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414 Nicollet Mall
Minneapolis, Minnesota 55401-1993

May 18, 2009

Mr. Richard Kinch
US Environmental Protection Agency (5306P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Xcel Energy Response to Request for Information relating to Surface Impoundments Under 104 (e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9604(e).

Dear Mr. Kinch:

Please find enclosed the response from:

- Public Service Company of Colorado (PSCo), a Colorado corporation;
- Northern States Power Company of Minnesota (NSP-M), a Minnesota corporation, and;
- Northern States Power Company of Wisconsin (NSP-W), a Wisconsin corporation;

all d/b/a Xcel Energy Inc., related to the US Environmental Protection Agency's (EPA) "Request for Information" received May 4, 2009 for surface impoundments that are used to manage coal combustion residuals or byproducts at our coal fired generation plants. This response addresses the nine additional facilities Xcel Energy identified in a letter to EPA dated April 17, 2009, specifically:

- NSP-W Bay Front Plant in Ashland, Wisconsin
- NSP-M Minnesota Valley Plant in Granite Falls, Minnesota
- PSCo Arapahoe Station in Denver, Colorado
- PSCo Cameo Station in Grand Junction, Colorado
- PSCo Cherokee Station in Denver, Colorado
- PSCo Comanche Station in Pueblo, Colorado
- PSCo Hayden Station in Hayden, Colorado
- PSCo Pawnee Station in Brush, Colorado
- PSCo Valmont Station in Boulder, Colorado

We are consolidating and submitting the requested information for the nine facilities as attachments to this letter. The responses are organized by plant to respond to the questions posed in the US EPA letter.

In an effort to assist the agency in its collection of information, we are also providing copies of those documents where available, which EPA has identified in its request for information.

We have made every effort to fully respond to EPA's request for information in the very limited amount of time that was provided to us and despite the ambiguous nature of several of the requests. To the best of my knowledge, the information contained in this response is true, accurate, and complete, as of this date. Please direct any questions concerning this submittal to my attention at the address listed below.

Sincerely,

5-18-2009

Date

Terry E. Coss, PE
Environmental Director
Xcel Energy
414 Nicollet Mall
Minneapolis, MN 55401

Attachment 1: NSP-W Bay Front Plant
Attachment 2: NSP-M Minnesota Valley Plant
Attachment 3: PSCo Arapahoe Station
Attachment 2: PSCo Cameo Station
Attachment 3: PSCo Cherokee Station
Attachment 4: PSCo Comanche Generating Plant
Attachment 5: PSCo Hayden Station
Attachment 6: PSCo Pawnee Station
Attachment 7: PSCo Valmont Station

Attachment 1: NSP-W Bay Front Plant

Bay Front Plant is reporting on the following two surface impoundments:

- **Surge Basin**
- **Polishing Pond**

Note that the polishing pond is likely beyond the scope of EPA's information request, given its primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of this surface impoundment for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

The Bay Front Plant has two settling ponds that are connected in series. The first pond, called the Surge Basin, is the primary settling pond for process waste solids, including ash fines/slag. The second pond, called the Polishing Basin, contains small amounts of process waste due to carry over from the Surge Basin. Surface discharges from the basins are monitored and reported under a state issued NPDES permit.

Fly ash and bottom ash produced at the plant are managed in silos and trucked off-site for beneficial reuse.

The Surge Basin will generally accumulate about 2,000 cubic feet of process waste annually. The Polishing Basin will accumulate about 90 cubic feet annually. The Surge Pond is typically dredged annually and the polishing pond is dredged as needed. The materials dredged from the ponds are dewatered and trucked off site for beneficial reuse.

Response to the US EPA Questions

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(s) does not having a rating, please note that fact.*

   The Surge Basin and Polishing Basin have not been rated by any agency under the National Inventory of Dams criteria. Based on the NID criteria, the two management units would not meet the minimum size for a classification rating.

Attachment 1: NSP-W Bay Front Plant

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

   The basins were constructed in 1976.

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 type of materials that are temporarily or permanently contained in the unit(s).*

   The Surge Basin temporarily stores slag fines that are part of the process water treatment at the plant. The Polishing Basin contains process water and only de-minimis solids, such as slag fines or sediments, that may be carried over from the Surge Basin.

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?*

   The two basins were designed and certified by a Professional Engineer in 1976. We were unable to locate any documentation demonstrating that the construction was 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 assessment/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?*

   We could not locate records documenting that the pond has been evaluated for structural integrity. NSP-W completed a field study as part of meeting the requirements of the State of Wisconsin Administration Code NR 213, "Lining of industrial Lagoons and Design of Storage Structures". A report issued in 1992, completed by a Professional Engineer, confirmed the storage ponds met or

Attachment 1: NSP-W Bay Front Plant

exceeded the requirements of NR 213. A letter is attached from the Wisconsin DNR documenting their review of the 1992 report and agreeing with the findings.

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.*

   Wisconsin does not recognize the two basins as dams and there have been no state or federal inspections recorded related to the structural integrity of these management units. To our knowledge there are no State or Federal inspections planned.

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.*

   Not Applicable – Refer to item 6.

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.*

   Based on the engineering study completed in 1976, the Surge Basin is an earth embankment with the berm height of 9.5 ft. measured from the downstream toe to the embankment crest. The Polishing Basin is an earth embankment with a berm height of 7.5 ft.

   The surface area and maximum volume (at the embankment crest) of the Surge Basin are 0.15 acres and 2,200 cubic yards, respectively.

   The surface area and maximum volume (at the embankment crest) of the Polishing Basin are 0.41 acres and 4,980 cubic yards, respectively.

Attachment 1: NSP-W Bay Front Plant

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 of 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).*

   We have found no record of known spills or unpermitted releases from the ponds to surface waters or land during the past 10 years.

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

    The Bay Front Plant is owned by Northern States Power Company - Wisconsin, a subsidiary of Xcel Energy Inc.

Attachment 2: NSP-M Minnesota Valley Plant

Minnesota Valley Plant is reporting on four surface impoundments, referred to as Ponds 1, 2, 3 and 4.

