

### Coal Combustion Residuals Surface Impoundments

### Hazard Potential Classification Periodic Assessment Report

Conemaugh Generating Station Ash Filter Ponds New Florence, Pennsylvania

GAI Project Number: C151611.04, Task 002 October 2016 Rev. 01, October 2021



Prepared by: GAI Consultants, Inc.
Pittsburgh Office
385 East Waterfront Drive
Homestead, Pennsylvania 15120-5005

Prepared for: Conemaugh Generating Station 1442 Power Plant Road New Florence, Pennsylvania 15944-9154

### **Table of Contents**

Profe	essional I	Engineer Certification	ii
Asse	ssment i	Revisions	
1.0	Introdu	ction	1
2.0	Hazard	Potential Classification Criteria	2
3.0	3.1 3.2	Potential Classification Activities	2 3
4.0	Conclu	sions	4
5.0	Referer	nces	6
Eigur	o 1	Site Location Map	
•		•	
Figur	e 2	Photographic Map	

Topographic and Flow Direction Map

Attachment A Hazard Potential Classification Forms

© 2021 GAI CONSULTANTS

Figure 3

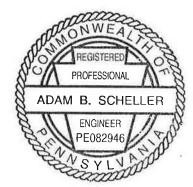


#### **Professional Engineer Certification**

The Periodic Hazard Potential Classification Assessment for the Conemaugh Generating Station Ash Filter Ponds was prepared by GAI Consultants, Inc. (GAI). The Assessment Report was based on certain information that, other than for information GAI originally prepared, GAI has relied on, but not independently verified. Therefore this Certification/Statement of Professional Opinion is limited to the information available to GAI at the time the Assessment Report was written. On the basis of and subject to the foregoing, it is my professional opinion as a Professional Engineer licensed in the State of Pennsylvania (PA) that the Assessment has been prepared in accordance with good and accepted engineering practices as exercised by other engineers practicing in the same discipline(s), under similar circumstances, and at the time and in the same locale. It is my professional opinion that the Periodic Hazard Potential Classification Assessment was prepared consistent with the requirements of the United States Environmental Protection Agency's "Standards for the Disposal of Coal Combustion Residuals in Landfills and Surface Impoundments," published in the Federal Register on April 17, 2015 with an effective date of October 19, 2015.

The use of the words "certification" and/or "certify" in this document shall be interpreted and construed as a Statement of Professional Opinion and is not and shall not to be interpreted or construed as a guarantee, warranty or legal opinion.

Adam B. Scheller, P.E. Engineering Manager





#### **Assessment Revisions**

Revision	Date	Reason	Description	Reviewer
0	Oct. 2016		Original Document, Initial Assessment	NRG, CB&I Inc.
1	Oct. 2021	Comprehensive review and as-needed revisions to conduct Periodic Assessment per CCR Rule, Section 257.73(f)(3) requirements (Periodic Assessment required every five years)	Remove NRG, additional miscellaneous administrative changes, Reevaluation of Hazard Potential Rating.	Conemaugh Station, GAI Consultants, Inc



#### 1.0 Introduction

On December 19, 2014, the Administrator of the United States Environmental Protection Agency signed the Disposal of Coal Combustion Residuals (CCR) from Electric Utilities final rule (the Rule). The Rule was published in the Federal Register on April 17, 2015, became effective on October 19, 2015, and is contained within amended portions of Title 40, Part 257 of the Code of Federal Regulations (CFR). The Rule establishes a comprehensive set of requirements for the disposal/management of CCR in landfills and surface impoundments at coal-fired power plants under Subtitle D of the Resource Conservation and Recovery Act. These requirements include compliance with location restrictions, design criteria, operating criteria, groundwater monitoring and corrective action criteria, and closure and post-closure care aspects.

Included with the design criteria under 40 CFR §257.73(a)(2)(i-ii) are requirements to conduct initial and periodic hazard potential classification assessments for all existing non-incised CCR surface impoundments. Pursuant to §257.53 (Definitions) of the Rule, this hazard potential classification is an assessment of "the possible adverse incremental consequences that result from the release of water or stored contents due to failure of the diked CCR surface impoundment or mis-operation of the diked CCR surface impoundment or its appurtenances." These assessments are to be certified by a professional engineer, must assign a low, significant, or high hazard potential rating to each CCR unit based on criteria provided in §257.53, and must provide the basis for the selected rating. The initial assessment must be completed no later than October 17, 2016, with subsequent periodic assessments required every 5 years.

The Conemaugh Generating Station (Station) is a coal-fired steam electric power generating station located in New Florence, Pennsylvania. The Station has four surface impoundments that are subject to this Rule, specifically identified as Ash Filter Ponds A, B, C, and D. The ponds are part of an ash water recycling system, and serve the multi-purpose function of receiving, storing, settling, and supplying water for bottom ash sluicing activities. Other components of the ash water recycling system include a distribution box (also known as the receiver box), ash dewatering bins (which receive sluice water from the bottom ash hoppers), an ash water recycle sump (AWRS), and recycling and level control pumps.

