(i.) Owner Name: Southern Indiana Gas and Electric Company dba Vectren Power Supply  
Owner Address: One Vectren Square, PO Box 209, Evansville, IN 47708  
CCR Unit Name: A. B. Brown Ash Pond  
Identification Number: not applicable

(ii.) Location: West Franklin Quadrangle, Posey County, Indiana;  
Section 24, Township 7S, Range 12W

(iii.) Purpose of CCR Unit:  
The A. B. Brown Ash Pond receives the discharge from the Physical-Chemical Waste Water Treatment System which processes waters from landfill run-off and wash water used to spray off the filter cake belt filter and filter cake truck loading bays from both scrubbers; south side runoff pond water consisting of coal pile run-off, boiler water pretreatment system, reverse osmosis reject, water treatment filter & softener backwash, boiler blow down, precipitator & ash pit area floor drains, air heater wash, the hopper seal & ash hopper overflow, storm water, coal trestle dust suppression system, coal handling French drain, coal handling and sanitary waste from the coal handling area and SIMI building, and the East Ditch Drain; storm water; water from plant floor drains; bottom ash; and intermittently fly ash.  
The ash pond has a further purpose of serving as the source water for the cleaning of the filter cake belt filter and truck loading bays. These waters recirculate back to the ash pond after passing through the aforementioned physical-chemical treatment system. Additionally, the Hydroveyor system used to move dry fly ash to the load out facility at the river requires a vacuum which is created by the flow of water which is created by recirculating water in the ash pond.

(iv.) Watershed size and name: The drainage area is 242.4 acres. The pond is located within the Ohio River watershed. (2016 Inflow Design Plan)

(v.) Foundation Properties:  
The foundation soils consist of interbedded stiff to very stiff clay and loose to medium dense silt soils (2016 Structural Stability Assessment). The dam was constructed across a western end of a natural valley. (see ABB Civil Plan_1974 in section vii)

(vi.) CCR Unit Construction:  
Construction drawings required the embankment be compacted to 95% of the Standard Proctor maximum dry density (ASTM D 698). Based on geotechnical field evaluations, the dam embankment consists of stiff to very stiff clayey soils that have consistency and strength indicative of well-compacted materials. The soil buttress that exists against the downstream slope of the dam was constructed in 8-inch loose lifts and was mechanically compacted to at least 95% Standard Proctor maximum dry density. (2016 Structural Stability Assessment) In 2003, an Emergency Spillway was added to the far southern end of the dam to supplement the original Principal Spillway. The emergency spillway was cut into native soils to an elevation of 447 ft and protected by riprap (see ABB
The pond was created by damming a natural valley and the base of the pond is native soils. The ABB Pre Plant 1957 Topo listed below shows original natural contours.

(vii.) Construction Drawings:
Drawings of the original dam construction and modifications are listed below.

ABB Site 1974 Civil Plan
ABB 1974 Lower Dam Engineering Plan
ABB Lower Dam Profile and Storage Curve
ABB Lower Dam Principal Spillway
ABB Lower Dam Construction Drawing
ABB Lower Dam 2016 Post Buttress Plan and Cross Section
ABB Pre Plant 1957 Topo

(viii.) Instrumentation: No instrumentation is present.

(ix.) Area Capacity Curve: The original storage capacity curve is listed on the ABB Lower Dam Profile and Storage Curve drawing identified above.

(x.) Spillway Description:
The principal spillway is a 36” reinforced concrete pipe with an invert elevation of 444 ft. Peak flow rate during a 1000 year, 24-hour storm event is 38.8 cfs. Calculations to determine the flowrate can be found in the 2016 Inflow Design Flood Control System Plan posted on the A. B Brown CCR webpage. The construction is further described on the ABB Lower Dam Principal Spillway drawing listed above.

The emergency spillway is a 30’ wide trapezoidal channel cut into native soils and lined with rip rap for erosion protection. Based on calculations from the 2016 Inflow Design Flood Control System Plan posted on the A. B Brown CCR webpage, the design storm event will not reach the elevation of the emergency spillway and therefore the peak flow rate is 0 cfs. The construction is further described on the ABB Lower Dam Emergency Spillway_2003 drawing listed above.

(xi.) Surveillance, Maintenance and Repair:
The dam is inspected weekly as required by the CCR regulation 40 CFR § 257.83(a)(i). Deficiencies are either identified as requiring additional observation or entered into a Work Order request to trigger repairs. Water surface elevation is remotely monitored through a level indicator which is set to alarm in the Control Room if the water level is within 0.5 ft of the Principal Spillway elevation. The system also alarms if the water level drops below 440.5 ft. The plant routinely monitors weather forecasts to prepare the pond for predicted high precipitation events. Video cameras or other surveillance technologies are not present.

(xii.) Record of Structural Instability:
Extensive information on the stability of the dam and foundation can be found in the 2016 Structural Stability Assessment and 2016 Safety Factor Assessment documents posted on the A. B. Brown CCR webpage. In 2016, a 190,000 cy yd stabilizing buttress was constructed against the downstream slope of the dam to address potential seismic consideration. The buttress crest is up to 200 ft wide and varies in elevation from 432 ft.
to 444 ft. The buttress was installed to insure Safety Factor criteria were met and was not in response to a suspected instability.

NOTE: Information in the History of Construction is based on information that was reasonably and readily available. The CCR rule does not require owners of existing surface impoundments to generate new information or provide anecdotal or speculative information regarding the design or construction history. (Final Rule Preamble, Fed Reg 80, page 21380)