Background:

The Minnesota Valley Plant is currently inactive and has not produced significant amounts of ash for the last 10 years. When the plant operates, the fly and bottom ash are combined before being hydraulically transported to a four pond settling system. The settling treatment occurs in a series of three ponds. The first pond in the series has historically alternated between pond 1 or pond 2 (parallel operation). Surface discharges from the ponds are monitored and reported under a state issued NPDES permit.

For the past 20 years, Pond 1 has served as the primary storage facility for solids accumulations from the other ponds. The combined ash is stored in Pond 1 until it is full. The pond is then dredged as needed to maintain capacity, and then the ash is dewatered and transported by truck to a dry disposal facility.

All of the ponds are located below grade on three sides, with the fourth side adjacent to the river being an earth embankment. Pond No. 1's west side is a combination of natural material and earthen embankment.

Pond 1 currently contains combined ash. The ash has been dry stacked above the top of the pond but graded so that runoff is controlled within the pond.

The ponds are subject to periodic visual inspections by plant personnel.

Response to the US EPA Questions

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(s) does not having a rating, please note that fact.*

   None of the four ponds noted above have been rated by any agency under the National Inventory of Dams. Based on the NID criteria, the four ponds would be classified as low hazard.

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

Attachment 2: NSP-M Minnesota Valley Plant

Ponds 1 and 2 were put into service as part of a new unit being installed in the early 1950's. Ponds 3 and 4 were added to the site in 1975.

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 type of materials that are temporarily or permanently contained in the unit(s).*

   A combination of fly ash and bottom ash are temporarily deposited in the pond system. The ash that accumulates in the other ponds is transferred, as needed, for temporary storage in Pond 1. As noted above, this first pond is periodically dredged and any material removed is dewatered and trucked off-site for dry disposal.

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?*

   The original ponds were designed as part of the original plant design. We were unable to locate any documentation that the plans were prepared and signed by a Professional Engineer. We could not find documentation that the ponds added in the 1970's were designed by a Professional Engineer. A hydrologic analysis of the ponds was completed in 1996, but the structural integrity of the earth embankments was not addressed.

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 assessment/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?*

   No record of any structural integrity assessment of the ponds has been found. Given the low risk of a structural failure, the company

Attachment 2: NSP-M Minnesota Valley Plant

has no current plans to complete a structural assessment in the future.

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.*

   The Minnesota Department of Natural Resources, Dam Safety Unit, does not recognize any of the ponds as dams and there have been no state or federal inspections recorded related to the structural integrity of these management units. To our knowledge, there are no inspections planned for these management units.

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.*

   Not Applicable – Refer to item 6.

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.*

   The four ponds each have a surface area approximately three quarter of an acre. As noted above, the crest of the ponds is at grade except for the sides adjacent to the Minnesota River. The constructed earth embankment height for the ponds is approximately 6 ft, but adding the natural riverbank, the total height is approximately 15 ft. from toe of the river to the embankment crest. Approximately half that height is below the river pool elevation during normal conditions.

   The average depth of Ponds 1 and 2 is approximately 12 ft., corresponding to the height of the earth embankment plus the basin formed by the excavation of natural soils from inside of the pond.

Attachment 2: NSP-M Minnesota Valley Plant

The resulting maximum volume of these ponds is estimated at 9 acre-ft (12,000 cubic yards) of storage (both solids and water). The depth of Ponds 3 and 4 are approximately 9 ft, resulting in a maximum volume of 7 acre-ft (10,800 cubic yards) of storage (both solids and water).

Pond 1 is almost full. Pond 2 contains ash amounting to more than half its total volume. The ash volume in the other two ponds is less than 25 percent of their total volume.

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 of 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).*

We have found no record of known spills or unpermitted releases from any of the ponds to surface waters or land during the past 10 years. The ponds have been overtopped during flood events on the Minnesota River in 1997 and 2001, which could have resulted in some ash being carried away by floodwaters.

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

The Minnesota Valley Generating Facility is owned by Northern States Power Company - Minnesota, a subsidiary of Xcel Energy Inc.

Attachment 3: PSCo Arapahoe Station

Arapahoe Station is reporting on the following six surface impoundments:

- **North Storm Water / Process Water Pond**
- **South Storm Water / Process Water Pond**
- **South Ash Pond**
- **Emergency Pond**
- **Discharge Pond**
- **Ash Pump Pond**

Note that many, if not all of these surface impoundments are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of these surface impoundments for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

The first three ponds listed above were formerly used to settle bottom ash out of the process water. The water then flowed through the Emergency Pond and Discharge Pond, mixing with other plant process wastewater prior to discharge in accordance with a State-issued NPDES permit. In June 2005 an ash dewatering system was built eliminating the need for ash settling ponds, and the first three ponds listed above were dredged to remove residual ash and subsequently repurposed. These three ponds now have the potential to receive process water during plant upsets. The North and South Storm Water Ponds also receive stormwater.

The Emergency Pond and the Discharge Pond currently receive blow-down water from the circulating water system, other process wastewater, and stormwater.

The Ash Pump Pond was never used for ash settling; its name derives from its use to pump makeup water to the bottom ash sluicing system. This pond does occasionally receive small amounts of process water from the ash dewatering system, as well as storm water and other plant waste-water streams. The water from this pond flows to the Emergency Pond and/or Discharge pond.

Inspections of the ponds are conducted daily for normal operation by plant operators and chemists.

Attachment 3: PSCo Arapahoe Station

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(s) does not having a rating, please note that fact.*

   All six ponds are incised (below-grade), and none have been rated by any agency under the National Inventory of Dams, nor would we expect them to meet the minimum threshold for any such rating.

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

   The original plant pond design consisted of one large ash settling pond put into service when the plant became operational in 1950. In about 1965 (exact date unknown), five separate and smaller ponds (the North Storm Water / Process Water Pond, South Storm Water / Process Water Pond, South Ash Pond, Emergency Pond, and Discharge Pond) were constructed and put into service in the area of the original ash-settling pond.

   The Ash Pump Pond was constructed and put into service when the plant became operational in 1950.

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 type of materials that are temporarily or permanently contained in the unit(s).*

   Three ponds (the North Storm Water / Process Water Pond, South Storm Water / Process Water Pond, and the South Ash Pond) were formerly used to settle out and temporarily store bottom ash generated at the facility. These three ponds are no longer used for settling ash, and were dredged to remove bottom ash subsequent to construction of the ash dewatering system. They may now receive water from the Ash Pump Pond.

