ATC

GROUP SERVICES LLC

VISUAL SITE INSPECTION REPORT - 2015

SOUTHERN INDIANA GAS AND ELECTIRC COMPANY
A.B. BROWN GENERATING STATION
LOWER AND UPPER ASH POND DAMS
WEST FRANKLIN, IN

ATC PROJECT NO. 170LF00110

JANUARY 14, 2016

PREPARED FOR:

SOUTHERN INDIANA GAS AND ELECTRIC COMPANY
A.B. BROWN GENERATING STATION
8511 WELBORN ROAD
MOUNT VERNON, IN 47620
ATTENTION: MS. LISA MESSINGER

ATC
GROUP SERVICES LLC

ATC Group Services LLC

7988 Centerpoint Dr.
Suite 100
Indianapolis, IN 46256

Phone 317 849 4990
Fax 317 849 4278

www.atcgroupservices.com

January 14, 2016

Ms. Lisa Messinger
A.B. Brown Generating Station
8511 Welborn Road
Mount Vernon, IN 47620

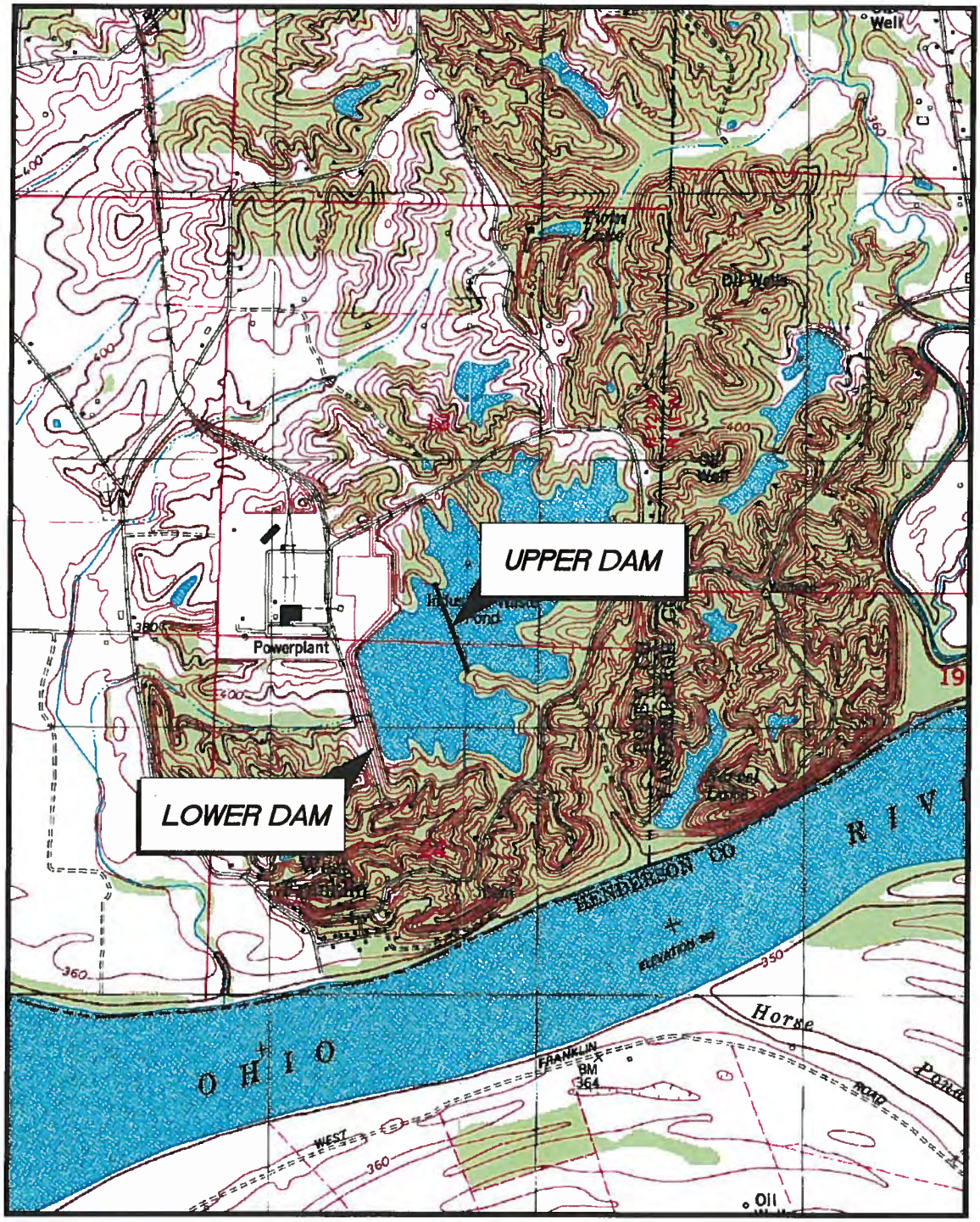
Subject: Visual Site Inspection Report - 2015
A. B. Brown Generating Station
Lower and Upper Ash Pond Dams
West Franklin, Indiana
ATC Project No. 170LF00110

Dear Ms. Messinger:

Submitted herewith is the report of our October 7, 2015 Visual Site Inspection of the Lower and Upper Ash Pond Dams at the A.B. Brown Generating Station. This report serves as the initial annual inspection to meet the requirements of the Coal Combustion Residuals Rule put in place by the Environmental Protection Agency on April 17, 2015.

The scope of this inspection was limited to an examination of readily observable surficial features of the dams and a review of information that you provided. Please note that the inspection did not include any test drilling, testing of materials, precise physical measurements of dam features, detailed calculations to verify spillway capacities or embankment stability or other engineering analyses. Although the inspection was conducted by competent personnel in accordance with generally accepted methods for inspecting dams, it should not be considered as a warranty or guaranty of the future safety of the dam.

The pond system that was inspected consists of the Upper Ash Pond and the Lower Ash Pond. The Upper Ash Pond discharges into the Lower Ash Pond. The Lower Ash Pond has the capability to discharge into an unnamed tributary to the Ohio River; however, its normal pool elevation is controlled to prevent discharge by pumping water back for reuse to the A.B. Brown Station. The ponds are located within the A.B. Brown Station property area in Section 24, Township 7 South, and Range 12 West, about a half mile north of the Ohio River in Posey County, Indiana as highlighted on the West Franklin, IN USGS Quadrangle map, Figure 1 on the following page.



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VICINITY MAP

ASH POND DAM INSPECTION
OCTOBER 7, 2015
A.B. BROWN GENERATING STATION
WEST FRANKLIN, INDIANA

Project Number: 170LF00110		Drn. By: PL
Drawing File: SEE LEFT		Ckd. By: DB
Date: 12/15	Scale: 1" = 2000'	App'd By:
ATC GROUP SERVICES LLC		Figure: 1

H:\2015\VECTREN CORPORATION\AB BROWN 2015 VISUAL INSPECTION 170LF00110\170LF00110-VIC-2015.DWG, HP5500

Don Bryenton of ATC Group Services LLC (ATC) met with Angie Scheller on October 7, 2015 to discuss details associated with the referenced Ash Pond Dams.

