

US EPA ARCHIVE DOCUMENT

**BASIN ELECTRIC  
POWER COOPERATIVE**

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**SENT VIA OVERNIGHT MAIL**

August 27, 2009

Mr. Richard Kinch  
US Environmental Protection Agency  
Two Potomac Yard  
2733 S. Crystal Dr.  
5<sup>th</sup> Floor; N-5783  
Arlington, VA 22202 2733

Re: Request for Information Under Section 104(e) of the Comprehensive Environmental Response, Compensation and Liability Act, 42 U.S.C. 9604(e)

Dear Mr. Kinch:

This letter is in response to the telephone call on August 11, 2009, from Mr. Craig Dufficy, EPA regarding the status of the two solid waste process ponds located at the Antelope Valley Station. During that phone call, Mr. Dufficy indicated that the ponds met the criteria for an EPA evaluation as a solid waste management unit.

The Antelope Valley Station (AVS) is owned and operated by Basin Electric Power Cooperative (Basin Electric) and consists of two coal-based electrical generation units. AVS uses lignite coal to fuel its two units. Unit 1 became operational in 1984; Unit 2 became operational in 1986.

The coal combustion byproducts that are generated at AVS are fly ash/flue gas emission control residuals and bottom ash. Those wastes are landfilled in Permit SP-160 issued by the North Dakota Department of Health. The management unit that is also associated with Permit SP-160 is the Spray Drier Ash Water Make-up Pond (SDA) and an associated pond used when the SDA pond is dredged and cleaned out called the temporary pond or decant pond.

The SDA pond provides make-up water for the ash water system, the SO<sub>2</sub> removal system and the coal handling dust suppression systems. The pond covers three acres and has a nominal capacity of 28 acre feet. It is designed to a maximum depth of 11 feet. The major waste sources to the pond are the plants low quality sumps, neutralizing sumps and cooling water blowdown. In addition, the coal handling area sumps and the SO<sub>2</sub> absorber and lime receiving building sumps discharge the pond intermittently. The pond was modified in 1995 to install a double layer high density polyethylene liner. Any leakage is collected and pumped back into the pond.

The temporary pond or decant pond is used when the SDA pond is periodically dredged or cleaned out. The solids from the pond are hydraulically transported to the decant pond. The decant pond is an above grade pond covering approximately 3.4 acres with a storage volume of 30,000 yards. The pond has been constructed with a clay liner on the base and interior sidewalls. Perforated pipe has been placed on the floor within a filter layer of bottom ash. The base of the pond is sloped to a low collection point where the perforated drain pipes are connected to a sump manhole. This pond is put into service every 5-10 years or when needed.



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The Plant Manager of the AVS is Mr. John Jacobs who reports to me, the Vice President of Operations for Basin Electric. Enclosed are the specific responses to the Enclosure of the March 9, 2009 EPA letter. If you have any further questions, please advise.

Sincerely,

*John W. Jacobs for BOB H.*

Robert W. Holzwarth  
V.P. Plant Operations

/gmj

Enclosures

cc: Ron Harper (w/enc.)  
Dave Glatt (w/enc.)

Antelope Valley Station (AVS) responses to the Enclosure of the March 9, 2009 EPA letter via telephone conversation with Mr. Craig Dufficy, U.S. EPA on August 11, 2009.

**Question 1** Relative to the National Inventory of Dams criteria for High, Significant, Low or Less-than-Low, please provide the potential hazard rating for each management unit and indicate who established the rating, what the basis of the rating is, and what federal or state agency regulates the unit(s). If the unit does not have a rating, please note that fact.

**Response 1** The Antelope Valley Station management units do not have an official rating that has been assigned by a state or federal regulatory agency. The AVS management units are regulated under North Dakota Department of Health Waste Management Permit SP-160. The North Dakota Department of Health, Waste Management Division inspects the management units.

**Question 2** What year was each management unit commissioned and expanded?

**Response 2** Exact commissioning dates are unknown. The SDA pond was commissioned between July 1, 1978 and September 1, 1979. The Decant pond was commissioned sometime during 1993.