   The Emergency Pond and Discharge Pond are no longer used to process ash, but still contain some residual bottom ash from former plant operations. They are now used to settle suspended solids and

Attachment 3: PSCo Arapahoe Station

control water chemistry from other plant wastewater prior to discharge under the NPDES permit.

An ash dewatering system is now in use and occasionally process water from that system is discharged to the Ash Pump Pond.

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?*

No plant documentation was located to demonstrate that the ponds were designed by or construction supervised by 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 assessment/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?*

No record of any structural integrity assessment of the ponds was found, nor would we expect such an assessment to have been performed given they are below-grade, incised ponds.

There are no plans to evaluate the structural integrity of these ponds in the future.

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.*

There have been no state or federal inspections recorded related to the structural integrity of these management units. To the best of

Attachment 3: PSCo Arapahoe Station

our knowledge, there are no inspections planned for these management units.

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.*

   Not applicable – refer to item 6.

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.*

   The Emergency Pond is 1.6 acres in size, with a capacity of approximately 19,500 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The Discharge Pond is 0.86 acres in size, with a capacity of approximately 11,800 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The South Storm Water / Process Water Pond is 0.89 acres in size, with a capacity of approximately 22,500 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The Ash Pump Pond is 0.32 acres in size, with a capacity of approximately 5,700 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The South Ash Pond is 0.87 acres in size, with a capacity of approximately 21,800 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

Attachment 3: PSCo Arapahoe Station

The North Storm Water / Process Water Pond is 1 acre in size, with a capacity of approximately 13,000 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

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 of 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).*

   We have found no record of known spills or un-permitted releases from the units to surface water or to the land within the past 10 years.

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

    Arapahoe Station is owned by Public Service Company of Colorado, a subsidiary of Xcel Energy Inc.

Attachment 3: PSCo Arapahoe Station

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Attachment 4: PSCo Cameo Station

Cameo Station is reporting on the following two surface impoundments:

- **Process Water Retention Pond**
- **Ash Silo Storm Water Retention Pond.**

Note that these surface impoundments are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of these surface impoundments for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

The Process Water Retention Pond, a below-grade incised pond, is used to control pH from the boiler blow down, capture small amounts of ash carried from the floor drains of the plant, and to hold other plant process wastewater.

The Ash Silo Storm Water Retention Pond was originally a ditch next to the railroad right of way that was dammed at one end to create a pond. This pond captures stormwater runoff and water from the daily wash down of the ash silo and surrounding area.

The ponds are visually inspected daily by plant personnel.

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(s) does not having a rating, please note that fact.*

   Neither of the two ponds listed above have been rated by any agency under the National Inventory of Dams, nor do we believe either pond meets the minimum threshold to be rated.

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

   The date of construction of the ponds is unknown, but is believed to coincide with plant construction in 1956.

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*

Attachment 4: PSCo Cameo Station

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 type of materials that are temporarily or permanently contained in the unit(s).

The Process Water Retention Pond is used to settle suspended solids and control water chemistry prior to discharge under an NPDES permit. It also captures minor amounts of fly ash and bottom ash carried from the floor drains of the plant.

The Storm Water Retention Pond captures stormwater runoff and water from the daily wash down of the ash silo and surrounding area. It contains small amounts of fly ash and bottom ash from these activities.

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?*

   The ponds were designed as part of the original plant design. However, no documentation could be found to demonstrate that a Professional Engineer certified the design or supervised the construction of the ponds.

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 assessment/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?*

   No record of any structural integrity assessment of the ponds was found.

   There are no plans to evaluate the structural integrity of these ponds in the future, due to their small size and configuration.

Attachment 4: PSCo Cameo Station

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.*

   There have been no State or Federal inspections recorded related to the structural integrity of these management units. To the best of our knowledge, there are no inspections planned for these management units.

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.*

   Not applicable – refer to item 6.

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.*

   The Process Water Retention Pond is 0.3 acres in size, with a capacity of approximately 2,520 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The Storm Water Retention Pond is 0.05 acres in size, with a capacity of approximately 1,000 cubic yards. The pond is about half-full, primarily water with minor amounts of solid material, so the approximate volume stored is 500 CY. The stored volume was visually estimated on May 6, 2009. The maximum height of the pond is approximately 12 feet.

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 of federal regulatory agencies. For purposes of this question,*

Attachment 4: PSCo Cameo Station

please include only releases to surface water or to the land (do not include releases to groundwater).

We have found no record of known spills or un-permitted releases from the units to surface water or to the land within the past 10 years.

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

Cameo Station is owned by Public Service Company of Colorado, a subsidiary of Xcel Energy Inc.

Attachment 5: PSCo Cherokee Station

Cherokee Station is reporting on the following six surface impoundments:

- **West Ash Pond**
- **Center Ash Pond**
- **East Ash Pond**
- **Emergency Spill Pond**
- **West Polishing Pond**
- **East Polishing Pond**

Note that many, if not all of these surface impoundments are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of these surface impoundments for purposes of completeness and due to the ambiguous nature of EPA's request.

Background

Cherokee Station currently collects its sluiced bottom ash in three Ash Ponds. One pond at a time receives ash. Ash settles out in each of these Ash Ponds and sluice water overflows to a lift station. This lift station sends a mixture of ash pond water and other plant wastewater through a clarification waste treatment system. If the lift station level gets too high the excess water bypasses the clarifier and flows to the Emergency Spill Pond. This water is then pumped back through the clarifier. Clarified water goes to the Polishing Ponds for pH adjustment prior to discharge in accordance with a State-issued NPDES permit. Ash is periodically dredged from the ash ponds and transported offsite by truck for disposal.

Inspections of the ponds are conducted for normal operation daily by plant operators and chemists.

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(s) does not have a rating, please note that fact.*

   The Emergency Spill Pond has a dam on the south end that is approximately 8 feet high. It has not been rated by any agency under the National Inventory of Dams, nor would we expect it to meet any minimum threshold for rating.

Attachment 5: PSCo Cherokee Station

The remaining ponds are incised (below-grade). None have been rated by any agency under the National Inventory of Dams, nor would we expect them to meet the minimum threshold for any rating.