The ash impoundment area originally consisted only of the Lower Dam that was constructed around 1975, following approval by IDNR (Docket D-4405 Rev. I), with a crest elevation of EL 450 and 3(H):1(V) sideslopes. The downstream slope has an intermediate berm area that is approximately 100 feet wide at approximately EL 414 before continuing down the sideslope to the toe of slope at approximately EL 400. This intermediate berm was reportedly included in the design to provide access for a rail line that was not constructed. The design plans indicate that there is a 2 ft thick sand drainage layer present approximately 2.5 ft below the surface of the berm. A system of perforated pipes was installed in this drainage layer in 2009 to help facilitate the discharge of water that collects in the drainage layer. The drainage layer also extends up the slope above the berm to approximately EL 432. The Lower Ash Pond Principal Spillway consists of a 36 in. dia. drop inlet (rim EL 444) connected to a 36 in. dia. RCP outlet pipe that has the capability to discharge downstream into an unnamed tributary to the Ohio River. The normal pool elevation is maintained at EL 441.5 or below by a skimmer pipe that recirculates water from the impoundment area back to the Station for reuse so that the Principal Spillway is inactive. An Emergency Spillway consisting of a 30 ft bottom width trapezoidal opening with a spillway elevation of EL 447 and 5(H):1(V) sideslopes was installed in 2003 when the first phase of the Upper Dam was built.

The Upper Ash Pond Dam was constructed across the existing impoundment, creating an upper and lower impoundment area, to increase the ash storage capacity of the pond following approval by IDNR (Application #FW-21909). The dam was built in phases with the initial phase constructed to EL 455 in 2003 and the remainder built to a crest elevation of EL 464 in 2007. The dam, which was constructed over the ponded ash, has 5(H):1(V) sideslopes and a toe elevation of about EL 444. Its Principal Spillway consists of a 60 in. dia. HDPE drop inlet housed within a 66 in. dia. RCP drop inlet. The HDPE drop inlet is connected to a 24 in. dia. HDPE outlet pipe which is housed within a 30 in. dia. RCP. A gate weir was added to the drop inlet structure in 2014 to allow the facility to lower the pool elevation in the upper reservoir to provide more storage capacity during storm events. The principal spillway outlet pipe discharges downstream into the lower impoundment. The pool elevation in the upper impoundment is generally controlled at EL 458.3 by the gate weir and at EL 460 by the drop inlet structure. Its Emergency Spillway consists of a 30 ft bottom width trapezoidal opening with a spillway elevation of EL 461.5 and 5(H):1(V) sideslopes.

As noted above, the dam inspection was completed on October 7, 2015. The weather condition was approximately 80° F and sunny. The pond system features are highlighted on the attached Site Plan in Appendix C. The Dam Inspection Reports with the results of the inspection for each pond are also attached in Appendices A and B. The following is a list of our observations followed by our recommendations in bold print.

LOWER DAM OBSERVATIONS/RECOMMENDATIONS

1) The crest was lined with crushed stone and was in good condition.
Recommendation: None at this time.

2) A discharge of less than 1 gpm of clear water was noted at the Principal Spillway Outlet. Since the reservoir level was below the invert of the Principal Spillway at the time these observations were made, the source of the water is unclear.
Recommendation: Monitor discharge at the outlet during each weekly inspection. If the flow rate increases, or if fines are noted in the discharge, the cause of the seepage should be determined.

(Note: Following a visual inspection on September 8, 2014, SIGECO performed a video survey of the Principal Spillway and retained Stantec to review the video and perform a site inspection. SIGECO should continue to perform regular visual inspections of the flow from the outlet of the Principal Spillway as recommended by Stantec on December 11, 2014.

3) There was no discharge through the Emergency Spillway.
Recommendation: None at this time.

4) The upstream slope has a riprap cover and appeared to be in good condition.
Recommendation: None at this time.

5) The majority of the phragmites present within the riprap section on the upstream slope are now under control, but the phragmites are present along the normal pool line.
Recommendation: Continue to control/remove phragmites.

6) The downstream slope was grass covered and was in good condition. The vegetative cover is being maintained at a height of less than 6 inches.
Recommendation: None at this time.

7) The drop inlets associated with the diversion berms on the intermediate berm were free of debris.
Recommendation: Continue to monitor the condition of the drop inlets on a regular basis and remove the debris as needed.

UPPER DAM OBSERVATIONS/RECOMMENDATIONS

1) The crest was lined with crushed stone and was in good condition.
Recommendation: None at this time.

2) The drop inlet Principal Spillway was modified by the installation of a gate weir. There was discharge into the Principal Spillway and it seemed to be functioning properly.
Recommendation: None at this time.

3) The wheel on the temporary drawdown valve on the Principal Spillway drop inlet has been removed, the temporary butterfly valve at the base of the drop inlet has been blocked in a closed position and the drawdown pipe has been capped.
Recommendation: None at this time

4) The area around the Principal Spillway outlet has been cleared and is easily accessible. **Recommendation: Continue to maintain the area to allow routine inspection of the outlet pipe and allow free flow from the outlet pipe.**

5) The upstream slope was covered with riprap and was in satisfactory condition. **Recommendation: None at this time.**

6) The downstream slope was grass covered and in satisfactory condition. **Recommendation: None at this time.**

Coal Combustion Residuals Rule Ash Pond Requirements/Observations

On April 17, 2015, the Environmental Protection Agency's (EPA) CCR Rule was released. As a result, CCR Surface Impoundments are now required to meet the requirements of 40 C.F.R. §257.74 and to be inspected in accordance with 40 C.F.R. §257.83(b). The results of the initial annual inspection of this impoundment are outlined below:

40 C.F.R. §257.83

(b) Annual inspections by a qualified professional engineer.

(1) If the existing or new CCR surface impoundment or any lateral expansion of the CCR surface impoundment is subject to the periodic structural stability assessment requirements under §257.73(d) or §257.74(d), the CCR unit must additionally be inspected on a periodic basis by a qualified professional engineer to ensure that the design, construction, operation, and maintenance of the CCR unit is consistent with recognized and generally accepted good engineering standards. The inspection must, at a minimum include:

(i) A review of available information regarding the status and condition of the CCR unit, including, but not limited to, files contained in the operating record (e.g., CCR unit design and construction information required by §257.73(c)(1) and §257.74(d), the results of inspections by a qualified person and results of previous annual inspections);

The initial CCR Rule annual inspections of the A.B. Brown Upper and Lower Ash Ponds was performed by the undersigned professional engineer on October 7, 2015. Prior to the inspection, files from the operating record were reviewed along with the results of previous inspections performed by qualified persons.