Water from the ponds drains via gravity to the AWRS, where it is subsequently pumped to the bottom ash hoppers during sluicing. Sluice water from the hoppers is sent to dewatering bins, and is decanted or drained from the bins and sent back to the ponds via the distribution box. Some water is introduced into the system via precipitation falling directly into and around the ponds, and from additional sources (such as sump pumps, drains, and plant processes) that are routed to the distribution box and AWRS locations. These sources help to replenish losses, providing an adequate, ongoing supply of sluice water.. In addition, there are overflow provisions for the ponds and the AWRS. Accumulated bottom ash is removed from the ponds during periodic cleanout activities and is transported to the Station's CCR landfill (the Ash/Refuse Disposal Site). The locations of the Station and the ponds are shown on Figure 1.

In 2016, the Station engaged the services of CB&I Environmental & Infrastructure, Inc. (CB&I) to conduct an initial review of the Ash Filter Ponds with respect to their size, configuration, and downstream features to develop respective hazard potential classifications for each of these CCR impoundments. This initial effort included the review of available background and design information and a field visit conducted on June 28, 2016 and culminated in the preparation of the Hazard Potential Classification Initial Assessment Report in October 2016

In 2021, the Station engaged the services of GAI Consultants Inc. (GAI) to conduct a periodic review of the Ash Filter Ponds with respect to their size, configuration, and downstream features to either confirm or revise the respective hazard potential classifications for each of the Ash Filter Ponds. This effort included the review of available background and design information, including the Initial Assessment Report, and a field visit conducted on October 6, 2021.



This Report has been prepared to identify the periodic hazard potential classification for the subject CCR impoundments, and to provide documentation required by the Rule, including the basis for the classification and certification of the findings by a professional engineer. Beyond this introductory section, Section 2.0 outlines the regulatory criteria for selection of a hazard potential classification; Section 3.0 describes the activities performed to support the hazard potential classification; and Section 4.0 provides the formal hazard rating assigned to each of the impoundments. Section 5.0 lists the references that were consulted during this assessment.

As required, this Periodic Assessment Report will be appropriately placed in the facility's operating record pursuant to §257.105(f)(5), noticed to the State Director per §257.106(f)(4), and posted to the publicly accessible internet site pursuant to §257.107(f)(4).

#### 2.0 Hazard Potential Classification Criteria

The Rule presents hazard classification criteria as a means to categorize "the possible adverse incremental consequences that result from the release of water or stored contents due to failure or mis-operation of the diked CCR surface impoundment or its appurtenances." From §257.53, there are three potential Hazard Classifications for CCR impoundments: Low, Significant, and High. The criteria for each category are as follows:

- Low Hazard Potential Failure or mis-operation of the diked surface impoundment results in no probable loss of human life and low economic and/or environmental losses. Losses are principally limited to the surface impoundment owner's property.
- Significant Hazard Potential A failure or mis-operation of the diked surface impoundment results in no probable loss of human life, but can cause disruption of lifeline facilities, or impact other concerns.
- High Hazard Potential Failure or mis-operation of the diked surface impoundment will probably cause loss of human life.

#### 3.0 Hazard Potential Classification Activities

The hazard potential classification process included three main steps: review of background and design information for the impoundments; conduct a field visit to view the impoundments and surrounding area; and selection of a hazard potential rating for each impoundment using regulatory criteria presented in the Rule.

#### 3.1 Review of Background and Design Information

Prior to the field visit, GAI collected and reviewed available background and design information regarding the impoundments and surrounding area, including mapping, aerial images, and reports and other documents provided by the Station. Mapping and aerial images were utilized to prepare Figures 1 through 3 included with this report. Pertinent information identified during development of the figures included ground surface elevations and topography, property boundary lines, structures, surface water features, and infrastructure in the vicinity of the impoundments.

The impoundments are situated toward the southern reaches of the Station property, just southwest of the primary operations area. The nearest Station property boundary is to the south, and abuts the Conemaugh River. The ponds are located together in a common impoundment area and share an overall perimeter dike. This diked area is bordered by a station haul road to the north and south, a haul road and limestone storage area to the west, and the flue gas desulfurization (FGD) system to the east. A rail corridor runs through the Station property between the impoundment area and the Conemaugh River. At its closest, the rail corridor is over 300 feet away from the toe of the basin impoundment area.

