Well, animals and plants need water, so -- and also, I'm not sure if any of you have heard of Evans Plunge, but it is pretty much a water park, you know. Lots of people go there, and it's one of the -- it's a pretty big company, I guess -- well, water park.

But if they continue with this, it will close down along with many other places, closing other jobs, too. And yeah, some people told me to, like, speak from my heart, not like write anything down. So yeah, forgive me if I mumble and, like, shake or freeze. Okay.

But anyway, that's a little -- I wanted to finish that. But like I said, I feel for this community, you know, because it's -- you know, I look around, I see it. But you know, there's also other ways to make money.
You could bring industry here, you can bring alternative energy and create a plant here, some sort of jobs. You could get all kinds more jobs than what you're go- -- what you're investing in with this mine.

We can't get this back. And we can't afford the finances that will happen to us. Let's look at what would happen. It will destroy ranching and farming in this county, which is most of the action. 60 percent of the taxes paid in Fall River County come from those operations.
You will make a mess out of tourism because you will lose water in key areas and word will get around that people don't need to come here anymore.
[...]

SUSAN HENDERSON: Now, I would say to you that we can find Washington. I can find Washington. I will find Washington. By this presentation, I wish to preserve my right to object to these -- to whatever decision you make that allows this project. So be on notice that this is something that we should all band together to stop. Thank you.

Letter ID	Commenter Name	Commenter Org.
20	Ex. 6 Personal Privacy (PP)	Individual
116		Individual
121		Individual
122		Individual
230		Individual
289		Individual
323		Individual
331		Individual
370		Individual
464		Individual
470		Individual
470		Individual

487	Ex. 6 Personal Privacy (PP)	Individual
491		Individual
7452		Azarga Uranium Corporation
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual

7461 (5/9 Rapid City hearing)	Ex. 6 Personal Privacy (PP)	Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual

7462 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
7642 (Hot Springs hearing)		Individual

7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Individual
7642 (Hot Springs hearing)		Individual

Text
Between this and the proposed healthcare repeal / replace, you're going to actively kill off people. Is that what you really want? Please, be a responsible government for all the people, not just a few who will benefit from this. Thank you.
By this letter I am requesting that the EPA reopen the investigation into the problems being caused by the mining ofthe 1950's and 1960's and suspend the Powertech Azarga permit application currently being heard by Region 8 EPA for 4000 deep well injection wells. [...] Please advise me as soon as possible as to what action you intend to take regarding the reopening of this SuperFund Investigation of the Dewey Burdock Area and the Cheyenne River.
10). Before any approval is considered for additional contamination, the area must be placed in a SuperFund status.
Sadly, The EPA has just allowed the continuation of a poisonous herbicide/pesticide rather than remove it from use. I look forward to the hearings.
Subject: Comments on Dewey Burdock proposal [...] We've got people willing to put their names on the line and spend hours and days out of their week attending the EPA hearings and making comments - not to mention the time spent organizing, reading the published documents and policies to put together these comments, etc. The current story of our nation seems to be that a project is set up, the real people who are affected show up and give their voice (when they are allowed to do so), and the people with the money and power steamroll ahead anyway. However, people young and old are coming up, getting involved, and showing up to do the work that will make the cultural shift from valuing money (which, if you ever took economics, you know is an arbitrary, imaginary concept) to valuing human life, to valuing nature, to valuing the connections between people, between people and nature, valuing what is really important to human life, to finding the meaning of life. The meaning of life seems mysterious and out of reach to American culture - but there are plenty of people around who have a grasp of it, it's just that those people, by their exact nature, are considered to be the quiet ones, not the ones who become famous or go on TV media or whatever.
More jobs could be created by bring renewable energy to the area and creating a public transportation system connecting the communities in the area. These systems would provide ongoing employment of people to design and build renewable energy operated transportation and operate and maintain it after it is established
Also, please stop all destructive activities within the entirety of Region 8. Killing land kills people. It's within your moral obligations to use your position to help save lives.
Subject: Additional Comments Dewey Burdock In Situ Leach Mine - President Trump Accountability Please discuss the effect on USA v. China profit & loss trade balance of this project. If a Chinese Company (Azarga) extracts profit from a SD project (Dewey Burdock) and it eventually becomes a Superfund Site or at least mess, whose clean up becomes otherwise funded by the public...how is that wise trade policy? What is the ability of a foreign company to walk away with profits & leave us with costly clean up & irretrievable consequences? Please consider profit gained vs environmental clean up costs dumped on others - - as a trade deficit issue.
Re: drought report Sorry, the drought report is for the last "20" years.
My name is Ex. 6 Personal Privacy (PP) and my wife and I live on a small ranch south of Pringle and have been there for 23 years. Thank you for this opportunity to speak today. I do not receive payment of any kind for being here. I am not a for profit corporation. Unlike PIT, I have no loyalties or any responsibilities to show a profit to any stockholders. I am free to do the right thing and I have only the truth as I see it to give. Men of my age are usually ref erred to as "old men" but 50 years ago when I was "young and in my natural prime" I was a Naval Aviator on a carrier in the Gulf of Tonkin flying low level photo reconaissance missions over North Vietnam. When commissioned by Congress as an officer, I swore an oath to uphold and defend the Constitution as maybe some in this room have done. The Constitution and the Bill of Rights of course support a prime directive: Clarify the responsibilities of the government and the rights of the people. Not businesses nor corporations' rights but citizen's rights. Our governments' responsibility is to the health and welfare of the citizens. This is ostensibly why our military is asked to get in harm's way: to make sure these rights, our rights are protected and secured. Every civil servant, every citizen's board, every governor is accountable to the citizens who have allowed them to serve and if they do not protect the public interest , if they forget about protecting the health and welfare of all the citizens and the rights of the people then they have abrogated their prime directive and can and should be removed. If it is not in the PUBLIC INTEREST, it should not be done
Capitalism will be the death of the environment.
Big problem with one well in Wasa but no problem with hundreds of wells in Provo area?
Leaks found on Dakota Access pipeline system Blake Nicholson Associated Press BISMARCK, N.D. -The Dakota Access pipeline and a feeder line leaked more than 100 gallons of oil in North Dakota in separate incidents in March as crews prepared the disputed $3.8 billion pipeline for operation. Two barrels, or 84 gallons, spilled due to a leaky flange at a pipeline terminal in Watford City on March 3, according to the state Health Department. A flange is the section connecting two sections of pipeline. Oil flow was immediately cut off and the spill was contained on site. Contaminated snow and soil were removed. No people, wildlife or waterways were affected, according to the department's environmental health database. The leak was on a line operated by a connecting shipper on the Dakota Access pipeline, said Vicki Granado, spokeswoman for Texas-based Dakota Access developer Energy Transfer Partners. "They are responsible for the operations, maintenance, etc.:' she said. A leak of half a barrel, or 20 gallons, occurred March 5 in rural Mercer County, data from the federal Pipeline and Hazardous Materials Safety Administration show. Contaminated soil was removed, and no waterways were affected. There were no reported injuries to people or wildlife. The administration is part of the Department of Transportation. The online report says an above-ground valve failed due to a manufacturing defect, causing the leak. Upstream and downstream valves were closed to isolate the leak. Later, all other such valves in the Dakota Access system were inspected and found to be OK. The federal database shows no leaks along the pipeline in Iowa or Illinois. ETP maintains the pipeline is safe, but several tribes in the Dakotas - including the Cheyenne River, Standing Rock, Yankton and Oglala Sioux-fear environmental harm and are fighting in federal court, hoping to convince a judge to shut down the line. North Dakota Environmental Health Chief Dave Glatt said the Health Department lists such incidents in its online database but typically doesn't otherwise notify the public of oil spills smaller than 150 barrels unless the oil contaminates water.

The pipeline leaked 84 gallons of oil in South Dakota on April 4. That spill, at a rural pump station, also was quickly cleaned up and didn't threaten any waterways.
Newspaper article title: Black Hills gold miners still making millions

Wharf sells $136.8M in metals from mine

Seth Tupper and Bob Mercer

Journal Staff
PIERRE - Coeur Mining sold $136. 7 million worth of precious metals in 2016 from its Wharf Resources mine near Terry Peak in the Black Hills, according to recent reports filed by the company.
But to do so, the company used about 150 million gallons of water and about a million pounds of cyanide along the way.
The Wharf mine is one of five mines that Coeur, which is based in Chicago, operates in the Americas. The other mines are in Nevada, Alaska, Mexico and Bolivia. The company reported total revenue of $665.8 million last year.

At the Wharf mine in 2016, gold production was 109,175 ounces and silver production was 105,144 ounces. Both numbers were increases compared with 2015, when the Wharf mine yielded 89,496 ounces of gold and 70,276 ounces of silver.

Matt Zietlow, environmental manager for Wharf Resources, spoke about the production numbers Thursday during a public meeting of the South Dakota Board of Minerals and Environment in Pierre.
"It was a strong year for us overall," Zietlow said.
The company paid severance taxes of $7.3 million to the state, he said.
There are other gold-mining permits and exploratory permits in the Black Hills, but the Wharf mine is South Dakota's only operating large- scale gold mine.
The report of $136.7 million in metal sales from the Wharf mine is from year-end results reported by Coeur Mining to investors. Additional company reports say the Wharf mine employs 214 people and covers eight square miles. The mine is several miles west of Lead, just north of Terry Peak and visible from the top of the ski area near the summit.

In a separate annual report filed with the state of South Dakota, Wharf reported that its 2016 mining activities included the withdrawal of 75.63 million gallons of groundwater and 77.4 7 million gallons of surface water; the mining of 4.75 million tons of ore and the processing of 4.27 million tons of ore; the mining of11.33 million tons of overburden or waste rock; and the use of 1.2 million pounds of cyanide as part of the mine's heap-leach method of extracting precious metals from ore.

Reclamation, or the restoring of mined land, was minimal in 2016.
"We didn't have really any reclamation last year because we were mining in areas that were, for the most part, already disturbed," Zietlow said.
In Coeur's reports to investors, the company is projecting lower production from the Wharf mine this year because of the anticipated completion of a high-grade deposit.
[Handwritten comment] We again lose.

Additionally, I am philosophically opposed to foreign entities, whether private enterprises or governments, being allowed to exploit U.S. resources, and don't understand the laws that enable them to do so.

Also,

Just one note. In a few places, there are a few typos on Table 5 [in the attached comment document] labeling this for cumulative effects, which it is not for. Table 5 represents our specific comments on the draft environmental justice document.

And, you know, one of the things I really want to ask for is, you know, we need a cumulative impact analysis of the EPA/NRC uranium mining activities on the Pine Ridge Reservation, because a lot of the data that does currently exist is either out of date or hasn't been thorough enough, especially when dealing with some of these projects.

[...]

SENATOR KEVIN KILLER: (Speaking in indigenous language.)
That's our traditional greeting in Lakota. I shake your hands with a warm and good heart, and I want to say, you know, thank you to hosting these hearings. You know, I come up here in opposition to the proposed mine.
Mainly, you know, from working on legislation at the state level and understanding that, you know, we did -- recently did a bill dealing with a project in Haakon -- a proposed project in Haakon County, and this basically had to deal with drilling down into the proposed -- proposed area.
And a lot of that research, you know, I actually, you know, seen what happened and seen how that kind of played out. It was -- it was alarming because, you know, at the end of the day, I think we saw, just based on the research alone, that there wasn't a lot of outlets for this waste, high-level waste.
So our legislature basically took the bill, and we approved the legislature's input in this process. Before it was just the governor, and now it's -- the legislature can be involved in that.

There's a teenage boy a number of years ago that invented a way to clean the oceans of the oil and the trash. After I heard about it awhile back, I never heard anything again.

That's what I'm trying to say. I represent these people. I represent the Shawnee. We stopped fracking for the most part there. We ran Peabody coal out. They're gone now. They filled that hole. And now they are trying to get a bankruptcy notice. Bankruptcy.

Flint River, those people are paying for poisoned water. They are made to leave their homes. They're not even -- they have nowhere to go.
[...]

You should be growing hemp. You should be growing food. We've got a food crisis. I can't buy the lettuce at the store, it's $5 a head. Why? We should be growing our own food. You're going to have millions of millions of people starving soon. They're already there. They already got lead poisoning. Their children are already suffer from lead poisoning for the rest of their life.

[...]
CHRISTOPHER JOE RUEBNER-MALROY: Thank you.
One last thought. There's a war in the Japan Sea right now. They are threatening to bomb a ship that was sent over there, never should have been sent because you didn't finish the war here on water.

EARL TALL: Hello. I'm Earl Tall. I've been in North Dakota recently. I was also a former resident of Yellow Thunder Camp. Where's the gentleman that was over there?

A couple years ago, they had a hearing in Hot Springs. I think it was a National Regulatory Commission, and they talked about water then. And the majority of the people there disagreed with what they were proposing, and yet the -- the permit was issued.

[...]
We need to -- what's the next steps for -- what's the next steps for the people?
AUDIENCE MEMBER: Another Standing Rock.
EARL TALL: Because --
AUDIENCE MEMBER: We have land down there.
EARL TALL: Our relatives were shot with rubber bullets.
REGIONAL JUDICIAL OFFICER SUTIN: I'd ask that you don't interrupt testimony, please.

EARL TALL: Our relatives were shot with rubber bullets in Standing Rock. We were threatened in Yellow Thunder, in Yellow Thunder Camp. And how many of you people are willing to get shot with rubber bullets?
AUDIENCE MEMBER: Right here.
EARL TALL: You know, I think it's going to have to probably come down to that again.
AUDIENCE MEMBER: Oh, yeah. That's true.
EARL TALL: And it was a peaceful camp in North Dakota, but that's how they treated us.

I work as a land surveyor out of the town of Deadwood. And part of our surveying responsibilities include mineral claims surveying and mining site surveying. We have, on occasion, actually gone out and surveyed and delineated limits of defined Superfund sites in the hills, of which there are several, as I'm sure you're aware.
One of these Superfund sites was actually in the town of Whitewood, South Dakota, a small town off of Exit 25 on I-90. Many of the toxic elements within that Superfund site affect private property to the point where, whenever we plat or provide property survey for homeowners in that area, by regulation, local regulation, we have to show the defined area on their plat if it is indeed part of their property.
[...]
One other issue I would like to address here is the EPA's aquifer exemption. I know by regulation you're allowed to do this. I recall back in the 1970s when the EPA was first formed.
There were, I don't know how many, numerous toxic sites, polluted sites around the country, and the EPA really did, over the years, a really good job of getting a lot of these cleaned up, increasing public awareness, and creating regulations by which the industry and other companies had to abide in order to keep the environment clean.
But somewhere along the line, it seems like, with all respect, you may have violated the public trust by including regulations that now allow certain areas, aquifers, whatever to be polluted.
With all respect, I would suggest that these regulations be revisited and serious reconsideration be given to them.
Thank you very much.

However, people young and old are coming up, getting involved, and showing up to do the work that will make this cultural shift from valuing money -- which, if you ever took economics, you know money is an arbitrary, imaginary concept -- to valuing human life, to valuing nature, to valuing connections -- connections between people, connections between people and nature -- valuing what is really important to human life, to finding the meaning of life.
The meaning of life to American culture seems mysterious and out of reach, but there are plenty of people around who have a grasp of it. It's just that those people, by their exact nature, are considered to be the quiet ones. They're not the ones who become famous or go on TV media or whatever.

RAY GREFF: My name is Ray Greff, and I thank you very much for putting on this hearing and accepting comments from people like me.
Does anyone remember The Crying Indian, Iron Eyes Cody, and the pollution ad that first aired on TV in 1971? Glad a few of you remember that.
Anyway -- and there's an argument on the internet right now, was Iron Eyes Cody actually Indian? Apparently, he's Sicilian or Italian. They are fighting on that on the internet.
But anyway, that ad made a big impression on me. And to this day, I don't litter the tiniest piece of paper. I'll go to the house and throw it in the garbage. And when I'm out hiking and hunting, I'll often pick up cans and garbage and throw them where they should have been thrown in the first place.
This is a quote from David Brower, former head of the Sierra Club from his book, For Earth's Sake: "While the death of young man -- while the death of young men in war is unfortunate, it is no more serious than the touching of mountains and wilderness areas by humankind."
And I wanted to bring that out just to show what, to me, is the radical nature of the environmentalist versus the conservationist that I consider myself. I have a 1981 B.S. degree in mining engineering from the School of Mines here. And the old joke about the environmentalist, that's a guy who already has his cabin in the hills.

So I -- and like with the rest of them that are saying, you know, EPA failed on the Standing Rock issue. There was supposed to be a full environmental impact statement study that was supposed to be done, and it didn't happen.
Because your president, your United States President came in, and he's going to continue abolishing and, you know, pawing through his laws against the people of these United States and our Indian people.
[...]
And you know, the EPA, your duty, the Environmental Protection Agency, your duty, I think right now, United States citizens, you know, should demand this Agency to file, to go after Japan for Fukushima.

Lakota, we have a reservation. Now they went us to be quiet. I don't know anything about your guys' -- I learned your language, and I like a lot of your language, how you guys do things.

I'm a Lakota. I'm not educated. I never went to your schools, and I don't want to learn anymore. It just destroys my people. It's destroying my culture. I can't even speak to my grandkids because the government, everybody says we have to speak your language. Like I myself say, I'm not like you guys. I'm my own person. I grew up on this land. I don't want your education.

(Speaking in indigenous language.)

If you want to bring in businesses to the reservation -- no, that's a sovereign nation. If you want to be like these white people and you love money, leave the reservation. Get the hell out and go live with them out here. Leave my reservation pure.

So when you get tired of being a Wasicu, you can come home and be a Lakota. Don't bring that stuff into the reservation. If you want money and you want to be like these white people, look it, there's a whole land out here. Come out here.
Okay, my people. That's what I'm telling you now. If you want to be Wasicus, get off that land and be Wasicus out here. Leave that reservation the way it is.

Organic forms of any heavy metal are able to penetrate the lining of the digestive tract much easier than ionic and inorganic salts that are blocked by their electrical charges.
Organic metals act as a chelate, something that the health industry does to essential minerals to significantly improve absorption and also make them much more able to enter into direct biochemical reactions in the living body.
Selenium is another metal known to have wonderful health effects preventing cancer and enhancing thyroid hormone, but inorganic selenium, the form generated in ISL mining is known to cause birth defects of the highest severity.
Higher-evolved animals above microorganisms are not able to convert the quantities of the inorganic forms of minerals to detoxify, even the essential ones like selenium, into a biocompatible organic form. Plants and microorganisms do that in rivers and soils and can make heavy toxic metals even more toxic as they organify them.
The incongruency between actual toxicities of some chemical forms of metals and the actual regulatory levels is huge. Most toxicity levels fail -- charts fail to take into consideration the chemical forms of the metals, which is absolutely critical in assessing any toxicity status, and currently are not being tested for.
My recommendation to EPA is to upgrade your testing of MCLs by including the speciation of inorganic forms of metals and testing for organified forms, including uranium, and then compare the LD50 levels of each chemical form, which are often orders of magnitude in difference.
[...]
LINSEY MCLEAN: Only then can the true toxicity of the wastewater you are testing be assessed.
[...]

LINSEY MCLEAN: Using only a quantitative analysis of the metals tells you nothing about the toxicity you are actually looking for.

Thank you.

Corporations have been proven to be sociopathic. The power structure of the human race has proven -- the power structure of the human race has proven itself to be psychotic and severely corrupt.
You who sit in regulatory positions are playing a fool's game if you think you can be reasonable with these institutions. True human beings do not want to live like this. If you are making excuses for this industry, you are losing your humanity.

This should concern you. It should also concern you that there is an international justice movement gaining traction on the planet, and anyone involved in the degradation of and threatened -- and threats to human life is going to be held accountable.

Now that -- and they -- and they brought the power of the money, the anti-Christ, called it capitalism.
I have a dollar bill that I wanted to show you something. We all know, we all seen the pyramid with the eye on top. That eye represents anti-Christ, anti-Christ. And there's 13 layers of rocks here. And those represent the 13 Satanic families. And we've got 13 stripes sitting up here.
And if you look on the other side, it's a military emblem. I was in the Army. My cap, first class cap, I had a gold emblem on my head. But on the right side of it, he's holding 13 arrows. On the other side is an olive branch with 13 olives on it. And there's a shield right in here, it's got 13 stripes.
And right above the head, there's a group of stars. There's 13 of them. And the tail feathers, there's 13 of them. That's what you call capitalism. It has occupied the whole Northern Hemisphere.
[...]
When that anti-Christ, this God's eye came, he came with the money. And if you look on that -- they say he has a number 666 on his head. So if you look at this, all of these, anything you buy has that, the mark of the beast on it.
Because if you look at a bar code, the first -- there's two long lines in the middle, but there's two more long lines, and at the end there is another long line. And if you take accounting Cobalt, you know that those are sixes.

And so someday they are going to put those codes on our skin. And there are 800 FEMA camps that are across the nation, and the one for South Dakota is right here, FEMA camp. And they are building a -- equipping it with coffins that can hold up to five bodies.

So if you refuse this mark under your skin, you're going to be sent here, and you're going to die here. And that's coming soon. So I just wanted to say that.

And my T-shirt reminds us all today that only we can resist fascist liars. Let's remember that in the coming days.

Thank you very much.

ROBERT WHITE MOUNTAIN: I'm back. Thank you, EPA, for doing this hearing. I just wanted to say a couple things. First of all, something is kind of troubling. During the break here I was outside, and I really didn't feel good about -- we came here, you know, just to voice our opinions.
And in return, we had some young men from this town go by and say racial things to us. Try to incite a riot, you know. It's like, why is this turning racial? Why? We're all human beings. It doesn't need to get racial. Doesn't need to get violent. I just wanted to share that.
And also, you know, I feel for this community. And I realize that -- I've traveled all over this country, and I see that, as I feel for this community because you have no jobs, you have no growth here, you know.
This -- there was a mine here for 29 years, but this town didn't even grow. It was just like a little dead town, you know, really. It's -- you're depending on this gold to come in and revive this town.
There's like gazillions of towns all over this United States that are in just the same situation as this town. All kinds of towns that are dying in this whole country. So I feel for this community in that respect.

SARAH PETERSON: My name is Sarah Peterson, and I'm going to finish how Mary Helen started before I go back to what I was going to say.
Yes, there was a Superfund application for the Diamond Mine at Dewey-Burdock. And two people from the EPA, I'm not sure who they were, came up and were thrown off the land.
They could not do the investigative work to determine whether the Superfund cleanup was needed.
They came back the next summer -- and I don't understand how this works -- they got thrown off again. This is the federal -- you're a federal agency. And you have the federal court behind you. Why didn't you come out with the court order to get back on the land to protect us and clean up the mess that was left?
You know, I -- I just think of the IRS. If they knocked on my door, I couldn't say, Get out of here. I would be put in jail and everything taken away from me. I don't get this.

SOPHIA BLACKCLOUD: Okay. Well, I was -- I went around the town and I tried to find ice. So in doing that, certain people wanted to tell me directions, others didn't. Mainly children were happy to oblige, once again with just kindness.
And so it seemed that everybody was afraid to come here to speak or to have a voice in this town. So it makes me wonder what is being taught.
You said your wife was a teacher, Mr. Hollenbeck. Your poor son. I'm sorry, Mark, I feel for you. I really do. I really do. You're not being taught the truth.
[...]
SOPHIA BLACKCLOUD: Okay. So then I wanted to know, your local dump right now, I guess there's being drilling -- oil drilling done here. And I want to know where that water and whatnot is being dumped. Because I heard from your local town that it's being dumped right back into your dump.
It's not being disposed of properly. So therefore, it's back in your water that you're drinking. Your water jugs are not filled in the back. The water we gave you, you're not drinking.
[...]
SOPHIA BLACKCLOUD: That's all I have to say. Again, it feels more cold like, and it just -- it doesn't feel -- if I owned half of a town or mayored it, I'm sure that I'd have half the town behind me as well.
[...]
SOPHIA BLACKCLOUD: Money doesn't rule everything. Think with your heart.

APRIL SMITH: That came up so fast. I want to thank Mr. Davis because I have this, like, concise thing I was going to say and not be emotional, and I really appreciate that he went there. So thank you.
I think that companies like Powertech come into places like South Dakota because the population is so small and people here, they work hard every day and they just try to get by. And they don't have time to come to things like this, and they can't educate themselves about what's really happening to the land and the water.

And so I would encourage everyone here to try and express what's happening and hopefully get more and more people on board to expressing to the EPA during these types of open comment periods to oppose the permits and the aquifer exemption.

And big companies like Powertech come in, they do what they want to do, they say what they want to say to get the -- whatever they want to do -- go in, they pollute our beautiful land and water, and then they leave. I worked on a Superfund site, and I didn't know it. And it was in the District 9. Is that your district?
REGIONAL JUDICIAL OFFICER SUTIN: 8.

APRIL SMITH: 8. Okay. But through Denver; is that correct? Salt Lake, is that --

REGIONAL JUDICIAL OFFICER SUTIN: We're in Denver.

APRIL SMITH: But you cover Salt Lake?

REGIONAL JUDICIAL OFFICER SUTIN: Yep.
APRIL SMITH: And so, you know, there was a lot of educated people that I worked with, and they didn't know that they worked on a Superfund site. So, you know, the idea that, you know, having open, you know, conversations and, you know, people educating each other happens. It takes a lot of work, even when -- it just blows my mind.

Having just come on board, I've only been working on this for a week. I don't know a lot of the information, so I thank a lot of you that have done all the environmental -- I mean, I'm learning a lot.
[...]
Because I just started, there's a lot of things I don't know, and I'm going to talk to a lot of people. I'm going to contact medical professionals, see if I can get doctors and nurses on board. They're the ones that are going to have to take care of us if we get sick. They need to know what they're dealing with if this should pass.
When I have completed all my information, I will see that you get a copy. I will send a copy to President Trump, to Vice President Pence, to the Department of Environmental, to Rick Perry, to all of our senators, to the congressmen, to anyone I can think of. That will be sent by e-mail and snail mail.
And let them all decide if they're going to turn their heads and let this happen to us, because it's our responsibility and they're responsible for taking care of us.

And that's all I know because, like I said, I'm just getting started. So thank you for those that have all the information in your heart, and you shared it. Thank you for coming and giving us a chance, and you'll be hearing from me. Okay. Thank you.

MARTIN BATES: Hello. My name is Martin Bates. I'm a veteran of 20 years in the United States Air Force. I'm not a resident of this area. I'm just learning about this area. My wife and I are residents of Madison, South Dakota, but we are really residents of a motor home, and we travel around. We appreciated the South Dakota welcome several years ago as residents, and we can do that.