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

The three Ash Ponds were constructed and put into service in 1957.

The two Polishing Ponds and the Emergency Spill Pond followed in 1979-1980.

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).*

The primary makeup of the ash in the three Ash Ponds is sluiced ash, which is mainly bottom ash. The ponds do contain minor amounts of fly ash, boiler slag, and flue gas emission control residuals. These ponds are periodically dredged with waste being transported offsite for proper disposal.

The Emergency Spill Pond receives lift station overflow, coal pile runoff and surface storm water runoff. The Emergency Spill Pond is pumped back to the lift station for treatment as soon as possible.

The two Polishing Ponds receive treated wastewater from the clarifier for pH adjustment prior to discharge in accordance with the State-issued NPDES permit. The clarifier is designed to remove solids, but the potential exists for de minimis carry-over of ash particles to the Polishing Ponds.

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?*

The three Ash Ponds were part of the original plant design, but no documentation can be found showing that a professional engineer

Attachment 5: PSCo Cherokee Station

prepared or signed the ash pond plan layout, or supervised the construction.

As for the other ponds no documentation was found that these ponds were designed by or construction supervised by 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?*

   No record of any structural integrity assessment of the ponds has been found.

   There are no plans to evaluate the structural integrity of these ponds in the future, due to their size and configuration.

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.*

   There have been no State or Federal inspections recorded related to the structural integrity of these management units. To the best of our knowledge, there are no inspections planned for these management units.

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.

   Not Applicable – Refer to item 6.

Attachment 5: PSCo Cherokee Station

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 unit(s). The basis for determining maximum height is explained later in this Enclosure.

   The West Ash Pond is 0.39 acres in size, with a capacity of approximately 12,700 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The Center Ash Pond is 0.48 acres in size, with a capacity of approximately 15,600 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The East Ash Pond is 0.39 acres in size, with a capacity of approximately 12,700 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The Emergency Spill Pond is 0.4 acres in size, with a capacity of approximately 7,700 cubic yards. A concrete dam on the South end is 8 feet 4 inches high from toe to crest. Current volume as measured on May 12, 2009 is approximately 644 cubic yards, and consists primarily of water.

   The West Polishing Pond is 1 acre in size, with a capacity of approximately 25,000 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The East Polishing Pond is 1 acre in size, with a capacity of approximately 25,000 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

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

Attachment 5: PSCo Cherokee Station

include only releases to surface water or to the land (do not include releases to groundwater).

We have found no record of known spills or un-permitted releases from the units to surface water or to the land within the past 10 years.

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

Cherokee Station is owned by Public Service Company of Colorado, a subsidiary of Xcel Energy Inc.

Attachment 5: PSCo Cherokee Station

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Attachment 6: PSCo Comanche Station

Comanche Station is reporting on five surface impoundments:

- **Ash Pond #1**
- **Ash Pond #2**
- **Ash Pond #3**
- **Polishing Pond (#4)**
- **Ash Disposal Facility (ADF) Stormwater Retention Pond**

Note that some of these surface impoundments are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of these surface impoundments for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

Ponds used at Comanche Station are used to manage clarifier underflow (calcium carbonate), bottom ash solids, de minimis amounts of scrubber solids, and other plant process wastewater. All of these ponds are clay lined and are operated under a State-issued NPDES permit. Comanche also has a storm water retention pond as part of its dry ash disposal facility.

Clarifier underflow material is generated as part of the water treatment process at Comanche Station. The calcium carbonate is hydraulically transported from the clarifiers to Ash Ponds 1 & 2 to allow for settling of solids and dewatering in preparation for permanent disposal. De minimis amounts of scrubber solids are also disposed of in Ash Ponds 1 & 2 when needed; in these rare cases the material is transported via a vacuum truck.

Bottom ash generated at Comanche is hydraulically transported to Ash Pond 3 (bottom ash pond) that temporarily stores the ash until it can be removed. The fly ash/scrubber solids generated at Comanche are managed in a conditioned state and are disposed of in a landfill located on plant property. The landfill has a clay liner and stormwater is collected in a retention pond at the disposal facility.

Pond 4 is a polishing pond that Ponds 1- 3 pass through before the water is discharged in accordance with the State-issued NPDES permit.

Attachment 6: PSCo Comanche Station

The ADF Stormwater Retention Pond captures storm water runoff and associated suspended solids (ash and scrubber solids) from the dry ash landfill.

Inspections of the ash ponds are conducted daily by plant operators and chemists for normal operation.

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(s) does not having a rating, please note that fact.*

   All five ponds are incised (below-grade), and none have been rated by any agency under the National Inventory of Dams criteria, nor would we expect them to meet any minimum threshold to be rated.

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

   Ponds 1 – 4 were constructed in 1972.

   The ADF Stormwater Retention Pond was constructed in 1987.

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 type of materials that are temporarily or permanently contained in the unit(s).*

   Ponds 1 & 2 contain clarifier underflow material and de minimis quantities of emission control residuals from scrubbers.

   Pond 3 temporarily stores bottom ash prior to removal for disposal.

   Pond 4 contains process water with only de minimis amounts of bottom ash or emission control residuals carried over from Ponds 1, 2, or 3.

   The ADF Stormwater Retention Pond contains stormwater and small amounts of sediment, fly ash, bottom ash, or emission control residuals carried off from the ash disposal facility by surface runoff.

Attachment 6: PSCo Comanche Station

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?*

   Ash ponds 1 – 4 were designed, and construction supervised by a PE in 1973.

   The ADF Stormwater Retention Pond was designed, and construction supervised by a PE in 1987.

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 assessment/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?*

   No records have been located to confirm if the ponds at Comanche Station have been evaluated for structural integrity.

   There are no plans currently to evaluate the structural integrity of these ponds in the future, based on their design as below-grade, incised ponds.

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.*

   There have been no State or Federal inspections recorded related to the structural integrity of the Comanche ponds. To the best of our knowledge there are no inspections planned.