Topographic information for the subject area was obtained from a site survey by L. R. Kimball performed in 2010 (Kimball, 2010) and from a site survey perform by GAI in January 2020 (GAI, 2020). The overall topography in the vicinity of the ponds slopes southward toward the Conemaugh River. The



common diked area has a crest elevation of approximately 1091 to 1095 feet mean sea level (ft msl). The greatest exterior embankment heights occur on the western and southern sides, while relief on the northern and eastern sides is minimal. The western and southern embankments slope to the west and south, respectively, to perimeter channels at the toe, at an approximate elevation of 1080 ft msl. These perimeter channels convey water southward and westward, respectively, to a roadside culvert. Drainage entering the culvert passes below the site access road and is then routed southward through undeveloped Station property and eventually beneath the rail corridor in the direction of the Conemaugh River (located approximately 0.2 to 0.3 miles from the impoundments). Under normal conditions, the majority of runoff following this flow path would be expected to infiltrate before ever reaching the River. Toward the north and east, the ground surface generally slopes away from the ponds, toward a grassy area and perimeter road to the north, and toward the FGD system to the east.

Infrastructure in the vicinity of the ponds is limited to the onsite access road, an elevated limestone conveyor, and the rail corridor. The closest nearby properties and structures are 0.3 to 0.5 miles southwest of the ponds and are separated from the Station property by the Conemaugh River.

Several wetlands (swamps) are present in the low-lying area between the ponds and Conemaugh River, with the majority of these occurring south of the rail corridor. A delineation of wetlands and also a Pennsylvania Natural Diversity Inventory were completed in the anticipated inundation area as part of a study conducted in advance of the rail line construction in 2005. The study indicated that in general, the wetlands in the vicinity of the rail line and downstream of the ponds are palustrine emergent (with precipitation and runoff as the only water sources) and palustrine scrub-shrub wetlands. No critical or endangered specifies were found to be present in the vicinity of the rail project (GAI, 2005).

As part of this hazard assessment, design and operational background information for the ponds was reviewed. It is important to note that the classification required by §257.73 is based on the consequences of the impoundment failing, and not on the likelihood of a failure. Subsequently, a limited amount of design and operational information was pertinent to this evaluation. Specifically, the contents and capacities of the ponds were considered as information relevant to estimating an inundation area and further determining the associated impacts that would occur under a breach scenario.

Each pond has a storage capacity of 6.2 acre-feet (ac-ft), based on a combined operational capacity for three ponds of 18.6 ac-ft (Dewberry Consultants, 2014). Only three of the four ponds are in use at any one time, with the fourth out of service for maintenance and cleaning purposes. For the purpose of this hazard assessment, each pond is considered as a separate unit, as the failure or breach of one unit would not directly translate into the failure or breach of additional units. The capacity of each pond was considered relative to the downstream areas to help identify the approximate potential inundation area. In addition, the single pond capacity was compared to a threshold value of 20 ac-ft, at which impoundments of five feet in height or more require the compilation and submittal of additional construction and stability-related information. Due to the capacity of each pond being less than 20 ac-ft, no evaluations beyond hazard potential classifications are required by §257.73.

#### 3.2 Field Visit

On October 6, 2021, Adam Scheller (GAI engineer) met with John Shimshock (Station Environmental Specialist) to perform a site walk and visual reconnaissance of the ponds and surrounding area. GAI walked the perimeter of the ponds and confirmed that the ash water recycling features appeared to be in overall agreement with the previously reviewed reports and documents. GAI visually assessed upstream conditions for run-on potential and likely breach flow path downstream conditions, respectively. Due to the diked construction of the impoundment area, potential run-on is minimal, limited to precipitation falling directly on and in the immediate vicinity of the ponds. With respect to the most likely flow path during breach conditions, breaches to the west (for ponds A, B, C, or D) or south (pond D) were considered, as the lack of significant embankments to the north and east would preclude failure in those directions. Access roads to the west and south of the ponds, as well as an elevated



limestone conveyor system to the south of the ponds, were noted to be present and potentially impacted during a breach scenario.

Stormwater channels were observed along the western and southern embankment toes, converging at the southeast corner of the embankment area at a culvert passing under the site access road. Downstream of the culvert, a series of swales, channels, and other conveyance features direct flow southward, under the rail corridor and through undeveloped wooded and brush-covered Station property, whereupon infiltration of the majority of the runoff would be expected. This area is topographically lower than a perimeter access way that runs along the Conemaugh River, preventing direct discharge from the area to the river. Other than the site access road, conveyor, and rail corridor, no notable manmade features (structures, utilities, etc.) were observed in the downstream area near the ponds.

#### 3.3 Hazard Potential Classification Determination

The information gathered from review of background and design documents/drawings and during the site visit was utilized to complete a Hazard Potential Classification Form (Form) for each impoundment, contained in Attachment A of this report. The Form was developed to provide a comprehensive, methodical, and quantitative means to select a hazard rating. The following types of impacts were considered: loss of human life, economic losses, environmental losses, damage to lifeline facilities, and other concerns (such as impacts to critical facilities, typically represented by medical facilities, transportation facilities, etc.). A worst-case failure scenario was considered to be a catastrophic dike failure and sudden release of the impoundment contents (i.e., a breach scenario). As noted previously, the failure of one pond would not tend to cause the failure of the others; as such, each pond was considered independently. Due to similarities between the ponds, the findings and conclusions are consistent between the ponds.