I'm also -- I had 20 years in the Air Force. And when I got out of the Air Force, I joined an organization called Veterans for Peace, and we stand up for equal rights, human rights, smart decisions. And having spent my whole life trying to walk lightly on Earth, I've noticed that there's a lot of people that don't walk lightly on Earth.
And I don't know, it seems like they do it because they disregard other humans and they disregard water, air, trees, animals, et cetera, and usually because of ignorance, greed, convenience, or just pure meanness.
If you'll think about that for a moment, you'll see what I mean. There are people that just -- they see that I do something for Earth, and they immediately go behind me and throw trash on the ground because they want to counter what I did.

Now, I can see a lot of dumb things happening, not that I'm all that bright, but I did listen to my mom and dad. And as I read about this thing, I have a few points. My folks taught me to clean up the mess after I did a project and before starting a new project.

And as we travel around the U.S., we go to national parks and we go to state parks and we go to places where other indigenous groups are fighting pipelines or whatever it is.

And everywhere we go, we see messes. We see messes that industries like this industry is doing -- I can't say the last name -- but what this industry is going to do and what they've done already, we see messes everywhere. They won't clean up the mess.

And, you know, that's a simple thing that we learn in kindergarten, is clean up one mess -- when you get done with a project, clean it all up, and then come and do the next project. So they ought to do that.
[...]
And in the Air Force, I was trained in shelter management. I was trained how to use a Geiger counter, how to put on a chem suit, how to clean somebody else off if they got chemical. And chemical attack was the enemy.
I want to mention, too, by the way, that I swore -- I see other veterans here, too, and you'll correct me if I'm wrong. But we swore an oath to protect this country and the people of this country against all enemies, foreign and domestic. And I see domestic enemies in places like this. So -- I'm sorry. I'm getting excited here.
But I learned how to use a Geiger counter, and I also could see what radiation could do to people when it's ingested. Most of this radiation you're talking about here is if it's ingested or breathed. Other radiation, if you touch it, get close to your skin, it affects you. I've learned how to decontaminate.

Notes

addressed in letter to Ex. 6 Personal Privacy (PP)
[date]

Letter ID	Commenter Name	Commenter Org.
84	Ex. 6 Personal Privacy (PP)	Individual
114		Individual
262		Individual

262	Ex. 6 Personal Privacy (PP)	Individual
266		Individual
304		Individual
339		Individual
346		Individual
426		Individual

	445	Ex. 6 Personal Privacy (PP)	Individual

445	Ex. 6 Personal Privacy (PP)	Individual
451		Individual
452		Individual
536		Ur-Energy Inc.
539		Prairie Hills Audubon Society
7456		Individual
07459 (Valentine hearing)		Individual

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)	Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

Text

Subject: Drilling for drinking water

If accessing this water will be for profit then you will just be adding to the stresses of mankind. If you get it done in a not for profit manner i can agree with it, otherwise my answer will be no

Subject: Re: Thank you for your comments

Awesome, thank you Valois and bless the critical work of the EPA!

The Non Radiological Effects of Uranium Inorganic forms of minerals, especially selenium and uranium, as well as other heavy metals, which consistently test high in aquifers post mining, have shown to be toxic to living systems of plants, animals and humans in very low levels. Uranium toxicity at low levels has shown in population statistics of exposed population such as Native Americans on contaminated and exposed reservations downwind and downriver from old exposed uranium mines to be more predisposed to chronic conditions such as: metabolic syndromes, diabetes, behavior and sleep problems, obesity and heart disease, fertility, and morbidity and mortality compromises. These are non radiological effects of uranium discussed, in that uranium as a metal actively incorporates itself into the biochemistry of the body. The radiological effects are another subject, not involving the actual chemical reactions such are described here. Reference: Heavy metal uranium affects the brain cholinergic system in rat following subchronic and chronic exposure Ex. 6 Personal Privacy (PP) 11 "Previous studies have shown that uranium is present in the brain and alters behavior, notably locomotor activity, sensorimotor ability, sleep/wake cycle and the memory process, but also metabolism of neurotransmitters. The cholinergic system mediates many cognitive systems, including those disturbed after chronic exposure to uranium i.e., spatial memory, sleep/wake cycle and locomotor activity." https://www.ncbi.nlm.nih.gov/pubmed/19409444

Uranium is known to travel through the blood to virtually every tissue and organ system in the living body through active transport by blood. It will reduce and for solid precipitates in the hard tissues of the body like bone and also cause kidney stones and kidney disease and the precipitates enlarge with time and chronic exposure. Binding with bicarbonate in the body will also compromise the body's ability to neutralize acids, predisposing to gastric ulcers as well as various muscle pains, cramps and spasms. Highly acidic bodies with compromised acid neutralization abilities, such as contamination with compromising uranium ions, will have higher agitation levels and volatility of behavior. Uranium ions in the liver will compromise blood sugar regulation, causing increased cravings for sugars in the diet, leading to diabetes, metabolic syndromes and obesity, as carbohydrate metabolism is compromised. Further, as blood sugar lacks internal regulation, alcohol and drug use is elevated in statistics, as the body struggles to "just feel good for a little while". Increased cancer rates are observed with uranium exposure as well as reproductive toxic effects with DNA breakage observed. Compromise to the connective tissues of the body, that cover virtually every surface in the entire body, produce autoimmune diseases such as crippling Lupus. This is exactly what we are seeing in population health statistics on the reservations affected. Further, the toxic effects of uranium are greatly enhanced in the presence of calcium ions, which are known to be generated in ISL mining as well as in runoff waters of the Rocky Mountains over old uranium open pit mines. The Rocky Mountains are high reservoir of calcium carbonate, so ISL mining waters containing uranium as they are known to do, will have even more toxic effects in synergy than what would be expected and predicted of each separately. Reference: Medical Effects of Internal Contamination with Uranium Croatian Medical Journal v.40, n.1, Mar99 Asaf Durakoviæ Department of Nuclear Medicine, Georgetown University School of Medicine, Washington D.C., USA "Uranium as a heavy metal is of particular importance as a complex of uranium and bicarbonate ions, which increases the solubility of uranium in serum. This compound is rather insoluble in water due to the complex ion formation between uranium and bicarbonates. This mechanism determines the Ex. 6 Personal Privacy (PP) 12 transport of ultra filterable uranium from the sites of contamination to the tissues and target organs (8). In blood, the uranium-bicarbonate complex establishes an equilibrium with non-filterable protein-bound uranyl ions, with 60% of uranium bicarbonate-formed and 40% protein- formed (9). In other studies, 74% of uranium in blood was present in the inorganic compartment of plasma, 32% was protein-formed, whereas 20% was associated with red blood cells (10). Uranyl salt complexes with bicarbonates are less stable than uranous salt complexes. Reduction of uranium in plasma is not probable, while the uranous salts can be reduced in the intracellular environment (11). Uranous (IV) retention sites are the bone and kidney, whereas uranyl (VI) ions accumulate in the liver and spleen prior to their redistribution in the renal and skeletal system." "Each of the uranyl ions are complexed by two phosphate ions on the surface of bone crystals, with simultaneous release of two calcium ions. The uranous ion produces a toxic effect on the living cells by inhibiting the processes of metabolism of carbohydrates by the inhibition enzyme systems. A uranyl ion replacing a magnesium ion binds the ATP molecule to hexokinase. ATP-uranyl-hexo- kinase complex blocks the release of phosphate to glucose, inhibiting its first step of metabolic utilization with non-metabolized glucose in the extracellular environment (12). The toxic effects of uranium were shown to be enhanced by the administration of calcium (33). The effects of uranium on the nervous system have been described as paralysis of the hind legs, blindness, and loss of coordination in rabbits in the terminal phase of intoxication (52). Most recent studies indicate significantly higher prevalence of malignant diseases in uranium workers (59), with increased mutations in underground miners (60) and connective

Verbal Testimony to EPA on Dewey Burdock UIC Class 3 mining and Class 5 disposal wells oral presentation at hearing: My name is Linsey McLean, and I am an environmental biochemist in toxicology for the last 40 years. I was born and raised in Flint, Michigan, lived there for the first 55 years of my life with over 450 Class 7 industrial dumpsites in each of the counties in SW Michigan. So I am well acquainted with environmental contamination of all kinds. This is the reason, actually, that I sought my course of study, and pursued a career in the effects of environmental pollution on the living body of both humans and animals. I am also a federally approved expert witness. I am submitting testimony on why it is necessary to include uranium in the metals testing for MCL/maximum contaminant levels. Currently, uranium is not one of the monitored metals in wastewater for uranium mining sites and should be. Even if the other metals are under the MCL's, uranium can be nearly off the chart and has been found to be so in old ISL sites that are attempting restoration. This has already been shown for several mines in Wyoming and Nebraska. Dewey Burdock waste injection wells will be sending plumes into the Minnelusa water as it flows south and east, through Igloo- the Black Hills Army Depot, through Buffalo Gap, Oelrichs, and elsewhere, and on into the Indian reservations that are already suffering contamination from the old open pits near Edgemont, SD. Metals can bond with many different molecules, which can then become completely different compounds, with totally different chemical and biochemical "personalities" and activities. If they bond with inorganic substances such as phosphate, oxide, sulfate, carbonate etc, they will form inorganic compounds. However, if they bond with carbon containing compounds, they become "organified" and will then have different toxicities and different biochemical activity in a living body. Organified metals have a significantly higher bioavailability in the living body, and much more ability to travel to, and target, Ex. 6 Personal Privacy (PP) 28 different organs and tissues of the body, interfering at the highest rate with normal healthy biochemical pathways than inorganic metals. "Organic" metals, are the substances of life itself. High levels of organified uranium have been studied and measured by the DOE recently, in old uranium mines. How did it get there when they are supposed to be extracting the uranium? Organified metals, including uranium, are known not to be recoverable by the ion exchange method of ISL recovery, since it is already bound organically and will not bind to the organic synthetic resins. So the levels will build up as the mining waters are recycled over and over in the ISL mining process, until the waters become too saturated and are disposed as waste. Organically bound metals under this circumstance, will continue to increase in the waste water of the ISL mine, adding to the metal burden of the wastewater, and also the toxicity of such, beyond what it would be if the metals remained in an inorganic and ionic form. There should be very elevated levels of organified uranium and other metals in the Inyan Kara, because of the contamination of the aquifer with micro organisms from open boreholes and decaying fenceposts placed in the old boreholes, so little recoverable uranium is there. There should be minimum levels of actual mining uranium shown for the permit, spectated and inorganic. Organic forms of any heavy metal are able to penetrate the lining of the digestive tract much easier than ionic and inorganic salts, that are blocked by their electrical charges. Organic metals act as a "chelate", something that the health industry does to essential minerals to significantly improve absorption, and also make them much more able to enter into direct biochemical reactions in the living body. Selenium, another metal, known to have wonderful health effects, preventing cancer, and enhancing thyroid hormone. But inorganic selenium, the form generated in ISL mining, is known to cause birth defects of the highest severity. Higher evolved animals above micro organisms are not able to convert quantities of the inorganic forms of minerals, even essential ones like selenium, into the biocompatible organic forms. Plants and micro organisms do that in rivers and soils, and can make heavy toxic metals even more toxic as they organify them. The incongruencies between actual toxicities of some chemical forms of metals and the regulatory levels is huge. Most toxicity level charts fail to take into consideration the chemical forms of metals, which is absolutely critical in assessing any toxicity status, and currently are not being tested for. Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) 29 My recommendation to EPA is to upgrade their testing of MCL's by including the speciation of inorganic forms of metals, and testing for organified forms, including uranium. Then, comparing the LD 50 levels of each chemical form, which are often orders of magnitude in difference. Only

Basis for My Testimony as Expert in Field As an environmental biochemist working with toxic exposures in both animals and humans for the last 40 years. I was born and raised in Flint, Michigan, lived there for the first 55 years of my life with over 450 Class 7 industrial dumpsites in each of the counties in SW Michigan. So I am well acquainted with environmental contamination of all kinds. This is the reason, actually, that I sought my course of study, and pursued a Ex. 6 Personal Privacy (PP) Ex. 6 Personal Privacy (PP) 0 career in the effects of environmental pollution on the living body of both humans and animals. I am also a federally approved expert witness. I have collected the largest databank for hair analysis monitoring of metals and minerals of anyone in the world since 1977. This databank follows the continuing increase in environmental toxins in air, water and food residues over the last 50 years, and correlates with disease and health compromise symptoms and syndromes. To date, I have one Canadian and 7 U.S Patents for products and protocols addressing health compromises from environmentally driven diseases in both humans and animals, including one for the only diet protocol that has ever earned a U.S Patent. This diet program resulted from my research from the 1970's, 1980's and 1990's, and underlies all the popular and effective diets of today featuring low carbohydrate, high protein, and high monounsaturated healthy vegetable oils, including the Atkins Diet, the South Beach Diet, the Zone Diet, the American Diabetes Association Diet, the Mediterranean Diet, etc. The foundation of this revolutionary approach is designed to fuel biochemical energy pathways while supporting compromised biochemical pathways, including hormone pathways, and also addressing detox of the interfering environmental chemicals, so that normalization of biochemistry is achieved. I have served in Michigan as an expert witness in state courts in environmental pollution and dumping cases and as expert witness in South Dakota in state and federal (NRC) hearings in the Dewey Burdock case for ISL uranium mining

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Subject: Testimony for Dewey Burdock injection wells

Hi Valois,

The following links are the documents comprising my written public testimony for Dewey Burdock Injection well permits.

- http://linseymclean.com/TVA/TVA%20Analysis%20of%20Aquifer%20Tests%20at%20Burdock%20SD%201980-b.pdf
- http://linseymclean.com/EPA/Linsey-McLean-EPA-slides.pdf
- http://linseymclean.com/EPA/Linsey-McLean-EPA.pdf

Thanks so much for all that you do!

My name is Ex. 6 Personal Privacy (PP) and I am an undergraduate student at James Madison University. Attached is my statement on the Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits, released by the U.S. Environmental Protection Agency on March 6, 2017.

1. Background

The Inyan Kara Group aquifers are located in the Black Hills of South Dakota which is composed of the Inyan Kara, Madison, and Minnelusa aquifers (Kyllonen, 1987). These aquifers are regenerated by the infiltration of rainfall into the ground, while water from these aquifers is released from well extractions as well as natural springs. Water in all three of the aquifers in the Inyan Kara Group require some kind of treatment before either public use or irrigation (Kyllonen, 1987). Some substances requiring treatment include: gross alpha radiation, iron, manganese, sulfate, hardness, sodium, bicarbonate, and fluoride (Kyllonen, 1987). Within the Inyan Kara Group aquifers, contain rocks that have uranium in them. This uranium is then naturally dissolved over time, producing dissolved uranium and radium-226 within the aquifers (Kyllonen, 1987).

2. Overview of Proposed Action

The U.S. Environmental Protection Agency (EPA) has drafted two Underground Injection Control (UIC) Area Permits for Powertech (USA) Inc. These drafted permits are for

"UIC 'Class III' Area Permit for injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class III injection wellfields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected" (McClain-Vanderpool, 2017).

The following comment provided is for your consideration toward the Proposed Dewey-Burdock Class III and Class V Injection Well Draft Area Permits by the end of the comment period, on May 19, 2017. The permits in question are Permit No. SD31231-00000 for the aquifer exemption decision, Permit No. SD31231-00000 for the class III injection well permit, and Permit No. SD52173-00000 for the class V injection well permit. My name is Ex. 6 Personal Privacy (PP) and I am a senior at James Madison University in Harrisonburg, Virginia. I am currently studying Integrated Science and Technology, with a focus on environmental science. As a person who cares deeply about the protection of the environment, I have written a response to the UIC permits under consideration.

Introduction

Water is one of the most important and valuable resources on the planet. Water is the source of all life on earth and it needs constant protection. The Safe Drinking Water Act (SDWA), from the EPA, legally protects drinking water in the United States. This act led to the creation of the Underground Injection Control (UIC) program as a response to growing needs for underground injection of potentially dangerous materials and the extraction of materials from underground. According to the EPA, a class III injection well is a "well used to inject fluids for the extraction of minerals" and a class V injection well is a "well not included in the other classes used to generally inject non-hazardous fluid into or above an underground source of drinking water (USDW)" (Injection Wells, 1989).

The EPA is truly an invaluable resource and protector of the land and therefore the American people.

Thank you for all your hard work.

To the Editor:

Mark Hollenbeck, in the May 23, 2017 issue of the Hot Springs Star is quoted as saying: "Southwest of the Black Hills, and in Edgemont, Inyan Kara is poor quality. Some wells having a salinity of 7,600 ppm, twice as salty as sea water, not usable…"

Sea water is about 3.5% in salt (NaCl) which by multiplying by 10,000 gives 35,000 ppm. Thus to be twice as salty as sea water these wells would have to be 70,000 ppm. It appears that Mr. Hollenbeck has made a ten-fold error in his calculations.

What is an Injection well/UIC? An injection well is a device that places fluid deep underground into porous rock formations, such as sandstone or limestone, or into or below the shallow soil layer. The fluid may be water, wastewater, brine (salt water), or water mixed with chemicals. In waste water disposal, treated waste water is injected into the ground between impermeable layers of rocks to avoid polluting fresh water supplies or adversely affecting quality of receiving waters. **In the case of this EPA permit, the injection will go directly into the Minnelusa aquifer and not in rock formations where injections typically are directed. Injection wells are usually constructed of solid walled pipe to a deep elevation in order to prevent toxic injections from mixing with the surrounding environment.

(http://en.wikipedia.org/wiki/Injection_well)

Until the 1960s, drillers could just dump this stuff wherever they wanted. Being extremely salty and full of chemicals, this is obviously a bad idea. The 1960s saw the introduction of deep injection wells. The idea was that if you could inject fluids into rocks thousands of feet underground, the toxic waste would stay there forever. In order for this to work, the rock layers have to be porous, like a sponge, and the waste has to be injected under pressure to force its way into the rocks.

Regulatory Requirements of Deep Injection Wells

In the United States, injection well activity is regulated by the United States Environmental Protection Agency (EPA) and state governments under the Safe Drinking Water Act http://en.wikipedia.org/wiki/Safe_Drinking_Water_Act (SDWA). EPA has issued Underground Injection Control (UIC) regulations in order to protect drinking water sources. The EPA has defined six classes of injection wells.

Class I wells are used for the injection of municipal and industrial wastes beneath underground sources of drinking water.

Class II wells are used for the injection of fluids associated with oil and gas production, including waste from hydraulic fracturing.

Class III wells are used for the injection of fluids used in mineral solution mining {en.wikipedia.org/wiki/Solution mining) beneath underground sources of drinking water. (ISL Uranium mining falls in here)

Class IV wells, like Class I wells, are used for the injection of hazardous wastes but inject waste into or above underground sources of drinking water instead of below. **Class V** wells are those used for all non-hazardous injections that are not covered by Classes I through IV. Examples include storm-water drainage wells and septic system leach fields {en.wikipedia.org/wiki/Septic drain fieldl.

Class VI wells are used for the injection of carbon dioxide for sequestration, or long term storage. Currently, there are no Class VI wells in operation, but 6 to 10 wells are expected to be in use by 2016. http://people.uwec.edu/piercech/HazwasteWebsSp04/DeepWellInjection/DeepwWellInjection.htm

[...]

References: High-rate injection is associated with the increase in U.S. mid-continent seismicity (https://pubs.er.usgs.gov/publication/70161978) Barbara A. Bekins, and Justin L. Rubinstein Abstract An unprecedented increase in earthquakes in the U.S. mid-continent began ... in 2009. Many of these earthquakes have been documented as induced by wastewater injection. We examine the relationship between wastewater injection ... and U.S. mid-continent seismicity using a newly assembled injection well database for the central and eastern United States. We find that the entire ... increase in earthquake rate is associated with fluid injection wells. High-rate injection wells (>300,000 barrels per month) are much more likely to be ...

Induced Earthquakes (https://earthquake.usgs.gov/research/induced/myths.php) The primary cause of the recent increase in earthquakes in the central United States. Wastewater disposal wells typically operate for longer durations and ... injection wells induce earthquakes. Most injection wells are not associated with felt earthquakes. A combination of many factors is necessary for injection to ... induce felt earthquakes. These include: the injection rate and total volume injected; the presence of faults that are large enough to produce felt ... earthquakes; stresses that are large enough to produce earthquakes; and the presence of pathways for the fluid pressure to travel from the injection ...

Injection-induced earthquakes (https://pubs.er.usgs.gov/publication/70048668) Abstract Earthquakes in unusual locations have become an important topic of discussion in both North America and Europe, owing to the concern that ... and underground mining, withdrawal of fluids and gas from the subsurface, and injection of fluids into underground formations. Injection-induced ... production of oil and gas from previously unproductive formations. Earthquakes can be induced as part of the process to stimulate the production from tight ... associated with industrial activity, with a focus on the disposal of wastewater by injection in deep wells; assess the scientific understanding of induced...

A Century of Induced Earthquakes in Oklahoma? (https://www.usgs.gov/news/century-induced-earthquakes-oklahoma) I related to oil production, particularly disposal of wastewater in deep injection wells, are known to potentially cause earthquakes. Prior to the ... Release Date: October 26, 2015The rate of earthquakes has increased sharply since 2009 in the central and eastern United States, with growing ... evidence confirming that these earthquakes are primarily caused by human activity, namely the injection of wastewater in deep disposal wells. The rate of ... earthquakes has increased sharply since 2009 in the central and eastern United States, with growing evidence confirming that these earthquakes are ...

Sharp increase in central Oklahoma seismicity 2009-2014 induced by massive wastewater injection (https://pubs.er.usgs.gov/publication/70137863) data required to unequivocally link earthquakes to injection are rarely accessible. Here we use seismicity and hydro-geological models to show that ... earthquakes to distances of 35 km, with a triggering threshold of-0.07 MPa. Although thousands of disposal wells may operate aseismically, four of ... Sharp increase in central Oklahoma seismicity 2009-2014 induced by massive wastewater injection Science By: Kathleen, M. Keranen, Geoffrey A. Abers ... , Matthew Weingarten, Barbara A. Bekins, and Shem in Ge.

[...]

2008-2010 Cases of Water Contamination Violations

CLASS-2 WELLS: 22 OTHER WELLS: 77 Cases of Unauthorized Injection= **859** Cases of Pressurized Injection= **1,199** Test Failures for Significant Leaks= **6,723** Total Wells with Violations= **60,467** http://projects.propublica.org/graphics/underground-injection-wells !http:llprojects.propublica.org/graphics/underground-injection-

STRUCTURAL FAILURES

A ProPublica review of well records, case histories, and government summaries of more than 220,000 well inspections from October 2007 to October 2010 found that structural failures inside injection wells are routine. From late 2007 to late 2010, one well integrity violation was issued for every six deep injection wells examined -more than 17,000 violations nationally. More than 7,000 wells showed signs that their walls were leaking. Records also showed wells are frequently operated in violation of safety regulations and under conditions that greatly increase the risk of fluid leakage and the threat of water contamination. ProPublica's analysis showed that, when an injection well fails, it is most often because of holes or cracks in the well structure itself.

UNAUTHORIZED INJECTION

Basically illegal dumping, EPA officials describe this as the most serious of all violations. It means waste was dumped into a well without a permit or without being legally approved for a certain location. State regulators say most violations are for bad paperwork, but in some cases, oil and gas companies have dumped dangerous waste meant for Class 1 wells into Class 2 wells to avoid fees and tighter regulations.

MECHANICAL INTEGRITY VIOLATION

Mechanical Integrity testing, or MIT, is the primary way of checking the condition of injection wells. All Class 1 and Class 2 deep injection wells are required to be tested regularly, often by pressurizing the well and waiting to see if any of the pressure escapes, indicating a crack in one of the well's layers. Regulators say most violations indicate a small problem that, caught early, prevents a larger failure in the future. But some failures noted in federal records do describe "significant"leaks and migration of waste.

OVER PRESSURIZED INJECTION

When waste is injected at higher pressure than is allowed on an injection well permit, it can either break out of the well or fracture the rock underground, creating new pathways for that waste to migrate into, and pollute, water supplies. A violation means that the pressure caused waste to move outside of its intended zone and endanger drinking water.

TEST FAILURES FOR SIGNIFICANT LEAKS

This means that a well failed a mechanical integrity test and "caused the movement of fluids outside of the authorized zone," because either its cement or steel structure, or the tubing that lines the inside of the well, had a crack.

WATER CONTAMINATION

In the reports each state submits to the EPA annually, they list the number of cases where an underground source of drinking water was believed to have been polluted as a result of leaking injection wells. http://www.sourcewatch.org/index.php/Injection well (http://www.sourcewatch.org/index.php/Injection welll Here are some of the multiple regulations for the construction and maintenance of monitoring and testing wells:

• follow waste analysis plan
• perform Mils at required intervals
• reporting and record Keeping
• record injection fluids and all monitoring results
• report on any changes at facility and noncompliances

Closing

• flush well with non-reactive fluid
• submit plugging and abandonment report
• monitor ground water until injection zone pressure can no longer influence any USDW
• inform authorities of well location and zone of influence

Siting

• AoR testing
• no-migration petition demonstration
• geological studies

Construction

• well is cased and cemented
• proper tubing and packer
• UIC program director must approve plan

Operation

• monitor injection pressure, flow rate, and volume
• alarms and devices to shut down flow if necessary
• maintain pressures that will not initiate cracking

http://www.epa.gov/safewater/uic/classonestudy.pdf
http://www.mindfully.org/Water/2003/Deep-Injection-Wells-GA013jul03.htm
http://www.mindfully.org/Water/2003/Deeo-Ioiection-WellsGA013jy103.htm

Problems with Recovery of Mined Minerals When Organic Compounds Contaminate an Aquifer Summary: You cannot recover all of the uranium from the mining water. Organified uranium compound levels will build up in the wastewater. Arabian Journal of Chemistry Volume 4, Issue 4. October 2011 (www.sciencedirect.com/science/journal/18785352/4/4l. Pages 361 -377

PROBLEMS WITH ION EXCHANGE IN WATER PURIFICATION

Ion exchange is another method used successfully in the industry for the removal of heavy metals from effluent. An ion exchanger is a solid capable of exchanging either cations or anions from the surrounding materials. Commonly used matrices for ion exchange are synthetic organic ion exchange resins. The disadvantage of this method is that it cannot handle concentrated metal solution as the matrix gets easily fouled by organics and other solids in the wastewater. Moreover ion exchange is non-selective and is highly sensitive to the pH of the solution. (Kurniawan et al., 2006).