Attachment 6: PSCo Comanche Station

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.*

   Please refer 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 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.*

   Ponds 1 – 4 are identical in size at 1.6 acres and have a volume of 18,700 cubic yards each. The ponds are entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

   The ADF Storm Water Retention Pond capacity is 0.92 acres in size with a capacity of 12,700 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

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 of 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).*

   On April 9, 2007 the pipe from Polishing Pond (#4) going to the river was hit during an excavation. Between 2000-3000 gallons of process water was released into an excavation area before the flow was stopped and the line was patched. The collected water was pumped back into the Polishing Pond. We have found no records of any other known spills or unpermitted releases from the ponds to surface waters or land during the past 10 years.

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

Attachment 6: PSCo Comanche Station

Generating Unit Nos. 1 and 2 of the Comanche Station are owned by Public Service Company of Colorado, a subsidiary of Xcel Energy Inc.

Generating Unit No. 3 is operated by Public Service Company of Colorado. It is jointly owned by PSCo, Intermountain Rural Electric Association (IREA), and Holy Cross Energy.

Attachment 6: PSCo Comanche Station

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Attachment 7: PSCo Hayden Station

Hayden Station is reporting on the following six surface impoundments:

- **High Quality Skimmer Pond**
- **High Quality Pond**
- **Intermediate Quality Pond**
- **Fly Ash Decant Basin**
- **Common Wet Ash Settling Basin**
- **Ash Disposal Facility (ADF) Contact Storm Water Pond**

Note that many, if not all of these surface impoundments are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of these surface impoundments for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

Hayden Station collects all coal combustion residues for dry on-site disposal. Fly Ash is collected dry and transported by truck to an on-site Ash Disposal Facility (ADF). Bottom ash is dewatered in bins and transported by truck to an on-site disposal area.

The facility has three above grade process ponds connected in series that are designed to remove suspended solids and control water chemistry prior to reuse within the facility (High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond). Excess solids that settle out in the first pond in the series (HQ Skimmer Pond), which may include ash particles, are periodically dredged, dewatered and then transported to the on-site ash disposal area.

The facility also has two below grade concrete ash cleanout basins. The smaller basin (Fly Ash Decant Basin) is used for ash silo load-out cleanup water and the larger basin (Common Wet Ash Settling Basin) is for storage if the bottom ash dewatering system fails and other ash dewatering needs. These basins are normally empty and are cleaned out following each occurrence.

The facility also has a Contact Storm Water Pond that receives stormwater runoff from the ash disposal area. This pond water is tested prior to discharge under a NPDES Permit. The pond is constructed as a basin following natural contours.

Attachment 7: PSCo Hayden Station

Routine visual inspections of these surface impoundments are conducted by plant personnel.

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(s) does not having a rating, please note that fact.*

   The Intermediate Quality Pond is listed on the NID and rated as a Low Hazard Dam.

   The three process water ponds (High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond) share a common dam around them and are classified on the State of Colorado, Division of Water Resources - Dam Safety Branch's inspection forms as Low Hazard. The State inspects this dam every 6 years.

   The two concrete cleanout basins (Fly Ash Decant Basin and the Common Wet Ash Settling Basin) and the Contact Storm Water Pond at the ash disposal area have not been classified, nor would we expect them to meet the minimum threshold for any rating.

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

   The High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond were commissioned in 1975.

   The Fly Ash Decant Basin and the Common Wet Ash Settling Basin were commissioned in 1992.

   The contact storm water pond at the ADF was commissioned in 1983. This pond is formed by the working face of the ash disposal cell and the adjacent native hillside. Consequently, the configuration of this pond is modified both vertically and horizontally during the course of development of the ash disposal area.

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 type of*

Attachment 7: PSCo Hayden Station

materials that are temporarily or permanently contained in the unit(s).

Small amounts of fly ash, bottom ash, and flue gas emission control residues are temporarily deposited in the first pond (High Quality Skimmer Pond) in the series. This pond is periodically dredged and any material removed is dewatered and sent for disposal.

Some fly ash, bottom ash, and flue gas emission control residues may move through the under drains to the High Quality Pond.

The Intermediate Quality Pond may contain water that has mixed with fly ash, bottom ash, and flue gas emission control residues in the two previous ponds.

The Fly Ash Decant Basin may contain fly ash, bottom ash, and flue gas emission control residues.

The Common Wet Ash Settling Basin may contain fly ash, bottom ash, and flue gas emission control residues.

The Contact Storm Water Pond at the ash disposal area may contain fly ash, bottom ash, and flue gas emission control residues.

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?*

The High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond were designed by a Professional Engineer (PE). A PE supervised the construction of these three ponds.

A PE Dam Engineer from the State of Colorado, Division of Water Resources - Dam Safety Branch, inspects the High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond Dam every 6 years.

A PE did not design or oversee the construction of the Fly Ash Decant Basin and the Common Wet Ash Settling Basin.

A PE did not design or oversee the construction of the Contact Storm Water Pond at the ash disposal area.

Attachment 7: PSCo Hayden Station

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 assessment/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?*

   As noted in the response to Question 4, the High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond are regularly inspected by a dam safety engineer from the State of Colorado. These structures are also subject to routine operational inspections by plant staff to identify issues that might develop between State inspections. We would not normally perform an independent and redundant structural safety or integrity inspection absent a specific concern.

   The Company has not performed a structural safety inspection of the below-grade Fly Ash Decant Basin, the Common Wet Ash Settling Basin, or the Ash Contact Storm Water Pond. There are no plans to evaluate the structural integrity of these ponds in the future.

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.*

   The State of Colorado, Division of Water Resources - Dam Safety Branch inspected the three process water ponds (High Quality Skimmer Pond, High Quality Pond and the Intermediate Quality Pond) on May 9, 2007. The Dam Engineer is a PE. The State of Colorado Inspection Report is attached.

   There have been no other State or Federal inspections recorded related to the structural integrity of these or the other ponds. To the best of our knowledge there are no future inspections planned at

Attachment 7: PSCo Hayden Station

this time, other than the six-year recurring Colorado State inspection noted above.

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.*

There were only minor issues noted on the inspection report including rodent control, vegetation management and crest grading. Corrective actions have been completed. See attached Weed Control Purchase Order # 269792, Crest Grading Work Order # 2973887.