During a pond breach scenario, it would be expected that solid material from the structure's berm and also settled solids contained in the pond would generally deposit in the near vicinity of the pond toe. Some of the finer sediment from the pond may be transported further, but it is anticipated that the majority of solid material would drop out near the access road and in the large flat area north of the rail corridor. Any flow continuing to the rail corridor would be further filtered and attenuated by the elevated and ballasted rail bed. It is anticipated that flow passing the rail lines and continuing toward the River would be predominantly water, and that the flow would further dissipate across the relatively flat, undeveloped area within the boundary of the Station property. Relatively higher topography along the Conemaugh River prevents direct discharge from this area to the river. There are no foreseeable impacts to neighboring properties. Aside from possible temporary impacts to an internal Station roadway and less likely to the conveyor system, no adverse impacts to infrastructure are anticipated. Additionally, no adverse impacts to structures, utilities, lifeline or critical facilities, or natural areas are anticipated.

#### 4.0 Conclusions

Based on the review of background and design information, observations made during the site visit, and hazard potential evaluation activities performed as part of this assessment, the following hazard ratings were selected for the Conemaugh Station CCR impoundments:

Impoundment Name	Hazard Potential Rating
Ash Filter Pond A	Low
Ash Filter Pond B	Low
Ash Filter Pond C	Low
Ash Filter Pond D	Low

These ratings are based on the determination that a failure or mis-operation of these impoundments would be unlikely to cause a loss of human life and would cause minor economic or environmental



losses principally limited to the surface impoundment owner's property. In addition, a failure or mis-operation would be unlikely to impact lifeline or critical facilities or cause other significant negative effects.