ORGANIFIED URANIUM IS A REAL THING IN ISL MINES

Http://www.newswise.com/articles/slac-study-helps-explain-why-uranium-persists-in-groundwater-at-former-mining-sites

• SLAC Study Helps Explain Why Uranium Persists in Groundwater at Former Mining Sites

• New Details About Uranium Chemistry Show How It Binds to Organic Matter Article ID: 668799 Released: 2-Feb-2017 2:05 PM EST Source Newsroom: SLAC National Accelerator Laboratory *Newswise*- Decades after a uranium mine is shuttered, the radioactive element can still persist in groundwater at the site, despite cleanup efforts

A recent study led by scientists at the Department of Energy's SLAC National Accelerator Laboratory helps describe how the contaminant cycles through the environment at former uranium mining sites and why it can be difficult to remove. Contrary to assumptions that have been used for modeling uranium behavior, researchers found the contaminant binds to organic matter in sediments. The findings provide more accurate information for monitoring and remediation at the sites. The results were published in the Proceedings of the National Academy of Sciences. In 2014, researchers at SLAC's Stanford Synchrotron Radiation Lightsource (SSRL) began collaborating with the DOE Office of Legacy Management, which handles contaminated sites associated with the legacy of DO E's nuclear energy and weapons production activities. Through projects associated with the Uranium Mill Tailings Radiation Control Act, the DOE remediated 22 sites in Colorado, Wyoming and New Mexico where uranium had been extracted and processed during the 1940s to 1970s. Uranium was removed from the sites as part of the cleanup process, and the former mines and waste piles were capped more than two decades ago. Remaining uranium deep in the subsurface under the capped waste piles was expected to leave these sites due to natural groundwater flow. However, uranium has persisted at elevated levels in nearby groundwater much longer than predicted by scientific modeling. In an earlier study, the SLAC team discovered that uranium accumulates in the low-oxygen sediments near one of the waste sites in the upper Colorado River basin. These deposits contain high levels of organic matter-such as plant debris and bacterial communities. During this latest study, the researchers found the dominant form of uranium in the sediments, known as tetravalent uranium, binds to organic matter and clays in the sediments. This makes it more likely to persist at the sites. The result conflicted with current models used to predict movement and longevity of uranium in sediments, which assumed that it formed an insoluble mineral called uraninite. Different chemical forms of the element vary widely in how mobile they are-how readily they move around-in water, says Sharon Bone, lead author on the paper and a postdoctoral researcher at SSRL, a DOE Office of Science User Facility

Since the uranium is bound to organic matter in sediments, it is immobile under certain conditions. Tetravalent uranium may become mobile when the water table drops and oxygen from the air enters spaces in the sediment that were formerly filled with water, particularly if the uranium is bound to organic matter in sediments rather than being stored in insoluble minerals. "Either you want the uranium to be soluble and completely flushed out by the groundwater, or you just want the uranium to remain in the sediments and stay out of the groundwater," Bone says. "But under fluctuating seasonal conditions, neither happens completely." This cycling in the aquifer may result in the persistent plumes of uranium contamination found in groundwater, something that wasn't captured by earlier modeling efforts. "For the most part, uranium contamination has only been looked at in very simple model systems in laboratories," Bone says. "One big advancement is that we are now looking at uranium in its native environmental form in sediments. These dynamics are complicated, and this research will allow us to make field-relevant modeling predictions." The study combined the expertise of researchers at SLAC, Pacific Northwest National Laboratory and the Canadian Light Source. The research team used a blend of techniques to analyze samples of sediments in the experiment. They performed X-ray spectroscopy at SSRL to identify the chemical form of uranium. Capabilities at the Canadian Light Source and at the Environmental Molecular Science Laboratory (EMSL) at Pacific Northwest National Laboratory were used to map the locations of the elements in the samples at the nanometer scale. This additional information allowed the researchers to determine whether or not the uranium was bound to carbon-containing, or organic, materials. SSRL and EMSL are DOE Office of Science User Facilities. The DOE Office of Science funded the project. SLAC is a multi-program laboratory exploring frontier questions in photon science, astrophysics, particle physics and accelerator research. Located in Menlo Park, Calif., SLAC is operated by Stanford University for the U.S. Department of Energy's Office of Science. For more information, please visit slac.stanford.edu {slac.stanford.edu)

SLAC National Accelerator Laboratory is supported by the Office of Science of the U.S. Department of Energy. The Office of Science is the single largest supporter of basic research in the physical sciences in the United States, and is working to address some of the most pressing challenges of our time. For more information, please visit science.energy.gov (science.energy.gov).

The Bottom Line on Leaky Injection Wells, ISR/L Recovery and the Stabilization of Plumes:

If an ISR/L recovery well is contaminated with organic carbon compounds, whether naturally occurring or from leaky underground waste disposals, then the efficiency of recovery of uranium or any other metal by the common ion exchange method will be compromised, and will be rendered unrecoverable. Moreover, if the organic carbon compounds are stereoisomers, whether naturally occurring or synthetic industry wastes, they will only react with other stereoisomers, so no inorganic method of stabilizing a plume will be effective, as demonstrated at SmithHighland Ranch in WY. Contaminated old ISR/L field waters may still test high for the elemental presence of uranium, and be marketed and sold (stocks and investments) as having a high propensity for extraction, but that would not be the case. It would not be recoverable. There is no technology known today that will clean up an aquifer like that.

[...]

MESSAGE TO THE PUBLIC: PREPARE FOR THE EPA HEARINGS

1.) Get there early to sign in for your time to present your concerns.

2.) You are most effective if you take the time to write out your understanding of the permit and your objections to it and handing it to the judges. You can save time by reading it aloud to the judges and then submitting the written paper to them for their records. You will have only a short time to speak, so make you comments relevant and pointed. Be sure to sign your name. If you print your comments out on your computer, be sure to sign your name and address at the bottom to make it legal.

3.) Use the science to make your point. Show that you understand the science by explaining why you are against any hazardous waste in our aquifers, whether the Inyan Kara or the Minnelusa, and also why you are against making the Inyan Kara any more compromised than it already is. Both of these aquifers are being used, if not for personal use, then for ag use. Many people with wells in the area, do not even know what aquifer they are in. If you know your well aquifer and it is the Inyan Kara or Minnelusa, you need to make that point.. These judges are scientists and need to hear that you understand and are opposed to this permit. Do Not just get up there and whine about how this doesn't feel good to you. That just gets blown off. Use the studies and scientific points outlined in this document to help you. More if you know more. You only need a couple points to hammer down on.

4.) Encourage your friends and neighbors to get involved and come with you to protect our water.

The Permit in question: EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota. Public hearings will be held in Valentine, NE and in Rapid City, Hot Springs and Edgemont, SD

CONTACT:

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(Denver, Colo. -March 6, 2017) EPA has issued two draft Underground Injection Control (UIC) Area Permits to Powertech (USA) Inc., for injection activities related to a proposed uranium recovery project in the southern Black Hills region in Custer and Fall River Counties of South Dakota. EPA will conduct information sessions combined with public hearings on April 27th and on May 8 through May 11 at the times and locations detailed below. EPA will accept public comments on the draft permits and a proposed aquifer exemption associated with the project through May 19, 2017.

The draft permits issued today include a UIC 'Class 111' Area Permit for injection wells for the in-situ recovery (ISR) of uranium in the Inyan Kara Group aquifers and a UIC 'Class V' Area Permit for deep injection wells that would be used to dispose of ISR process waste fluids into the Minnelusa Formation below the Inyan Kara after treatment. Under the terms of the draft permits, waste injected under the Class V permit must be treated prior to being injected and must meet all radioactive waste and hazardous waste standards. Monitoring of the underground sources of drinking water surrounding the Class 111 injection well-fields will take place before, during and after ISR operations to ensure the underground sources of drinking water are protected.

EPA is also proposing an aquifer exemption approval in connection with the draft UIC Class III Area Permit. Specifically, this approval would exempt the uranium-bearing portions of the Inyan Kara Group aquifers from protection under the Safe Drinking Water Act. Such an exemption must be in place before ISR activities within these aquifers can occur.

Under its obligation to comply with the National Historic Preservation Act and under EPA's Tribal Policy on Consultation and Coordination with Indian Tribes, EPA has been consulting and coordinating with several interested Tribes to identify the potential effects of the proposed project on traditional cultural places, historic and sacred sites. EPA will continue to consult and coordinate with Tribes as necessary throughout the public comment period concerning these proposed permitting actions

The public is encouraged to provide comment on these draft permits and the aquifer exemption by midnight mountain time, May 19, 2017. EPA's final permit decision will be based on an evaluation of comments received and a determination of whether underground sources of drinking water are protected. The draft permits can be found at the EPA Region 8 UIC Program website: https://www.epa.gov/uic/uic-epa-region-8 (https://www.epa.gov/uic/uic-epa-region-8)

https://www.epa.gov/uic/administrative-record-dewey-burdock-class-iii-and-class-v-injection-well-draft-area-permits (https://www.epa.gov/sites/production/files/2017-03/documents/class_v_draft_area_permit_fact_sheet.pdf)

How to Comment:

Written comments must be received by email, fax or mailed to:

Valois Shea

shea.valois@epa.gov (shea.valois@epa.gov)

fax: 303-312-6741

U.S. EPA Region 8 Mail Code: 8WP-SUI

1595 Wynkoop Street Denver, CO 80202-1129

From the Permit: Powertech USA submitted an application for a UIC Program Class V Area Permit proposing to construct and operate up to eight (8) deep injection wells within the Dewey-Burdock Project Boundary to be used for the disposal of treated uranium ISR process wastewater into the Minnelusa and Deadwood Formations. At the time the Class V Area Permit Application was submitted, Powertech anticipated that the two (2) Minnelusa and the two (2) Deadwood injection wells proposed in the Class V Permit Application would provide adequate disposal capacity for the Permit SD52173-00000 6 Dewey-Burdock Class V Draft Area Permit Fact Sheet volume of uranium ISR process wastewater that is expected to be generated at the site. As further explained below in Section 2.3, Powertech did not intend to request additional injection wells to be added under the Class V Area Permit unless the first four (4) wells did not provide adequate disposal capacity. However, Powertech withdrew the permitting request for the two Deadwood injections wells in a letter dated December 9, 2016**Public Information Sessions and Hearing Information {The public may also provide written and/or verbal comments during the following EPA public hearings):**

Thursday, April 27, 2017 from 4:00 to 8:30 p.m. (with a break from 5:00 to 6:00 p.m.)
Niobrara Lodge, 803 US Highway 20, Valentine, Nebraska 69201
Monday-Tuesday, May 8-9, 2017, 1:00 to 8:00 p.m. (with a break from 5:00 to 6:00 p.m.)
The Best Western Ramkota Hotel, 2111 N. Lacrosse Street, Rapid City, South Dakota 57701
Wednesday, May 10, 2017, from 1:00 to 8:00 pm (with a break from 5:00 to 6:00 p.m.)
The Mueller Center, 801 S 6th Street, Hot Springs, South Dakota 57747
Thursday, May 11, 2017, from 1:00 to 8:00 pm (with a break from 5:00 to 6:00 pm)
St. James Catholic Church, 310 3rd Avenue, Edgemont, South Dakota 57735from
From the Permit:

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This Class V Area Permit authorizes up to four (4) wells for injection into the Minnelusa Formation only. Powertech originally proposed the construction of the two (2) Minnelusa Formation injection wells listed in Table 1, but may elect to construct up to two (2) additional injection wells allowed under this Class V Area Permit. If Powertech decides that more than four (4) injection wells are needed to provide enough capacity to disposed of the treated ISR waste fluids, a modification under this permit will be required per 40 CFR § 144.39 and 40 CFR § 124.5. This process will involve issuing a draft permit modification subject to public comment on the modifications only.

Table 1. Injection Wells Proposed under the Class V Area Permit
~= approximately

1. The approximate depths shown in this table are extrapolated from the type logs described in the Class V Permit Application. Actual injection zone depths will be determined from drill hole logs during well construction. The Class V Permit Application, including the required information and data necessary to issue a UIC permit in accordance with 40 CFR parts 124, 144, 146 and 147, was reviewed by the EPA and determined to be complete. This Class V Area Permit is issued for a time period of ten (10) years after the Permit Effective Date and will expire after that time. The Class V Area Permit also may be terminated upon delegation of primary enforcement responsibility for the Class VU IC Program to the State of South Dakota unless the State agency chooses to adopt and enforce this Permit. If Powertech wishes to continue any activity regulated by this Permit after the expiration date of this Class V Area Permit, Powertech must submit a complete application for a new Permit at least 180 days before the Class V Area Permit expires.

2.1 Injection Well Classification The injection wells authorized under this permit are classified as Class V industrial wastewater injection wells. The proposed injection zone for injection wells DW No. 1 and DW No. 3 is the Minnelusa Formation, which overlies the Madison Formation, a USDW. Typically, Class I radioactive waste injection wells are used for process wastewater disposal at uranium ISR sites because process wastewater at these types of facilities usually meets the definition of "radioactive waste" under 40 CFR § 144.3. Class I radioactive waste disposal wells are required to inject fluids below the lowermost formation containing an underground source of drinking water within one quarter mile of the well bore per 40 CFR § 144.6(a)(3). Radioactive waste disposal above USDWs are classified as Class IV wells and are banned per 40 CFR § 144.13. Because the proposed Minnelusa injection zone for DW No. 1 and DW No. 3 is located above a USDW, these wells do not fit the regulatory definition of a Class I injection well. Therefore, in order to be able to inject in the Minnelusa, above USDWs, the permit requires Powertech to treat the injectate so that it does not fall under the definition of "radioactive waste." According to 40 CFR § 144.S(e)

Permit SD52173-00000 7 Dewey-Burdock Class V Draft Area Permit Fact Sheet:
Well Permit Number: SD52173-08764
Well Name: OW No. 1
Proposed Injection Zone: Minnelusa Formation
Anticipated Injection Zone Depth: -1,615'
Location within Project Area: Burdock
Well Permit Number: 5D52173-08765
Well Name: DW No. 3
Proposed Injection Zone: Minnelusa Formation
Anticipated Injection Zone Depth: -1,950' --2,540'
Location within Project Area: Dewey

Class V injection wells are those not included in Class I, 11, 111, IV or VI. Therefore, OW No. 1 and OW No. 3 must be classified as Class V injection wells.

Because these two wells will be used as deep disposal wells, the Class V Area Permit contains the protective construction and monitoring requirements designed for Class I injection wells. However, because these wells are Class V wells, the Class V Area Permit contains permit limits requiring injectate constituent concentrations to be at or below radioactive waste standards set in 10 CFR Part 20, Appendix 8, Table 11, Column 2 and hazardous waste standards set in 40 CFR § 261.24 Table 1.

The proposed injection zone for injection wells OW No. 2 and OW No. 4 is the Deadwood Formation, which is expected to lie beneath all USDWs in the area. These two wells fit the regulatory definition of Class I wells found at 40 CFR § 144.6(a). Even if Powertech treats the injectate for these two wells so that injectate constituent concentrations would be at or below radioactive waste standards set in 10 CFR Part 20, Appendix 8, Table 11, Column 2 and hazardous waste standards set in 40 CFR § 261.24 Table 1, these wells would still meet the definition of Class I other industrial well found at 40 CFR § 144.6(a)(2). South Dakota regulation 74:55:02:02 prohibits Class I injection wells in the State. When the EPA informed Powertech that the OW No. 2 and OW

No. 4 wells proposed for injection into Deadwood Formation are classified as Class I wells under UIC regulation 40 CFR § 144.6(a)(2}, Powertech submitted a letter to the EPA withdrawing the request for authorization for construction and operation of wells injecting into the Deadwood Formation. Because there is no longer an active application for injection into the Deadwood Formation, there is no agency action related to injection into this formation. https://www.epa.gov/sites/production/files/2017-03/documents/class_v_draft_area_permit_fact_sheet.pdf (https://www.epa.gov/sites/production/files/2017-03/documents/class_v_draft_area_permit_fact_sheet.pdf)

CONTACT US Tell us what you think.

BIOGRAPHY

Ex. 6 Personal Privacy (PP) had parallel professional careers in the Department of Veterans' Affairs and Naval Intelligence enlisted in the United States Marine Corps at age 17 and completed his eight-year obligation to the United States Marine Corps through an active Marine Reserve program. This United States Marine Corps program allowed him to complete both undergraduate and graduate school at the University of Houston, while also fulfilling his eight-year military obligation.

During the Vietnam War, Ex. 6 Personal Privacy (PP) was recruited for a direct commission in a United States Naval Intelligence Program. The Navy was seeking individuals with skills in basic science, computer science, and "exotic" linguists. education and civilian specialties were chemistry, biochemistry, and psychology. also earned a second graduate degree from the Army-Baylor Program at Fort Sam Houston, San Antonio, TX, 1971-1973. Following intensive POW Debriefing training by the Navy, he volunteered for active duty to debrief returning Navy/Marine Corp POWs from Vietnam in 1973.

Concurrent with his Veterans' Administration 34-year careers in medical research and executive health care positions, 28 years as a Naval Intelligence Officer in twelve Naval Intelligence active reserve units. Ex. 6 Personal Privacy (PP) served three tours of active-duty.

Ex. 6 Personal Privacy (PP) earned 11 Naval Intelligence Certifications. These certificates are known as Navy Officer Billet Codes (NOBC). Examples of these certifications are: Air Intelligence Officer, Naval Attache, Photo Interpreter, Anti-submarine Warfare Officer, and Naval Investigative Service Officer. volunteered for active duty during the first Gulf War (1990-1991) and commanded a US Naval Intelligence team during Desert Shield and Desert Storm. The team's mission was to identify weapons, technology, arms, and chemical substraits that had been acquired by Iraq. Also, the Team was to interdict those items still in transit to Iraq before hostilities began. The Navy team was awarded the Defense Meritorious Service medal and a Joint Meritorious Unit Award for their distinctive accomplishments before and during hostilities. Ex. 6 Personal Privacy (PP) was also awarded the Defense Superior Service Medal. was injured while on active duty and formally retired from Naval Intelligence in November 1996

Position Statement

SOUTH DAKOTA

ISL Dewey-Burdock EPA Class 3 and Class 5 UIC injection wells for mining and other hazardous waste deposition -March 2017

Summary:

The Hong Kong/China based uranium mining company, Powertech/ Azarga that has been pursuing ISL (in situ leach recovery) mining permits in the Dewey-Burdock, Edgemont area of the Black Hills, is currently requesting permits from the EPA for waivers from the Clean Water Act for the Inyan Kara aquifer in order to implement UIC injection wells for mining, and for hazardous waste permanent deposition from mining activity in the Minnelusa aquifer.

The Black Hills enjoys a relatively sound economy. Agriculture and tourism supports the majority of businesses. We who live here have an opportunity to enjoy the attractions and the beauty as well. It's just a nice place to live. I hope you have a chance to enjoy some of the beauty here in the Black Hills while you're here.

“About 60 percent of the body is made up of water and without this fluid the functions of the cells would cease. Water is distributed throughout the body both inside and outside the cells and balancing this distribution is an important part of maintaining normal cellular function. Normally water is divided among three spaces in the body, with the following percentages representing averages.

Intracellular (70 percent) – this is water that is inside the cells
Intravascular (5 percent) – this is water that is in the bloodstream
Interstitial (25 percent) – this water can be found between cells and blood vessels.

We regulate the levels of water in our body by drinking fluids and making excretions, urine. This allows us to constantly adjust our hydration based on our levels of activity. Inside our bodies, fluid is distributed appropriately through a number of factors:

The brains and kidneys regulate thirst and elimination of excess fluid
The large proteins in our blood plasma pull fluids into the bloodstream

The permeability of both cell membranes and the walls of capillaries help determine how much water can be held in and pushed out of cells and blood vessels.

Each of these factors helps us regulate the amount and distribution of fluid. If these factors were to be interfered with, fluid levels and distribution can become problematic.

Dehydration is an abnormal decrease in the total amount of water in the body. This may be caused by decreased fluid intake or a significant loss of fluid from the body by one or more of a variety of means. Remember, however, that maintaining a balance of water relies on a healthy gastrointestinal system. Fever, vomiting or diarrhea can also significantly alter the amount of water in the body. Fluid can be lost, as well, through rapid breathing (as in a respiratory distress patient) and profuse sweating. The plasma protein of blood can be lost with injuries such as burns.” “Dehydration results from losing more fluid than the patient takes in. This is very common in hot weather, when the patient sweats a great dela but done not drink enough liquid to keep up with the fluid (heat exhaustion).”

Quote from Brady, *Emergency Care, 12th Edition* , Daniel Limmer and Michael F. O'Keefe.

Please find attached comments from Ur-Energy Inc. and its subsidiaries on the UIC Class III Draft Area Permit for the Dewey-Burdock project. We hope that you will find our comments objective and helpful in the development of the permit. If you have any questions please don’t hesitate to call.

[ATTACHMENT: “UR-Energy Comments on Draft UIC Class III Permit.doc”]

Comments on the 2 Underground Injection Control (UIC) Draft Area Permits to Powertech (USA) Inc. & the associated aquifer exemption & Cumulative Effects Analysis, -- One Permit is a potential UIC Class III Area Permit for injection wells for the ISR of uranium; the second is a a potential UIC Class V Area Permit for deep injection wells that will be used to dispose of ISR process waste fluids into the Minnelusa Formation

One solution is to build a pile of very dry land, and cover it with demolition materials from all over the county. How about some land that is already contaminated.

The other comment I'd like to make is, what is the half-life on that waste that's coming out of there? It's not the -- the half-life makes all the difference in the world of what goes in that ground.
And if it's radioactive, whatever that half-life is kind of gives you an idea of how long it'll be there.

So I'm -- so I'm questioning, like, people, like, why oppose it? But I'm kind of, like, why do -- I don't know why anyone is strongly supporting this. I don't know how it benefits anyone. The best is we get all these people to come up from the industry. They are all from the industry. Some way or another, they are all or have been or are getting paid to be here.
I don't know where all the guys in cowboy hats went, but they were all kind of sneering and stuff like that. But I don't know. It kind of becomes this partly political thing rather than what is the right thing to do here as human-being people.

Like this false dichotomy between science and emotion. Like science -- if you look at the word "science," it says the observation of the natural world. We are the natural world. That's what science is. So science has been co-opted and trampled into representing corporate interests. So what I'm seeing here is corporate interest.

I know, EPA, whatever you want to call yourself, you are probably really good people. You have children, families, homes and that to go to. You're not really the people to rant at. We can never get close to those people.
But you can tell your people that there is resistance to this, and there is going to continue to be resistance to not just this, but the corporate -- corporate corpse that is taking away life from all of us. It's sucking life out of us.
The relative that spoke about money, the system is of control. Money is the system of control. You know, would you be here if you weren't getting paid? Question your life if that is the case.
If that is the case that you would not be here, you are now enslaved. You are doing something against your will. As you write all this down, as you write all this down, stir up -- do a really good job.
[...]
I'm English, and I -- my children, my wife are American. We currently live with the -- on the Sicangu Rosebud over there. That's where we're residing at the moment. But -- yeah, mostly I just wanted to say that.

In which reality would we prefer to live in, one where people come out of the goodness of their heart or one where there are paid. People paid -- obviously paid by corporations to sneer and deride people for having an emotional response to something that is actually quite an emotional issue.

So yeah, just mostly that. There will be resistance. There is resistance. Expect that. And we'll see what happens, I guess. If you -- if you, your bosses, the people who pay you and enslave you decide to go ahead and grant the permits. So I request that you don't grant the permits.

Maybe I will request that you grant them so that we can, like, get on with this and get rid of the corporations and -- no. Formally, I'm requesting that you do not grant the permits.
And that they better watch out, seriously.
All right. Thank you.

CHARLES KELSEY: As she said, my name is Charles Kelsey. I live east of Edgemont. I have a small horse training ranch there, and I live near the Cheyenne River. I like to fish there. I eat the fish from the Cheyenne River. I am retired.

I retired after 35 years of doing radiation protection. I've worked in several countries and have worked in several states in the U.S. doing radiation protection. In other words, protecting people from radiation. I've done that for 35 years. So I know a lot about it.

I've had a lot of experiences with it. I've had experiences where there have been problems, where technical failures, where there had been human errors, and we've had to deal with some problems. But we have, over time, dealt with those problems.

And as I say, learned a lot about protecting people from radiation. I've worked in several industries over the years, including the ISR industry to protect people from radiation.

I've worked -- in that time, I've worked with many regulators, such as these. I've worked with professionals that have worked in all these industries, and I have -- as I say, I've seen a lot of examples of a lot of things over time.

The one -- I have learned a few things about radiation that are not obvious to a lot of people. One thing I've learned is that no matter where I go in this world, and I turn on a radiation detector, the radiation clicks, it -- or, the detector clicks. Doesn't matter where I am. That means there is radiation everywhere all the time. There always has been and there always will be.

I've also learned that no matter where I am, if I take a sample and have it studied, there's uranium. It doesn't matter where I am, it's always there. And it always has been, so it's just a fact of life.
I've also learned that if you look around yourselves, start counting off, that if we're typical of people in this country, you can -- you can bet that one in five of us, no matter where we live in this country, we're going to die of cancer.

So when you hear of this person or that person or the other person dying of cancer, that's just the way it is in this country. One in five people die of cancer.

AUDIENCE MEMBER: We never had cancer.
CHARLES KELSEY: Whatever the causes.
AUDIENCE MEMBER: We never did.
REGIONAL JUDICIAL OFFICER SUTIN: Please don't interrupt.
CHARLES KELSEY: Those are just a few things that I've learned in my experience in radiation protection.
As I say, I'm retired, and my interest in this community continues to be protecting people from radiation. So I'm here to answer questions, to work with people, to help with the understanding of radiation.

And I am here to try to help ensure that this operation, if it goes on, will be done with the concern for people and to protect people from radiation.

The one additional thing that I have learned in working with professionals like these is that they really are looking out after our best interest. And I truly believe that whatever their decision is, that that decision will be for our best interest. And I have learned that through 35 years of working with professionals like this.

So I'm willing to take their decision and live with it and try to help people around here live with it the best that they can. That's all I have.

So I'd like to start with two things before I go into my reading, and it was the man that first spoke about the uranium first here earlier. He's probably paid by Powertech to say those things. I've heard many speak on what he spoke on, and it just -- I've heard the scientists, I've heard the doctors, I've heard landowners, so on and so forth.

The second landowner that was in favor of the mining should not have the right to jeopardize or -- you know, he was in favor of the landowners have the right to make that decision for all of us to start mining, and he should not have the right to jeopardize drinking water for the entire Black Hills. Should not.