(ii) A visual inspection of the CCR unit to identify signs of distress or malfunction of the CCR unit and appurtenant structures

The visual inspection performed on October 7, 2015 did not reveal signs of slope instability.

(iii) A visual inspection of any hydraulic structures underlying the base of the CCR unit or passing through the dike of the CCR unit for structural integrity and continued safe and reliable operation.

A visual inspection was performed of the exposed portions of the hydraulic structures on October 7, 2015. No visible signs of structural deficiencies were noted at that time. A video inspection of the entire Principal Spillway System for the Lower Ash Pond was performed in October 2014. That inspection revealed some staining and spalling of the

concrete pipe, as well as some water dripping from the joints. Based on these observations, SIGECO retained the services of Stantec to further evaluate the structural integrity of the Principal Spillway System. The findings of Stantec's investigation indicate "that the 36-inch components of the Principal Spillway appear to currently be in satisfactory operating condition". SIGECO continues to perform regular visual inspections of the flow from the outlet of the Principal Spillway as recommended by Stantec.

(2) Inspection report. The qualified professional engineer must prepare a report following each inspection that addresses the following:

(i) Record any changes in geometry of the impounding structure since previous annual inspection;

Although this is the first formal annual CCR Rule Inspection, no significant changes in geometry have been noted since the last general visual inspection performed in September 2014.

(ii) The location and type of existing instrumentation and the maximum recorded readings of each instrument since the previous annual inspection;

There is no instrumentation at this impoundment.

(iii) The approximate minimum, maximum and present depth and elevation of impounded water and CCR since the previous annual inspection;

Since this is the first formal annual CCR Rule inspection, information regarding minimums and maximums since the previous annual inspection are not available.

Upper Ash Pond - The depth of coal ash and the elevation of the pool level on October 7, 2015 was estimated to be approximately 62 ft and EL 458.3, respectively.

Lower Ash Pond - The depth of coal ash and the elevation of the pool level on October 7, 2015 was estimated to be approximately 53 ft and EL 442.3, respectively.

(iv) The storage capacity of the impounding structure at the time of the inspection;

Upper Ash Pond – The storage capacity of the impounding structure is approximately 4,700,000 yd^3.

Lower Ash Pond - Based on information provided by others, the storage capacity of the impounding structure is approximately 2,900,000 yd^3.

(v) The approximate volume of the impounded water and CCR at the time of inspection;

Upper Ash Pond - Based on information provided by others, the approximate volume of water and CCR are 500,000 yd^3 and 3,700,000 yd^3, respectively.

Lower Ash Pond - Based on information provided by others, the approximate volume of water and CCR are 300,000 yd^3 and 2,300,000 yd^3, respectively.

(vi) Any appearances of an actual or potential structural weakness of the CCR unit, in addition to any existing conditions that are disrupting or have the potential to disrupt the operation and safety of the CCR unit and appurtenant structures; and

The visual inspection performed on October 7, 2015 did not reveal any actual or potential structural weaknesses

(vii) Any other change(s) which may have affected the stability or operation of the impounding structure since the previous annual inspection.

None.

While considering our observations and recommendations, it should be noted that the overall condition of the A.B. Brown Pond System's dams on the day of our inspection was considered SATISFACTORY, indicating that no existing or potential dam safety deficiencies were noted at this time.

The Dam Inspection Reports are provided in Appendices A and B, along with observations made during the inspection on October 7, 2015. A Site Plan highlighting the locations of the dams is provided in Appendix C.

We appreciate the opportunity to assist you with this project. If you have any questions concerning information contained in the report, or if the condition of the dam should change significantly from that described herein, please do not hesitate to call either of the undersigned at 317.849.4990.

Sincerely,
ATC Group Services LLC

Brent A. Miller, CHMM
Senior Project Scientist

Donald L. Bryenton, P.E.
Principal Engineer

DONALD LEE BRYENTON
REGISTERED
№
17877
STATE OF
INDIANA
PROFESSIONAL ENGINEER

Copies: (3) Lisa Messinger – SIGECO

APPENDICES

APPENDIX A: LOWER ASH POND

SECTION 1: DAM INSPECTION REPORT
SECTION 2: SUMMARY OF OBSERVATIONS

APPENDIX A: LOWER ASH POND

SECTION 1: DAM INSPECTION REPORT

SUGGESTED DAM INSPECTION REPORT (Refer to pages 5 and 6 for instructions.)

Print Form

Name of Professional Conducting Inspection	Professional License No. (Indiana)
Don Bryenton	17877
Business Address	**Phone: (day) 317 - 849 - 4990**
ATC Group Services LLC, 7988 Centerpoint Dr., St. 100, Indianapolis, IN 46256	(evening) ___ - ___ - ___

Company Name ATC Group Services LLC

INSPECTION PREPARATION: Reviewed all pertinent technical documentation related to this dam and site in the State's and the Owner's files: Yes ☒ No ☐ Comment

MULTIDISCIPINARY:I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines, in additional to the general civil engineering, may include geotechnical, geological, hydrologic, structural, and mechanical. Yes ☒ No ☐ Comment

Dam Name	Quad.	Date of Inspection
A.B. Brown Station Lower Dam	West Franklin	10 / 7 / 15

State Dam ID	Permit (if unapproved see pg. 6)	County	Sec.	T.	R.	Last Inspection
65-7	D-4405 (Rev. 1)	Posey	24	7 S	12 W	9 / 8 / 14

Owners Name	Owner's Phone
Southern Indiana Gas and Electric	(812) 491-4787

Address/Zip Code
8511 Welborn Road, Mt. Vernon, IN 47620

Contact's Name	Contact's Phone	Spillway Width	Ft. FBD.
Angie Scheller	(day) 812 - 491 - 4787 (evening) 812 - 568 - 8925	Top 60 Bot. 80	6

Hazard	Drainage Area	Surface Area	Height	Crest Length	Crest Width	Inlet Below Crest	Slope
High	0.42 MI^2	52 AC	70 FT	1540 FT	20 FT	FT	Up 3(H):1(V) Down 3(H):1(V)

FIELD CONDITIONS OBSERVED
Water Level - Below Dam Crest ~8 Ft.
Ground Moisture Condition: Dry ☒ Wet ☐ Snowcover ☐ Other

DRAWDOWN STRUCTURE
☐ Yes ☒ None
Comment

MONITORING ☐ Yes ☒ None [☐ Gage Rod ☐ Piezometers ☐ Seepage Weirs ☐ Survey Monuments ☐ Other]
Comments

A UPSTREAM SLOPE

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (A-1) None ☐ (A-2) Riprap - Missing, Sparse, Displaced, Weathered ☐ (A-3) Wave Erosion-with Scarps ☐ (A-4) Cracks-with Displacement ☐ (A-5) Sinkhole ☐ (A-6) Appears Too Steep ☐ (A-7) Depressions or Bulges ☐ (A-8) Slides ☐ (A-9) Animal Burrows ☐ (A-10) Trees, Brush, Briars ☐ (A-11) Other
Comments:

B CREST

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (B-1) None ☐ (B-2) Ruts or Puddles ☐ (B-3) Erosion ☐ (B-4) Cracks with Displacement ☐ (B-5) Sinkholes ☐ (B-6) Not Wide Enough ☐ (B-7) Low Area ☐ (B-8) Misalignment ☐ (B-9) Inadequate Surface Drainage ☐ (B-10) Trees, Brush, Briars ☐ (B-11) Other
Comments:

The crest of the dam is covered with crushed stone.