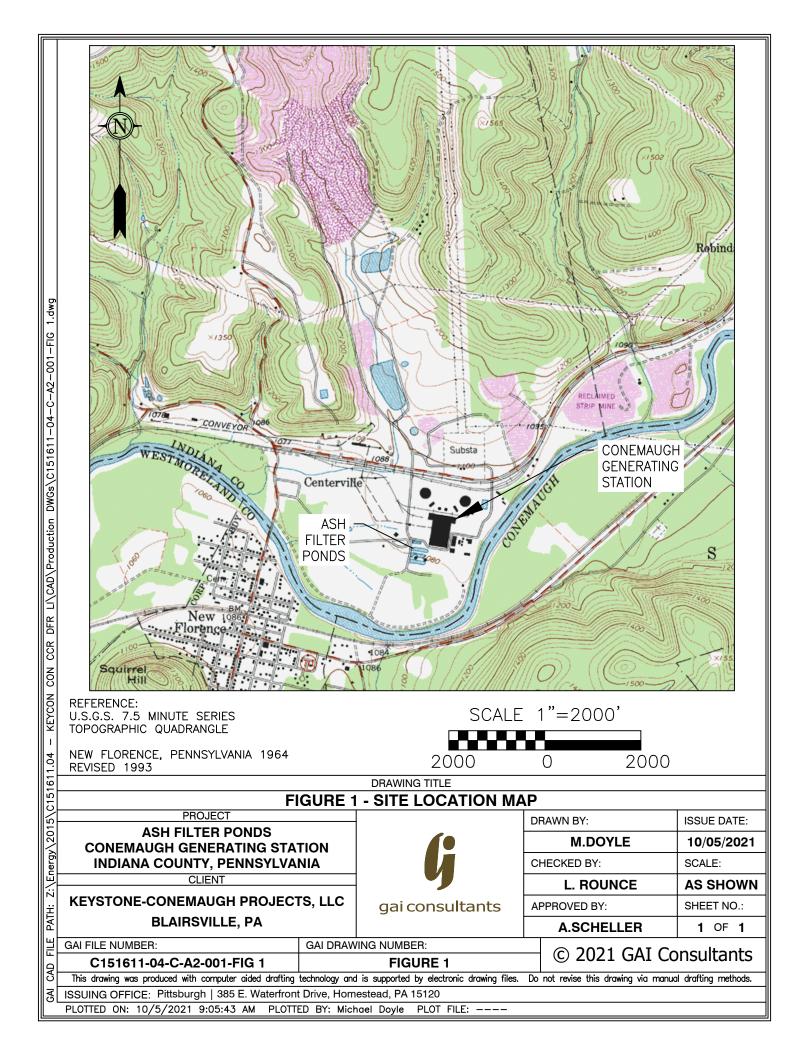
#### 5.0 References

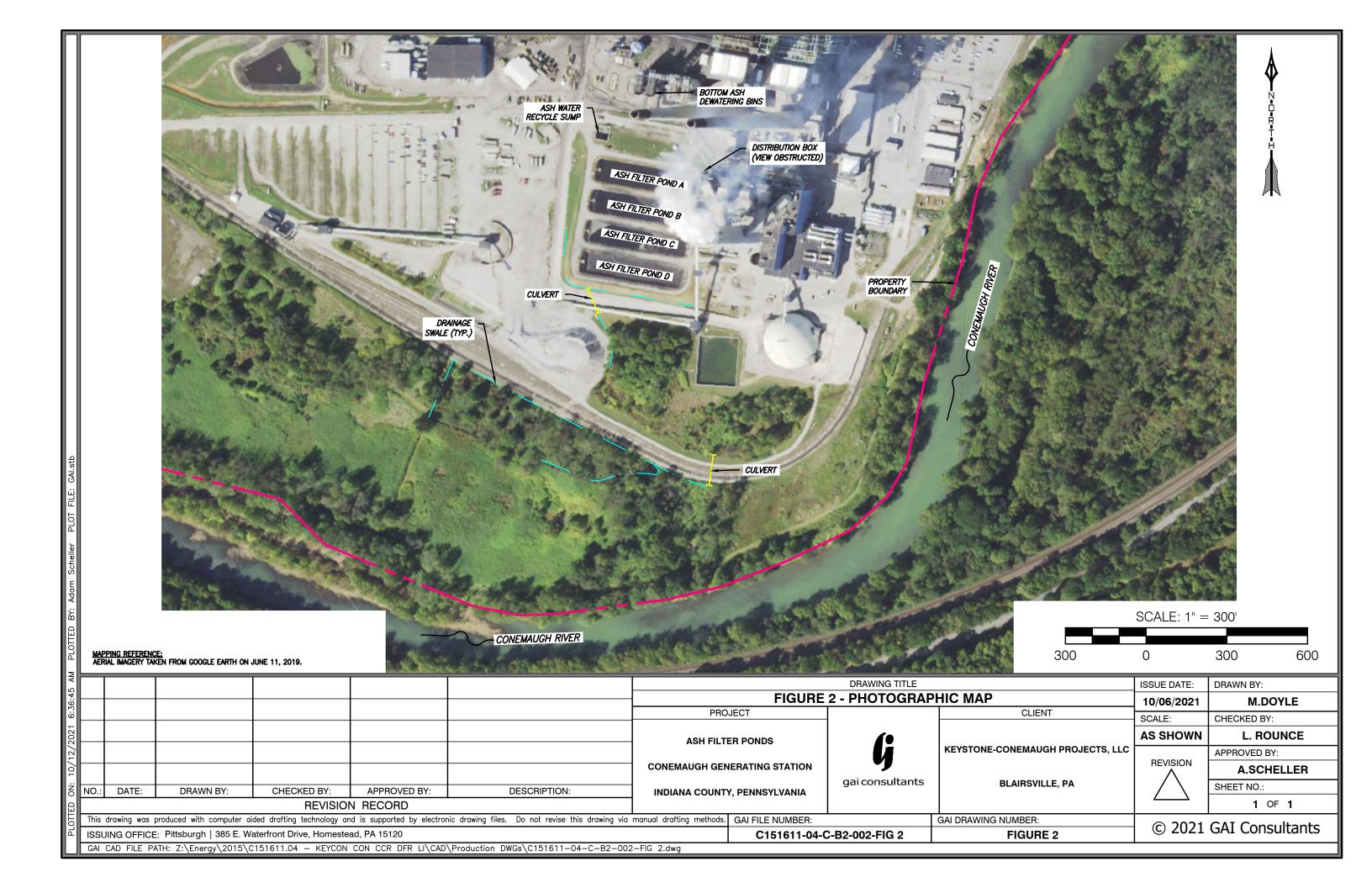
- "Critical Facilities." The National Weather Service. Web. 6 May 2016.
- Dewberry Consultants, LLC. "Coal Combustion Residue Impoundment Round 12 Dam Assessment Report, Conemaugh Generating Station Filter Ash Ponds & CT Desilting Basin, GenOn Energy New Florence, PA." Prepared for the United States Environmental Protection Agency. January 2014.
- Federal Emergency Management Agency. "National Flood Hazard Layer." Indiana County, Pennsylvania. January 27, 2015.
- Federal Register, Volume 80, No. 74. Sections 257.53 (Definitions) and 257.73 (Structural Integrity Criteria for Existing CCR Surface Impoundments). April 17, 2015.
- GAI Topographic Survey of Ash Filter Ponds, Conducted January 19 through January 31, 2020.
- GAI Consultants, Inc. "Wetland Delineation Report, Conemaugh Power Station, Loop Track Project Area." November 2005.
- Geosyntec. "Geotechnical and Hydraulic Assessment Report, Conemaugh Generating Station Filter Ash Ponds and Desilting Basin." November 22, 2013.
- Gilbert Associates, Inc. "Conemaugh Power Station Addition of 4th Ash Filter Pond, As-Built Drawing No. D-782-008." Revised October 10, 1995.
- Kimball, L. R., "Conemaugh Station Base Mapping." Drawing No. E-744-3093-0. August 4, 2010.
- Raytheon Engineers & Constructors, Inc., "System Description, Ash Water Recycle, Conemaugh Station." May 5, 1995.
- Reliant Energy. "Water Balance Diagram, for Conemaugh Station Units 1 & 2." Drawing No. 1942-SK-M-113 SH 2 Rev. 9. February 3, 2006.