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.*

The High Quality Skimmer pond has a design maximum surface area under 1.0 acre and 8,872 cubic yards of storage. The embankment is approximately 19 ft. high from toe to crest. As of May 7, 2009 a visual estimate of the volume of ash or other solids in this pond is about 3,000 cubic yards. This pond is currently being dewatered and should be cleaned out this summer.

The High Quality pond has a design maximum surface area under 4.5 acres and 65,000 cubic yards of storage. The embankment is approximately 15 ft. high from toe to crest. As of May 7, 2009 a visual estimate of the volume of ash or other solids in this pond is about 1,000 cubic yards. This pond contains about 7,500 cubic yards of water, is currently being dewatered and should be cleaned out this summer.

The Intermediate Quality pond has a design maximum surface area under 20 acres with 442,000 cubic yards of water storage. The pond is normally maintained at or near full capacity. The embankment is approximately 22 ft. high from toe to crest. We do not have current information on the volume of ash or other solids in this pond, since the pond is intended for process water storage and treatment and

Attachment 7: PSCo Hayden Station

does not receive significant volumes of solids. The pond water level is typically maintained at or near capacity.

The Fly Ash Decant Basin has a design maximum surface area under 0.006 acres, and a capacity of 64.5 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

The Common Wet Ash Settling Basin has a design maximum surface area under 0.09 acres, and a capacity of 474 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

The Contact Storm Water Pond at the ash disposal area has a surface area of under 0.75 acres, and a capacity of approximately 5,900 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

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 of 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).*

We have found no record of known spills or un-permitted releases from the units to surface water or to the land within the past 10 years.

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

The Hayden Station is operated by Public Service Company of Colorado, which is a subsidiary of Xcel Energy Inc. It is jointly owned by PSCo, PacifiCorp, and Salt River Project.

Attachment 8: PSCo Pawnee Station

Pawnee Station is reporting on the following six surface impoundments and one ash disposal facility:

- **New Bottom Ash Water Recovery Pond**
- **Bottom Ash Disposal Pond**
- **Ash Water Recovery Pond**
- **Intermediate Quality (IQ) Water Pond**
- **Evaporative Pond B**
- **Evaporative Pond C**
- **Ash Disposal Facility (ADF)**

Note that many, if not all of these surface impoundments and the landfill are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of them all for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

Pawnee Station is a zero discharge facility. Fly ash and bottom ash are both collected on a dry basis and are marketed for a variety of beneficial uses, including concrete. A minor fraction of ash that is not suitable for utilization is disposed of in an on-site landfill that is constructed entirely below grade. This landfill also receives raw water treatment system clarifier residuals that are transported by truck.

In 2002, the plant installed a drag-chain to mechanically remove and dewater bottom ash prior to loading on a truck for utilization or disposal in the on site dry landfill. Prior to this conversion, bottom ash was sluiced to lined settling ponds. From there it was periodically dredged and dewatered for disposal in the on-site dry landfill.

The following ponds may come in contact with or have the potential to contain a small amount of bottom ash fines: "New" Bottom Ash Water Recovery Pond, Bottom Ash Disposal Pond, Ash Water Recovery Pond, Intermediate Quality (IQ) Pond, Evaporative Pond B, and Evaporative Pond C.

1. **The "New" Bottom Ash Water Recovery Pond is used as a holding basin for make up water to the boiler bottom ash water system. Although the primary function of the pond is a reservoir for the boiler bottom ash water system, it contains a small portion of bottom ash**

Attachment 8: PSCo Pawnee Station

fines, as the water is re-circulated through the boiler bottom ash water system.

2. **The Bottom Ash Disposal Pond is no longer in service. This pond was a settling pond in which sluiced bottom ash settled out and the water was recovered for re-circulation. After the solids settled in the pond, the overflow drained into the Ash Water Recovery Pond. This pond still contains some residual bottom ash and occasionally receives direct precipitation**

3. **The Ash Water Recovery Pond is no longer in service. It served as a re-circulation basin for the boiler bottom ash water system after grinding and sluicing of bottom ash. This is a below grade pond that still contains some residual bottom ash and occasionally receives direct precipitation.**

4. **The Intermediate Quality (IQ) Water Pond is used to store storm water runoff, high quality pond overflow, and miscellaneous plant drains. When water resources are low, the pond makeup can be supplemented using the water from the boiler bottom ash water system, therefore the pond potentially contains a small amount of bottom ash.**

5. **Evaporative Ponds B and C are used to collect wastewater from the brine concentrators and overflow from the IQ pond. The primary function of the ponds is to collect and evaporate wastewater from the brine concentrators. A third, idle evaporative pond exists at the site (Pond A) and had the same function as Ponds B and C when it was in use. However, it has been empty and out of service since about 2004.**

6. **Pawnee has a landfill, which in past operations has been used to dispose of fly ash and bottom ash (hauled by truck), and slurry produced from the water treatment clarifier, which is also transported by truck. Currently, the majority of bottom ash and fly ash are being marketed for beneficial reuse and a very limited amount is being disposed in the landfill. The landfill continues to accept slurry waste from the clarifier. The landfill was formed by an excavation and is fully below grade.**

Routine visual inspections of the ponds and landfill are conducted by plant or contractor personnel.

Attachment 8: PSCo Pawnee Station

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(s) does not having a rating, please note that fact.*

   The Intermediate Quality Pond and the Evaporation Ponds are listed on the NID and rated as Low Hazard Dams.

   The Colorado State Engineers Office, Divisions of Water Resources, regulates the "New" Bottom Ash Water Recovery Pond, IQ pond, and Evaporative ponds B and C. The State Engineer has classified the IQ Pond and Evaporative Ponds B and C as Class 3 dams. The Engineer's Office has not classified the "New" Bottom Ash Water Recovery Pond or the Bottom Ash Disposal Pond.

   The Ash Water Recovery Pond and Fly Ash Landfill are below grade, and have not been rated by any agency under the National Inventory of Dams, nor do we believe they would meet the minimum threshold for any rating.

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

   The Bottom Ash Disposal Pond and Ash Water Recovery Pond were commissioned in 1980; use was discontinued in 2002.

   The IQ Pond and Evaporative Ponds B and C were commissioned in 1980.

   The "New" Bottom Ash Water Recovery Pond was constructed and commissioned in 2005.