Letter ID	Commenter Name	Commenter Org.
71	Ex. 6 Personal Privacy (PP)	Individual
218		Individual
294		Individual
302		Individual
328		Individual
329		Individual

464	Ex. 6 Personal Privacy (PP)	Individual
489		Individual
505		Individual
519		Black Hills Clean Water Alliance

	527	Ex. 6 Personal Privacy (PP)	Clean Water Alliance
	528	Ex. 6 Personal Privacy (PP)	Aligning for Responsible Mining

539	Ex. 6 Personal Privacy (PP)	Prairie Hills Audubon Society
542		Prairie Hills Audubon Society
543		Prairie Hills Audubon Society
00544, 00545		Prairie Hills Audubon Society

546	Ex. 6 Personal Privacy (PP)	Oglala Sioux Tribe
553		South Dakota DENR
556		South Dakota Department of Game Fish, and Parks

556	Ex. 6 Personal Privacy (PP)	South Dakota Department of Game Fish, and Parks
7449	Ex. 6 Personal Privacy (PP)	Individual
7460 (5/8 Rapid City hearing)	ds	Individual
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		

	Ex. 6 Personal Privacy (PP)	Prairie-Hills Audubon Society
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

Text	Notes
As stated in South Dakota Department of Environment and Natural Resources water regulation, the water belongs to the residents of this state.	
Surface water flow in channels is ephemeral except for perennial Beaver Creek. **U.S. Army Corps of Engineers permit application under Section 404 of the Clean Water Act will be required before conducting work in jurisdictional wetlands** (see Surface Waters and Wetlands SEIS Section 4.5.1.1). (see Section 404 of the Clean Water Act -exhibit A_cwa_sec404doc.pdf).	Include under CEA; check context
It is also not stated how the policy and permits for aquifer exemption follows the Clean Water Act regulations and what will be done in order to maintain these regulations. By including this in the policy, it will help prove that the permits are being regulated and abiding by the Clean Water Act. The Clean Water Act establishes a structure for regulating pollution in the waters of the United States (EPA, 2017b). As mentioned above, water leaks are possible, which could ultimately lead to water contamination. Therefore, if there is a risk of contamination of water sources due to the UIC of mining waste with the aquifer, the process could fail to abide by the Clean Water Act ultimately making the proposed policy on draft permits to be reconsidered.	Include under Surface Water concerns
Also, the Resource Conservation and Recovery Act excludes mining waste from federal hazardous waste regulations. If, or rather, when there is an accident, South Dakotans will not only suffer the biological consequences, but will also have to do the clean up. And clean up of radioactive substances is not easy. [...] Even if I were supportive of uranium mining (which I am emphatically not), I am troubled by the laws as written which permit mining corporations (in this case, one from China) to profit from public resources without paying anything for the right. The Mining Law of 1872, which still governs uranium and other "hardrock" mining to this day, any company can extract and sell minerals from public lands without paying a cent in royalties to the federal government.	Does Powertech comment on this exemption for analyzing for haz waste metals?
Our republican state lawmakers mostly seem to be concerned about money and money in their pockets from investments for some in Powertech. Who will protect us????? Only you. I am concerned our Republican administration is willing to throw us all under the bus. Our state does not even require bonding as far as I know. If there is a failure and contamination we have no other resource.	
Here are links to species petitioned to List or down-list under the Endangered Species Act Of special significance in the Dewey Burdock mining proposal, is the petition to list the Sturgeon chub, which is in the Cheyenne River and the White River. You may wish to pay attention to that one. RECENT LISTINGS rusty patched bumble bee petition - Listed in February 2017 - as an endangered species under the Endangered Species Act https://www.federalregister.gov/documents/2017/02/10/2017-02865/endangered-and-threatened-wildlifeand-plants-endangered-species-status-for-rusty-patched-bumble-bee Petition by Xerces Society http://www.xerces.org/wp-content/uploads/2013/01/Bombus-affinis-petition.pdf STATUS PENDING PETITION TO DE-LIST Scroll down further for more info on the petition to delist the American Burying Beetle, look for photo of the beetle Petition to de-list: https://www.fws.gov/southeast/candidateconservation/pdf/petition-to-delist-american-burying-beetle.pdf USFWS 90 Day Finding: https://www.fws.gov/midwest/endangered/insects/ambb/90DayFinding16March2016.html PETITIONS TO LIST BIRDS ========== Black Backed WoodPecker, DPS Chad Hanson , BCA, CBD (deadline - USFWS decision in fall 2017) http://ecos.fws.gov/docs/petitions/92210/416.pdf The Golden Winged Warbler, Anna Sewell https://www.fws.gov/midwest/es/soc/birds/goldenwingedwarbler/goldenwingedwarblerpetition.pdf MAMMALS The Plains Spotted Skunk https://www.fws.gov/midwest/es/soc/mammals/pdf/PetitionList4SppGrasslandThicket.pdf BUMBLE BEES ========== western bumble bee petition Defenders of Wildlife http://ecos.fws.gov/docs/petitions/92000/679.pdf Docket http://www.regulations.gov/#!docketDetail;D=FWS-R6-ES-2016-0023 yellow banded bumble bee petition Defenders of Wildlife http://ecos.fws.gov/docs/petitions/92000/681.pdf docket http://www.regulations.gov/#!docketDetail;D=FWS-R5-ES-2016-0024 BUTTERFlIES ========== petition to list Monarch butterfly Center for Biological Diversity, Xerces Society, Center for Food Safety http://ecos.fws.gov/docs/petitions/92210/730.pdf petition to list regal fritillary butterfly Wildearth Guardians http://ecos.fws.gov/docs/petitions/92000/462.pdf Status of review https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=I075 FISH Petition to list Sturgeon & Sicklefin Chub, Wildearth Guardians, petition link:	

http://www.wildearthguardians.org/site/DocServer/Sturgeon_SicklefinChubPetition8_11_16.pdf?docID=17346
REPTILES/AMPHIBIANS
==========
Reptiles/Amphibians (lots-53 species)
One species within 53 species, includes - Blanding turtle is in SD
Center for Biological Diversity
http://ecos.fws.gov/docs/petitions/92210/662.pdf

5.4.1 .1.4.1 "The typical water quality during land application will be better than shown .... since the water quality will be continually improving during aquifer restoration." Is this board comfortable with the idea that by putting clean water into a radioactive and contaminated aquifer that the aquifer will be cleaner rather than the clean water becoming contaminated? Phrases such as *"Anticipated* ... . application water quality. 11 *"Estimated* worse case", 11 *typical* land application water quality." "Improving to *approximate* base line water quality", "in addition, *Madison water ma.v be used at an v time to improve the land application water quality", "anticipated* that trace metal concentrations at or below ..... human health standards." Referenced table 5.4-2 and 5.4-3 were *estimated.* Also *estimated* chloride, magnesium, arsenic, barium, cadmium, chromium, selenium, lead, radium, thorium, etc.

Figure 5.4-4 *Estimated* process waste water quality: arsenic, chloride, Carbonate, Hydrogen Carbonate, ammonium, selenium, radium, sulphate, TH230, U. Should not these provisional statements cause grave concern?
5.5.4.1 "Anticipated land application rate of 297 to 653 gpm" The land application is the 2% 170 gpm bleed from the Inyan Kara. Where does the 297 to 653 come from?
Figure 5.3-2 Should the board be concerned that PT can only "clean" 5000 gallons per day while they are producing a minimum of 250000 gallons of waste a day?..
"Potential radiological impacts demonstrate no significant exposure pathway from vegetable garden to potential human receptors." Is this the kind of double speak with which we should be comfortable?

To issue a permit for massive amount of water would be a huge mistake no matter to who or for what. DENR regulates water and sewer – where is their involvement? What was Silver King all about if uranium is of no concern? We don't need another tax payer burden to clean up a foreign company's tailings.

South Dakota Codified Laws
Page 1 of 1

46A-l-8. Resolution of conflicting interests. The objectives and purposes to be served by the Board of Water and Natural Resources shall be to resolve conflicting special interests of federal, state, and local agencies or entities or private interests in proposed water projects, including federal projects and the designation and preservation of certain rivers or portions thereof as scenic rivers so that the public interest in such project proposals will be protected and enhanced, optimum over-all benefits will accrue to the people of South Dakota, and maximum consideration of all needs and desires in such water projects will be ensured, especially in those involving multiple purposes such as combinations of irrigation, flood control, navigation, electric power, domestic and stock water, municipal and industrial water supplies, lake stabilization, pollution control, water quality enhancement, fish and wildlife, recreation, groundwater recharge, erosion control, or other beneficial purposes and uses.

Source: SL 1972, ch 241, § 14; SDCL Supp,§ 46-17A-13.
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Enacted Feb 1, 1994 Executive Order 12898 entitled, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations

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This letter provides comments on the EPA's draft Underground Injection Control permits for the proposed Dewey-Burdock uranium project, as well as the associated proposed aquifer exemption, which would be located in the Black Hills of South Dakota.

The draft permits would allow the use of water from the Inyan Kara Aquifers for uranium mining using 4,000 Class III wells and the construction of up to four Class V deep disposal wells to pump mining wastes into the Minnelusa Aquifer. The exemption would cover part of the Inyan Kara Aquifers under the Safe Drinking Water Act. The Class III wells would be the first permitted by the EPA for in situ leach (ISL) uranium mining and would therefore set a precedent.
The organizations listed below oppose the EPA's proposed issuance of permits and the exemption for these purposes for the following reasons.
There are a number of shortcomings in the EPA's documents and process surrounding these draft permits and draft exemption. This letter will summarize some of the key issues.
The basic issue in this process has been the failure to adhere to the NEPA process. While the NRC has attempted to follow that process for the possession of nuclear materials, its actions have not covered a variety of current issues that are under the EPA's purview, particularly water issues. The applicant's project has also changed in important respects between the time the NRC began considering it and the time the EPA began considering it. Examples include:
• NRC documents consider the use of 4,000 gallons of water per minute for the mining and reclamation process. The EPA applications consider the use of 9,000 gpm, more than twice as much water.
• This project was originally described as involving 1,500 injection, recovery, and monitoring wells. By the time the EPA issued its draft permits, this had grown to 4,000 wells, nearly three times more wells.

• The projected bleed rates have varied over time, from .5% of the water used to 17% of the water used. In addition, the reverse osmosis process makes at least 30% of the water put through the RO process into waste, and this is not considered in the EPA documents. This seriously weakens all the assumptions and calculations on water use in the Class III draft permit documents.

• Documents prepared by Petrotek for Powertech/Azarga set subsurface water movement rates at 6 to 7 feet per year (without offering a source). NRC documents set the transmissivity rate in the Fall River formation at 255 ft.2 per day and in the Lakota formation at 150 ft.2 per day. Dr. Perry Rahn, Professor Emeritus from the South Dakota School of Mines and the acknowledged expert in these matters, said in a 2014 speech (which has since been submitted for publication) that groundwater velocity in the Inyan Kara Aquifers at the Dewey-Burdock site might be as much as 5,480 feet per year – over a mile -- which "might indicate fast groundwater movement through very permeable units of through fractures." The draft permits omit this critical information that could have very real impacts on wells that are downgradient of the proposed mine site.

These changes in the parameters of the proposed project go the heart of the information that informs the process in this case. The NRC and the EPA have had different projects submitted to them. The consideration of both projects would not be redundant – it would be sensible. The EPA should begin a thorough NEPA process to assess the project as it is currently proposed.

PROCESS ISSUES

The basic process issue in this case has been the failure of the EPA to adhere to the NEPA process. While the NRC has attempted to follow that process for the possession of nuclear materials, its actions have not adequately covered a variety of issues that are under the EPA's purview, particularly water issues. The EPA needs to complete its own NEPA process.

[...]

At the end of the Class V Fact Sheet and the Draft Cumulative Effects Analysis, the EPA indicates that the Endangered Species Act will be complied with, but gives no information on how it intends to do this. When will this be done? What species will be considered? Who will do the analysis (not the company)? This should already have been completed before draft permits were issued.

The EPA mentions the presence of a short-horned lizard, which is rare and protected in South Dakota, in the proposed project area. After stating that the species is "important in some tribal cultures," it offers the solution "Once construction activities begin at the site, the EPA expects that the [sic] any short-horned lizards that were in the area will seek less disturbed locations." This is pure conjecture, without any back-up information on the size or habits of the lizards. Are they territorial, or is it species-appropriate for them to move? Are they large enough to move fast enough to out-run a bulldozer or pick-up truck? Or are they, in reality, unprotected?

This and similar information must be provided and backed by scientific research at the Dewey-Burdock site for this and other species. Animals should not simply be expected to move out of a site that's over 10,000 acres in a systematic and comprehensive process. And the EPA then expects them to just move back in after mining is complete – as if the same animals will be alive and remember their former homes after as many as 20 years. This is beyond unacceptable in the direction of ludicrous – and is certainly unacceptable.

Species other than animals are not considered in this discussion. Plants cannot simply move off the site. Some of them are important to tribal practices and customs, such as medicinal plants and timpsila (prairie turnips). Full scientific information should be gathered, and full analysis must be done, for non-animal species. Species that are important to the long-term residents of the area -- the Lakota, Cheyenne, and other native nations – require special protection. There is already information on protection of some species in project documents that could serve as a base for part of this analysis. However, a full and independent analysis is also needed.

This analysis would include close consideration of the opinion of the South Dakota Department of Game, Fish and Parks. This opinion was stated in an October 17, 2008, letter written by Stan Michals. Michals said that exploratory activity should not take place on some parts of the project area between February and August (inclusive) due to the presence of a bald eagle nest (a state-protected bird) and a redtail hawk nest. Mining, deep disposal wells, land application, and reclamation, which are more long-lasting and disruptive than exploration, should clearly also not take place during those seven months of the year in raptor nesting and other protected areas.

The sturgeon chub must be included in the discussion of wildlife concerns. It is present in the Cheyenne River and may be threatened or endangered in areas downstream from the proposed mine. Additional silt, heavy metals, and radioactive materials would be potential threats.

[...]

In addition, the EPA should not rely on the NRC's analysis, recommendations, or regulations. The processes by the two agencies should be independent, so that the proposed mine, disposal wells, and aquifer exemption receive the benefits of the expertise and different regulatory focuses of both agencies.

[...]

We support the conclusion of EPA's statutory analysis that the Dewey-Burdock mine is subject to the Clean Air Act and subpart W. If the project goes forward, we request that public education sessions and public comment periods be held as part of the subpart W regulatory process.

B. FAILURE TO ADHERE TO NEPA PROCESS

The basic issue in this process has been the failure to adhere to the NEPA process. While the NRC has attempted to follow that process for the possession of nuclear materials, its actions have not covered a variety of current issues that are under the EPA's purview, particularly water issues. The applicant's project has also changed in important respects between the time the NRC began considering it and the time the EPA began considering it.

Examples include:

• NRC documents consider the use of 4,000 gallons of water per minute for the mining and reclamation process. The EPA applications consider the use of 9,000 gpm, more than twice as much water. **Which is it?**

• This project was originally described as involving 1,500 injection, recovery, and monitoring wells. By the time the EPA issued its draft permits, this had grown to 4,000 wells, nearly three times more wells. **Which is it?**

• The projected bleed rates have varied over time, from .5% of the water used to 17% of the water used. In addition, the reverse osmosis process makes at least 30% of the water put through the RO process into waste, and this is not considered in the EPA documents. **Which is it?** This seriously weakens all the assumptions and calculations on water use in the Class III draft permit documents.

• Documents prepared by Petrotek for Powertech/Azarga set subsurface water movement rates at 6 to 7 feet per year (without offering a source). NRC documents set the transmissivity rate in the Fall River formation at 255 ft.2 per day and in the Lakota formation at 150 ft.2 per day. **Which is it?**

• Dr. Perry Rahn, Professor Emeritus from the South Dakota School of Mines and the acknowledged expert in these matters, said in a 2014 speech (which has since been submitted for publication) that groundwater velocity in the Inyan Kara Aquifers at the Dewey-Burdock site might be as much as 5,480 feet per year – over a mile -- which "might indicate fast groundwater movement through very permeable units of through fractures." The draft permits omit this critical information that could have very real impacts on wells that are downgradient of the proposed mine site.

This further supports the conclusion, stated below, that the Town of Buffalo Gap, SD, should be included in the EJ Analysis, because it relies on wells that are downgradient of the proposed mine site.

These changes in the parameters of the proposed project go the heart of the information that informs the process in this case. The EPA should begin a thorough NEPA process to assess the project as it is currently proposed.

Along the same line, the draft permit is not accurate on the depth of existing drilling on the site. According to the company's Large Scale Mine permit application, drilling has been done on site down to the Sundance aquifer. This means that information on the Minnelusa should already be available. **Where is it?**

[...]

5. Comments on the potential adverse effects of the proposed project

A. **DB Groundwater Discharge Plan May 2017 ("GDP").** In 2012, Powertech applied to the SD DENR for a groundwater discharge permit to dispose of liquid waste fluids via land application. In 2014, the SD DENR recommended conditional approval of the permit application.

Conditions include:

o Land application of liquid wastes cannot occur if sufficient capacity is available via the Class V UIC disposal wells.

o Powertech will collect 4 months of ambient ground water monitoring that is required by ARSD 74:54:02:18 and monthly samples for an additional 8 months AND quarterly sampling thereafter until mining commences. However per a November 17, 2014 letter to DENR Powertech requested permission to suspend the quarterly sampling. This request was granted per a December 3, 2014 letter from DENR. **This suspension of quarterly sampling is not consistent with the permit condition. Further Powertech lacks the financial resources to comply with sampling or monitoring requirements.**

o The permit conditions proposed by the SD DENR indicates 7 compliance points – 4 at Dewey and 3 at Burdock – the March 2012 GW Discharge Plan(GDP) prepared by Powertech indicates only 2 compliance wells for the Burdock land application areas. **There should be a 3rd alluvial compliance well for the Burdock area land application areas.**

[...]

o C **The permitted allowable limits ("PALs") that are proposed for the compliance wells by DNER in December 2012 are set at "ambient" values for numerous regulated constituents –particularly sulfate, TDS, uranium, gross alpha and radon. These PALs are orders of magnitude above the SD human health standards (SD ARSD 74:54:01::04) and well above the NRC standards included in 10 CFR 20 , Appendix B, Table 2, Column 2.** THE GDP does not provide any discussion to explain alluvial water quality – i.e., – why high TDS, why high sulfate, why high radionuclides. **These discrepancies need to be explained prior to the issuance of a permit.**

o D. No discussion of hydraulic relationship between groundwater in alluvial deposits and surface water in Beaver Creek and Pass Creek. This hydraulic relationship needs to be properly evaluated and publicly disclosed **prior** to the issuance of any permit.

[...]

What about the other toxic constituents?

E. The permit application also indicates that Powertech has applied for a land application discharge permit from DENR. There is no information on the soil types that will receive the effluent, the volumes planned for land application, the chemistry of the water, etc.

NEPA

Please identify all ACTION ALTERNATIVES in any related NEPA document, that discuss all the possible mining and waste disposal scenarios . including listing of the pages showing where any related NEPA document discusses disposal of other remote mines ISR wastes at the facility?

Here is a link to the National Environmental Policy Act:

https://www.fws.gov/r9esnepa/RelatedLegislativeAuthorities/nepa1969.PDF

If the EPA is allowed an equivalent process to NEPA... please discuss how are you meeting NEPA's goals and objectives in an equivalent way, especially please discuss how you meet Sec. 102 [42 USC § 4332 (C) (iii) and (E).:

I quote some of the text below

"Sec. 102 [42 USC § 4332.....

(B) identify and develop methods and procedures, in consultation with the Council on Environmental Quality established by title II of this Act, which will insure that presently unquantified environmental amenities and values may be given appropriate consideration in decisionmaking along with economic and technical considerations;

(C) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement by the responsible official on --

(i) the environmental impact of the proposed action,

(ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,

(iii) alternatives to the proposed action,

(iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and

(v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.

Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of title 5, United States Code, and shall accompany the proposal through the existing agency review processes;.....

(E) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources ;" (Emphasis added.)

Can either of you give me the publication date for the Federal Register Notice of publication of the CFR rule set that CRF 40 CFR 124.9 (b) (6) belongs within. This rule exempts EPA permitting via underground injection control (UIC) from NEPA.

I wish to see the justifications for adoption of this rule set and that would normally be exlained in a preamble for the rule in the Federal Register, when it was adopted.

I ask for this information to help write my comments on Dewey Burdock In-situ Leach Application.

I wish to understand which legal argument EPA uses to exempt itself from NEPA for UIC.

As I understand it courts have exempted agencies from the procedural requirements under NEPA where the court thinks that either:

(1) a direct conflict between NEPA and the organic statute authorizing agency action exists, or

(2) NEPA procedures will be redundant with those provided for under the organic statute due to either displacement or functional equivalence.

I ask that you fully disclose those legal arguments in your final permit documents... fully explain how and why EPA chose to pass CFRs exempting itself from NEPA for UIC. Please fully disclose which legal rationale you tier to. If it is "functional equivalence"; we believe you need to show how you are achieving "functional equivalence" or have redundant procedures to NEPA.

Prairie Hills Audubon Society attaches the Clean Water Alliance (CWA) letter. We thank Lilias Jarding for writing this "sign on letter" and we incorporate the CWA comments by reference & we would love to see you do NEPA analysis on this project..

Lilias Jarding repeatedly argues a NEPA argument and asks you to achieve NEPA standards & compliance. We wish to present CWA letter's points skewed in a slightly different way. We are aware that the EPA adopted 40 CFR 124.9 (b) 6, which the EPA uses to avoid NEPA on UIC approvals. We have not found in writing the EPA's justification, in which it explains why it believes can avoid federal law (NEPA) , but we suspect it is tiering to the legal precedent for "functional equivalence" - an winning argument from various court cases. We don't know if 40 CFR 124.9 (b) 6, has ever been put to a court challenge, to see if the EPA's UIC application review process meets a Judge's view of "functional equivalence". We are not sure if the EPA has ever directly approved an In Situ Leach Uranium mine vs allowing States primacy over UIC. Has the EPA done such an mine waste injection UIC approvals, (citing 40 CFR 124.9 (b) 6 to escape NEPA) & actually survived a court challenge?

Since you all believe you can escape NEPA, we suggest you reread/reconsider all Lilias's NEPA arguments, to say you must demonstrate "functional equivalence" with NEPA. If you must supplement the record to address the issues Lilias raises.. you must then release the revised/supplemented set of EPA review documents also for public comment. If you don't do this additional step, there will be another NEPA or NEPA "functional equivalence" argument that maybe can be litigated.

We believe that the project is being approved by multiple entities (EPA, SD-WMB, SD-BME and NRC) and ironically the project description changes. Is the project a slippery moving target? We fear the Applicant will incrementally ratchet up the scope of the project each time some new entity reviews it and expect the new entity to be impressed by and tier to the older reviewing entity's prior approval, who actually reviewed and approved a different and maybe smaller project. We then fear the Applicant will go back to the earlier entity with the later approval of the revised project from the second agency. Maybe this could be an agency manipulation strategy? This also creates special review confusion as the NRC review follows NEPA and the EPA review does not but does "functional equivalence" of NEPA.

Please be extremely clear about how the project morphs constantly. Please present all it's modalities, perhaps as a "range of action alternatives" . Lilias Jarding lays out the conflicting project versions out for you in her Clean Water Alliance letter. You must develop the various alternatives in detail -- with smaller footprint and larger footprint "action alternative" versions. And you must do each alternative's impact analysis. NRC must then do another SEIS.

[ATTACHMENT: "Dewey_Burdock_Project Sign-On Letter 6-17.docx"]

Other aspects of the EPA and applicant analysis suffer from the same frailty. Specific examples of mitigation measures that are vaguely and inadequately referenced include:

• Reliance on the future submission and potential issuance of a National Pollution Discharge Elimination Standards ("NPDES") permit to specify mitigation measures and best management practices ("BMPs") to prevent and clean up spills.

• A Fish and Wildlife Service ("FWS") raptor monitoring and mitigation plan has not been developed despite confirmed raptor activity in the project area.

• FWS permits to avoid and mitigate impacts to Bald Eagles' use of three existing Bald Eagle nests.

• Ongoing development of mitigation plans for listed species.

• Generic reference to working BLM mitigation and reclamation guidelines.

• Vaguely referenced and unspecified sound abatement controls.

• Generically referenced mitigation of evaporation pond impacts that are and deferred to later analysis under the Clean Air Act's Hazardous Air Pollution provisions.

• Groundwater mitigation where Powertech excluded such mitigation measures from its proposal or merely assumed compliance with applicable requirements.

In summary, EPA has not met its duty to analyze the impacts of the proposal, cumulative and otherwise.

[...]

VII. THE EPA HAS AN INDEPENDENT DUTY TO CARRY OUT WILDLIFE SURVEYS AND TO COMPLY WITH THE ENDANGERED SPECIES ACT AND MIGRATORY BIRD TREATY ACT.

Even though the federal approval process has been segmented into individual approvals by NRC, BLM and EPA over the course of a decade, each federal agency (and staff) must satisfy out its independent duties to comply with the Endangered Species Act (16 U.S.C. § 1531 et. seq) ("ESA"), Migratory Bird Treaty Act ("MBTA"), and Bald and Golden Eagle Protection Act (BGEPA) (16 U.S.C. §§ 668-668d). Each agency must demonstrate compliance before taking action that could take, kill, harm, or otherwise impact the protected species. Failure to comply with these laws can subject the agency and its staff to civil and criminal penalties, unless the harm to the protected species is allowed by a lawfully approved permit issued by the U.S. Fish and Wildlife Service ("U.S. FWS"). EPA lacks U.S. FWS's special expertise in wildlife, and it is U.S. FWS that has permitting authority under federal wildlife laws. For ESA-listed species, EPA and must use "all methods and procedures which are necessary" to "prevent the loss of any endangered species, regardless of the cost." Roosevelt Campobello Intern. Park v. U.S. E.P.A., 684 F.2d 1041, 1048-49 (1st Cir. 1982), *quoting* TVA v. Hill, 437 U.S. at 185, 188 n.34 (1978).

Powertech and NRC prepared biological surveys that were wholly inadequate and limited in scope. Over the course of a decade, those surveys have become stale and do not correspond to current ecological baselines and status of current listings. Even with the limited survey methods, NRC determined that the Powertech project may affect and even cause prohibited take to listed species, including Whooping Cranes, Greater sage grouse (active leks), Bald Eagles, and Golden Eagles. Courts have set aside agency action that lacks accurate and current data on Greater sage grouse because "inaccurate information participation. Or. Nat. Desert Ass'n v. Jewell, 840 F.3d 562, 570 (9th Cir. 2016). EPA cannot simply turn a blind eye to the protected wildlife that may be affected by the activities subject to SDWA permitting.

