APS
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VIA FEDERAL EXPRESS

March 26, 2009

Mr. Richard Kinch
U.S. Environmental Protection Agency
5th Floor N-5783
Two Potomac Yard
2733 S. Crystal Drive
Arlington, Virginia 22202-2733

Re: Arizona Public Service Company – Cholla Generating Station: Request for Information Under 104(e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9604(e) ("104(e) Request").

Dear Mr. Kinch:

On March 13, 2009, Arizona Public Service Company ("APS") received the above referenced 104(e) Request for each surface impoundment or similar diked or bermed management unit(s) or management units designated as landfills at the Cholla Generating Station which receive liquid-borne material for the storage or disposal of residuals or by-products from the combustion of coal, including, but not limited to, fly ash, bottom ash, boiler slag, or flue gas emission control residuals. APS's response for the Cholla Generating Station is attached.

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.

Signature: John R. Denman
Name: John R. Denman
Title: Sr. V.P., Fossil Generation

Arizona Public Service Company's 104(e) Response for the Cholla Generating Station

Plant Description

The Cholla Generating Station is a four unit, coal fired, 1160 megawatt steam electric power plant. As part of its operations, the plant generates residuals and by-products from the combustion of coal. The residuals and by-products are conveyed to four surface impoundments for storage and disposal: a Bottom Ash Pond, a Fly Ash Pond, a Sedimentation Pond, and a retention pond named the West Area Retention Pond. Approximately 70% of the fly ash generated at the plant is sold for beneficial reuse.

Impoundment Descriptions

Bottom Ash Pond

The Bottom Ash Pond is a zoned clay core earthen embankment, which receives bottom ash (slurried with process water) from all four of the plant's generating units. The bottom ash settles to the bottom of the Bottom Ash Pond, and the process water is siphoned back to the general water sump and re-used.

Fly Ash Pond

The Fly Ash Pond is a zoned clay core earthen embankment (with a ten foot by 650 foot saddle dike), which receives fly ash from all four of the plant's generating units.

Fabric filters remove dry fly ash from generating units 1, 3, and 4. Generating unit 2 uses a mechanical dust collector to remove some fly ash on a dry basis, and a venturi scrubber system (a wet particulate/ SO_2 removal system) removes additional fly ash. The dry fly ash that is not sold for beneficial re-use and all of the wet fly ash are slurried with flue gas desulfurization residuals and pumped to the fly ash pond.

Sedimentation Pond

The Sedimentation Pond is a sub-grade impoundment, with a two foot thick compacted clay liner, which receives *de minimis* amounts of coal combustion by-products in storm water, process water, plant wash down water, and slurry from system leaks, from drains located on the plant site.

West Area Retention Pond

The West Area Retention Pond is a sub-grade impoundment, with an earthen liner, which receives *de minimis* amounts of coal combustion by-products in storm water, process water, and plant wash down water, from the west side of the plant.

104(e) Questions

Please provide the information requested below for each surface impoundment or similar diked or bermed management unit(s) or management units designated as landfills which receive liquid-borne material for the storage or disposal of residuals or by-products from the combustion of coal, including, but not limited to, fly ash, bottom ash, boiler slag, or flue gas emission control residuals. This includes units that no longer receive coal combustion residues or by-products, but still contain free liquids.

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

Bottom Ash Pond

The rating, which is designated by the Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division, which regulates the unit, is "High Hazard Potential." The basis for the rating is set forth in the Arizona Administrative Code ("A.A.C."), Article 12. Dam Safety Procedures, Section R12-15-1206 B, attached to this response as Exhibit A (Section R12-15-1202, which contains the definitions of the terms "Hazard potential" and Hazard potential classification," is also attached as part of Exhibit A).

Fly Ash Pond

The rating, which is designated by the Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division, which regulates the unit, is "High Hazard Potential." The basis for the rating is set forth in the A.A.C., Article 12. Dam Safety Procedures, Section R12-15-1206 B, attached to this response as Exhibit A (Section R12-15-1202, which contains the definitions of the terms "Hazard potential" and Hazard potential classification," is also attached as part of Exhibit A).