   The Landfill was constructed in the late 1970s and placed into service in 1980.

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 type of materials that are temporarily or permanently contained in the unit(s).*

Attachment 8: PSCo Pawnee Station

Both the Bottom Ash Disposal Pond and Ash Water Recovery Pond contain bottom ash from prior operations. The amount of water retained in these ponds from precipitation is insignificant and, typically evaporates quickly due to the arid climate. Both ponds are no longer in service.

The "New" Bottom Ash Water Recovery Pond contains a small amount of bottom ash within the process water managed in this pond.

The IQ pond contains a small amount of bottom ash within the process water managed in this pond.

Evaporative Ponds B and C contain plant process wastewater and solids from the wastewater evaporation. These ponds also have the remote possibility of containing bottom ash fines from the IQ pond overflow.

The Landfill contains fly ash, bottom ash, and lime slurry from the water treatment process.

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?*

A Professional Engineer designed all ponds and the landfill. Plant construction records do not indicate that a Professional Engineer supervised construction of the original ponds.

The "New" Bottom Ash Water Recovery Pond, IQ Pond, and Evaporative Ponds B and C are under the jurisdiction of the Colorado State 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 assessment/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*

Attachment 8: PSCo Pawnee Station

occur?

No record of any structural integrity assessment of the ponds by Company personnel has been found.

Structures classified as dams are regularly inspected by a Dam Safety Engineer from the State of Colorado (see response to Question 6 below). We would not normally perform an independent and redundant structural safety or integrity inspection absent a specific concern.

There are no plans to evaluate the structural integrity of ponds not classified as dams.

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.*

The State Engineer conducts periodic inspections of the ponds classified as dams.

The last safety evaluation for the IQ pond was conducted in 2002 by the Colorado State Engineer. The inspector indicated that this pond should be classified as a Class 4 dam, but we have received no documentation reclassifying this from a Class 3 pond.

The Colorado State Engineer inspected evaporative ponds A, B and C in December of 2008. At the time of the inspection repairs were being conducted on the liner for C Pond as noted in the report.

The Colorado State Engineer has not inspected the "New" Bottom Ash Water Recovery Pond. Based on the normal interval of State inspections, we anticipate the pond will undergo a safety inspection by the State Engineer in or around 2010.

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.*

Attachment 8: PSCo Pawnee Station

Please provide any documentation that you have for these actions.

During the inspection of Evaporative Ponds A, B and C in December of 2008, three issues were identified:

1) **"No gage rods" was noted in the report. Gage rods were actually present in Ponds B and C, but new rods have since been installed in these ponds. Pond A is empty and out of service, so no gage rod is necessary.**
2) **Erosion was noted on the access road between Ponds A and B. The eroded areas have since been repaired.**
3) **Damage was noted on to the liner of Pond C. See the attached Work Order # 2962135 documenting the repair to correct this damage.**

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.*

The "New" Bottom Ash Water Recovery Pond size is 6 acres with a total storage capacity of 83,900 cubic yards. Current volume is estimated as 52,400 cubic yards as measured on May 3, 2009, and primarily consists of water with minor amounts of solid material. Maximum height is 16 ft.

The Bottom Ash Disposal Pond size is 13 acres, and total storage capacity is 403,000 cubic yards. Current volume is estimated at 121,000 cubic yards, with estimations based on observation of solids accumulated on May 3, 2009. Maximum height is 10 ft.

The Ash Water Recovery Pond size is 1 acre, and total storage capacity is 8,100 cubic yards. The pond is entirely below grade, and therefore per Enclosure A to EPA's letter, no volume or height information is reported.

The IQ Pond size is 3.5 acres with a total storage of 77,400 cubic yards. Current volume as measured on May 3, 2009 is 35,500 cubic yards, and primarily consists of water with minor amounts of solid material. The maximum height is 21 ft.

Attachment 8: PSCo Pawnee Station

Evaporative Pond B size is 14.8 acres with a total storage of 222,200 cubic yards. Volume as measured on May 3, 2009 is 114,200 cubic yards, and primarily consists of water with minor amounts of solid material. The maximum height is 13 ft.

Evaporative Pond C size is 10.5 acres with a total storage of 154,900 cubic yards. Volume as measured on May 3, 2009 is 87,600 cubic yards, and primarily consists of water with minor amounts of solid material. The maximum height is 13 ft.

The Landfill size is 34 acres with a total storage capacity of 2,176,400 cubic yards. The landfill is entirely below grade, and therefore, per Enclosure A to EPA's letter, no volume or height information is reported.

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 of 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).*

We have found no record of known spills or un-permitted releases from the management units to surface water or to the land within the past 10 years.

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

Pawnee Station is owned by Public Service Company of Colorado, a subsidiary of Xcel Energy.

Attachment 8: PSCo Pawnee Station

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Attachment 9: PSCo Valmont Station

Valmont Station is reporting on the following three surface impoundments:

- **East Ash Settling Pond**
- **West Ash Settling Pond**
- **Coal Pile Stormwater Runoff Pond**

Note that many, if not all of these surface impoundments are likely beyond the scope of EPA's information request, given their incised/below-grade nature, and/or the fact that their primary purpose is not to store or dispose of coal combustion residuals or byproducts. However, we are including a description of these surface impoundments for purposes of completeness and due to the ambiguous nature of EPA's request.

Background:

The Valmont Generating Station collects all coal combustion by-products for off-site utilization or on-site disposal in a State approved dry ash landfill. Fly ash is collected dry. Bottom ash is hydraulically conveyed to two ash settling ponds which are excavated bi-annually and the ash either utilized or disposed. The outfall of the ash disposal ponds is regulated under the site NPDES permit and discharges to the plant cooling water reservoir system. The ponds are not permanent ash disposal ponds but rather provide settling and temporary storage of bottom ash. Only one of these ponds is typically active and used at any one time. Operating practice is to clean out and switch the active pond every year.

The Coal Pile Stormwater Runoff Pond has the capability of receiving washdown from the paved area around the ash storage silo.

Valmont Station has three large reservoirs on site. These are used for raw water storage and plant water cooling/recirculation.

The day-to-day pond operations are monitored by the Plant Chemist, according to the requirements of the NPDES permit.