NRC's FSEIS confirms impacts to MTBA-listed species. See, e.g., FSEIS at 4-97 to 4-98 ("All of these birds are BLM sensitive species and protected by the MBTA."). NRC's FSEIS confirmed that prohibited take of protected species:

NRC staff expect that similar potential impacts described in SEIS Section 4.6.1.1.1.1.2, including injury or mortality from vehicles and electrical lines, fragmentation, vegetation conversion, and loss of breeding habitat, for nongame and migratory birds will also potentially impact chestnutcollared longspur, dickcissel, loggerhead shrike, and blue-grey gnatcatcher.

FSEIS at 4-98.

EPA's ESA consultation duties, 16 U.S.C. § 1536(a)(2) ("Section 7") are triggered because Section 7 "appl[ies] to all actions in which there is discretionary Federal involvement or control." 50 C.F.R. § 402.03. "Action" is defined as "all activities or programs of any kind authorized or carried out, in whole or in part, by Federal agencies...." 50 C.F.R. § 402.02. EPA is carrying out agency action, and therefore must carry out Section 7 consultation duties or risk civil and criminal penalties for take. Similarly, Powertech does not appear to have applied for a Section 10 permit, and similarly faces ESA penalties for any "take" it may cause. 16 U.S.C. § 1539(a)(1)(B); 50 C.F.R. § 17.32(b).

NRC's FSEIS reveals that active bald eagle and other raptor nests are known to exist in and near the proposed project site. FSEIS at 4-147, *accord* at 3-46 ("Five confirmed, intact raptor nests and one potential nest site were observed within the proposed project area, and the applicant identified two additional nests within a 1.6-km [1-mi] radius of the study area (Powertech, 2009a)"). EPA's SDWA permitting thus is likely involves prohibited take under federal wildlife laws, including direct and cumulative impacts on normal breeding, feeding, and/or sheltering behavior of bald eagles due to at least one confirmed, active nest in the project area. FSEIS at 3-46 to 3-47. Similarly, MTBA-listed raptor species, including "red-tailed hawk, American kestrel, and northern harrier [which] were the most commonly seen raptor species in the proposed project area and will be the primary raptor species impacted by project activities." FSEIS at 4-149.

EPA's SDWA duties independently trigger compliance with federal wildlife laws before any decisions can be issued on Powertech's application.

The South Dakota Department of Environment and Natural Resources (DENR) reviewed the available Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits and has enclosed comments for your consideration. If you have any questions about DENR's comments, please contact me at brian.walsh@state.sd.us or 605.773.3296.

South Dakota Department of Environment and Natural Resources Comments on EPA's Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

General:

1. An EPA issued Aquifer Exemption in South Dakota for Class III injection does not exempt groundwater from the requirements of the state's Groundwater Quality Standards (ARSD 74:54:01). However, it is DENR's position that if the Aquifer Exemption is finalized, South Dakota's groundwater quality standards will not apply within the exempted area. The state's Groundwater Quality Standards will apply and be enforceable on groundwater located outside of the exempted area.

South Dakota Mine Permit

Wildlife mitigative strategies presented in the Administrative Record are tiered to Powertech's proposed mine permit. EPA must recognize Powertech has only applied for a state mine permit. The proposed state mine permit application has no state standing. Under the SD Mined Land Reclamation Act (SD Codified Law Chapter 45-6b), the Board of Minerals and Environment (BME) is charged with issuing state permits and requirements for ISR facilities. In November of 2013, the BME discontinued hearings on Powertech's proposed state mine permit application until other state and federal agencies finalized their respective permitting. Powertech proposed mine permit application is still pending and no state mine permit exists. The Administrative Record must not reference a state large scale mine permit.

Affected environment

The Administrative Record does not include the site's available wildlife data in describing impacts to ecological resources. Scant use of citations in the Administrative Record makes it difficult to determine what available wildlife study data is used to describe the affected environment. It is reasonable to believe that wildlife data is only as current as the date of application. However it must be noted that it has been almost 10 years since the EPA has started its UGI evaluation. During that time, new wildlife and habitat data have enhanced understanding of the site's ecological conditions. Also, recently listed ESA species may exist on site. The Administrative Record did not adequately describe the affected environment or impacts to ecological resources.

Additional wildlife information includes:

Prairie dog colonies: The initial baseline wildlife survey documents only 3 of the 7 prairie dog colonies known to exist in the wildlife study area. The significance of the ecologic function of both the existing and newly identified prairie dog colonies is unknown. Direct and cumulative UIC impacts on prairie dog viability are not considered in the Administrative Record.

Bats: The USFWS ESA listing of the Northern Long-eared Bat is a significant change since permitting began on the Dewey Burdock Project. The Administrative Record does not address the recent ESA listing or the habitat potential of the project area's historic mine workings.

Burrowing owls: Recent wildlife surveys by Powertech have identified burrowing owls use in one of the project area's prairie dog colonies. The extent of burrowing owl use at the site's existing or newly discovered colonies is unknown.

Bald eagle: The bald eagle nest identified in the initial wildlife survey is no longer in use, but an alternated nest is now the primary nest site. Powertech proposes construction and facility operation within active bald eagle nest buffers. The Administrative Record does not consider bald eagle disturbance take resulting from project effects on forage areas and home range.

Reptiles and amphibians: The rational to determine impacts to short-horned lizard on page 149 of the Draft Cumulative Effects Analysis is unfounded. The rational presumes that native prairie, the preferred habitat of lizards, does not exist on rangelands and since impacts are on rangelands, lizards will not be impacted. The rational originates from Section 6.0 'Impacts To Land Use'. Baseline study from the project identifies native vegetation and "widespread occurrence" of an unknown lizard species. The Administrative Record does not identify native vegetation, cumulative effects of conversion of native vegetation, or direct impacts on lizards.

Subject: Comment on Dewey Burdock In Situ Leach Uranium mining injection wells

[...]

Here is an e-mail from the lady at the EPA in DC I was directed to, when I asked my NEPA questions. See the second sentence in 40 CFR § 124.9 (b) (6).

It is alleged by others that in order for EPA to put this in EPA's administrative CFRs, EPA may be relying on "functional equivalence" doctrine, for which precedent was established in court cases. You might ask Allison about that - see what her opinion is of this and if EPA's CRF 40 CFR 124.9 (b) (6) below, is based in "functional equivalence" legal precedent - how do you comply with that legal precedent parameters?

I suggest once you figure it out, you explain it to the public in your final writings on this permitting and I suggest offer us another extended comment period, once your EPA's alternative to NEPA duties are fully understood.

If I have time, I will write a better letter later.

[...]

Begin forwarded message:

From: "Hoppe, Allison" <hoppe.allison@epa.gov>

Subject: NEPA information

Date: May 11, 2017 at 2:04:02 PM MDT

To: Ex. 6 Personal Privacy (PP)

Hi Ex. 6 Personal Privacy (PP)

Here is the information we talked about. Let me know if you have any further questions.

40 CFR § 124.9 Administrative record for draft permits when EPA is the permitting authority.

• (a) The provisions of a draft permit prepared by EPA under § 124.6 shall be based on the administrative record defined in this section.

• (b) For preparing a draft permit under § 124.6, the record shall consist of:

o (1) The application, if required, and any supporting data furnished by the applicant;

o (2) The draft permit or notice of intent to deny the application or to terminate the permit;

o (3) The statement of basis (§ 124.7) or fact sheet (§ 124.8);

o (4) All documents cited in the statement of basis or fact sheet; and

o (5) Other documents contained in the supporting file for the draft permit.

o (6) For NPDES new source draft permits only, any environmental assessment, environmental impact statement (EIS), finding of no significant impact, or environmental information document and any supplement to an EIS that may have been prepared. NPDES permits other than permits to new sources as well as all RCRA, UIC and PSD permits are not subject to the environmental impact statement provisions of section 102(2)(C) of the National Environmental Policy Act, 42 U.S.C. 4321.

• (c) Material readily available at the issuing Regional Office or published material that is generally available, and that is included in the administrative record under paragraphs (b) and (c) of this section, need not be physically included with the rest of the record as long as it is specifically referred to in the statement of basis or the fact sheet.

• (d) This section applies to all draft permits when public notice was given after the effective date of these regulations.

https://www.epa.gov/uic/aquifer-exemptions-underground-injection-control-program

https://www.epa.gov/nepa/epa-compliance-national-environmental-policy-act

Best,

Allison Hoppe

Law Clerk

Cross-Cutting Issues Law Office

Office of General Counsel

U.S. Environmental Protection Agency

(202) 564-1912

The Nuclear Regulatory Commission, they should be dealing seriously, but now they look like they're passing that ball. That's going to hurt the people. And EPA is going to be hamstringing again, you know.

As you are probably aware, in the 2011 legislature, South Dakota gave up its statutory authority to oversee wastewater aquifer injection in ISL uranium mines at the urging of Powertech, now known as Azarga Uranium. Other types of mining in South Dakota, such as gold, oil, gas are regulated much more thoroughly than ISL uranium mining.

NANCY HILDING: My name is Nancy Hilding from Black Hawk. I'm the president of Prairie-Hills Audubon Society, which is an environmental group in western South Dakota, and I'm speaking on behalf of the society.

Got several points to raise. I'll begin with 42 U.S.C. 4321 or 40 C.F.R. 1500-1508, the NEPA regulations, and the Council on Environmental Quality rules to execute those.

I'm aware that the EPA has gotten exempted of the Clean Water Act and the Clean Air Act from having to do NEPA analysis. I've not been able to find that you're exempted under the Safe Drinking Water Act or under RCRA. Maybe you are, and I just haven't looked hard enough. But I didn't find it, and I didn't find it in your rules under your NEPA enforcement. So maybe I just don't know better.

But the GEIS on in-situ leach uranium mining by the NRC just has the cooperating agency, one of the Wyoming agencies, the DEQ or the EQC, I forget which. And the cooperating agency on the SEIS on Dewey-Burdock was the Bureau of Land Management. There was no EPA as the cooperating agency, and you were not a cosignator, that I'm aware of, to any of those frauds.

So ir- -- I don't know whether you should have or not. I'm asking you. Are you exempted under the Safe Drinking Water Act and RCRA? So whether it's you, or you and the NRC, I believe these are failings in those documents.
You're supposed -- they're the -- that -- either the draft or the final had 642 wells as part of the well fields and the 8 for the deep injection. I've heard that the proposal lists 4,000 wells that you guys are writing up recently. That was not one of the action alternatives. That's a much bigger footprint than was in the action alternative in the SEIS.
[...]

And, you know, somebody mentioned Hanford today. But we have here in South Dakota, up in Haakon County, the Department of Energy proposal to do research into a deep borehole deposition of radioactive waste here in South Dakota in the project area of the SEIS and the GEIS. So this is either a connected action or a cumulative action that's not being discussed.

[...]
Connected actions and -- connected actions and cumulative effects not discussed in the DEISs -- or SEISs.
[...]
NANCY HILDING: Quickly, Trump doesn't like NAFTA and the TPP. Having foreign companies default and leaving Superfund sites is a desirable thing that he would like.

RICK BELL: So Rick Bell again, and I appreciate Ms. Shea sending me these slides last night. I was laying in bed thinking about the day and all the things that we've heard about.
I kind of got -- well, first of all, let me say that at the very beginning of this process, I was glad to find out the EPA was in charge of this project rather than the NRC because I believe, you know, given all of the mining problems that I've seen and heard about, there's -- you know, well permits -- sorry, mining permits that the NRC is in charge of that are out of date by ten years and yet they are still in operation.
There's thousands and thousands -- as we've heard from Mr. Meyer tonight -- there's thousands and thousands of violations at the Crow Peak in Nebraska. So I was somewhat happy to know that EPA was on top of this.

So it seems like if we want to stop this, we need to work at a level where we might be effective. I think this still requires some permitting by the DENR in South Dakota, and I think if we would present the financial losses that this may have, that that would influence the South Dakota approval more than it would the EPA or the NRC.

I think that's all I had to say. Thank you very much.

But, you know, I think that we are a small state, 750,000 people. We're a cheap date. You can come in here with a few thousands dollars, buy a few folks, and you can do whatever you want. But, you know, there's no regulatory authority looking over in the state. There's no water -- they changed the laws.

U.S. Army Corps of Engineers permits under Section 404 of the Clean Water Act will be required before conducting work in jurisdictional wetlands.

I can see why regulators would block out things which could cost them their jobs and bring billions of dollars in lawsuits. According to paid engineers working for the Chinese uranium mining company Azarga, they and the Nuclear Regulatory Commission are best qualified to look after our safety and welfare. Not everyone always sees it that way.
In 2007, then-candidate Barack Obama stated, quote: "The NRC is a moribund agency that needs to be revamped and has become captive to the industries that it regulates." That's according to a Keene, New Hampshire Sentinel interview."

U.S. Army Corps of Engineers permits under Section 404 of the Clean Water Act, it will be required before conducting work in jurisdictional wetlands.

Include under CEA; check context

Letter ID	Commenter Name	Commenter Org.
20		Individual
124		Individual
304		Individual
	Ex. 6 Personal Privacy (PP)	
339		Individual
383		Individual
464		Individual
491		Individual

519	Ex. 6 Personal Privacy (PP)	Black Hills Clean Water Alliance
525		Cheyenne River Sioux Tribe
527		Clean Water Alliance

528	Ex. 6 Personal Privacy (PP)	Aligning for Responsible Mining
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

Text
Subject: EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern South Dakota Please, there are some things that we can't get wrong, and this is one of them. Clean-up is near impossible and will not be an option. Some things can't be reversed.
There are several situations that require the Mining Board to deny a permit of this kind: [...] 45-6B-33: Reclamation of the affected land pursuant to the requirements of this chapter is not physically or economically feasible. According to today's RCJ, P/T lobbyist and Program Manager "speaking at a Rapid City Council committee meeting in August, conceded that if the project goes through, the company will need to somehow fund it." "They will need a larger financier going forward", Hollenbeck said, adding that it could lead to a joint venture or selling more stock, or perhaps selling the company. "It may be a sell-out of the project," he said. "I don't know that." P/T hasn't the financing to even start the project even with over 50 million shares being sold. How can this board approve this permit when they have financing for neither the start nor the finish. THIS HAS BEEN SHOWN AND THE PERMIT SHOULD BE DENIED.
There are past instances where such actions were detrimental to the environment and natural restoration of the impacted groundwater was questionable, leaving areas of contaminated groundwater within the confines of the mining area and gradually flowing down the slope of the gradient within the aquifer (Mudd, 2001). [...] 6. Conclusion My opposition to the Class III and Class V Underground Injection Control Area Permits for the Inyan Kara Group aquifers stems from scientific studies of previous in situ uranium recovery projects. Although the waste created from the mining process is treated before it is injected into the groundwater, it has been shown that water quality is often worse than before the mining began. Increased levels of salinity, sulfate, and radionuclides have been observed in the areas of extraction, after restoration took place. Natural processes have not been proven to be effective in reducing the amount of uranium within groundwater (Mudd, 2001). Mining companies are unable to fully clean up the mess that they made, leaving the water and environment a dirtier and less safe place to live in. [...] References Cited: Kyllonen, D., & Peter, K. (1987). Geohydrology and water quality of the Inyan Kara, Minnelusa, and Madison Aquifers of the northern Black Hills, South Dakota and Wyoming, and Bear Lodge Mountains, Wyoming. Date accessed: 26 March 2017. Retrieved from: https://pubs.usgs.gov/wri/1986/4158/report.pdf McClain-Vanderpool, L. (2017). EPA seeks public comment on draft permits and aquifer exemption for uranium mining project in southwestern Dakota. Environmental Protection Agency. Date accessed: 26 March 2017. Retrieved from: https://www.epa.gov/newsreleases/epa-seeks-public-comment-draft-permits-and-aquifer-exemption-uranium-mining-project Mudd, G. (2001). Critical review of acid in situ leach uranium mining: 1. USA and Australia. Environmental Geology. 41(3). 390-403. Date accessed: 26 March 2017. Retrieved from: https://link.springer.com/article/10.1007/s002540100406 "Radiation Protection."(2017). U.S. Environmental Protection Agency. Date accessed: 6 April 2017. Retrieved from: https://www.epa.gov/radiation/health-and-environmental-protection-standards-uranium-and-thorium-mill-tailings-40-cfr
Any amount of pollution to the aquifers would cost a heavy price to remediate, if remediation could be possible at all (Management of Remediation Waste Under RCRA, 1998 October 14). [...] If contaminants were able to get into these aquifers, it would be a heavy price to clean it up, if it could be cleaned up at all (Injection Wells, 1989).
My research is focused on finding a solution to the water contamination by uranium, arsenic, sulfates and a number of other metals/elements of concern. Uranium chemistry is very complicated and it is difficult to imagine the environmental impacts by this proposed project. Though I feel optimistic that we are closer to solving a portion of the problem, it will cost more to remediate a contaminated sites in the future which is inevitable. I am deeply saddened of this news and I sincerely hope that this project is not allowed to move forward.
The NRC estimates that the reclamation will cost upwards of $65 to 70 million. PT will not have that amount available based on foreseeable yellow cake pricing. It will be left in a contaminated condition and will most likely be left to the state and/or the counties to attempt the impossible and bankrupting clean up.
Given my personal experience working for Chem Nuclear Inc., on the Riverton, Wyoming, UMTRA (Uranium Mill Tailings Remedial Action) Project, I have been converted from an advocate of nuclear power, or the use of its by-products, to one opposed to the mining and processing activities associated with the extraction and use of uranium, or other radioactive elements. As a Health Physics Monitor, I was charged with detecting and monitoring radiation in the air, soil, and on equipment at the Riverton Super Fund site: My job involved directing excavators and surveying excavations with a scintillation probe to insure the removal of tailings and contaminated substrates; inspecting trucks for contamination prior to their exit from the job site, to insure safe transport for off-site disposal; monitoring air quality, on site and off site, with sampling equipment designed to detect air-borne radioactive contaminants; and assaying off-site properties (i.e., nearby farms, homes, and businesses) contaminated by wind-blown sediments from tailings piles, or tailings used as backfill around or under rural and urban building sites such as houses, industrial buildings, and parking lots. The Riverton UMTRA project site was one of 24 mill processing sites, and 8000 vicinity properties (off-site locations with known or putative contamination), in 9 western states and the state of Pennsylvania, designated by the Uranium Mill Tailings Radiation Control Act (1978, UMTRCA, Public Law 95-604) for remediation. The Department of Energy was responsible for the remediation. The Riverton site had 35 vicinity properties that had to be surveyed for radiological contaminants and cleaned up. Fremont Minerals, Inc., later known as Susquehanna-Western, Inc., a private enterprise, owned the 218-acre Riverton site where a mill was built and uranium ore was processed from 1958 to mid-1963. Seventy-two acres of a 218-acre site had tailings 4 feet deep, and a total of 140 acres were considered contaminated. The 1 million cubic yards of mill tailings contaminated the air (radon and windblown tailings), soils, and both surface and ground water—consequently, local wells were condemned and well permits were frozen, as surveys revealed that contaminants from the mill site were present in two aquifers below the site. The mill site, which is surrounded by the Wind River Reservation, the home of Shoshone and Arapahoe tribes, was on private property owned by non Indians. It was acquired by the State of Wyoming, in 1987, to facilitate remediation. Under the UMTRCA law, the state was liable for 10% of the costs, and the Federal government 90%. Hence, taxpayers or consumers ultimately paid for the careless behaviors of the mining and processing entities, while it took an act of Congress and *ca* . 25 years to get the cleanup started, and another 2 ½ years to complete the removal of surface contamination.

The surface cleanup was conducted between May 1988 and Sept 1990 and cost over $50,000,000.00. The job site was active 24 hours a day, 7 days a week, in order to excavate and remove approximately 1.8 million cubic yards of materials. In other words, 1 million cubic yards of mill tailings, with an residual concentration of uranium estimated at 15%, and 800,000 cubic yards of contaminated soils and substrates were removed and trucked to the Gas Hills—the original mining site located 53 miles east of the mill site. In addition, approximately 800,000 cubic yards of clean backfill had to be brought in bring the site to grade, before re-vegetation efforts could begin. The mill was also demolished, removed, and buried off site in the Gas Hills. And a nearby farm had its topsoil removed and replaced due to contamination from wind-borne tailings, while other vicinity properties required soil remediation and demolition and re-construction of affected structures.

The mill tailings site is less than a mile from the confluence of two rivers—it is 4000 feet south of the Big Wind River, and 3000 feet north of the Little Wind River. And closer yet, there is an excavated drainage channel, a natural stream, wetlands, and an oxbow lake. Hence, the site is located on a flood plain terrace, with alluvial deposits, and is underlain by 3 aquifers: There is a surficial aquifer, comprised of 15-20 feet of alluvial sand and gravel, with water 3 to 6 feet below ground surface. This aquifer is contaminated with 10 to 40 times the accepted levels of concentration for uranium and molybdenum. There is a semi-confined aquifer of sandstone 15 to 30 feet thick, partially separated from the surficial by 5 to 10 feet of shale, and it is also contaminated, while the confined sandstone aquifer, the largest and deepest aquifer, has been judged to be free from contaminants, or perhaps, the contaminants have been diluted to concentrations below detection. The nearby oxbow lake, once used by residents of the Reservation for swimming and fishing, is contaminated, as it is recharged by water from the surficial aquifer. In such case, it is off-limits for such uses. The plume of contamination under the mill site is moving towards and into the Little Wind River and the DOE estimates that it will take at least 100 years to flush the upper two aquifers. In 2001, the DOE started issuing annual monitoring reports, and in year-2000 dollars, estimated it would cost $100,000 a year, or more than $10 M, to monitor the ground water over this period.

Given the fact that Otten and Hall of the U. S. Geological Survey are among those who have observed that "To date, no remediation of an ISR operation in the United States has successfully returned the aquifer to baseline conditions," the presumptions of companies who propose this type of mining – and the brave statements by regulating agencies -- must be approached with abundant caution. If no U.S. ISL mine has ever returned the water to baseline, what makes the EPA believe that this unprecedented task will be accomplished at Dewey-Burdock? This question must be addressed explicitly and analyzed thoroughly as a result of a full NEPA process, if the EPA decides to push forward rather than deny the permits and exemption.

Furthermore, the Preliminary Economic Assessment related to this project notes uncertainty in whether the Dewey-Burdock Mine is even economically viable. This is a grave concern to the Tribe for two reasons. First, it raises the concern that the project proponents will not have the financial resources to provide contingency funds for future remediation or if the project proponent will even maintain responsibility for such activities.

Otten and Hall of the U. S. Geological Survey are among those who have observed that "To date, no remediation of an ISR operation in the United States has successfully returned the aquifer to baseline conditions" ("In-situ recovery uranium mining in the United States: Overview of production and remediation issues" at http://www-pub.iaea.org/mtcd/meetings/PDFplus/2009/cn175/URAM2009/Session%204/08_56_Otton_USA.pdf). Bill Von Till of the NRC issued similar sentiments when he said in August 2010 "to date, restoration to background water quality for all constituents has proven to be not practically achievable at licensed NRC IS[L] sites" (credited in another source to EIS for Moore Ranch ISR project, WY., p. B-36).

This is important partly because, typically, when companies can't restore water to baseline conditions or to the standards set by the NRC, the NRC simply raises the amount of contamination allowed. At some point, the restoration water "fits" those raised standards, and the mine's water is declared "restored." This is unacceptable for the NRC, and it would be unacceptable for the EPA. The EPA must retain its baseline permit limits through a true restoration process. It is also important that standards are set at a true "baseline," which is the original condition of the project area's water prior to uranium drilling or mining.

Given these experiences in the real, on-the-ground world of ISL mining at modern mines in the United States, the presumptions of companies who propose this type of mining – and the brave statements by regulating agencies -- must be approached with abundant caution. If no U.S. ISL mine has ever returned the water to baseline and if restoration to background has proven not achievable, what makes the EPA believe that this unprecedented task will be accomplished at Dewey-Burdock? This question must be addressed explicitly and analyzed thoroughly as a result of a full NEPA process, if the EPA decides to push forward rather than deny the permits and exemption.

[...]

OMISSIONS

Moving to omissions, there is no analysis – or even discussion – of whether it is possible to treat the quantity of water being used by this project to the required standards. If it is not – and if the process is not closely monitored – water will be permanently contaminated. There is no analysis or discussion of whether it is possible to treat the water quickly enough to keep up with the injection rate proposed by this project. And there is no analysis or discussion of the reverse osmosis facilities, their location(s) in the project area, or the impacts they would bring. This includes the fact that at least 30% of the water put through the RO process typically becomes waste water. The Class V Fact Sheet uses the number 30% (p. 50), but RO operations can create four gallons of waste water for every 1 gallon of treated water. This waste is commonly called "brine," although the waste water in this project would be radioactive and full of heavy metals and would require further treatment before being disposed of as 11e waste.

There is also the question of whether RO treatment of all this water can be done economically, given the price of uranium (currently only $19.25 per pound of yellowcake) and other project costs. A responsible agency would include a full discussion of the RO process and its impacts on the environment, waste treatment, bonding requirements, and the feasibility of the project. It would also provide numerous examples of places in which this operation has proceeded successfully at the flow rates and with the contaminants proposed by the company.

[...]

We do not want a repeat of what happened at Wasta, SD, about 50 miles east of Rapid City. There, a drill bit and 150' section of equipment broke off when a driller was looking for oil. Groundwater can be exposed, creating a possible link between the Minnelusa and Inyan Kara formations, and plugging the resulting hole may be impossible. The State's bond was wildly inadequate (*Rapid City Journal* , January 23, 2017 and March 17, 2017). We are not willing to take a risk that something similar could happen as a result of the proposed Dewey-Burdock project.

[...]

As part of this process, note that current conditions do not provide an adequate or accurate "baseline." All baseline measurements (ground and surface water, air, soil, sediment, etc.) should be defined as the original condition of the project area, before drilling and mining.

[...]

There is one statement in the Class III Fact Sheet that created more questions than it answers. This is the statement that "Groundwater pumped to the surface during the pump tests will not be injected back into the subsurface" (p. 59). The obvious question, of course, is what will be done with this waste water? Will it be allowed to run into the ground and/or the creeks? What will its quality be? Is this waste water included in the calculations of the amount of water consumed during the project? At a minimum, the answers to these questions should be included in the discussion.

C. The permit application indicates that if Class V UIC wells are used for disposal of waste fluids (which Class V disposal will be severely restricted because of its abandonment of the Deadwood formation according to Powertech's own admission) –it "will be possible" to use reverse osmosis to treat groundwater removed during groundwater restoration. This allows the water to be re-used for restoration. The permit application is very unclear about if and what types of treatment will be used to treat: (1) radioactive waste fluids prior to injection by Class V UIC wells; (2) groundwater removed as part of groundwater restoration efforts.

