



**DEPARTMENT of ENVIRONMENT  
and NATURAL RESOURCES**

PMB 2020  
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Comments from South Dakota Department of Environment and Natural Resources, Waste Management Program

I am the Administrator of the Waste Management Office within the Department of Environment and Natural Resources for the State of South Dakota. I manage both the Hazardous Waste and Solid Waste Programs. I understand the difference between a state-managed program and a program that is authorized to implement the program in lieu of EPA. With that introduction I have the following comments:

- The state of South Dakota does not need additional solid waste or hazardous waste rules for the safe management of Coal Combustion Residues (CCR). We have one coal-fired power plant that disposes coal ash in South Dakota. It has been in existence since the mid-1970s. There is groundwater monitoring required at this facility and at no time has there been any impacts from the disposal of CCR even though the In Harm's Way report provided to EPA would indicate otherwise. We will be commenting specifically on this report later in this letter. We understand, however, there may be other areas of the country where environmental conditions may dictate the need for additional safeguards.
- If we must choose one of the two proposed options for regulating these CCR disposal sites, then the most reasonable approach is to regulate CCR as a solid waste under Subtitle D authority. South Dakota has a strong solid waste program and we have managed CCR in a responsible manner for more than three decades. Regulating CCR as a hazardous waste is not reasonable. The disruption to both the solid and hazardous waste programs to manage CCR as hazardous waste with no additional protection than is already in place in this state under our solid waste authority is not the answer. Personnel currently working on the management of CCR will no longer be the individuals who will work on permitting our one site in the future if CCR are going to be regulated as special wastes under Subtitle C. Our budget will not allow general funds to be used (except for the general fund match) to regulate CCR as hazardous waste and I doubt whether there will be any additional hazardous waste grant money available to us. With no additional benefits in environmental protection but the added burden of regulating these wastes as hazardous waste, the additional time and paperwork required with the EPA authorization process and EPA oversight activities, it is not a good fit to manage CCR as hazardous waste. We do not have any hazardous waste landfills in this state and thus we do not have experience within our existing program for permitting a hazardous waste landfill. It will take time for us to build up the kind of resources necessary to permit our one site

under our hazardous waste authority. It will take some additional time and resources to regulate CCR as a solid waste as well under Subtitle D, however it will be much less of a financial/employee impact. The solid waste program is a permit driven program versus our hazardous waste program is an inspection and enforcement driven program in this state.

- A large percentage of the CCR generated is currently being recycled in different ways. We encourage these recycling activities. The stigma of calling CCR a special waste under the hazardous waste authority will reduce if not eventually eliminate recycling and beneficial use of these wastes.
- Our state's one disposal facility uses a dry tomb landfill for the disposal of CCR. There is considerable difference in managing a surface impoundment with a dam structure versus managing a dry landfill. Environmental factors managing a structure with water pressure behind a dam structure are very much different than landfills generally constructed as a dry tomb type of structure. In addition, the leaching potential both vertically and horizontally caused by water pressure in a surface impoundment structure is significantly different than what might be expected from a dry tomb landfill.
- EPA has asked whether the different CCR should be managed different due to the physical and chemical differences. Yes. Each has difference characteristics that should be taken into account because each of the residues is going to react differently in the environment. Boiler slag is fairly inert for instance. Why would you choose to regulate this waste in the same manner as fly ash.
- We require a solid waste permit for the disposal of CCR. Permits are issued for five-year periods followed by a renewal application process. The permit includes requirements for design and construction to include plan review for waste disposal areas, containment systems, final caps, etc. The permit also includes requirements for operational practices, groundwater monitoring, record keeping, annual reporting, closure, and post-closure care.
- You have asked about other programs that inspect dam structures. Dam structure integrity is managed within another office within DENR. We do not have any CCR surface impoundment dam structures therefore we won't take the time to describe our Dam Safety Program inspection requirements.
- The In Harm's Way report contains numerous inaccuracies and misrepresented findings about the Big Stone Power Plant in South Dakota. Despite our best efforts to help the report author to understand the facility, the report's accuracy suffered from the author's unfamiliarity with the facility/site and the haste with which the report was written. We will not attempt to refute all of the errors in the report. Instead we will refute only a portion of what we believe to be some of the more important errors or grossly misrepresented information.
- The In Harm's Way report states that arsenic has been measured in a down-gradient groundwater monitoring well at a level that is 13 times the federal MCL. The referenced

measurement for arsenic is 0.1322 mg/L (total metals). The federal drinking water standard for treated drinking water is 0.01 mg/L (total metals). The South Dakota Groundwater Quality Standard for dissolved arsenic is 0.01 mg/L. On the date the referenced down-gradient monitoring well measured 0.1322 mg/L total arsenic, the same well was also measured for dissolved arsenic with the result being 0.0066 mg/L. Despite what the In Harm's Way report states, the federal drinking water standard cannot be compared to a treated drinking water standard. South Dakota's Groundwater Quality Standard for dissolved arsenic was not exceeded for water drawn from the same well on the same date. The In Harm's Way report also makes similar claims that the same well sampled on the same date exceeded the federal action level for lead by 7 times. We have the same comment above for lead as we have commented on for arsenic.