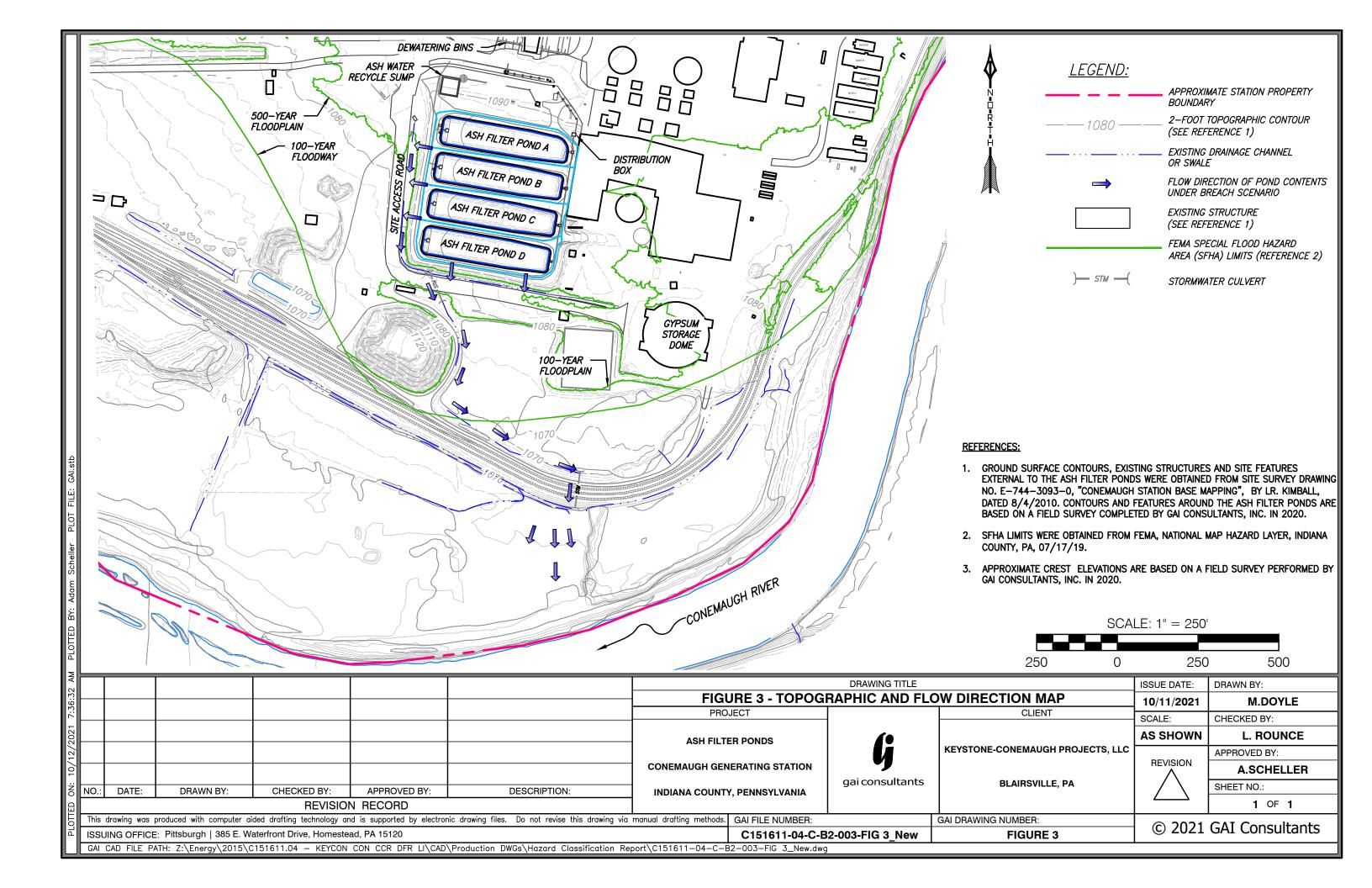


### **FIGURES**









# **ATTACHMENT A**Hazard Potential Classification Forms



Facility Name:_	Conemaugh Generating Station  Ash Filter Pond A				_	
Unit Name:_					_	
Type of Inspection (Circle One):	Initial		Periodic	Date of V	isit: <u>10/6/2021</u>	
Impoundment Configuration (Circle or Specify):		Cross-V	/alley	Side-Hill	Diked Incised	Other:
Notes:						
<ol> <li>If the impoundment is entirely incised, hazard potential cl</li> <li>For the purposes of selecting a hazard potential category,</li> <li>1 = Low</li> </ol>			s nume	•	egories listed in 40 CF 3 = High	R §257.53, as follows:
I. Risk to Human Life Pursuant to 40 CFR 257.53, the probable loss of human	life resu	ılts in a	High h	azard potential rat	ing.	
Consideration	Yes	No	N/A	Scorin	Selecte Score	d Comments
Loss of Human Life Would a failure or mis-operation of the unit probably cause loss of human life?		V		No = 1 Yes = 3	1	
II. Economic Losses  40 CFR 257.53 associates economic loss with a Significar property may be associated with a Low hazard potentia.			ntial ra	ting, except that lo	ow economic losses	principally limited to the owner's
Consideration	Yes	No	N/A	Scorin	Selecte Score	d Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	V			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Magnitude Are the anticipated economic losses due to a failure or mis- operation of the impoundment relatively low compared to the resources available to the owner/operator to correct foreseeable impacts?	\ \ 			Yes = 1 No = 2	1	
III. Environmental Losses  40 CFR 257.53 associates environmental damage with a to the owner's property may be associated with Low haz			•	tential rating, exce	pt that low environ	mental losses principally limited
Feature	Yes	No	N/A	Scorin	Selecte Score	Comments
Affected Areas Would environmental losses be principally limited to the surface impoundment owner's property?	V			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on Station property, eitherby natural features or through reasonably applied remedialmeasures, so as to prevent offsite migration of these materials?	7			Yes = 1 No = 2	1	Existing topography and site configuration encourage solids drop out and the spreading and dissipation of flow before exit of Station property.
Restoration Is it expected that the area(s) impacted by a failure or mis- operation of the impoundment could be readily restored to pre-incident conditions?	V			Yes = 1 No = 2	1	
Sensitive Species Are there any protected or endangered species in the area that would likely be impacted by a failure or mis-operation of the impoundment?		7		No = 1 Yes = 2	1	