Powertech should be required to provide a clear explanation about these types of treatment prior to any issuance of the Permit, as well as information that demonstrates it has the financial and technical resources to ensure such treatment actually will happen.

[...]
D. As noted above Powertech is required to treat the waste fluid to comply with standards in CFR Part 20, Appendix B, Table II, Column 2 and 40 CFR 261.24, Table 1. This treatment is required prior to disposal via underground injection. There is little information in the permit application.
Apparently Powertech plans to treat the waste fluid by "radium removal in radium removal ponds". There is no information regarding the constituents which are expected to exceed the standard and will need to be removed nor any information on how the "radium removal ponds" work – is radium the only constituent that needs to be treated? Is the radium suspended in the waste fluid? How will compliance be monitored?
[...]

Given the fact that Otten and Hall (USGS) are among those who have observed that "To date, no remediation of an ISR operation in the United States has successfully returned the aquifer to baseline conditions," the presumptions of companies who propose this type of mining – and the brave statements by regulating agencies -- must be approached with abundant caution.

If no U.S. ISL mine has ever returned the water to baseline, what makes the EPA believe that this unprecedented task will be accomplished at Dewey-Burdock? This question must be addressed explicitly and analyzed thoroughly as a result of a full NEPA process, if the EPA decides to push forward rather than deny the permits and exemption.

LAURAL BIDWELL: Yes. My name is Laural Bidwell. I'm a resident of Rapid City. I lived in Hot Springs for 11 years and used to walk my dogs in Edgemont.
And I don't know a lot about geology, but the one thing I do know is that the State of South Dakota has never been particularly interested in protecting its natural resources.
Their bonds that they usually require in order for people to clean up sites should they contaminate them have been far less than the amount of money that it takes to clean them up.

And with this stuff, we don't know what's going to happen ten years down the line. We don't know what's going to happen 50 or 100 years down the line. And we don't know that these companies are -- obviously not even going to necessarily be around ten years down the line, much less 20 or 50. Who is going to do the cleanup?

And that's -- there's no -- there's no way to clean our waters. No matter what kind of scientific -- how many scientists or geologists, whatever you -- they tell you that you could purify this water, it's just BS.

And as a final statement, I would simply say that Azarga doesn't have to -- Azarga/Powertech doesn't have to clean this up. They aren't required to clean it up because it can't be cleaned up. You cannot clean up radioactive material. It remains radioactive. It might be in a solid, it might be energy, but it's radioactive. You can't lie down next to it, you can't put it in your mouth without getting into trouble. You can't do those things.

No matter how safe science says it is, there is no proof of how to fix this, clean this water up. No proof. No track record at all.

And we're still going to take this risk for our kids, the kids standing in the back? You're going to have kids, you know.

At the same time, I've been learning more about this process. I talked with the manager, Mr. Hollenbeck. I just met him, so I don't mean to -- but he was explaining part of the stuff there, you know, and he -- at the end he said, It's a theory. It's a theory of how we're going to be able to clean the water and be able to get it back to its -- you know, at least drinkable or usable. It's a theory.

So that kind of like, this doesn't sit good with me, you know.

Letter ID	Commenter Name	Commenter Org.
53		Individual
363		Individual
546	Ex. 6 Personal Privacy (PP)	Oglala Sioux Tribe
7460 (5/8 Rapid City hearing)		Individual

7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Individual
7642 (Hot Springs hearing)		Individual
7642 (Hot Springs hearing)		Individual

Text
Subject: Re: Power Tech/Azarga aquifer contamination concerns I just spoke to the Hot Springs City Engineer, Tracy Bastian, who said the city of Hot Springs, as well as many other private wells in this area, get their drinking water from the Minnelusa Aquifer. I would expect that if Power Tech/Azarga, before being seriously considered for this project, should be responsible for providing and paying for a baseline water test of the wells that provide drinking water from the Minnelusa Aquifer. Unfortunately, once the damage is done, there will be nothing that anyone can do to restore our drinking water to its original purity except to lower the standards for safe levels for the contaminants, as has been the case where contamination has occurred at other in-situ sites.
Subject: Powertech/Azarga Draft Permit for the ISU Dewey/Burdock Project After studying and researching pages and in permitting ISU mining, and knowing how long it has been since the last water testing on wells for the above named project; I am proposing that the water should be retested along with the leaching, etc. Conditions of groundwater can and do change..
III. BASELINE WATER QUALITY INFORMATION IS LACKING Powertech relies on the same data regarding the baseline water quality for its EPA permit applications as it did for its NRC license applications. The applicant has provided no significant baseline water quality information since the NRC license proceedings were conducted. Indeed, in response to comments from the Tribe during the NRC process specifically detailing the problems with lack of adequate baseline water quality data, NRC Staff confirmed that the applicant collected data from 2007 to 2009 and that "the NRC staff used this information when drafting the affected environmental section of the SEIS as well as analyzing impacts of the proposed action." FSEIS at E-32: Exhibit NRC-009-B-2. Exacerbating these problems, NRC Staff stated that: the applicant will be required to conduct additional sampling if a license is granted to establish Commission-approved background groundwater quality before beginning operations in each proposed wellfield in accordance with 10 CFR Part 40, Appendix A, Criterion 5B(5). However, this does not mean that the NRC staff lacks sufficient baseline groundwater quality information to assess the environmental impacts of the proposed action. FSEIS at E-32; Exhibit NRC-009-B. The same problems persist in the EPA UIC permitting process. The admitted data gaps, and the failure to gain additional sampling before the draft permits were issued, establishes that, like NRC Staff, EPA has not required or used the collection of any additional baseline data for its characterization of baseline water quality, but and that EPA will require additional data in the form of "well field packages" in order to establish a credible baseline for use in the regulatory process. Thus, while the existing administrative record contains data from 2007-2009, the background water quality for use in the actual regulatory process for the facility will be established a future date, outside of any public process, and without the benefit of the public's review and comment. This approach undermines the UIC permitting process, prevents the EPA from accurately assessing the potential impacts from the project, and prevents the public from being able to effectively review and comment on the project. The result is a lack of compliance with the SDWA and the UIC regulations. The attached Opening Written Testimony of Dr. Robert E. Moran (Exhibit OST-001) submitted during the NRC hearing process demonstrates the failings of EPA's approach. Exhibit OST-001; Dr. Moran Opening Written Testimony at 16-18. Specifically, Dr. Moran notes the lack of analysis of impacts from past mining activities (p. 16), the lack of necessary information as to the chemical compositions and volumes of wastes, among others (p. 17), the potential bias of the data thus far provided (p. 18) along with the scientifically invalid tactic of requiring the Applicant to collect meaningful water quality data to be used in the configuration of mine design in the future and outside of the public review: The delayed production of this critical baseline information until after licensing is not scientifically defensible as it prevent establishment of a baseline on which to identify, disclose, and analyze environmental impacts, alternatives, and mitigation measures involved with the Dewey-Burdock proposal. A scientifically defensible monitoring and mitigation of an operating project is not possible based on the baseline data and analyses I have reviewed. Exhibit OST-001 at 17. The attached expert Rebuttal Testimony of Dr. Robert Moran also confirms that EPA has not adequately described the baseline conditions at the site using reasonably comprehensive data. Exhibit OST-018. For instance, Dr. Moran specifically opines that despite expectations that post-license collection of data is sufficient to fill in any gaps that currently exist, such a process deprives expert agencies, the public and the parties to this proceeding (and EPA staff) the opportunity to meaningfully review and evaluate the impacts from the proposed project during the permitting process. Exhibit OST-018, Rebuttal Testimony of Dr. Robert E. Moran at 2 (A.2). Further, any assertions that this additional data cannot be obtained without full construction of final well-fields is unsupported and contradicted by the expert testimony of Dr. Moran. Dr. Moran opines that adequate baseline data can be gathered "without constructing the ultimate wellfield monitoring network." Id. Dr. Moran points to previous studies undertaken by TVA and Knight Piesold that conducted pump tests to gather baseline data prior to NRC approval. Id. Dr. Moran states that Powertech's consultant Mr. Demuth "confuses hydrological testing that is needed to establish, analyze, and disclose the hydrogeological setting as part of the NEPA-based NRC permit-approval with the more specialized production tests Powertech will conduct on constructed wellfields." Id. In short, there is no legal, technical, or practical basis to forgo gathering this needed data as part of the UIC application process, or at minimum the EPA draft permit process. At the hearing conducted in the NRC licensing process, Dr. Moran's testimony confirmed that additional data is necessary for a "complete" baseline analysis, including the collection of data for water quality constituents not presented in the company's application materials, such as strontium and lithium. See attached August 20, 2014 Transcript at p. 1007, line 24 to p. 1008, line 1. Consistent with Dr. Moran's testimony, applicant witness Mr. Demuth admitted that additional data is necessary to provide complete baseline data. Id. at p. 1012, lines 16-20. Thus, Dr. Moran's expert opening, rebuttal, and live hearing testimony in the NRC administrative process demonstrates that EPA lacks the necessary information to meet its requirements for demonstrating a competent set of baseline data – and instead defers meaningful collection, disclosure, and analysis until a later date, only after the public have been denied the opportunity to comment on the baseline that reveals the affected environment that will be impacted. This critique is centered on EPA's plan to defer collection of baseline and to rely on future analysis of future baseline analyses conducted as part of the well field packages, to be provided only after license issuance. This is in effect an identical system adopted by NRC Staff, which deferred meaningful review of baseline information through a so-called Safety and Environmental Review Panel (SERP) – outside of its NEPA process and long after the public's opportunities for comment and review have run. Further buttressing this argument is the attached Declaration of Dr. Richard Abitz detailing the requisite standards for scientific validity in a baseline analysis. Exhibit OST-001, at 2. See also, Moran Suppl. Decl. at ¶58 ("The [NRC Staff evaluation], like the Powertech Application, fails to define pre-operational baseline water quality and quantity—both in the ore zones and peripheral zones, both vertically and horizontally."); *accord* ¶¶ 47-74, 75, 82-84, 92-94, 95. Overall, the Powertech submittal fails to adequately describe the affected aquifers at the site and on adjacent lands and fails to provide the required quantitative description of the chemical and radiological characteristics of these waters necessary to assess the impacts of the operation, including potential changes in water quality caused by the operations.
The other thing is, where is the baseline data? We're talking about three -- we're talking about different types of uranium. You have your natural uranium, the -238, which is like 98 percent -- when you're exposing this to air -- the air, it's causing different chemicals to come into your -- you know, humans are being exposed to that. Is it being tested? Is there any baseline data in that area that is downwind? We have a rain shadow effect coming off the Black Hills into the prairie and the Badlands area. How far is that? We have a map up here that shows the little uranium area, but is the air quality taken into consideration? There's -- which way does the wind blow?

Where does the most contaminants come from, the analysis from that? There is no baseline data in Oglala Lakota County, Fall River County for air quality, and that should be a significant factor.

Who will be responsible for the cost of testing present domestic wells, to obtain a true water quality baseline?

When this is done, for one thing, I'm testing our water. It's costing us $750 to prove that the Minnelusa water is pure. I will see that you get a copy. Also, I'm trying to get ahold of the state report that said we had the best water in the county. I will see that you get a report.

Now I'm going to speak on the term "baseline." It is actually a misnomer in that it does not refer to the real pre-mining baseline condition of the groundwater or the entirety of the aquifer.
Instead, a selected baseline from the immediate baseline production area of the ore-bearing portion of the aquifer is established.
Thus, aquifers and groundwater are left unstable.

Letter ID	Commenter Name	Commenter Org.
55	Ex. 6 Personal Privacy (PP)	Individual
121		Individual
125		Individual
158		Individual
218		Individual

262	Ex. 6 Personal Privacy (PP)	Individual
297		Individual
410		Individual
415		Individual
485		Individual
486		Individual
487		Individual
7460 (5/8 Rapid City hearing)		

	Ex. 6 Personal Privacy (PP)	Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		Individual
7462 (Hot Springs hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

hearing)		
7642 (Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Individual

Text

Subject: Articles on the seismic testing south of the proposed Dewey Burdock Project

Thank you again for taking the time to hear our concerns for the Dewey Burdock project on our water last week.

As you may already know, we just learned that there is probably going to be seismic testing south of the Dewey Burdock site. These articles are timely and I believe they may be critical to the future of the Dewey Burdock project as well as the old mining sites that still remain a threat to our water and the buried weapons at Igloo. Realizing there are faults in this region, we, the residents of the Black Hills, are even more concerned with this new realization that seismic testing and perhaps eventual fracking will take place on and near the former army depot site at Igloo!!!!!!!!!!!!! God Help us!!!!!!!!!

It is common for Cascade Spring to flow red as a result of previous seismic tests, heavy machines working miles away, not to mention unknown causes for this phenomena. IT IS A DELICATE ENVIRONMENT AND WHAT HAPPENS IN A GIVEN AREA HAS AN IMPACT MILES AWAY! I cannot imagine what effect these seismic tests and/or the effect of eventual fracking may have on the Dewey Burdock site even with the best attempts at confining the toxins they will be disturbing, creating and re-injecting into the earth and our water supply, which is a bad idea without the additional issues created by the seismic testing at Igloo!!!!!

Please educate yourselves on the future plans for seismic testing in this hazardous area and its possible effect on the Dewey Burdock Project!!!! The results may be catastrophic! I sincerely pray that the EPA will protect us because there will be no way to clean up the possible devastation and/or to restore what we now have. Thank you!

13). The Igloo compound has a history of contamination by such dangerous poisons as lead, sarin gas and radioactive elements. Government chemical weapons and testing have made that area ready for Super Fund status. The sarin contamination is held in 50 to 60 year old 55 gallon barrels, which are stored underground in burial trenches where leakage is not that rare. Any seismological activity in this area will risk a: fracturing of the sarin tunnels and release of the poison as well as fracturing of the cave network that connects to all the underground caves and aquifers.

Because of all of this and the danger of the contamination of Igloo, (Sarin gas and high levels of radiation in the whole are,) the EPA should seek a status of SUPERFUND rather than authorize additional mining on top of the existing poisons.

Dear Ms. Shea:

I am a retired U. S. Naval Captain (06) who served in Naval Intelligence and worked in concert with the Central Intelligence Agency during the Desert Shield/Desert Storm War with Iraq. I headed up a unit which tracked Saddam Hussein's chemical warfare capabilities and interdicted technology and critical materials to keep Hussein from deploying his arsenal of war gasses on coalition troops. I hold graduate degrees in Biochemistry and Health Care Administration. I am qualified and considered an expert in chemical warfare weapons.

I have long been concerned about the Black Hills Army Depot (BHAD) which is a 21,000-acre-site, just south of the Dewey Burdock area where Azarga wants to have an in situ leach uranium mining operation and a huge waste disposal program using underground injection wells. They wish to dispose of radioactive and very toxic waste from other uranium mining sites and oil and gas fracking sites.

The BHAD which operated from 1941 to 1968 was the world's largest chemical warfare agent storage site, handling such lethal agents as sarin, soman, toban, GB, VX, German top secret chemicals recovered after WWII, mustard gas, Lewisite, and phosgene and others. The US chemicals were brought to the BHAD in preparation for WWII by the thousands of tons. Some were in canisters and others were in the form of rockets or other delivery systems. These agents are extremely lethal, and are gaseous at temperatures above 55 F.

These agents are soluble in water and oil and cannot be neutralized in their present storage configuration at the BHAD. Many were dumped in over 200 miles of trenches or stored underground. Most are now unstable and some have explosives attached, which are decomposing and have a great tendency to auto ignite. They are too dangerous to move.

Some agents are percolating down through the shale that covers the site, and most are sitting in cave structures under the depot. The Wind Cave structure extends under the Dewey Burdock area and under the BHAD.

Any significant disturbance to the underground area including the Dewey Burdock area has a great potential to release large quantities of lethal chemical warfare agents into the air and local creeks. There would be no way to control these releases or minimize their effects. A toxic and lethal cloud could spread from the BHAD killing every living thing within its path.

The drilling of 4000 wells to support the uranium mining operation would create tremendous geological stresses. Azarga has admitted that they will inject water and CO_2 under pressure along with lixiviants (as yet unidentified) designed to dissolve the underground rock strata containing the uranium. Water and CO_2 create the highly caustic carbonic acid. They then propose to pump the dissolved uranium several miles under pressure to a processing plant where they will leach out some of the uranium. The resulting toxic sludge, which will still be highly radioactive and laden with heavy metals such as arsenic, the carbonic acid, the lixiviants and the dissolved rock, will then be forced back into the well fields, again under pressure.

This process will create a plume of pressurized toxic dissolved rock which will spread out from the well field area, contaminating everything in its path, destroying valuable water aquifers, and eventually reaching the BHAD. To date, there has never been an in situ leach uranium mining operation which has not destroyed underground water. DESPITE SERIOUS ATTEMPTS TO CONTROL THE PLUMES, NO SITE HAS BEEN TOTALLY CONTROLLED TO DATE.

It is my conclusion, based on available documentation, that these plumes will adversely affect and destabilize the chemical warfare agents below the BHAD. Thus, there is the potential for setting off a disaster of unprecedented magnitude.

There is no way to control the chemical warfare agents under the BHAD. We do know that the Wind Cave structure is huge and contains 300 foot deep caverns in some places. The water aquifers are mingling with the Madison aquifer in the Wind Cave structure. Pressurizing these wells could cause these chemicals to move, dissolved in the large amounts of water already underground in the area.

[...]

By this letter, I wish to strongly advise against permitting any part of this permit application. We can only speculate about the actual status of the chemical warfare agents underground in the BHAD. We know that these agents if disturbed will create a hideous release of toxic chemicals from weapons of mass destruction.

My concerns regarding the Dewey-Burdock Project are centered around the problems of artesian flow and, interactions with the Remediation of Buried Chemical Warfare Materiel located at the Black Hills Army Depot less than 10 miles to the south.

[...]

In order for artesian flow to occur at the Black Hills Army Depot, the water must originate topographically higher in the Black Hills and pass through the Dewey-Burdock project area boundary. Were this artesian water flow to happen with oxidant-charged lixiviate, and/or the brackish fossil aquifers, the contaminated groundwater would rust any metal-contained ordnance and release its contents into the environment.

[...]

Concluding Remarks

It is very likely that the oxidants used to free the uranium and/or the brackish fossil aquifers and the connected action of artesian flow as observed by the U.S. Army Corps of Engineers will also cause the destruction of underground storage containers i.e. Buried Chemical Warfare Materiel located at the Black Hills Army Depot less than 10 miles to the south of the Dewey-Burdock Project area and release their contents into the area's ground and surface waters. This huge munitions depot handled thousands of tons of chemical warfare agents such as sarin, soman, toban, GB, and VX, plus mustard, phosgene, and Lewisite.

http://rapidcityjournal.com/news/local/seismic-crews-want-to-test-up-to-acres-northwest-of/article_2d670e86-f90b-5db4-8bd6-19075034e04e.html

The Proximity of Igloo, Black Hills Army Depot/Black Hills Ordinance Depot • The Black Hills Ordnance Depot was officially designated in February 1942 in Fall River County. The site consisted of 21,095.85 acres, and was utilized for long-term storage of ammunition. In August 1962, the site was renamed the Black Hills Army Depot. The facility was developed with industrial storage, administrative buildings, housing, and related support facilities and utilities. The Depot was used for the receipt, storage, maintenance, inspection, testing, restoration, issuance and shipping of ammunition, propellants, and chemical toxics, the unpacking and functional packing of small arms ammunition, and the demilitarization of unsafe, obsolete and surplus ammunition, chemical ammunition, ammunition components, chemical toxics and general supplies. On June 30, 1967, the Black Hills Army Depot was closed and in 1968 was declared surplus by the Department of the Army. The City of Edgemont, South Dakota, purchased all land within the boundary fence and the remainder of the former site was transferred to the United States Forest Service. Currently, the entire site is used for livestock grazing. In 1981 a study conducted by Ecology and Environment, Inc. determined that a change in land use which would generate direct human contact, such as housing or crops for human consumption, should be avoided. • 368,000 tons of various kinds of nerve gas is stored underground and dumped in 200 miles of trenches on the 21,000 acre site. BHAD contaminants are: Sarin, Soman, Toban, GB, VX, Lewisite, Mustard Gas. Phosgene, as well as a host of very lethal things recovered from Germany at close of WWII. These canisters were soaked in ice water overnight so they could be opened, and a stabilizer added that would stabilize for just 10 to 15 years, according to the files, but that was back in the 1950's. Obviously, these nerve gases, which are both oil and water soluble in now unstable canisters should not be disturbed by pressurized injections known to cause earthquakes, or with remainder corrosive lixivients that Ex. 6 Personal Privacy (PP) 8 would harm the fragile canisters. at least some of the old boreholes were described by the TVA were directly into the tunnel structures. • Additionally, great numbers of UOX/ unexploded ordinance including rockets, hand grenades, bombs, land mines etc., are also buried there. The combination of these UOX and the toxic nerve gasses together spells something like an Armageddon if the site were disturbed by anything at all that would have even the remotest possibility of releasing this monster of a mess. • Sandia Labs has several reports on the dangers of chemical warfare agent bombs using M-55 rockets that are destabilizing and auto igniting. Too dangerous to move. Studies of this problem were commissioned by Congress. Circa 1994. Here is a link to the complete report https://www.nrc.gov/docs/ ML1305/ML13053A145.pdf • US Senators Larry Pressler and Tom Daschle both received classified briefings by the Pentagon on the dangers of the BHAD. Both are living in the Washington DC area. • When one considers that the Wind Cave Structure lies beneath the depot, one comes to the inescapable conclusion that we should never disturb this area with any mining activity or injection wells. The Wind Cave Structure is huge and not even fully explored or mapped. • There have been leaks documented in the are already, ranchers have sustained episodes of livestock deaths and wildlife deaths in the depot area from time to time. A rancher who owned a creek on the east side of the depot lost 1200 sheep in a four day period one spring.

Subject: Uranium

Dear Lois, I made a comment at the Hot Springs EPA meeting and also handed you my notes. Please think very carefully about granting any permits. We who are against it now have another Bio-Chemists who did research in Iraq and has chosen to retire in the Black Hills of South Dakota. I have lived here for almost 40 years and many people have said that Edgemont Army Depoe left buried chemicals behind. Sarin Gas as well as unexploded munitions behind. I shrugged it off. This man who did research for our country in Iraq concerning weapons of mass destruction said he is getting involved because he found that in Edgemont (Iglo) the chemicals came in but he can find no record of them being taken out.

A company is sending a seismic testing in the area for potential oil which will be done by fracking. Can you imagine what will happen when the ground shakes? More time is needed to find out the truth.

...III. The Danger of the Black Hills Army Depot:
I would refer you to my extensive comments regarding the Black Hills Army Depot (BHAD) to include the town of Igloo which operated on a 21,000 site 8 miles south of Edgemont from 1941 to 1968 written as comments in the NRC hearings for the Dewey Burdock Project.

Hundreds of thousands of tons of deadly chemical warfare agents were stored underground, buried in cement bunkers, or buried in 200 miles of trenches during this time period. These include but are not limited to sarin, soman, toman, toban, GB, VX, phosgene, Lewisite, and mustard gas. By now the canisters have leaked into the shale and the weapons and cannisters stored underground have the potential to auto ignite according to a study conducted by the Sandia Labs at the request of congress.

This site is a military SuperFund Site and was studied by the Corps of Engineers from 1991 to 2001. I served as chairwoman of the Restoration Advisory Board for the projected clean-up which at that time had a budget of $5 Billion. After extensive investigations the Army concluded that a clean- up was not safe to attempt nor could it be afforded.
Further the Wind Cave Structure underlies the BHAD extending northward toward Edgemont and the Dewey Burdock site as well as the Wind Cave and Jewel Cave visitors' center.
It is my contention that if we begin to disturb this area underground, we run the risk of spreading these terrible chemicals and their residues. These are soluble in water and oil and in their current burial/storage state cannot decompose.
The danger is gigantic and there would be no way to contain the damage except to cordon off huge areas of contamination.
Please refer to the BHAD Archive Search Report which has been revised and is now dated October 1992 and was prepared by the Huntsville, Alabama Corps of Engineers...

There are buried bombs and chemical weapons on the other side of Edgemont in Igloo.Wind cave is not very far off and new passageways ae being discovered all the time...

It has already been proved that injecting materials under high Pressures' deep underground causes earth quakes. This area is already having numerous earthquakes as the whole Black Hills is in uplift stage. More and harder earthquakes are apt to break those deadly gasses stored over there under Igloo. It could kill every living thing in the area. These permits would allow this company to pollute our underground water, which we all rely on. Just across our western border in Wyoming Cameco Resources has been hit with nine apparent violations on how they are shipping uranium products. http://www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html. We also have that concern with Arzargo/Powertech. http://www.gov/docs/ML061240509.pdf. http://www.nrc.gov/reading-rm/adams.html.

3. That Dewey Burdock has two geologic anomalies that preclude use as an ISL mining site ... the proximity of Igloo, with 367,000 tons of various nerve gasses stored in known unstable containers in over 200 miles of tunnels. And the 7650 open old bore holes that other sites do not have, that mix the waters of the aquifers already, making containment impossible, for mining or deposition of toxic wastes.
specifically address the subject of the class 3 mining injection wells and the class 5 haz waste deep injection wells. You really need to be specific here ... and those old boreholes were never closed, or if so, closed improperly by TVA. .. 7650 of them are still open and some have fenceposts in them, which the rotting wood further contaminates the aquifers it touches, inoculating them with fungi and bacteria that organify the metals, making them unavailable chemically from being extracted by the ion exchange method, including uranium, which will continue to increase in the wastewater.
And those 7650 open boreholes, existing in an uplift area of numerous cracks, fissures, fractures, breccia pipes and sinkholes that exist there, that are already allowing for the mixing of aquifers, does not allow for the containment of anything you put down in the ground, no matter what level. This includes the class 3 mining wells.

The proximity of the Igloo waste site depot has potential devastating consequences. We need to let sleeping dogs lie. We already have too many holes that were never closed by other companies. **LEAVE OUR LAND ALONE!**

I'm known by two names, James Huff and Navy Captain Jim Huff. I'm a retired Naval Intelligence Officer, and I'm coming at this issue from a different direction.
First of all, I want you to know I'm wholly opposed to granting these permits. A little bit about my background: I had two parallel careers. One was with the VA and one was with Naval Intelligence. I have a graduate degree in biochemical pharmacology, spent 11 years in research at the VA, and went to medical school in Houston.