- In Harm's Way identifies numerous waste disposal ponds or impoundments at the Big Stone Power Plant. The only permanent disposal unit for CCR at the power plant is a single dry tomb landfill located adjacent to and between some large cooling and evaporation ponds. In Harm's Way reported that the large ponds are used for disposal of CCR. In reality, these ponds are only used to store cooling water for the power plant boilers. There is one small boiler slag sluice pond on the property where slag is temporarily stored until it is removed and dried prior to being shipped offsite for recycling or hauled in dry form to the nearby dry tomb landfill.
- In the At Risk Populations section of In Harm's Way, the report states, "Groundwater is the only source of public water supply in South Dakota, with no known surface water supply intake in the entire state (Wendte, July 2010)." It is absurd that anyone would suggest that South Dakota does not have a single surface water supply intake. As an explanation, it is important to understand that the author did ask our department about any public water supply intakes for the small community (Big Stone City) located near the power plant. In response, our department wrote to the author that there are no known surface water intakes in South Dakota as it relates to the community of Big Stone City, South Dakota and adjacent Big Stone Lake which borders South Dakota and Minnesota. The author was advised to contact the state of Minnesota about potential surface water intakes being used on the Minnesota side of Big Stone Lake. Instead of using the information provided in the context it was given, the author chose to make the statement that there is not a single surface water intake for a public water supply in the entire state. For the record, large portions of South Dakota are provided water from surface water intakes on the Missouri River system in addition to many other surface water intakes from other sources. This comment has to do with the integrity of the report and not anything to do with environmental issues.
- In Harm's Way leads the reader to believe that there is groundwater contamination throughout the power plant site. Our department has acknowledged that there is one occurrence of groundwater contamination related to a brine pond release that occurred more than 20 years ago. Big Stone Power must treat surface water prior to using it in its plant because the water is not pure enough. As a result of that treatment process, Big Stone Power currently maintains two lined ponds, called brine ponds, where the remnants from the water softening treatment process are placed. The brine ponds have never been

used for the storage or disposal of CCR. Prior to 1988, a single brine pond was in existence and not lined. As a result, water from the brine pond was leaking out of the bottom of the pond, resulting in impacts to shallow groundwater. Once this was discovered, additional groundwater monitoring was required for this area and currently continues to monitor the impacts from the brine pond which have not moved off the Big Stone Power Plant property. The In Harm's Way report is taking the groundwater quality data gathered from the brine pond release that occurred more than 20 years ago and is using that information to suggest there are groundwater impacts related to CCR disposal. The water treatment process used by Big Stone Power has nothing to do with its coal ash disposal practices and in no way should be used to support any new regulations for coal ash disposal.

- The In Harm's Way author alleges that naturally occurring high levels of sulfate and metals found in the groundwater at the power plant site is a result of coal ash disposal. The groundwater quality in the area around the power plant site is highly mineralized, very hard, and high in sulfates. This is very typical of groundwater found in glacial till in eastern South Dakota. The high sulfate and metal levels found upgradient from the power plant disposal site is a result of naturally-occurring minerals, and not as a result of any coal ash disposal at the plant. This position again is supported by the groundwater monitoring conducted at the plant that shows that naturally-occurring groundwater upgradient from the plant has high sulfate and metal levels.
- The In Harm's Way author states that there are two wells downgradient of the ash disposal landfill that are located almost 900 feet from the ash disposal units "...too far away to reliably distinguish impacts to water quality from these units." In reality those wells are located less than 50 feet from the closed and capped portion of the ash disposal site.

As stated earlier in this letter, it is not our intention to refute every statement made in the Big Stone Power Plant section of the In Harm's Way report that is in error. By highlighting some of the more inaccurate and inappropriate claims made in the report, we believe we have made a strong case that information provided by the Environmental Integrity Project on the Big Stone Power Plant should not be considered as you continue to evaluate the future regulation of CCR.

In summary, in South Dakota we believe we have in place the statutes, rules, and permitting authority necessary to regulate the safe management and disposal of CCR. We ask that EPA not impose a Subtitle C regulatory approach for CCR. Without grant assistance from EPA, a Subtitle C approach would only serve to further strain our limited resources during this time of economic downturn with no additional environmental benefit to our state. Thank you for the opportunity to comment.



Vonni Kallemeyn, Waste Management Program Administrator  
South Dakota Department of Environment and Natural Resources