<b>Wetlands</b> Are there any jurisdictional or other identified wetlands in the area that would likely be impacted by a failure or mis- operation of the impoundment?		7		No = 1 Yes = 2	1	No adverse or lasting impacts to wetlands are anticipated.
<b>Waterways</b> Are there any navigable streams or rivers that would likely  be impacted by a failure or mis-operation of the  impoundment?		<b>V</b>		No = 1 Yes = 2	1	Appreciable impacts to the Conemaugh River are not anticipated for reasons previously noted above.

Facility Name: Conemaugh Generating Station

Unit Name:_		Ash Filt	er Pon	d A		
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	t: <u>10/6/2021</u>
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities w facilities as distributive systems and related facilities ne communications.						
Condition	Yes	No	N/A	Scoring	Selected Score	Comments
Lifeline Facilities  Would a failure or mis-operation likely cause disruption to  any distributive systems or facilities that provide electric  power, oil and natural gas, water and wastewater, or  communication services?		V		No = 1 Yes = 2	1	Critical Station infrastructure is located outside of the anticipated inundation area.
V. Other Concerns  40 CFR 257.53 notes the potential for other concerns not probable impacts to "Critical Facilities" as another concerns National Weather Service are listed below. Lifeline Facilities and Item IV. The inspector shall also consider a and shall write in any such concerns below.	cern the ilities ar iny othe	at may i re also d	trigger conside pecific	a Significant hazard rating. ered to be Critical Facilities, concerns not previously add	Critical Faci but are not l	lities as identified by the isted below due to being nay impact the hazard rating,
Condition	Yes	No	N/A	Scoring	Score	Comments
Critical Facilities  Would failure or mis-operation of the impoundment likely cause damage or sustained closure of any of the following critical facilities? If yes, please specify. Emergency Response Facilities Medical Facilities Designated Emergency Shelters Transportation Telecommunications Data centers Financial Major industrial/commercial				No (to all) = 1 Yes (to any) = 2	1	
Other Concerns  Are there any other significant concerns relative to the potential impacts due to the failure or mis-operation of this impoundment? If yes, please specify.		V		No = 1 Yes = 2 (Depending on Severity)	1	
IV. Conclusions/Final Rating  The Final Rating is equal to the Maximum of all "Selecte  Final Score =  Hazard Potential Classification =	1	DW	(=Ma	iximum "Selected Score" from a low 2 = Significant 3 = High	·	
Adam B. Scheller Printed Name			_	eering Manager, GAI Const Company	ultants	
Signature*			_	ature certifies that the inspec formation contained herein	-	formed as indicated, and that ccurate to the best of the

inspector's knowledge.