Now, during the Vietnam War, I received a direct commission in Naval Intelligence. The Navy was looking for individuals who were basic scientists, individuals who had exotic language skills, mathematicians, and computer types. But they had to have prior military service. My prior military service was in the Marine Corps.
With all that said, I'll explain why I'm interested in this issue. It's not just the drilling of these wells for uranium, but it's what this drilling will do to the geography, the geology surrounding the Black Hills Army Depot.
I was involved in studying binary nerve gasses. My last ACDUTRA, my last active duty was for this war, the Gulf War. It was there that we studied the gasses that were used by Saddam Hussein against the Kurds. I have an in-depth knowledge of both tertiary and binary gasses.
The gasses that are stored at the depot -- and there's documentation, and I have gone through the archival report here. The archival report indicates that the gasses that were brought in, primarily phosgene and a variety of nerve gasses, are still there. They were buried there. They were buried there in containers that are now rusting out.
To allow anyone to come in and drill in proximity to the Black Hills Army Depot would be outrageous because these gasses will plume into the soil, into the aquifers. And the drilling itself is one thing, but if there's any seismic activity there, the siesmic activity itself would have a tendency to jar the rock formations so that the aquifers would be negatively affected.
Now, my personal interest began in 1978, '79, and '80. I was the associate director of the VA hospital at Fort Meade, but I was also a Naval Intelligence Officer who commuted out of here about every three weeks to complete whatever missions were required. I would go back to Naval Air Station Glenview.
But I was fascinated by what was going on at the depot because one of my employees, our chief of police, would go there to hunt souvenirs. So I made it a point to study these reports.
I left. And in 1994, I retired from the VA, retired from Naval Intelligence, and came back here. And I see the issue is still going on. People are still trying to exploit the area around the depot, and I am seriously concerned about it.
And I will relinquish the floor with 20 seconds left. Thank you.

Which brings me to the subject of Igloo. The proximity of Igloo, the 367,000 tons of various nerve gases known to be unstable in old metal containers that are self-igniting and both water-soluble and oil-soluble buried in over 200 miles in both naturally occurring and man-made tunnels presents a unique hazard of epic proportions on the planet if flooded by highly oxidative lixiviants or disturbed by seismic activity known to be caused by injection wells. This alone should negate the Dewey-Burdock site for any and all mining activity.

I think the previous speaker talked about the Black Hills Army Depot. I won't belabor that except to say that that is the most toxic waste site in the world. It was billed as the largest chemical warfare agent dumping ground in the entire world.
For the ten years that we studied it, we had a $5 billion budget, which we never spent because we determined that we couldn't repair the damage.
We couldn't decompose the stuff stored out there, and it was going to percolate down through the shale and sit there. And the bottom line is, if we start disturbing the underground structures -- and remember that the Wind Cave structure goes all the way from the Dewey-Burdock area down into the depot, so there are vast cave structures that are available to move this material around -- I am pretty concerned, very concerned that we will cause an environmental, ecological nightmare with the undecomposable chemical warfare agents.
So I don't think that's a good idea. I don't think mining is a good idea. I don't think 4,000 wells is reasonable.

What we're liable to get, if we play this game, is siesmic activity, and we're liable to get earthquakes, and we might not be able to contain what we already have going in Igloo, the Black Hills Army Depot, because we will have greatly disturbed it

If these permits are issued, the Council for Responsible Mining will begin getting baseline testing and monitoring of these wells for class action lawsuits that will surely follow as the plumes flow south and east through Igloo and beyond.

And if it gets over into the Igloo area, where these people already testified what's buried there -- and we don't even know where it's buried -- contaminates, Katy, bar the door.

CINDY BRUNSON: I'm a local rancher. I live at the Black Hills Ordnance Depot at Igloo, South Dakota. We arrived in this area in 1987.

When I came to Edgemont, they -- the Tennessee Valley Authority, they had hazmat suits on and Geiger counters -- Geiger counters going around Edgemont, picking up uranium tailings from the old site.

Unfortunately, we moved to a ranch unbeknowing [sic] that there was uranium mining done there, and there was holes after holes, borings that were never plugged. They -- you could drop a rock down them, and it sounded -- seemed like it went endlessly, you know. I have no idea what depth these were. But anyway, nobody ever did anything to plug any of these holes.

So my concern is, there's a possibility of cross-contamination because of these borings, just like that man from the university over at Pine Ridge said, that, you know, they haven't expressed or told everybody about all the borings that were never plugged.

As a rancher, you know, first I would like the EPA to go back and have those areas cleaned up from the old uranium mining that was never ever cleaned up. And it's my understanding that the landowners won't let you back on because they feel they might be liable for the cleanup now that all these companies are gone.

KATHLEEN JARVIS: It's May 10th, 2017. Uranium mining EPA hearings. Public information sessions and hearing for the proposed Dewey-Burdock Project ISL mine near Edgemont. The South Dakota Environmental Impact Statement, the SEIS, fails to consider connected actions.

My name is Kathleen Jarvis. I am born on a tiny island off the coast of Hiroshima just after the bomb was dropped. Comment: My concerns regarding the Dewey-Burdock Project are centered around the problems of artesian flow and interactions with the remediation of buried chemical warfare material located at the Black Hills Army Depot less than 10 miles to the south.

[...]
KATHLEEN JARVIS: Okay. That's fine. The last was the relationship of the wellfields with the Black Hills Army Depot. That in and of itself has critical conditions to this project.

Number four, the proximity of Igloo, which is the most dangerous collection of unstable nerve gasses and old, unstable munitions in the world buried there. Igloo is downgradient of Dewey-Burdock.

Moving wastewater will destabilize Igloo and pick up even more toxins and move them and likely cause an event of epic proportions.

I worked in Igloo, South Dakota back in '75. And I got -- I don't know if that's where I got cancer or if it's from the Slim Buttes area. There was 37 holes, test holes there. And they say capping is not -- just this cover right here, that's not capping.

KATHLEEN JARVIS: Thank you. My name is Kathleen Jarvis. I'm the former controller of Custer State Park, former city finance officer of Hermosa, I currently work in the oil and gas industry.
The proposed Dewey-Burdock project ISL mine near Edgemont, South Dakota Environmental Impact Statement, the SEIS, fails to consider connected actions.

Comment: My concerns regarding the Dewey-Burdock project are centered around the problems of artesian flow and interactions with the remediation of buried chemical warfare material located at the Black Hills Army Depot less than ten miles to the south.

[...]
In order for artesian flow to occur at the Black Hills Army Depot, the water must originate topographically higher in the Black Hills and pass through the Dewey-Burdock project area.
Were this to happen with oxidant-charged lixiviate, contaminated groundwater would rust any metal-contained ordnance and release the contents into the environment.

Concluding remarks: It is very likely that the oxidants used to free the uranium will also cause the destruction of underground storage containers, i.e., buried chemical warfare material located at the Black Hills Army Depot less than ten miles to the south of the Dewey-Burdock project area, and release their contents into the area's ground and surface waters.
This huge munitions depot handled thousands of tons of chemical warfare agents such as sarin, soman, toban, GB, and VX, plus mustard, phosgene, and Lewisite.

References: U.S. Army Corps of Engineers, 1992 preliminary assessment of ordnance contamination at the former Black Hills Army Depot, South Dakota.
U.S. Army Corps of Engineers, 1992, "Final Archive Search Report, Preliminary Assessment of Ordnance Contamination at the former Black Hills Army Depot," South Dakota, Huntsville, Alabama.

U.S. Army Corps of Engineers, 2012, "Final Work Plan for Black Hills Army Depo Remedial Investigation and Feasibility Study."

More and harder earthquakes are apt to break those deadly gasses stored over there under Igloo. It could kill every living thing in the area.

Letter ID	Commenter Name	Commenter Org.
103	Ex. 6 Personal Privacy (PP)	Individual
195		Valois Shea
289		Individual
386		Individual
410		Individual
419		Individual
445		Individual
459		Individual
485		Individual

486	Ex. 6 Personal Privacy (PP)	Individual
493	Ex. 6 Personal Privacy (PP)	Individual

527	Ex. 6 Personal Privacy (PP)	Clean Water Alliance
527		Clean Water Alliance
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
07459 (Valentine hearing)		Individual
7460 (5/8 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
07463 (Edgemont hearing)		Individual
07463 (Edgemont hearing)		Individual

07463 (Edgemont hearing)	Ex. 6 Personal Privacy (PP)		Individual
07463 (Edgemont hearing)			Individual
07463 (Edgemont hearing)			Individual
07463 (Edgemont hearing)			Individual
07463 (Edgemont hearing)			Individual
07463 (Edgemont hearing)			Individual

Text
Now it is threatened with the contamination from radio-active hazard material. I am opposed to fracking and mining of yellow cake uranium at Crow Butte, in Crawford, Nebraska that threatens our Oglala, Mniluzahan aquifers, Inyan Kara, etc. aquifers.
We need to stand up against this devastation. Uranium mining is not the way to go because Pine Ridge Reservation Oglala Sioux Tribe is being contaminated via aquifers under our home and down White River. Crow Butte Uranium is not trying to clean up anything because they are not responsible for any damages outside their mining area. We need the EPA to do their job, and protect people from contamination.
The water, once fouled by in situ Uranium Mining, cannot be made useable. All you have to do see an example of this is look about an hour's drive south from the area where these mines are proposed to the Crow Butte mine near Crawford, Nebraska.. In situ uranium mining there has left the Brule aquifer permanently contaminated.
Subject: Re; permits at Crow Butte My statement to the EPA regarding the permits at Crow Butte, Cameco's Uranium Mine https://www.epa.gov/uic/administrative-record-dewey-burdock-classiii-and-class-v-injection-well-draft-area-permits Valois Shea (shea.valois@epa.gov) Fax: 303-312-6741 U.S. EPA Region 8 Mail Code: 8WP-SUI 1595 Wynkoop Street Denver, Colorado 80202-1129 " One permit would allow the company to drill 4,000 holes to mine using 8,000 gallons of water per minute for 10 years. The other permit would allow the company to pump mining waste into the Minnelusa aquifer (which people use for drinking water) through 4 disposal wells. " I began to learn of the insitu uranium mining, in the Black Hills, in late 2013. I attended the NRC hearings in Rapid City, South Dakota. Since that time I have devoted my time and energy gathering information and I have presented comments at further NRC Hearings. I attended the NRC hearings for Crow Butte, the Cameco mining company, and now, the Environmental Protection Agency is tasked with discovering further information and I have been discovering the rules of the NRC and the EPA, what are the similarities and the differences. An example would be: CERCLA Summary of the Comprehensive Environmental Response, Compensation, and Liability Act (Superfund) Quick Links • PDF of CERCLA, from U.S. Senate(167 pp, 423K, About PDF) • The official text of the CERCLA is available in the United States Code on FDSys, from the US Government Printing Office 42 U.S.C. §9601 et seq. (1980) https://www.epa.gov/lawsregulations/summary-comprehensive-environmental-response-compensation-and-liability-act MEMORANDUM OF UNDERSTANDING BETWEEN THE ENVIRONMENTAL PROTECTION AGENCY AND THE NUCLEAR REGULATORY COMMISSION https://www.nrc.gov/readingrm/doc-collections/news/2002/mou2fin.pdf 2
The Comeco Uranium Mining Project in Crawford, NE called Crowe Butte is a case in point. After 23 years of mining and dumping contaminated water back into the aquifers, the water is now hopelessly polluted. Tests by the USGS reveal radiation, and arsenic many times the EPA standards. Crowe Butte was given a full exemption by the NRC, the EPA, and the State of Nebraska. Residents thought that the mine was "in compliance" not realizing the status of the exemptions. People there are experiencing high rates of cancer. Many are abandoning their homes and leaving the area. This should never happen.
-The Crow Butte Uranium Mine is a prime example of what can go wrong with uranium mining and STILL the mines continues to spew toxic radiation from its site with no immediate intention from the EPA or PowerTech to clean it up...
A. For comparison, Crow Butte ISL uranium mine in Crawford, Nebraska, operated 11 well fields for 20 yrs using a single UIC hazardous waste deep injection well for deposition of their toxic wastes. Dewey Burdock originally requested a total of 8 UIC hazardous waste deep injection wells, but EPA is only permitting 4, still too many for a non functional, no profit mine, two of which are requested to be drilled right away. (Really? What do they need them all for? No work has been done to find and properly close any of the old borehole sites that is required by NRC, followed by adequate pump testing to make sure that the aquifer is contained prior to actively mining. EPA is not requiring borehole closure for the injection wells. This spells certain "disaster" even more.) • By the numbers: Smith Ranch in WY: 10 well fields, one deep injection well Crow Butte, Ne: 11 well fields, one deep injection well for 20 yrs. Willow Creek, composed of two sites, Christensen Ranch and Irigary-2 injection wells. OUR Backyard is Your Backyard! (https://knowmining.org/#portfolio) . 5.) Powertech/ Azarga has also applied for Class 3 injection wells for 14 well fields. This will be an additional 84 injection wells that will be receiving rock dissolving chemicals/lixivients for production. Normally a well field contains one production well for extraction surrounded by 6 injection wells.
THE EPA FAILS TO ACKNOWLEDGE THE DOZENS OF VIOLATIONS AND REPORTABLE INCIDENTS AT JUST ONE IN SITU LEACH MINE -THE CROW BUTTE MINE-OR TO TALK REALISTICALLY ABOUT THE FACT THAT EXCURSIONS AND LEAKS ARE "NORMAL" FOR IN SITU MINES. IN FACT, AT AT LEAST TWO ISL MINES, EXCURSIONS HAVE REACHED OUTSIDE THE MINE BOUNDARY. INSTEAD, THE PUBIC IS PRESENTED WITH A SANITIZED, READY FOR PRIME-TIME VERSION OF THE ISL PROCESS THAT CAN BE DISPLAYED BY NEAT DRAWINGS. THIS LACK OF REALISTIC CONSIDERATION OF THE IN SITU LEACH MINING PROCESS BODES POORLY FOR THE PUBLIC, AS IT INCREASES THE PROBABILITY THAT THE AGENCY WILL ISSUE FINAL PERMITS WITHOUT EVER HAVING GIVEN A "HARD LOOK" AT THE PROPOSAL.
Hannan LuGerry also mapped the aquifers, they are flowing from west to east. The most jobs that would be at start up, 80 versus 350,000 people losing their water. Is the government going to send in contaminated bottled water us? Go to uranium cowboy on u-tube to see a lot of information on this subject. Crawford, Nebraska is the only area that now has a very high rate of pancreatic cancer in Nebraska and the USA. Dennis Yellow Thunder has filed a petition fora review of Crow Buttes' permits. According to Lindsay McLain a known bio-chemist and NRC expert witness, there have been one and a half million chemicals introduced to the body since WW 2. Also the Tennessee Valley Authority after 10 years of looking for uranium to mine int he Dewey-Burdock area left because they found too much gypsum and caveines, in the area.
I **know this** is **a lot of information. Thank you for taking the time. In closing, here are some violations in a neighboring ISL mine:** **License Violations at Crow Butte ISL uranium mine (Nebraska)** • Aug 6, 2013: Well fails 15 year mechanical integrity test. • Jun. s!201J: Radiation Chose in unrestricted area exceeds 0.02 msV/h standard • Mar. 14, 2013: Evaporation Pond 1 liner leak • Jan. 18, 2013: Well fails mechanical integrity test • Oct. 24, 2012: Well fails 20-year mechanical integrity test • Aug. 20, 2012: Well fails 5-year mechanical integrity test • June 4, 2012: Well fails 5-year mechanical integrity test • May 25, 2012: Monitor well fails 15-year mechanical integrity test • · Oct. 7, 2011: Monitor well excursion • Aug. 9, 2011: Exceedance of Well Head Manifold Pressure Limitations • July 18, 2011: two wells fail 5-year mechanical integrity test • June 1, 2011: Evaporation Pond 1 liner leak • May 27, 2011: two Monitor well excursions • May 24, 2011: Monitor well excursion

- Mar. 16, 2011: Monitor well excursion
- Jan. 13, 2011: Monitor well excursion
- July 8, 2010: Monitor well excursion
- July 6, 2010: Well fails 5-year mechanical integrity test
- June 22, 2010: Excursions at two monitor wells "due to increased groundwater levels"
- June 22, 2010: Monitor well excursion
- June 16, 2010: Excursions at three monitor wells "due to increased groundwater levels"
- June 11, 2010: Evaporation Pond 3 liner leak detected
- May 10, 2010: Well fails 5-year mechanical integrity test
- Apr. 13, 2010: Excursion at monitor well due to "natural conditions"
- Dec. 31, 2009: Evaporation Pond 4 Liner Leak
- Nov. 19, 2009: Well fails 15-year mechanical integrity test
- Oct. 15, 2009: Mechanical integrity test missed for two wells
- June 18, 2009: Evaporation Pond 4 liner leak detected
- June 11, 2009: Monitor well excursion
- June 5, 2009: Evaporation Pond I liner leak detected
- April 27, 2009: Monitor well placed on excursion status
- April 17, 2009: Production well fails 5-year mechanical integrity test
- June 4, 2008: Exceedance of Well Head Manifold Pressure Limitations
- May 31, 2008: Monitor well placed on excursion status
- May 23, 2008: $50.000 penalty imposed for violations.
- May 19, 2008: Monitor well placed on excursion status
- April 29, 2008: Five-year mechanical integrity test missed for 42 wells
- September 26, 2006: Monitor well placed on excursion status
- May 5, 2006: leak detected at Pond 4
- January 19, 2006: Monitor well placed on excursion status
- October 27, 2005: Injection well leak detected
- August 4, 2005: Monitor well placed on excursion status
- June 28, 2005: Monitor well placed on excursion status
- June 17, 2005: Monitor well placed on excursion status
- May 2, 2005: Monitor well placed on excursion status
- May 14, 2004: leak detected at Pond 1
- December 23, 2003: Monitor well placed on excursion status
- December 26, 2002: Monitor well placed on excursion status
- September 10, 2002: Monitor well placed on excursion status
- April 4, 2002: Monitor well placed on excursion status
- December 4, 2001: Monitor well placed on excursion status
- March 2, 2001: Monitor well placed on excursion status
- September I 0, 2000: Monitor well placed on excursion status
- May 26, 2000: Monitor well placed on excursion status
- April 27, 2000: Monitor well placed on excursion status
- March 6, 2000: Monitor well placed on excursion status
- July 2, 1999: Monitor well placed on excursion status
- August 7, 1998: Spill of 10,260 gallons of injection fluid
- March 21, 1998: Monitor well placed on excursion status
- August 12, 1997: Discovery of Pinhole Leaks in Upper Liner of Process Water Evaporation Pond

Source: http://www.wise-uranium.org/umopusa.html#CROWB

Remember, if the permits are granted, due to state legislation removed in 2011, the DENR will no longer have the authority to do anything regarding ISL mining - no bonds, oversight, or penalties for license violations.

My name is Ex. 6 Personal Privacy (PP) please accept these as my comments to the formal hearing record.

I am a Sioux County Nebraska resident, our home is located about the same distance from the headwaters of the White River as we are from Cameco's CBR in-situ leach uranium mining and milling operation at Crawford, NE.

In 2012 I returned to northwest Nebraska where I was born and raised after living in the Black Hills of South Dakota for 26 years. What little I heard about the Crow Butte yellowcake operation was mostly public relations fluff. In 2004 and 2005 I spent a lot of time in Crawford caring for my terminally ill Mother. Mom was a resident of the Crawford area since the early 1940s, she was diagnosed with lung cancer in 2004 and died in Crawford nine months later. During that time period one of the many Crow Butte Resources' documented violations was an undetected poisonous spill into an underground source of drinking water that lasted for 2 1 /2 years spanning from July 1 , 2003 through March 31, 2006.

Crawford residents die early in their lives and many assume the mine is causing cancer. Residents have tested positive for heavy metals contamination associated with ISL operations, their recovery is dependent on their leaving the area of contamination. Residents fish nearby ponds and the White River at Crawford, but they do not eat their catch. It is rumored that a farmer had to down crops in their field due to contamination from the adjacent ISL license area. My Uncle, also a long time resident of Crawford, has stopped drinking his tap water. Workers say that one of the 8000 CBR wells has been sealed with railroad ties, and it is rumored that one of deep disposal wells has failed. Crawford, in Dawes County, has 2 of Nebraska's three deepest toxic waste disposal wells.

Locally the only critical thought and formal push back against the uranium mine has been from the Oglala Sioux Tribe and Consolidated Intervener expert witnesses. Elected officials, economic elites and growth groups worry about real estate values and their investments. The uranium mine and yellowcake mill is left off travel publications and maps. It feels like a cover-up. How do you invite people to visit and/or live in a radioactive contaminated area? Informed consent is vital to ethical human population care and development, otherwise, is it not "human trafficking" to invite uninformed people to get sick?

Up north near the South Dakota border some people are saying they want the economic advantages uranium mining & milling proponents boost about. The economically advantaged up there must be talking about tax relief or school funding because Crawford is dilapidating. The water works infrastructure is giving way and costly repairs are undertaken to keep the city water system functioning for a high poverty and declining population due to health and economic evacuation. It is heartbreaking for me when I think that short sighted land managers and property owners tied our schools to an unlicensed nuclear waste dump and future superfund site.

Another problem that has been common in the mine area and that is omitted from the EPA's discussion is wildfires. There have been at least three large wildfires in the area in the last five years. The Crow Butte ISL mine – only about 65 miles from Dewey-Burdock -- was evacuated in 2012 due to a wildfire. The impacts on water, air, and land could be enormous, if a building containing nuclear materials, wellfields, or storage ponds were impacted by a wildfire. The discussion of cumulative effects must include a thorough discussion of how this type of problem would be dealt with to protect the land, air, and water.

For example, the Crow Butte ISL mine near Crawford, NE., has had 85 license violations and reportable incidents. These range from excursions to leaks and spills to wells failing integrity tests. One leak at this site was not found or dealt with for over two years, which makes a mockery of the EPA's great faith in gauges, sensors, alarms, and other hardware to identify leaks and related system problems.

NANCY KILE: My name is Nancy Kile. Please accept these as my comments to the formal hearing record.

I am a Sioux County, Nebraska resident. Our home is located about the same distance from the headwaters of the White River as we are from the Cameco's Crow Butte Resources in-situ leach uranium mine and milling operation at Crawford, Nebraska.

In 2012, I returned to northwest Nebraska where I was born and raised after living in the Black Hills of South Dakota for 26 years. What little I've heard about Crow Butte yellowcake operation was mostly public relations fluff.

In 20- in -- in 2004 and 2005, I spent a lot of time in Crawford caring for my terminally ill mother. Mom was a resident of Crawford area since the early 1940s. She was diagnosed with lung cancer in 2004, and died in Crawford nine months later.

During that time period, one of the many Crow Butte Resources documented violations was an undetected poisonous spill into an underground source of drinking water that lasted for two and a half years, spanning from July 1, 2003 to March 31, 2006.

Crawford residents die early in their lives, and many assume the mine is causing cancer. Residents have tested positive for heavy metals contamination associated with ISL operations. Their recovery is dependent on their leaving the area of contamination.

Residents fish nearby ponds and the White River at Crawford, but they do not eat their catch. It is rumored that a farmer had to down crops in their field due to contamination from an adjacent ISL license area. My uncle, also a long-time resident of Crawford, has stopped drinking his tap water.
Workers say that one of the 8,000 CBR wells has been sealed with railroad ties, and it is rumored that one of the deep disposal wells has failed. Crawford and Dawes County have two of Nebraska's deepest toxic waste disposal wells.

Locally, the only critical thought and formal pushback against the uranium mine has been the Oglala Sioux Tribe and consolidated intervenors. Expert witnesses, elected officials, economic elites, and growth groups worry about real estate values and their investments. The uranium mine and the yellowcake mill is left off travel publications and maps. It feels like a cover-up.

I live ten miles from the Crow Butte in-situ leach mine, which I believe was originally given a 20-year lease. Then they get a 10-year temporary lease.
They've had plenty of time to try to clean that aquifer back up, and I don't believe it has been done or there is any intention of it being done.

So I don't even know why you would even come around. That's crazy. Well, look at what you did to Crow Butte, though. Crow Butte is crazy, right? Went to a Nebraska preservation officer for our cultural relevance on a temporary permit for ten years. Are you crazy?

And the reason I tell you this is, this Crow Butte uranium mine is ten years on a temporary permit. And I know all of you know that. And where in the world does anybody get to contaminate water like that?

And when you look at Crow Butte's list of excursions and they -- there's a probably, like, a 20-year history of five-year well -- well -- you know, where they're not up to their five-year code. And they keep doing that, but they're still on this temporary license. That's crazy.

The other factor is when we go -- when these parts, there's a big reservoir, Angostura, which is already highly contaminated from the Crow Butte uranium mine, which goes into the other watersheds.

So I just wanted to site the Crow Butte mine in nearby Nebraska as an example of types of violations that do occur at ISL sites. Between August 12, 1997 and August 6, 2013, there were 59 violations. I'm not sure if they were EPA violations or state-regulated violations, but ranging from radiation dose in unrestricted area, liner leaks in ponds, well -- mechanical integrity failing in their wells, 20-year mechanical integrity test fail, 5-year fail, 15-year fail, exceedance of wellhead manifold pressure limitations, just a variety of things. They were fined for many of them.

We know that Cameco's operations in Crow Butte, Nebraska have negatively impacted the water on Pine Ridge.
This came out in expert testimony both on the matter of license renewal for Crow Butte as well as the hearings for the NRC permit for this proposed project.

Dennis Yellow Thunder has filed a petition for review of the Crow Butte's permits. According to Linsey McLean, a known biochemist and NRC expert witness, there have been one and a half million chemicals introduced into the body since World War II.

DEBRA WHITE PLUME: Can you hear me? Okay.
Greetings, Mitakuyepi. Greetings to you of the Environmental Protection Agency of the United States of America. My name is Debra White Plume. My Lakota name is Wioweya Najin Win. I'm Oglala Lakota from the Pine Ridge homelands, maybe 60 miles south of here. And I am Cheyenne on my mother's side, Northern Cheyenne, who escaped from prisoner of war status at Crawford, Nebraska back in the day.
Now, I'm familiar with Crawford, Nebraska because that's where there's an in-situ leach uranium mine owned by Cameco Incorporated. I'm the lead plaintiff against that corporation.
They want to renew their license and start a new mine, North Trend; a new mine, Three Crow; a new mine, Marsland. One of the men who used to work for Cameco at Crow Butte, he's part of Powertech and Azarga.
I don't trust these uranium corporations because I've been in this battle for the protection of sacred water for 27 years now. When we filed against Cameco, we were the first ones to challenge a uranium corporation in America in 17 years. That was ten years ago. It's been 27 years now since anybody challenged a uranium corporation.