**Question 3** What materials are temporarily or permanently contained in the unit? Use the following categories to respond to this question: (1) fly ash; (2) bottom ash; (3) boiler slag; (4) flue gas emission control residuals; (5) other. If the management unit contains more than one type of material, please identify all that apply. Also, if you identify "other," please specify the other types of materials that are temporarily or permanently contained in the unit(s).

**Response 3** The AVS management units are permitted to temporarily accept fly ash and flue gas emission control residuals (FGD).

**Question 4** Was the management unit(s) designed by a Professional Engineer? Is or was the construction of the waste management unit(s) under the supervision of a Professional Engineer? Is inspection and monitoring of the safety of the waste management unit(s) under the supervision of a Professional Engineer?

**Response 4** Within the management unit the SDA Pond was designed and constructed under the supervision of a Professional Engineer. The SDA Decantation Pond's design drawings are not sealed by a Professional Engineer and records are not available on the QA/QC during the construction. Exhibits have been attached to show both ponds.

**Question 5** When did the company last assess or evaluate the safety (i.e., structural integrity) of the management unit(s)? Briefly describe the credentials of those conducting the structural integrity assessments/evaluations. Identify actions taken or planned by facility personnel as a result of these assessments or evaluations. If corrective actions were taken, briefly describe the credentials of those performing the corrective actions, whether they were company employees or contractors. If the company

**plans an assessment or evaluation in the future, when is it expected to occur?**

**Response 5** The management units at AVS have not been assessed or evaluated for safety (i.e., structural integrity) by Basin Electric.

**Question 6** **When did a State or a Federal regulatory official last inspect or evaluate the safety (structural integrity) of the management unit(s)? If you are aware of a planned state or federal inspection or evaluation in the future, when is it expected to occur? Please identify the Federal or State regulatory agency or department which conducted or is planning the inspection or evaluation. Please provide a copy of the most recent official inspection report or evaluation.**

**Response 6** The management units at AVS have not been assessed or evaluated for safety (i.e., structural integrity) by a State or Federal regulatory official.

An inspection of the solid waste facility was last completed by the North Dakota Department of Health on June 12, 2009. A copy of that report is attached.

**Question 7** **Have assessments or evaluations, or inspections conducted by State or Federal regulatory officials conducted within the past year uncovered a safety issues(s) with the management unit(s), and, if so, describe the actions that have been or are being taken to deal with the issue or issues. Please provide any documentation that you have for these actions.**

**Response 7** No safety issues have been identified with any of the management units at AVS. Please see "Response 7 Attachment 1".

**Question 8** **What is the surface area (acres) and total storage capacity of each of the management units? What is the volume of materials currently stored in each of the management unit(s)? Please provide the date that the volume measurement(s) was taken. Please provide the maximum height of the management unit(s). The basis for determining maximum height is explained later in this Enclosure.**

**Response 8** The SDA Pond's surface area is 3.1 acres and the total storage capacity is approximately 28 acre-feet. The SDA Decantation Pond's surface area is 3.4 acres and the total storage capacity is approximately 19.4 acre-feet. The SDA Decantation Pond is active while the SDA Pond is cleaned at a frequency of every five to ten years. Prior to its use the clay liner is reconstructed to the criteria shown on the design drawings. A minimum of three feet of freeboard is maintained on the ponds when active. The current volume of material in the SDA Pond is unknown and the SDA Decantation Pond has been excavated and is currently not in use.

**Question 9** **Please provide a brief history of known spills or unpermitted releases from the unit within the last 10 years, whether or not these were reported to State or federal regulatory agencies. For purposes of this question, please include only releases to surface water or to the land (do not include releases to groundwater).**

Response 9 There have been no known spills or unpermitted releases from the SDA pond or the temporary pond within the last 10 years.

**Question 10 Please identify all current legal owner(s) and operator(s) of the facility.**

Response 10 The facility is owned and operated by Basin Electric Power Cooperative.

**CERTIFICATION**

**By**

**Authorized Representative**

I certify that the information contained in this response to EPA's request for information and the accompanying documents is true, accurate and complete. As to the identified portions of this response for which I cannot personally verify their accuracy, I certify under penalty of law that this response and all attachments were prepared in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment for knowing violations.

Handwritten signature of Robert W. Holzwarth in black ink, written over a horizontal line.

Name: Robert W. Holzwarth

Title: VP Plant Operations