Sedimentation Pond

Because the Sedimentation Pond does not meet the definition of a dam, as set forth in the Arizona Revised Statutes § 45-1201(1), the unit is not regulated as a dam.

West Area Retention Pond

Because the West Area Retention Pond does not meet the definition of a dam, as set forth in the Arizona Revised Statutes § 45-1201(1), the unit is not regulated as a dam.

2. What year was each management unit commissioned and expanded?

Bottom Ash Pond

Commissioned (in-service) in 1978. Expanded in 1991.

Fly Ash Pond

Commissioned (in-service) in 1978.

Sedimentation Pond

Commissioned (in-service) in 1976

West Area Retention Pond

Commissioned (in-service) in 2002.

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).

Bottom Ash Pond

(1) Fly ash ; (2) bottom ash; (3) boiler slag; (4) flue gas emission control residuals; and (5) other. Other types include: sedimentation pond effluent, sedimentation pond solids, cooling tower blowdown, oil/water separators effluent, oil/water separator solids, boiler cleaning wastes, and storm water.

Fly Ash Pond

(1) Fly ash; (2) bottom ash; (3) boiler slag; (4) flue gas emission control residuals; and (5) other. Other types include: storm water, sedimentation pond solids, boiler cleaning wastes, and oil/water separator solids.

Sedimentation Pond

(1) Fly ash (*de minimis* amounts); (2) bottom ash (*de minimis* amounts); (3) boiler slag (*de minimis* amounts); (4) flue gas emission control residuals (*de minimis* amounts); and (5) other. Other types include: discharges of domestic wastewater from the secondary wastewater treatment plant, effluent from the oil/water separator, storm water, and vehicle wash water from the spray wash station.

West Area Retention Pond

(1) Fly ash (*de minimis* amounts); (2) bottom ash (*de minimis* amounts); (3) boiler slag (*de minimis* amounts); (4) flue gas emission control residuals (*de minimis* amounts); and (5) other (storm water).

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?

Bottom Ash Pond

The Bottom Ash Pond was designed by a Professional Engineer. Its construction was under the supervision of a Professional Engineer. Inspection and monitoring of the safety of the Bottom Ash Pond is under the supervision of a Professional Engineer.

Fly Ash Pond

The Fly Ash Pond was designed by a Professional Engineer. Its construction was under the supervision of a Professional Engineer. Inspection and monitoring of the safety of the Fly Ash Pond is under the supervision of a Professional Engineer.

Sedimentation Pond

The Sedimentation Pond was designed by a Professional Engineer. Its construction was under the supervision of a Professional Engineer. Inspection and monitoring of the safety of the Sedimentation Pond is not under the supervision of a Professional Engineer.

West Area Retention Pond

The West Area Retention Pond was designed by a Professional Engineer. Its construction was under the supervision of a Professional Engineer. Inspection and monitoring of the safety of the West Area Retention Pond is not under the supervision of a Professional Engineer.

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?

Bottom Ash Pond

APS last assessed or evaluated the safety of the Bottom Ash Pond on May 8-9, 2008. The individual who conducted the assessment/evaluation was an APS Generation Engineering, Civil and Structural Engineer (P.E.). No safety deficiencies were identified. The next assessment/evaluation is scheduled for May 2009.

Note that APS's assessment/evaluation included an examination of dessication cracks in the crest of the embankment of the Bottom Ash Pond (above the water line). These cracks were observed during the Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division's ("ADWR") 2007 inspection, at which time, ADWR did not designate the cracks as a safety deficiency. The cracks were also noted in ADWR's 2008 inspection report, which also indicated that there were no safety deficiencies found during the inspection.

APS has determined that the cracks are shallow and do not represent a safety issue, and APS is working with ADWR to close out the evaluation.

Fly Ash Pond

APS last assessed or evaluated the safety of the Fly Ash Pond on May 8-9, 2008. The individual who conducted the assessment/evaluation was an APS Generation Engineering, Civil and Structural Engineer (P.E.). No safety deficiencies were identified. The next assessment/evaluation is scheduled for May 2009.