Count on hazardous delivery spills occurring on your county roads. Be ready to evacuate your home when it does. If you doubt it, come to Crawford. I'll give you a tour. The casual transport of yellowcake is lethal to wayside communities. Boreholes and toxic flush extraction and mining yellowcake endangers downstream communities far into the future.
Don't let Cameco bring hazardous poisonous waste up here. Don't do your neighbor like that.

NANCY KILE: My name is Nancy Kile. I'm from Sioux County, born and raised in Crawford, Nebraska where Crow Butte is at. And I just wanted to -- to state about the fact that we aren't welcome here and we're intruding on this community, and those kind of things.

And I just want to say that I trusted my town leadership as well. I trusted what was going on in my hometown.
During the time period -- my mom was a resident of Crawford area since the early '40s. She came from Oglala. She came to Crawford because there was jobs there.
There's an Indian camp on the White River there, and we still would like it surveyed and reach into that history of the people who belonged to this land in this area. And we're going to do that. And we're going to -- we're going to talk about Squaw Creek Road that runs by Cameco.

But Mom was a resident of Crawford. She was diagnosed with lung cancer in 2004, and died in Crawford nine months later. During that time period, one of the many Crow Butte Resources documented violations was an undetected poisonous spill into an underground source of drinking water that lasted for two and a half years, spanning from July 1, 2003 through March 31, 2006.

My community, since the Oglala Sioux Tribe and the consolidated intervenors has interrupted that mine permitting, something happened. My community became encased in racism and hate.
My people said that Oglala were trying to take their jobs. My people criminalized poverty on each other and Oglala. Something happened. That is not who we are. Don't become that. Don't let your kids become that because you want tax relief and school funding and money for your elites. Don't sell out to a federal agency.
[...]
NANCY KILE: And talk about private property --
[...]
NANCY KILE: -- rights. Thank you.

Well, I was at another hearing, a hearing down in Crow Butte, and they were talking about restoring -- by the way, Crow Butte operated for at least five years without a permit because it had expired, and it took the NRC -- they continued to operate it and it took the NRC five years to get the hearing together to issue another permit.
[...]
-- there was a leak, this safe in-situ leach process with all the detection wells, there are 125 million gallons of -- of the toxic waste down at Crow Butte that leaked, and none of their etection wells got it. And it leaked. There was a pin hole in one of their pipes. It leaked for years.

So when we have, like, all this statistics showing and then also evidence of Crow Butte and what happened there, and how the uranium mine is still not cleared up, and you left a mess there, where it's contaminating that water in the earth. I mean, you have the facts showing. So the only other thing I can think of other than, you know, ignorance or, you know, greed is racism at its finest.

You know, and we learned a lot from Crow Butte. They won't clean up their -- out of the their area of mining site, and neither will you.

TONIA STANDS: Hello. I'm Tonia Stands. I'm from Oglala, South Dakota. And I just want to put this sign up and let everybody look at this. And it says: Crow Butte uranium is evidence, is the proof of what can go wrong.
And we stand on this. Right now we live -- the White River goes by the Crow Butte uranium mine and, you know, we keep -- we keep -- we're debating over scientific and --
[...]

And how do you -- how do you have a program in-situ leach recovery program with these guidelines, and you're a federal agency, and your -- your chain of command is higher than the state. And how are you not going to regulate or look at Crow Butte?

And you know what, they -- I went to these NRC hearings. And you know what they said in there? They have a monitor system. Go back through the record, they have a monitor system.

They have from the beginning, failures upon failures. And I sat in that courtroom and they said, For sure way that we have a monitor system is the snow. The snow melts and let's us know that we have a leak because our monitor systems are failing.

And do they tell us that? No, they don't tell us that. You know, we live down on the reservation, and you have to really look at this and they are sitting up right here in front of our reservations. They don't want us here. They want us gone so they can keep profiting off our sacred Black Hills. So they are on purposely doing this.

Crow Butte is direct evidence. This is within our land, our territory, where we, me and my people, have been here for thousands and thousands of years.

Letter ID	Commenter Name	Commenter Org.
331	Ex. 6 Personal Privacy (PP)	Individual
371		Individual
432		Individual
462		Individual
470		Individual
487		Individual
508		Individual
527		Clean Water Alliance
539		Prairie Hills Audubon Society
7461 (5/9 Rapid City hearing)		Individual
7462 (Hot Springs hearing)		Individual
7642		Individual

(Hot Springs hearing)	Ex. 6 Personal Privacy (PP)	Individual
7642 (Hot Springs hearing)		Individual

Text
Please discuss sufficiency of bonds.
The EPA should only consider protection of the Public interest in our water and it should require that Powertech/Azarda provide a reserve account that will pay for cleanup of any contamination that results. The main owner and beneficiarys of the uranium produced are foreign and not likely to avoid leaving contamination that could lead to another Super fund cleanup that will be billed to taxpayers.
...and it certainly does not require the company to provide enough of a bond to ensure the company is responsible for payment of all costs associated with reclaiming the land and sufficiently treat the water to ensure its safety. Please notify me of all activity associated with this application. Thank you.
Will the agency granting these exceptions be responsible for mitigating any damages caused by this permit? Will a bond be required sufficient to provide water to all affected residents and to cover any damages like those seen in Oklahoma. Who will be responsible for the cost of testing present domestic wells, to obtain a true water quality baseline? I understand the concept of putting a few rural residents at risk for the perceived benefit of a larger population base. However you must accept that agricultural products grown on soil you allowed to be contaminated, with water you allowed to be polluted will end up in your grocery market shelves. It's called karma. [ATTACHMENT: "Hydrogeologic Framework for the Madison and Minnelusa Aquifers in the Black Hills Area"]
How about bonding each well (extraction) @ $40,000 per well and $10+million for the injection wells? How about payments/royalties for the minerals extracted? What process does Powertech or Arzarga propose to purify the wastewater? 90% vs 100% (Hollenbeck describes water usage but avoids discussion of reclamation). If monitoring wells detect contaminants in the aquifer (which is tilted) how does one stop the migration? The underground water flows in Jewel Cave originates somewhere and flows where? The Madison aquifer pressures are much lower at the recharge location in the Black Hills. Are the Minnelusa pressures lower at the recharge level? Lower than the Madison? Well beyond the perimeters indicated in the EPA study and Powertech proposal. A small portion of the Inyan Kara, Madison and Minnelusa area. The Madison aquifer is used in five states. Water flows where it wants to.
Dear EPA, I re-opened my envelope to include 3 articles in our local paper. You can see why we don't want any more mining efforts. We must move on to energy sources like wind, solar and geothemal. No more water, cyanide spills, etc. Please find a way to not allow Azarga permits. Thank you UGLY: Just as-mining operations continue to proceed and may perhaps expand in the Black Hills, the ugly truth surrounding the former Gilt Edge Mine near Lead should serve as a cautionary tale. The Brohm mining company that ran the mine walked away from it in 1999, leaving interminable mess behind. The state was able to take possession of a $6 million cleanup bond fund, but it isn't nearly enough to reclaim the site and return it to nature. Before the state can even take possession of the site, the federal Environmental Protection Agency expects to spend another $20 million on cleaning it up, beyond the millions already spent. South Dakota officials who oversee mining should keep Gilt Edge in their thoughts when determining the level of cleanup bonds mining companies are forced to turn over. For in the end, whether it is state or federal money being spent to clean things up, it's mostly the taxpayers' money in the end that is responsible for the cleanup.
In the past companies have simply gone bankrupt and disappeared ... How much are the bonds the company is paying to guarantee the decontamination & desalination of the waste water?
A final issue is the demonstration of financial responsibility by the company, which the Class III Fact Sheet says should be done through a surety bond "or other adequate assurance" (p. 129). The only assurance that should be accepted is an adequate surety bond. The value of the company, if there is any, should not be used to demonstrate financial responsibility. The definition of an "adequate" surety bond is critical. As noted above, in western South Dakota and elsewhere, it has been common historically for uranium and other mining companies to be unable to fund full restoration after mining, to go bankrupt, and to leave the burden for taxpayers – if restoration was even technically feasible. In the case of in situ leach uranium mining, the Wyoming Department of Environmental Quality (DEQ) raised the bonds at the Highland and Smith Ranch ISL mines from $38,416,500 to $80,000,000, after it discovered that restoration attempts were not having any effect. In its March 10, 2008, Notice of Violation, the DEQ indicated that the real cost of restoration would be "on the order of $150 million." Regulators of other ISL projects should heed the Wyoming experience and insure that bonds for all activities that are associated with this technology are adequate, especially since full restoration has never happened. It is our position, based on the history of the uranium industry, that uranium mining cannot be done safely. This is especially important because Powertech has already admitted that its restoration could be incomplete. In a 2014 "Restoration Action Plan" submitted to the NRC, the company said that "elevated concentrations above the restoration criteria may remain in the production zone following restoration," which the company called "hot spots." The company suggests that, after further study, the "hot spots" could be ignored and the "well field be declared restored." This is unacceptable, and the EPA should explicitly prohibit this practice.
BONDS, Please fully disclose all bonds or other financial assurances that the various federal, State, Local and/or tribal governments require for the entire Project, under all potential scenarios for potentially permitted actions. Please discuss if the project can go forward as just a waste disposal project, before mining begins or completely independent of any mining activities ever occurring at all. Please discuss if the project can go forward as disposal for in-situ leach mining waste, that was never associated with the mining of uranium, thorium, rare earth minerals or other mining that might be under the NRC's regulatory jurisdiction. Can not-radiactive wastes from other types of in-situ leach mines, that are not currently regulated by the NRC be placed into a disposal site regulated by the NRC? Does the NRC have jurisdiction to make a decision about placement of wastes from a mine, that the NRC does not regulate into a facility that the NRC does in fact regulate or permit? If the facility never is associated with handling of any radioactive material... does the NRC have any regulatory jurisdiction, any ability to make regulatory decisions and if so which NRC bonds apply (if any)? If the facility never does any mining... which bonds or financial assurances of state, local, tribal or federal government apply?
And these people who want this project have to be responsible for that, and you don't have near enough money in bonds to begin to cover it. None. Show me one where they have.
And I am not an expert on any hydrolysis and all that. But I found it interesting that in the very first article in Hot Springs Star, there was -- where they talked about Powertech, there was also an article about a cleanup at a uranium mine in Colorado, I believe. But they were talking about firsthand knowledge. The one guy said that the tools seem to have just been dropped as they left, and he could feel the heat through his gloves as he was trying to clean them up. And I'm thinking, I don't think they planned on that. That was probably something they hadn't planned on or noticed or realized or something went wrong, and it took years for the state or the government to come up with a Super cleanup to clean that up, and it's unfortunate that they just walked away because then the taxpayer had to pay for it. And with this being a foreign company, I don't see how we're going to be able to get them to clean it up, even if it were possible to clean it up. So I would say while you have the ability, make sure that you get enough fund money from them beforehand so that it takes the profit away from them so that if they do it properly, supposedly, that they get their money back. Otherwise, they are just going to consider it a point of -- what do you call it -- operating expense to pay the fine. And then they'll just leave, and we have to deal with it. So please do not give this to them, and make it high enough so that it's mandatory. As much money as they plan on making, make them pay that ahead of time. If that would deter them from being sloppy, that would be money well spent. Thank you.
Will a bond be required sufficient to provide water to all affected residents and to cover any damages like those seen in Oklahoma?

Will a bond be required sufficient to provide water to all affected residents and to cover any damages, like those seen in Oklahoma?
So are there bonds being expected from the company to pay for the desalination and the decontamination of the free water to them that then becomes kind of costly to the rest of us left with the problem?

556		South Dakota Department of Game Fish, and Parks
556		South Dakota Department of Game Fish, and Parks
556		South Dakota Department of Game Fish, and Parks
556	Ex. 6 Personal Privacy (PP)	South Dakota Department of Game Fish, and Parks
556		South Dakota Department of Game Fish, and Parks
399		South Dakota Game, Fish and Parks
400		South Dakota Game, Fish and Parks
401		South Dakota Game, Fish and Parks
402		South Dakota Game, Fish and Parks

527	Ex. 6 Personal Privacy (PP)	Clean Water Alliance
556		South Dakota Department of Game Fish, and Parks
556	Ex. 6 Personal Privacy (PP)	South Dakota Department of Game Fish, and Parks
329		Individual

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South Dakota Department of Game Fish, and Parks (GF&P) reviewed information provided in the Public Notice: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area and "Additional Administrative Record Documents." Agency comments result exclusively from evaluation of the analysis found in the Additional Administrative Record Documents and specifically the Draft Cumulative Effects Analysis (Administrative Record). Our evaluation identifies issues listed below.

- South Dakota Mine Permit
- Avian management planning
- Affected environment
- Species of state concern
- Waste disposal options
- Process pond mitigation

[...]

If you have question please contact me at any of the numbers listed.

Avian Management Plan

The Administrative Record identifies an avian management plan. At this time, the management plan is conceptual, has not undergone agency review and essentially does not exist; therefore the extent and effectiveness of mitigation cannot be substantiated.

The Dewey Burdock Project proposes a plan to mitigate impacts to avian species during operations, however, special emphasis is given to bald eagles. Monitoring wells, a processing plant, production well fields, disposal facilities, and a supply water well are all currently proposed within a buffer established for an active bald eagle nest. During the life of the project, seasonal restrictions and unspecified mitigative measures are proposed for the facilities. The Administrative Record does not analyze the viability of seasonal mitigation measures on continuously operated facilities. Analysis also does not consider the questionable effectiveness of seasonal mitigation during times of urgent maintenance or situations requiring emergency repairs on continuously operated facilities. Mitigation measures also rely on individual eagle tolerance; as tolerance is known to vary greatly among individuals. Unsuccessful mitigation risks a disturbance take. Analysis in the Administrative Record does not recognize the necessity of bald eagle take permitting.

Administrative Record fails to recognize or establish the relationship between the site's prairie dog colonies and avian management. The site's prairie dog colonies are the presumed forage base and home range for bald eagles and other avian species. The Administrative Record does not describe the project's direct and cumulative effects on prairie dog colonies, and collateral impacts on bald eagles and other avian species.

Authorization of UIC activities on the site provides a reasonable risk of unpermitted bald eagle disturbance take. Seasonal mitigation in the discernible method of nesting bald eagle protection but USFWS take permitting is done "only" if necessary. Obtaining a permit out of necessity implies a response to a situation that may already has constituted disturbance or take. Operation of UIC permits in important bald eagle habitat, and the uncertainty associated with a seasonal mitigation strategy continuously operated facility will result in the probability of take. The Administrative Record does not assess the probability of bald eagle take during project operation.

Species of state (South Dakota) concerns

Section 14.2, "Species of State and Tribal Interest: The Short-Horned Lizard" does not describe species of state interest. For a complete listing of state threatened, endangered or rare species see: http://gfp.sd.gov/wild life/threatened-endangered/.

Waste disposal options

The Administrative Record does not analyze the potential for combined disposal methods (deep well and land application), or the potential for onsite disposal of wastes produced off site. Section '10.1 Overview of Operations' in the Class III permit states that Powertech may use land application in conjunction with deep disposal wells or by itself.

Process Pond mitigation

The Administrate Record is silent on the ecologic impact of process ponds containing toxic solutions or viability of mitigation measures. Section '14.0 Impacts To Ecological Resources' did not include analysis of direct and cumulative impacts to migratory birds and bats exposed to toxic solutions contained in the projects process related ponds.

Subject: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

Hi Valois,

I am reviewing information provided for in the 'Public Notice: Administrative Record for the Dewey-Burdock Class III and Class V Injection Well Draft Area Permits' https://www.epa.gov/uic/administrativerecord- dewey-burdock-class-iii-and-class-v-injection-well-draft-area-permits . I'm unclear if the "Additional Administrative Record Documents", specifically, the 'Draft Cumulative Effects Analysis' are considered a component of the Class III and V draft permits and thus subject to review and comments. The statement below is copied from the website and if read literally, it could be understood to mean that comments are sought only for the Class III and V draft area permits, and the identification of traditional cultural properties...My agency would like to provide comments on both the contents of the permits and Draft Cumulative Effects Analysis. Please provide us with an explanation of the scope of EPA's request.

> In addition to seeking comments on the Class III and V draft area permits, the EPA is seeking public comment on the identification of traditional cultural properties at the Dewey-Burdock Project Site Area of Potential Effects, on the potential adverse effects of the proposed project, and on measures to avoid, minimize or mitigate potential adverse effects on historic and traditional cultural properties pursuant to Section 106 of the National Historic Preservation Act and 36 CFR § 800.2(d) and § 800.6(a)(4).
>
> The EPA is also seeking comment on two options for approval of the aquifer exemption that Powertech requested related to the Class III permit application. The two options are discussed in the Aquifer Exemption Draft Record of Decision available on the EPA Region 8 UIC Program website.

The EPA has performed an Environmental Justice (EJ) analysis for the Dewey-Burdock UIC permitting actions and is seeking comment on the Draft EJ analysis document.

[ATTACHMENT: "removed.txt"]

already addressed via email

Subject: RE: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

Thanks Valois,

Which EPA program administers the injection well program?

[ATTACHMENT: "removed.txt"]

already addressed via email

Subject: RE: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits

Hi Valois,

A NEPA related question for you: Will EPA's "decision" / Administrative Record provide analysis of various alternatives? That is, consideration of No Action (no permit), and alternative actions (permit with various conditions).

Subject: RE: Dewey-Burdock Class III and Class V Injection Well Draft Area Permits - EPA has extended the public comment period through June 19

Morning Valois

144.4 includes state wildlife agency consultation as well as federal ESA. Was that consultation complete with sending SD GF&P the notice back in March 2017 or should we expect something more formal? GF&P intends to submit comments as a part of the scoping/public hearings. Submitting comments ensure our concerns are recognized but if you require consultation with us that also offers a better opportunity to present them.
Thanks for your help.

PROCESS ISSUES
The basic process issue in this case has been the failure of the EPA to adhere to the NEPA process. While the NRC has attempted to follow that process for the possession of nuclear materials, its actions have not adequately covered a variety of issues that are under the EPA's purview, particularly water issues. The EPA needs to complete its own NEPA process.
[...]

At the end of the Class V Fact Sheet and the Draft Cumulative Effects Analysis, the EPA indicates that the Endangered Species Act will be complied with, but gives no information on how it intends to do this. When will this be done? What species will be considered? Who will do the analysis (not the company)? This should already have been completed before draft permits were issued.

The EPA mentions the presence of a short-horned lizard, which is rare and protected in South Dakota, in the proposed project area. After stating that the species is "important in some tribal cultures," it offers the solution "Once construction activities begin at the site, the EPA expects that the [sic] any short-horned lizards that were in the area will seek less disturbed locations." This is pure conjecture, without any back-up information on the size or habits of the lizards. Are they territorial, or is it species-appropriate for them to move? Are they large enough to move fast enough to out-run a bulldozer or pick-up truck? Or are they, in reality, unprotected?

This and similar information must be provided and backed by scientific research at the Dewey-Burdock site for this and other species. Animals should not simply be expected to move out of a site that's over 10,000 acres in a systematic and comprehensive process. And the EPA then expects them to just move back in after mining is complete – as if the same animals will be alive and remember their former homes after as many as 20 years. This is beyond unacceptable in the direction of ludicrous – and is certainly unacceptable.

Species other than animals are not considered in this discussion. Plants cannot simply move off the site. Some of them are important to tribal practices and customs, such as medicinal plants and timpsila (prairie turnips). Full scientific information should be gathered, and full analysis must be done, for non-animal species. Species that are important to the long-term residents of the area -- the Lakota, Cheyenne, and other native nations – require special protection. There is already information on protection of some species in project documents that could serve as a base for part of this analysis. However, a full and independent analysis is also needed.

This analysis would include close consideration of the opinion of the South Dakota Department of Game, Fish and Parks. This opinion was stated in an October 17, 2008, letter written by **Stan Michals**. Michals said that exploratory activity should not take place on some parts of the project area between February and August (inclusive) due to the presence of a bald eagle nest (a state-protected bird) and a redtail hawk nest. Mining, deep disposal wells, land application, and reclamation, which are more long-lasting and disruptive than exploration, should clearly also not take place during those seven months of the year in raptor nesting and other protected areas.

The sturgeon chub must be included in the discussion of wildlife concerns. It is present in the Cheyenne River and may be threatened or endangered in areas downstream from the proposed mine. Additional silt, heavy metals, and radioactive materials would be potential threats.
[...]
In addition, the EPA should not rely on the NRC's analysis, recommendations, or regulations. The processes by the two agencies should be independent, so that the proposed mine, disposal wells, and aquifer exemption receive the benefits of the expertise and different regulatory focuses of both agencies.
[...]
We support the conclusion of EPA's statutory analysis that the Dewey-Burdock mine is subject to the Clean Air Act and subpart W. If the project goes forward, we request that public education sessions and public comment periods be held as part of the subpart W regulatory process.

South Dakota Mine Permit
Wildlife mitigative strategies presented in the Administrative Record are tiered to Powertech's proposed mine permit. EPA must recognize Powertech has only applied for a state mine permit. The proposed state mine permit application has no state standing. Under the SD Mined Land Reclamation Act (SD Codified Law Chapter 45-6b), the Board of Minerals and Environment (BME) is charged with issuing state permits and requirements for ISR facilities. In November of 2013, the BME discontinued hearings on Powertech's proposed state mine permit application until other state and federal agencies finalized their respective permitting. Powertech proposed mine permit application is still pending and no state mine permit exists. The Administrative Record must not reference a state large scale mine permit.

Affected environment

The Administrative Record does not include the site's available wildlife data in describing impacts to ecological resources. Scant use of citations in the Administrative Record makes it difficult to determine what available wildlife study data is used to describe the affected environment. It is reasonable to believe that wildlife data is only as current as the date of application. However it must be noted that it has been almost 10 years since the EPA has started its UGI evaluation. During that time, new wildlife and habitat data have enhanced understanding of the site's ecological conditions. Also, recently listed ESA species may exist on site. The Administrative Record did not adequately describe the affected environment or impacts to ecological resources.

Additional wildlife information includes:

Prairie dog colonies: The initial baseline wildlife survey documents only 3 of the 7 prairie dog colonies known to exist in the wildlife study area. The significance of the ecologic function of both the existing and newly identified prairie dog colonies is unknown. Direct and cumulative UIC impacts on prairie dog viability are not considered in the Administrative Record.

Bats: The USFWS ESA listing of the Northern Long-eared Bat is a significant change since permitting began on the Dewey Burdock Project. The Administrative Record does not address the recent ESA listing or the habitat potential of the project area's historic mine workings.
Burrowing owls: Recent wildlife surveys by Powertech have identified burrowing owls use in one of the project area's prairie dog colonies. The extent of burrowing owl use at the site's existing or newly discovered colonies is unknown.

Bald eagle: The bald eagle nest identified in the initial wildlife survey is no longer in use, but an alternated nest is now the primary nest site. Powertech proposes construction and facility operation within active bald eagle nest buffers. The Administrative Record does not consider bald eagle disturbance take resulting from project effects on forage areas and home range.

Reptiles and amphibians: The rational to determine impacts to short-horned lizard on page 149 of the Draft Cumulative Effects Analysis is unfounded. The rational presumes that native prairie, the preferred habitat of lizards, does not exist on rangelands and since impacts are on rangelands, lizards will not be impacted. The rational originates from Section 6.0 'Impacts To Land Use'. Baseline study from the project identifies native vegetation and "widespread occurrence" of an unknown lizard species. The Administrative Record does not identify native vegetation, cumulative effects of conversion of native vegetation, or direct impacts on lizards.

Here are links to species petitioned to List or down-list under the Endangered Species Act
Of special significance in the Dewey Burdock mining proposal, is the petition to list the Sturgeon chub, which is in the Cheyenne River and the White River. You may wish to pay attention to that one.
RECENT LISTINGS

rusty patched bumble bee petition - Listed in February 2017 - as an endangered species under the Endangered Species Act
https://www.federalregister.gov/documents/2017/02/10/2017-02865/endangered-and-threatened-wildlifeand-plants-endangered-species-status-for-rusty-patched-bumble-bee
Petition by Xerces Society
http://www.xerces.org/wp-content/uploads/2013/01/Bombus-affinis-petition.pdf
STATUS PENDING
PETITION TO DE-LIST
Scroll down further for more info on the petition to delist the American Burying Beetle, look for photo of the beetle
Petition to de-list:
https://www.fws.gov/southeast/candidateconservation/pdf/petition-to-delist-american-burying-beetle.pdf
USFWS 90 Day Finding:
https://www.fws.gov/midwest/endangered/insects/ambb/90DayFinding16March2016.html
PETITIONS TO LIST
BIRDS
==========
Black Backed WoodPecker, DPS
Chad Hanson , BCA, CBD
(deadline - USFWS decision in fall 2017)
http://ecos.fws.gov/docs/petitions/92210/416.pdf
The Golden Winged Warbler,
Anna Sewell
https://www.fws.gov/midwest/es/soc/birds/goldenwingedwarbler/goldenwingedwarblerpetition.pdf
MAMMALS
The Plains Spotted Skunk
https://www.fws.gov/midwest/es/soc/mammals/pdf/PetitionList4SppGrasslandThicket.pdf
BUMBLE BEES
==========
western bumble bee petition
Defenders of Wildlife
http://ecos.fws.gov/docs/petitions/92000/679.pdf
Docket
http://www.regulations.gov/#!docketDetail;D=FWS-R6-ES-2016-0023
yellow banded bumble bee petition
Defenders of Wildlife
http://ecos.fws.gov/docs/petitions/92000/681.pdf
docket
http://www.regulations.gov/#!docketDetail;D=FWS-R5-ES-2016-0024
BUTTERFlIES
==========
petition to list Monarch butterfly
Center for Biological Diversity, Xerces Society, Center for Food Safety
http://ecos.fws.gov/docs/petitions/92210/730.pdf
petition to list regal fritillary butterfly
Wildearth Guardians
http://ecos.fws.gov/docs/petitions/92000/462.pdf
Status of review
https://ecos.fws.gov/ecp0/profile/speciesProfile?spcode=I075
FISH
Petition to list Sturgeon & Sicklefin Chub, Wildearth Guardians,
petition link:
http://www.wildearthguardians.org/site/DocServer/Sturgeon_SicklefinChubPetition8_11_16.pdf?docID=17346
REPTILES/AMPHIBIANS
==========
Reptiles/Amphibians (lots-53 species)
One species within 53 species, includes - Blanding turtle is in SD
Center for Biological Diversity
http://ecos.fws.gov/docs/petitions/92210/662.pdf