Spillway Width refers to the open channel (typically the emergency or auxiliary spillway) at the control section.
Ft. FBD. refers to the vertical distance from the emergency (auxiliary) spillway control section to the lowest point of the crest of the dam.
Inlet Below Crest refers to the vertical distance from the inlet of the principal spillway to the crest of the dam.

DAM NAME A.B. Brown Station Lower Dam STATE DAM I.D. 65-7 DATE 10 /07 /15

C DOWNSTREAM SLOPE

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☐ (C-1) None ☐ (C-2) Livestock Damage ☒ (C-3) Erosion or Gullies ☐ (C-4) Cracks with Displacement ☐ (C-5) Sinkholes ☐ (C-6) Appears too Steep ☐ (C-7) Depression or Bulges ☐ (C-8) Slide ☐ (C-9) Soft Areas ☐ (C-10) Trees, Brush, Briars ☐ (C-11) Animal Burrows ☒ (C-12)Other Vegetation
Comments:

Minor isolated areas of shallow erosion were noted - repair as part of on-going maintenance. Isolated areas with sparse vegetation - repair as part of on-going maintenance.

D SEEPAGE

GOOD (NONE)	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (D-1) None ☐ (D-2) Saturated Embankment Area ☐ (D-3) Seepage Exits on Embankment ☐ (D-4) Seepage Exits at Point Source ☐ (D-5) Seepage Area at Toe ☐ (D-6) Flow Adjacent to Outlet ☐ (D-7) Seepage Clear/Muddy
[**DRAIN OUTFALLS SEEN** X No ___ Yes ☐ (D-8) Flow Clear/Muddy ☐ (D-9) Dry/Obstructed]
☐ (D-10) Other _____ Describe location of drains and indicate amount and quality of discharge.
Comments:

No wet areas noted on downstream slope or top of intermediate berm.

E PRINCIPAL SPILLWAY

GOOD	☐
ACCEPTABLE	☒
DEFICIENT	☐
POOR	☐

DESCRIPTION: 36 in. dia. RCP with invert at normal pool EL444

PROBLEMS NOTED: ☐ (E-1) None ☐ (E-2) Deterioration ☐ (E-3) Separation ☐ (E-4) Cracking ☐ (E-5) Inlet, Outlet Deficiency ☐ (E-6) Stilling Basin Inadequacies ☐ (E-7) Trash Rack ☒ (E-8) Other _____
Comments:

A discharge of less than 1 gpm of clear water was noted at the Principal Spillway Outlet. The pool level was at least 1.5 ft below the drop inlet at the time of the inspection. Based on video survey performed by others in October 2014, the discharge is a result of water dripping from some of the joints and minor cracks in the piping. Continue to monitor rate of discharge and turbidity weekly. If discharge rate increases or become turbid, investigate immediately. A low level alarm was added to alert the plant of loss of water volume in the reservoir.

F AUXILIARY SPILLWAY

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

DESCRIPTION: 30 ft bottom width trapezoidal spillway w/ 5H:1V sideslopes and spillway EL 447.

PROBLEMS NOTED: ☐ (F-1) None ☐ (F-2) No Auxiliary Spillway Found ☐ (F-3) Erosion-with Backcutting ☐ (F-4) Crack with Displacement ☐ (F-5) Appears to be Structurally Inadequate ☐ (F-6) Appears too Small ☐ (F-7) Inadequate Freeboard ☒ (F-8) Flow Obstructed ☐ (F-9) Concrete Deteriorated/Undermined ☐ (F-10) Other _____
Comments:

Remove fragmities present at the inlet to the emergency spillway to reduce the risk of creating an obstruction to flow. Maintain area as part of the fragmities control program used for the upstream slope.

G MAINTENANCE AND REPAIRS

GOOD	☐
ACCEPTABLE	☒
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☐ (G-1) None ☐ (G-2) Access Road Needs Maintenance ☐ (G-3) Cattle Damage ☐ (G-4) Spillway Obstruction ☐ (G-5) Brush, Weeds, Tall Grass, on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-6) Trees on Upstream Slope, Crest, Downstream Slope ☐ (G-7) Rodent Activity on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-8) Deteriorated Concrete-Facing, Outlet, Spillway ☐ (G-9) Gate and/or Drawdown Need Repair ☐ (G-10) Other _____
Comments:

Continue to maintain drop inlet structures for diversion berms on Intermediate Berm.

H OVERALL CONDITIONS

Based on this inspection and recent file review, the overall surficial condition is determined to be: ☒ (H-1) Satisfactory ☐ (H-2) Fair ☐ (H-3) Conditionally Poor ☐ (H-4) Poor ☐ (H-5) Unsatisfactory

IMPORTANT: IF THIS RATING IS DIFFERENT THAN PREVIOUS IDNR RATING, PLEASE ATTACH EXPLANATION AND REASONS FOR CHANGE ON PAGE 4.

DAM NAME A.B. Brown Station Lower Dam STATE DAM I.D. 65-7 DATE 10 / 07 / 15

RECOMMENDATIONS AND ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE-MINOR REPAIR-MONITORING

☐ (1) Provide Additional Erosion Protection: _____

☐ (2) Mow: _____

☐ (3) Clear Trees and/or Brush From: _____

☐ (4) Initiate Rodent Control Program and Properly Backfill Existing Holes: _____

☐ (5) Repair: _____

☐ (6) Provide Surface Drainage For: Continue to remove debris from diversion berm drop inlet structures as needed.

☐ (7) Monitor: Rate and turbidity of discharge from the Principal Spillway Outlet Pipe weekly.

☐ (8) Other: Remove fragmities from inlet section of emergency spillway.

☐ (9) Other: _____

ENGINEERING-EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:

(Plans & Specifications must be approved by State prior to construction.)

☐ (10) Prepare Plans and Specifications for the Rehabilitation of the Dam: _____

☐ (11) Prepare As-Built Drawings of: _____

☐ (12) Perform a Geotechnical Investigation to Evaluate the Stability of the Dam: _____

☐ (13) Perform a Hydrologic Study to Determine Required Spillway Size: _____

☐ (14) Prepare Plans and Specifications for an Adequate Spillway: _____

☐ (15) Set up a Monitoring Program: _____

☐ (16) Refer to Unapproved Status of Dam: _____

☐ (17) Develop an Emergency Action Plan: _____

☐ (18) Other: _____

☐ (19) Other: _____

Recommended schedule for upgrades/comments (Please prioritize and note importance of each item.)