Sedimentation Pond

Because the Sedimentation Pond does not meet the definition of a dam, as set forth in the Arizona Revised Statutes § 45-1201(1), safety assessments/evaluations are not necessary for this sort of structure.

West Area Retention Pond

Because the West Area Retention Pond does not meet the definition of a dam, as set forth in the Arizona Revised Statutes § 45-1201(1), safety assessments/evaluations are not necessary for this sort of structure.

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.

Bottom Ash Pond

The Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division, last inspected the Bottom Ash Pond on September 24-25, 2008. The next planned inspection is scheduled for September 2009. A copy of the most recent official inspection report is attached as Exhibit B.

Fly Ash Pond

The Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division, last inspected the Fly Ash Pond on September 24-25, 2008. The next planned inspection is scheduled for September 2009. A copy of the most recent official inspection report is attached as Exhibit C.

Sedimentation Pond

Because the Sedimentation Pond does not meet the definition of a dam, as set forth in the Arizona Revised Statutes § 45-1201(1), safety inspections are not conducted.

West Area Retention Pond

Because the West Area Retention Pond does not meet the definition of a dam, as set forth in the Arizona Revised Statutes § 45-1201(1), safety inspections are not conducted.

7. Have assessments or evaluations, or inspections conducted by State or Federal regulatory officials conducted within the past year uncovered a safety issue(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.

Bottom Ash Pond

No.

Fly Ash Pond

No.

Sedimentation Pond

Not applicable. See response to Question #6.

West Area Retention Pond

Not applicable. See response to Question #6.

8. What is the surface area (acres) and total storage capacity of each of the management units? What is the volume of material 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 units(s). The basis for determining maximum height is explained later in this Enclosure.

Bottom Ash Pond

Surface area: 80 surface acres.

Total storage capacity: 2,300 acre feet.

Volume of materials currently stored: APS estimates that the Bottom Ash Pond currently holds 1,440 acre feet of bottom ash. This number is based on annual calculations of ash disposed of, which are performed as part of the annual Toxic Release Inventory Reporting submissions. The plant does not take physical measurements of volume.

Date volume measurement was taken: N/A (see explanation above).

The statutory dam height, established by the Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division, is 73 feet.

Fly Ash Pond

Surface area: 420 surface acres.

Total storage capacity: 18,000 acre feet.

Volume of materials currently stored: APS estimates that the Fly Ash Pond currently holds 4,415 acre feet of material. This number is based on annual calculations of ash disposed of, which are performed as part of the annual Toxic Release Inventory Reporting submissions. The plant does not take physical measurements of volume.

Date volume measurement was taken: N/A (see explanation above).

The statutory dam height, established by the Arizona Department of Water Resources, Dam Safety and Flood Mitigation Division, is 80 feet.

Sedimentation Pond

Surface area: 1/2 surface acre.

Total storage capacity: 10.7 acre feet.

Volume of materials currently stored: 0.5 acre feet.

Date volume measurement was taken: March 19, 2009 (visual observation of sedimentation).

Dam height: N/A

West Area Retention Pond

Surface area: 1/4 surface acres.

Total storage capacity: 4.6 acre feet.

Volume of materials currently stored: Negligible.

Date volume measurement was taken: 03/19/09 (visual observation of sedimentation).

Dam height: N/A

9. Please provide a brief history of known spills or unpermitted releases from the unit within the last ten 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).

APS's responses below do not include permitted releases.

Bottom Ash Pond

There have been no known spills or unpermitted releases within the last ten years.

Fly Ash Pond

There have been no known spills or unpermitted releases within the last ten years.

Sedimentation Pond

There have been no known spills or unpermitted releases within the last ten years.

West Area Retention Pond

There have been no known spills or unpermitted releases within the last ten years.

10. Please identify all current legal owner(s) and operator(s) at the facility.

For all four facilities, APS and PacifCorp are the owners, and APS is the operator.