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(s) does not having a rating, please note that fact.*

   The Ash Settling and Stormwater Runoff ponds are incised (below-grade). Neither has been rated by any agency under the National

Attachment 9: PSCo Valmont Station

Inventory of Dams (NID), nor would we expect them to meet the minimum threshold for any rating.

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

Both Ash Settling Ponds were built in 1964 and the Coal Pile Stormwater Runoff Pond was built in 1993.

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 type of materials that are temporarily or permanently contained in the unit(s).*

The East and West Ash Settling Ponds primarily contain bottom ash but may contain some de minimis amounts of fly ash and/or emission control residue.

The Coal Pile Stormwater Runoff Pond primarily contains coal fines, but may also contain some de minimis amounts of fly ash and/or emission control residue from washdown operations.

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?*

The ponds were designed by Professional Engineers. We were unable to locate documentation to confirm whether construction was overseen by 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 assessment/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?

Attachment 9: PSCo Valmont Station

PSCo has not conducted structural integrity evaluations of either the Ash Settling Ponds or the Coal Pile Stormwater Runoff Ponds because of their small size and at grade construction.

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.

   There have been no State or Federal inspections recorded related to the structural integrity of these management units. To the best of our knowledge, there are no state or federal inspections planned for these management units.

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.*

   Not applicable – refer to item 6.

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.*

   The Ash Settling Ponds are each approximately 1 acre in size, with a capacity of about 26,000 cubic yards. Both are entirely below grade, and therefore, per Enclosure A to EPA's letter, no volume or height information is reported.

   The Coal Pile Stormwater Runoff Pond is approximately 0.14 acres in size, and has a capacity of about 670 cubic yards. The pond is entirely below grade, and therefore, per Enclosure A to EPA's letter, no volume or height information is reported.

Attachment 9: PSCo Valmont Station

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 of 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).*

There was one recorded spill from the West Ash Settling Pond on February 14, 2008 that was reported to the State of Colorado and the National Response Center (NRC). About 25 cubic yards of bottom ash slurry was released into the plant cooling water reservoirs. A vacuum truck was used to recover the bottom ash.

We have found no record of other known spills or unpermitted releases from any of the units to surface water or land within the last ten years.

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

The Valmont Station is owned by Public Service Company of Colorado, a subsidiary of Xcel Energy Inc.

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October 12, 2009

Mr. Richard Kinch
US Environmental Protection Agency (5306P)
1200 Pennsylvania Avenue, NW
Washington, DC 20460

Re: Summary Database Results Errors - Request for Information relating to Surface Impoundments Under 104 (e) of the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. 9604(e).

Dear Mr. Kinch:

On May 18, 2009 we submitted responses to the US Environmental Protection Agency (EPA) "Request for Information" received May 4, 2009 pertaining to surface impoundments used to manage coal combustion residuals or byproducts at the following operating companies:

- Public Service Company of Colorado (PSCo), a Colorado corporation;
- Northern States Power Company of Minnesota (NSP-M), a Minnesota corporation, and:
- Northern States Power Company of Wisconsin (NSP-W), a Wisconsin corporation

EPA subsequently released a summary of the submitted information to third parties per a FOIA request and has now placed that summary information (Database Results - PDF) on their website at:
http://www.epa.gov/epawaste/nonhaz/industrial/special/fossil/surveys/index.htm

A review of the summary table has indicated that it contains several errors, which are inconsistent with the information we provided on May 18th. For your convenience, the inconsistencies are identified separately by operating company in the three attachments.

To ensure that correct information is utilized by the EPA, by State agencies, and is made available to the public, we request that the database be updated to reflect the correct information in an expeditious manner. We further request that after correction of the EPA database and summary posted on the Agency's web site, any organizations or persons that received incorrect information under a FOIA request be notified that corrected information is available. Please direct any questions concerning this submittal to my attention at the address listed below.

Sincerely,

10-12-09

Terry E. Coss, PE
Environmental Director
Xcel Energy
414 Nicollet Mall, Minneapolis, MN 55401
(612) 330-5596

Date

Attachment 1: Public Service Company of Colorado (PSCo)
Attachment 2: Northern States Power Company of Minnesota (NSP-M)
Attachment 3: Northern States Power Company of Wisconsin (NSP-W)

Attachment 1: Public Service Company of Colorado (PSCo)

The following errors were identified in the summary Database Results table pertaining to PSCo facilities:

- **Cherokee Station**
  - The Emergency Spill Pond storage capacity should be 5 acre-ft (7,700 CY), not 0 acre-ft as shown.

- **Hayden Station**
  - The High Quality pond capacity should be 40 acre-ft (65,000 CY), not 1 acre-ft as shown.

- **Pawnee Station –**
  - Corrective measures were implemented for the two evaporation ponds, as evidenced by our text and the attachments sent in the initial response. Therefore, Column 7 should read "Yes", not "No" as shown.
  - The storage capacity values for the following ponds (listed in the order shown) are incorrect. It appears that the "current volume" information submitted was used (incorrectly) to determine the volumes shown, instead of using the "total storage capacity" information also requested and provided in our response. The correct pond capacity numbers that should actually be reported are:
    - Evaporation Pond C – 96 acre-ft (154,900 CY)
    - New Bottom Ash Water Recovery Pond – 52 acre-ft (83,900 CY)
    - Bottom Ash Disposal Pond – 250 acre-ft (403,000 CY)
    - Evaporation Pond B – 138 acre-ft (222,200 CY)
    - Intermediate Quality (IQ) Water Pond – 48 acre-ft (77,400 CY)

Attachment 2: Northern States Power of Minnesota (NSP-M)

The following errors were identified in the summary Database Results table pertaining to NSP-M facilities:

- **Minnesota Valley Generating Plant**
  - Ponds 1 and 2 have a maximum storage volume of 9 acre-ft. instead of 7 acre-ft. shown on column 8.

- **Sherburne County Generating Plant**
  - Pond No. 3 (North portion) was put into service in 2004 instead of 1975 as shown in Column 2.

Attachment 3: Northern States Power Company of Wisconsin (NSP-W)

The following errors were identified in the summary Database Results table pertaining to NSP-W facilities:

- **No errors were noted.**