1. Continue to control the growth of fragmities in the riprap on the upstream slope and expand control area to the entrance of the emergency spillway.
2. The trash racks on the drop inlets on the intermediate berm should be inspected regularly, especially after the vegetation on the dam has been mowed, and the debris removed as needed.
3. Monitor the quantity and turbidity of the discharge from the Principal Spillway Outlet Pipe weekly. If the rate of discharge increases, or if fines are noted in the discharge, initiate an investigation to develop a repair plan.

Photographs ☒ Attachments ☒

ENGINEER'S INSTRUCTION Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory two-year inspections. Yes ☒ No ☐

Comment

Professional Engineer's Signature Ronald L. Eggerton Date 1/11/16

Reviewed By _____ Date

Owner/Owner's Representative

EXPLANATION FOR CHANGE IN RATINGS (Describe all repairs, upgrades or improvements made if dam conditions and rating have improved since the last inspection. Describe deteriorating conditions if ratings have worsened.)

REASONS FOR RATING CHANGE:

PREVIOUS RECOMMENDATIONS FOR MAINTENANCE, REPAIRS, AND UPGRADES:

HAVE THEY BEEN PERFORMED ☒ YES ☐ NO (If no, please explain:)

Supporting Documentation

Photographs ☒ Attachments ☒ Calculations ☐ Drawings ☒ Other ☐

Comments:

INSTRUCTIONS FOR COMPLETING DAM VISUAL INSPECTION REPORT

1. Complete all items that are applicable; if not applicable, write in "N/A". For concrete dams, complete all applicable items and use "comments" section to cover items not included in the check boxes. Also indicate that the dam is concrete in the comments section.

2. Use page 6 to determine ratings of each dam component (items A through G) and for Overall Conditions (Item H).

3. Please write legibly and concisely.

4. Inspector must be knowledgeable with the type of dam, materials, and components being inspected. If not, qualified assistance shall be engaged.

5. The inspector shall review the dam owner's and IDNR project files prior to the inspection. Previous inspection reports shall be closely reviewed for previous problems and deficiencies.

6. If the ratings of the components (items A through G) or the Overall Conditions (item H) of the dam have changed since the last inspection, please complete page 4. If a rating has improved, dam repairs, improvements, analyses, or maintenance must have been performed and documented on page 4.

7. For a dam to have a satisfactory "Overall Conditions" rating, it must have no existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including infrequent hydrologic events (PMP for high hazard dams) and seismic events. The dam owner's project files must contain hydrologic and hydraulic analyses of the dam and its spillways to verify performance. The files must also contain slope stability analyses to verify embankment stability under full reservoir conditions and rapid-draw down conditions. The dam and all of its components must meet current IDNR and design standards. "Normal" deficiencies such as minor erosion, minor seepage, or normal concrete aging may not make a dam unsatisfactory or unacceptable. For a satisfactory "Overall Conditions" rating to be assigned, items A through G generally should all have a "good" rating; however, in some cases an "acceptable" rating may be satisfactory if the "Problems Noted" are minor, or "normal" conditions, such as minor erosion rills, small puddles on crest, or if grass needs mowed, but is in good condition.

8. An inspection report form must be submitted to IDNR along with a formal technical inspection report as described in Chapter 4.0 of Part 3 of the Indiana Dam Safety Inspection Manual.

9. Please sign and date this page in the space below to verify that you have read and understand these instructions.

Inspector's Signature: Donald L Dugan Date: 1/11/14

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, PRINCIPAL SPILLWAY, AUXILIARY SPILLWAY

GOOD	ACCEPTABLE	DEFICIENT	POOR
In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	Continued deterioration and/or unusual loading may threaten the safety of the dam.	Conditions observed in this area appear to threaten the safety of the dam. Conditions observed in this area are unacceptable.

CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD (NONE)	ACCEPTABLE	DEFICIENT	POOR
No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.	Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	Excessive seepage exists at areas other than drain outfalls and other designed drains. Seepage needs to be evaluated. Increased flow and/or continued deterioration in seepage conditions may threaten the safety of the dam.	Excessive seepage conditions observed appear to threaten the safety of the dam and is unacceptable. Examples: 1) Designed drain or seepage flows have increased without increase in reservoir level. 2) Drain or seepage flows contain sediment. i.e., muddy water or particles in jar samples. 3) Widespread seepage, concentrated seepage or ponding appears to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD	ACCEPTABLE	DEFICIENT	POOR
Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	Level of maintenance of the dam needs significant improvement. Major repairs may be required. Continued neglect of maintenance may threaten the safety of the dam.	Dam does not receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam. Level of maintenance is unacceptable.

OVERALL CONDITIONS

SATISFACTORY - No existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including such events as infrequent hydrologic and/or seismic events. Project Files contain necessary hydrologic, and other engineering calculations to verify dam safety and performance.

FAIR - No existing dam safety deficiencies are recognized for normal loading conditions. Infrequent hydrologic and/or seismic events would probably result in a dam safety deficiency.

CONDITIONALLY POOR - A potential safety deficiency is recognized for unusual loading conditions which may realistically occur during the expected life of the structure. CONDITIONALLY POOR may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency; further investigations and studies are necessary.

POOR - A potential dam safety deficiency is clearly recognized for normal loading conditions. Immediate actions to resolve the deficiency are recommended; reservoir restrictions may be necessary until problem resolution.

UNSATISFACTORY - A dam safety deficiency exists for normal conditions. Immediate remedial action is required for problem resolution.

HAZARD CLASSIFICATIONS OF DAMS (STRUCTURE)

LOW HAZARD- A structure the failure of which may damage farm buildings, agricultural land, or local roads

SIGNIFICANT HAZARD- A structure the failure of which may damage isolated homes and highways, or cause the temporary interruption of public utility services.

HIGH HAZARD-A structure the failure of which may cause the loss of life and serious damage to homes, industrial and commercial buildings, public utilities, major highways, or railroads.

UNAPPROVED STATUS OF DAM

A dam that has been given an unapproved status (see entry for permit) means that plans, construction specifications, hydraulic analyses, and/or a geotechnical investigation on your dam, proving the safety of the structure, have not been received and approved by the Indiana Department of Natural Resources (IDNR). IDNR records indicate that no progress has been made to secure this approval. The fact that the dam is inspected under the Regulation of Dams Act (IC 14-27-7.5) in no way alters the illegal status of the structures.

If your dam is indicated to be unapproved, it is requested that your engineer contact the Indiana Department of Natural Resources,

APPENDIX A: LOWER ASH POND

SECTION 2: SUMMARY OF OBSERVATIONS

A. B. BROWN STATION
LOWER DAM OBSERVATIONS
10-7-15

- **Crest of dam, EL 450, is lined with crushed stone and is in good condition.**

- **Upstream slope is riprap covered and is in good condition. No problems were noted along the upstream slope.**

- **Downstream slope is grass covered and is in good condition. Height of vegetative cover being maintained at 6 inches or less.**

- **The top of the intermediate berm is grass covered and in good condition. No wet spots were noted on the berm during this inspection.**

- **The downstream slope of the intermediate berm is grass covered and is in good condition.**

- **The normal pool elevation is controlled below the Principal Spillway inlet elevation, EL 444, by pumping water back for reuse to the A.B. Brown Station to limit/prevent discharge through Principal Spillway Structure. The Principal Spillway inlet pipe is in good condition.**

- **The Principal Spillway outlet pipe and headwall appear to be in good condition. However, flow (less than 1 gpm of clear water) was noted discharging from the pipe at the time of this inspection. Since the elevation of the water in the reservoir is below the principal spillway inlet, the source of the water discharging from the principal spillway outlet pipe is assumed to be from water dripping out of the pipe joints as noted in the 2014 video inspection of the pipe. Weekly observations of the quantity and turbidity of discharge should be continued.**

- **The dam is equipped with a riprap-lined Emergency Spillway, spillway EL 447. The downstream slope of the emergency spillway, as well as its downstream outlet channel are clear of trees and brush. Fragmities noted at the entrance of the emergency spillway should be removed and the area maintained to minimize the potential for obstructions.**

- **Surface water runoff from the downstream slope and the top of the toe berm is controlled by a diversion berm. The diversion berm directs the runoff to a series of drop inlet pipes that are equipped with trash racks. The trash racks were clear at the time of the inspection. The drop inlets should be inspected regularly and debris removed as necessary to allow the system to function properly.**

APPENDIX B: UPPER ASH POND

SECTION1: DAM INSPECTION REPORT
SECTION 2: SUMMARY OF OBSERVATIONS

APPENDIX B: UPPER ASH POND

SECTION 1: DAM INSPECTION REPORT

Print Form

SUGGESTED DAM INSPECTION REPORT (Refer to pages 5 and 6 for instructions.)

Name of Professional Conducting Inspection	Professional License No. (Indiana)
Don Bryenton	17877
Business Address	**Phone: (day) 317 - 849 - 4990**
ATC Group Services, 7988 Centerpoint Dr., St. 100, Indianapolis, IN 46256	(evening) ___ - ___ - ___

Company Name ATC Group Services LLC

INSPECTION PREPARATION: Reviewed all pertinent technical documentation related to this dam and site in the State's and the Owner's files: Yes ☒ No ☐ Comment

MULTIDISCIPINARY:I am experienced in the technical disciplines or I am working with other professionals experienced in the technical disciplines to properly inspect this dam and appurtenant works. Technical disciplines, in additional to the general civil engineering, may include geotechnical, geological, hydrologic, structural, and mechanical. Yes ☒ No ☐ Comment

Dam Name	Quad.	Date of Inspection
A.B. Brown Station Upper Dam	West Franklin	10 / 7 / 15

State Dam ID	Permit (if unapproved see pg. 6)	County	Sec.	T.		R.		Last Inspection
65-7	D-4405 (Rev. 1)	Posey	24	7	S	12	W	9 / 8 / 14

Owners Name	Owner's Phone
Southern Indiana Gas and Electric	(812) 491-4787

Address/Zip Code
8511 Welborn Road, Mt. Vernon, IN 47620

Contact's Name	Contact's Phone	Spillway Width	Ft. FBD.
Angie Scheller	(day) 812 - 491 - 4787 (evening) 812 - 568 - 8925	Top 60 Bot. 30	6

Hazard	Drainage Area	Surface Area	Height	Crest Length	Crest Width	Inlet Below Crest	Slope
High	0.25 MI^2	86 AC	20 FT	1100 FT	25 FT	FT	Up 5(H):1(V) Down 5(H):1(V)

FIELD CONDITIONS OBSERVED
Water Level - Below Dam Crest ~6 Ft.
Ground Moisture Condition: Dry ☒ Wet ☐ Snowcover ☐ Other ___

DRAWDOWN STRUCTURE
☐ Yes ☒ None
Comment ___

MONITORING ☐ Yes ☒ None [☐ Gage Rod ☐ Piezometers ☐ Seepage Weirs ☐ Survey Monuments ☐ Other]
Comments ___

A UPSTREAM SLOPE

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (A-1) None ☐ (A-2) Riprap - Missing, Sparse, Displaced, Weathered ☐ (A-3) Wave Erosion-with Scarps ☐ (A-4) Cracks-with Displacement ☐ (A-5) Sinkhole ☐ (A-6) Appears Too Steep ☐ (A-7) Depressions or Bulges ☐ (A-8) Slides ☐ (A-9) Animal Burrows ☐ (A-10) Trees, Brush, Briars ☐ (A-11) Other ___
Comments:

Upstream slope covered with riprap.

B CREST

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (B-1) None ☐ (B-2) Ruts or Puddles ☐ (B-3) Erosion ☐ (B-4) Cracks with Displacement ☐ (B-5) Sinkholes ☐ (B-6) Not Wide Enough ☐ (B-7) Low Area ☐ (B-8) Misalignment ☐ (B-9) Inadequate Surface Drainage ☐ (B-10) Trees, Brush, Briars ☐ (B-11) Other ___
Comments:

The crest of the dam is covered with crushed stone.

Spillway Width refers to the open channel (typically the emergency or auxiliary spillway) at the control section.
Ft. FBD. refers to the vertical distance from the emergency (auxiliary) spillway control section to the lowest point of the crest of the dam.
Inlet Below Crest refers to the vertical distance from the inlet of the principal spillway to the crest of the dam.

DAM NAME A.B. Brown Station Upper Dam STATE DAM I.D. 65-7 DATE 10 /07 /15

C DOWNSTREAM SLOPE

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (C-1) None ☐ (C-2) Livestock Damage ☐ (C-3) Erosion or Gullies ☐ (C-4) Cracks with Displacement ☐ (C-5) Sinkholes ☐ (C-6) Appears too Steep ☐ (C-7) Depression or Bulges ☐ (C-8) Slide ☐ (C-9) Soft Areas ☐ (C-10) Trees, Brush, Briars ☐ (C-11) Animal Burrows ☐ (C-12)Other_____
Comments:

Isolated areas of sparse vegetation.

D SEEPAGE

GOOD (NONE)	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (D-1) None ☐ (D-2) Saturated Embankment Area ☐ (D-3) Seepage Exits on Embankment ☐ (D-4) Seepage Exits at Point Source ☐ (D-5) Seepage Area at Toe ☐ (D-6) Flow Adjacent to Outlet ☐ (D-7) Seepage Clear/Muddy
[DRAIN OUTFALLS SEEN X **]** No ____ Yes ☐ (D-8) Flow Clear/Muddy ☐ (D-9) Dry/Obstructed]
☐ (D-10) Other_____Describe location of drains and indicate amount and quality of discharge.
Comments:

E PRINCIPAL SPILLWAY

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

DESCRIPTION: 60 inch RCP inlet to 24 inch barrel pipe. Current pool EL 458.3.

PROBLEMS NOTED: ☒ (E-1) None ☐ (E-2) Deterioration ☐ (E-3) Separation ☐ (E-4) Cracking ☐ (E-5) Inlet, Outlet Deficiency ☐ (E-6) Stilling Basin Inadequacies ☐ (E-7) Trash Rack ☐ (E-8) Other_____
Comments:

F AUXILIARY SPILLWAY

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

DESCRIPTION: 30 ft bottom width trapezoidal spillway w/ 5H:1V sideslopes and spillway EL 461.5.

PROBLEMS NOTED: ☒ (F-1) None ☐ (F-2) No Auxiliary Spillway Found ☐ (F-3) Erosion-with Backcutting ☐ (F-4) Crack with Displacement ☐ (F-5) Appears to be Structurally Inadequate ☐ (F-6) Appears too Small ☐ (F-7) Inadequate Freeboard ☐ (F-8) Flow Obstructed ☐ (F-9) Concrete Deteriorated/Undermined ☐ (F-10) Other _____
Comments:

G MAINTENANCE AND REPAIRS

GOOD	☒
ACCEPTABLE	☐
DEFICIENT	☐
POOR	☐

PROBLEMS NOTED: ☒ (G-1) None ☐ (G-2) Access Road Needs Maintenance ☐ (G-3) Cattle Damage ☐ (G-4) Spillway Obstruction ☐ (G-5) Brush, Weeds, Tall Grass, on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-6) Trees on Upstream Slope, Crest, Downstream Slope ☐ (G-7) Rodent Activity on Upstream Slope, Crest, Downstream Slope, Toe ☐ (G-8) Deteriorated Concrete-Facing, Outlet, Spillway ☐ (G-9) Gate and/or Drawdown Need Repair ☐ (G-10) Other _____
Comments:

H OVERALL CONDITIONS

Based on this inspection and recent file review, the overall surficial condition is determined to be: ☒ (H-1) Satisfactory ☐ (H-2) Fair ☐ (H-3) Conditionally Poor ☐ (H-4) Poor ☐ (H-5) Unsatisfactory

IMPORTANT: IF THIS RATING IS DIFFERENT THAN PREVIOUS IDNR RATING, PLEASE ATTACH EXPLANATION AND REASONS FOR CHANGE ON PAGE 4.

DAM NAME A.B. Brown Station Upper Dam STATE DAM I.D. 65-7 DATE 10 /07 /15

RECOMMENDATIONS AND ITEMS REQUIRING ACTION BY OWNER TO IMPROVE THE SAFETY OF THE DAM

MAINTENANCE-MINOR REPAIR-MONITORING

- ☐ (1) Provide Additional Erosion Protection: _____
- ☐ (2) Mow: _____
- ☐ (3) Clear Trees and/or Brush From: _____
- ☐ (4) Initiate Rodent Control Program and Properly Backfill Existing Holes: _____
- ☐ (5) Repair: _____
- ☐ (6) Provide Surface Drainage For: _____
- ☐ (7) Monitor: _____
- ☐ (8) Other: _____
- ☐ (9) Other: _____

ENGINEERING-EMPLOY AN ENGINEER EXPERIENCED IN DESIGN AND CONSTRUCTION OF DAMS TO:

(Plans & Specifications must be approved by State prior to construction.)

- ☐ (10) Prepare Plans and Specifications for the Rehabilitation of the Dam: _____
- ☐ (11) Prepare As-Built Drawings of: _____
- ☐ (12) Perform a Geotechnical Investigation to Evaluate the Stability of the Dam: _____
- ☐ (13) Perform a Hydrologic Study to Determine Required Spillway Size: _____
- ☐ (14) Prepare Plans and Specifications for an Adequate Spillway: _____
- ☐ (15) Set up a Monitoring Program: _____
- ☐ (16) Refer to Unapproved Status of Dam: _____
- ☐ (17) Develop an Emergency Action Plan: _____
- ☐ (18) Other: _____
- ☐ (19) Other: _____

Recommended schedule for upgrades/comments (Please prioritize and note importance of each item.)

Continue existing maintenance program.

Photographs ☒ Attachments ☒

ENGINEER'S INSTRUCTION Instructed owner on the safety concerns with the structure and how to monitor and inspect the dam and appurtenant works in the interim period between the regulatory two-year inspections. Yes ☒ No ☐

Comment

Professional Engineer's Signature Ronald L Bryant Date 1/11/16

Reviewed By _____ Date

Owner/Owner's Representative

EXPLANATION FOR CHANGE IN RATINGS (Describe all repairs, upgrades or improvements made if dam conditions and rating have improved since the last inspection. Describe deteriorating conditions if ratings have worsened.)

REASONS FOR RATING CHANGE:

PREVIOUS RECOMMENDATIONS FOR MAINTENANCE, REPAIRS, AND UPGRADES:

HAVE THEY BEEN PERFORMED ☒ YES ☐ NO (If no, please explain:)

Supporting Documentation

Photographs ☐ Attachments ☐ Calculations ☐ Drawings ☐ Other ☐

Comments:

INSTRUCTIONS FOR COMPLETING DAM VISUAL INSPECTION REPORT

1. Complete all items that are applicable; if not applicable, write in "N/A". For concrete dams, complete all applicable items and use "comments" section to cover items not included in the check boxes. Also indicate that the dam is concrete in the comments section.

2. Use page 6 to determine ratings of each dam component (items A through G) and for Overall Conditions (Item H).

3. Please write legibly and concisely.

4. Inspector must be knowledgeable with the type of dam, materials, and components being inspected. If not, qualified assistance shall be engaged.

5. The inspector shall review the dam owner's and IDNR project files prior to the inspection. Previous inspection reports shall be closely reviewed for previous problems and deficiencies.

6. If the ratings of the components (items A through G) or the Overall Conditions (item H) of the dam have changed since the last inspection, please complete page 4. If a rating has improved, dam repairs, improvements, analyses, or maintenance must have been performed and documented on page 4.

7. For a dam to have a satisfactory "Overall Conditions" rating, it must have no existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including infrequent hydrologic events (PMP for high hazard dams) and seismic events. The dam owner's project files must contain hydrologic and hydraulic analyses of the dam and its spillways to verify performance. The files must also contain slope stability analyses to verify embankment stability under full reservoir conditions and rapid-draw down conditions. The dam and all of its components must meet current IDNR and design standards. "Normal" deficiencies such as minor erosion, minor seepage, or normal concrete aging may not make a dam unsatisfactory or unacceptable. For a satisfactory "Overall Conditions" rating to be assigned, items A through G generally should all have a "good" rating; however, in some cases an "acceptable" rating may be satisfactory if the "Problems Noted" are minor, or "normal" conditions, such as minor erosion rills, small puddles on crest, or if grass needs mowed, but is in good condition.

8. An inspection report form must be submitted to IDNR along with a formal technical inspection report as described in Chapter 4.0 of Part 3 of the Indiana Dam Safety Inspection Manual.

9. Please sign and date this page in the space below to verify that you have read and understand these instructions.

Inspector's Signature: Ronald L. Bryant Date: 1/11/16

GUIDELINES FOR DETERMINING CONDITIONS

CONDITIONS OBSERVED - APPLIES TO UPSTREAM SLOPE, CREST, DOWNSTREAM SLOPE, PRINCIPAL SPILLWAY, AUXILIARY SPILLWAY

GOOD	ACCEPTABLE	DEFICIENT	POOR
In general, this part of the structure has a good appearance, and conditions observed in this area do not appear to threaten the safety of the dam.	Although general cross-section is maintained, surfaces may be irregular, eroded, rutted, spalled, or otherwise not in new condition. Conditions in this area do not currently appear to threaten the safety of the dam.	Continued deterioration and/or unusual loading may threaten the safety of the dam.	Conditions observed in this area appear to threaten the safety of the dam. Conditions observed in this area are unacceptable.

CONDITIONS OBSERVED - APPLIES TO SEEPAGE

GOOD (NONE)	ACCEPTABLE	DEFICIENT	POOR
No evidence of uncontrolled seepage. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions do not appear to threaten the safety of the dam.	Some seepage exists at areas other than the drain outfalls, or other designed drains. No unexplained increase in flows from designed drains. All seepage is clear. Seepage conditions observed do not currently appear to threaten the safety of the dam.	Excessive seepage exists at areas other than drain outfalls and other designed drains. Seepage needs to be evaluated. Increased flow and/or continued deterioration in seepage conditions may threaten the safety of the dam.	Excessive seepage conditions observed appear to threaten the safety of the dam and is unacceptable. Examples: 1) Designed drain or seepage flows have increased without increase in reservoir level. 2) Drain or seepage flows contain sediment. i.e., muddy water or particles in jar samples. 3) Widespread seepage, concentrated seepage or ponding appears to threaten the safety of the dam.

CONDITIONS OBSERVED - APPLIES TO MAINTENANCE AND REPAIR

GOOD	ACCEPTABLE	DEFICIENT	POOR
Dam appears to receive effective on-going maintenance and repair, and only a few minor items may need to be addressed.	Dam appears to receive maintenance, but some maintenance items need to be addressed. No major repairs are required.	Level of maintenance of the dam needs significant improvement. Major repairs may be required. Continued neglect of maintenance may threaten the safety of the dam.	Dam does not receive adequate maintenance. One or more items needing maintenance or repair has begun to threaten the safety of the dam. Level of maintenance is unacceptable.

OVERALL CONDITIONS

SATISFACTORY - No existing or potential dam safety deficiencies recognized. Safe performance is expected under all anticipated loading conditions, including such events as infrequent hydrologic and/or seismic events. Project Files contain necessary hydrologic, and other engineering calculations to verify dam safety and performance.

FAIR - No existing dam safety deficiencies are recognized for normal loading conditions. Infrequent hydrologic and/or seismic events would probably result in a dam safety deficiency.

CONDITIONALLY POOR - A potential safety deficiency is recognized for unusual loading conditions which may realistically occur during the expected life of the structure. CONDITIONALLY POOR may also be used when uncertainties exist as to critical analysis parameters which identify a potential dam safety deficiency; further investigations and studies are necessary.

POOR - A potential dam safety deficiency is clearly recognized for normal loading conditions. Immediate actions to resolve the deficiency are recommended; reservoir restrictions may be necessary until problem resolution.

UNSATISFACTORY - A dam safety deficiency exists for normal conditions. Immediate remedial action is required for problem resolution.

HAZARD CLASSIFICATIONS OF DAMS (STRUCTURE)

LOW HAZARD- A structure the failure of which may damage farm buildings, agricultural land, or local roads

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A dam that has been given an unapproved status (see entry for permit) means that plans, construction specifications, hydraulic analyses, and/or a geotechnical investigation on your dam, proving the safety of the structure, have not been received and approved by the Indiana Department of Natural Resources (IDNR). IDNR records indicate that no progress has been made to secure this approval. The fact that the dam is inspected under the Regulation of Dams Act (IC 14-27-7.5) in no way alters the illegal status of the structures.

If your dam is indicated to be unapproved, it is requested that your engineer contact the Indiana Department of Natural Resources,

APPENDIX B: UPPER ASH POND

SECTION 2: SUMMARY OF OBSERVATIONS

A. B. BROWN STATION
UPPER DAM OBSERVATIONS
10-7-15

- **Crest of dam is lined with crushed stone and is in good condition.**
- **Upstream slope is riprap covered and is in good condition.**
- **Downstream slope is grass covered and in good condition. Height of vegetative cover is being maintain at less than 6 inches.**
- **The normal pool elevation is controlled by a Principal Spillway drop inlet structure that discharges directly into the Lower Basin. The gate weir added in 2014 was in operation at the time of this field observation trip.**
- **The area around the principal spillway outlet pipe is clear of brush and is easily accessible. No problems noted at outlet pipe or outlet channel.**
- **The dam is equipped with an Emergency Spillway with spillway EL 461.5. The control section is grass lined and in good condition. The riprap lined emergency spillway outlet channel is clear of brush and small trees. No problems noted at the outlet channel.**

APPENDIX C: SITE PLAN

A.B. BROWN GENERATING STATION

UPPER ASH POND

LOWER ASH POND

UPPER ASH POND DAM

LOWER ASH POND DAM

DENSE BRUSH

BRUSH PILE

N

200 0 50 100 150 200

SCALE: 1" = 200'

LEGEND:

EMERGENCY SPILLWAY
Spillway Area Identification

APPROXIMATE DAM CREST
Dam Crest Area Identification

NOTE: ALL LOCATIONS ARE APPROXIMATE.

Revision:

Project Number: 170LF00110

Drawing File: SEE LEFT

Date: 12/15

Scale: AS SHOWN

App'd By:	Chkd. By:	Drn. By:
	DB	CR

Company Name:
A.B. BROWN GENERATING STATION
WEST FRANKLIN, INDIANA

ATC GROUP SERVICES LLC
Phone (+1)317.849.4990, Fax (+1)317.849.4278
7986 Centerpoint Drive, Suite 400, Indianapolis, Indiana 46256-3345
www.atcgroupservices.com

Drawing Title:
UPPER AND LOWER ASH POND DAM SYSTEM SITE PLAN
2015 TOPOGRAPHY
A.B. BROWN GENERATING STATION
WEST FRANKLIN, INDIANA

Sheet:

H:\2015\VECTREN CORPORATION\AB BROWN UPPER POND (1)\AB BROWN-PLT SITE 2015-2000SC.DWG, LAYOUT1-TITLE1