Facility Name:_	Cone	maugh	Gener	ating Station	-	
Unit Name:_	Ash Filter Pond B				-	
Type of Inspection (Circle One):	Initial		Periodic	Date of Vis	t: <u>10/6/2021</u>	
Impoundment Configuration (Circle or Specify):		Cross-V	/alley	Side-Hill	Diked Incised	Other:
Notes:						
<ol> <li>If the impoundment is entirely incised, hazard potential cl</li> <li>For the purposes of selecting a hazard potential category,</li> <li>1 = Low</li> </ol>			s nume	=	gories listed in 40 CFR § 3 = High	2257.53, as follows:
I. Risk to Human Life Pursuant to 40 CFR 257.53, the probable loss of human	life resu	ılts in a l	High h	azard potential rati	ng.	
Consideration	Yes	No	N/A	Scoring	Selected Score	Comments
Loss of Human Life Would a failure or mis-operation of the unit probably cause loss of human life?		<b>V</b>		No = 1 Yes = 3	1	
II. Economic Losses  40 CFR 257.53 associates economic loss with a Significar property may be associated with a Low hazard potentia			ntial ra	ting, except that lov	w economic losses pr	incipally limited to the owner's
Consideration	Yes	No	N/A	Scoring	Selected Score	Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	>			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Magnitude Are the anticipated economic losses due to a failure or mis- operation of the impoundment relatively low compared to the resources available to the owner/operator to correct foreseeable impacts?	<b>V</b>			Yes = 1 No = 2	1	
III. Environmental Losses  40 CFR 257.53 associates environmental damage with a to the owner's property may be associated with Low haz				tential rating, excep	ot that low environm	ental losses principally limited
Feature	Yes	No	N/A	Scoring	Selected Score	Comments
Affected Areas Would environmental losses be principally limited to the surface impoundment owner's property?	>			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on Station property, eitherby natural features or through reasonably applied remedialmeasures, so as to prevent offsite migration of these materials?	פ			Yes = 1 No = 2	1	Existing topography and site configuration encourage solids drop out and the spreading and dissipation of flow before exit of Station property.
Restoration  Is it expected that the area(s) impacted by a failure or mis- operation of the impoundment could be readily restored to pre-incident conditions?	>			Yes = 1 No = 2	1	
Sensitive Species  Are there any protected or endangered species in the area that would likely be impacted by a failure or mis-operation of the impoundment?		7		No = 1 Yes = 2	1	
Wetlands Are there any jurisdictional or other identified wetlands in the area that would likely be impacted by a failure or mis- operation of the impoundment?		<b>&gt;</b>		No = 1 Yes = 2	1	No adverse or lasting impacts to wetlands are anticipated.
<b>Waterways</b> Are there any navigable streams or rivers that would likely  be impacted by a failure or mis-operation of the  impoundment?		<b>✓</b>		No = 1 Yes = 2	1	Appreciable impacts to the Conemaugh River are not anticipated for reasons previously noted above.

Facility Name: Conemaugh Generating Station								
Unit Name:_		Ash Filt	er Pon	d B				
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	t: <u>10/6/2021</u>		
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities v facilities as distributive systems and related facilities ne communications.				· -				
Condition	Yes	No	N/A	Scoring	Selected Score	Comments		
Lifeline Facilities Would a failure or mis-operation likely cause disruption to any distributive systems or facilities that provide electric power, oil and natural gas, water and wastewater, or communication services?		V		No = 1 Yes = 2	1	Critical Station infrastructure is located outside of the anticipated inundation area.		
V. Other Concerns  40 CFR 257.53 notes the potential for other concerns not specifically identified in the regulation to justify a Significant hazard rating. GAI recognizes probable impacts to "Critical Facilities" as another concern that may trigger a Significant hazard rating. Critical Facilities as identified by the National Weather Service are listed below. Lifeline Facilities are also considered to be Critical Facilities, but are not listed below due to being addressed in Item IV. The inspector shall also consider any other site-specific concerns not previously addressed that may impact the hazard rating, and shall write in any such concerns below.								
Condition	Yes	No	N/A	Scoring	Selected Score	Comments		
Critical Facilities Would failure or mis-operation of the impoundment likely cause damage or sustained closure of any of the following critical facilities? If yes, please specify. Emergency Response Facilities Medical Facilities Designated Emergency Shelters Transportation Telecommunications Data centers Financial Major industrial/commercial	0000000	> > > > > > > > > > > > > > > > > > > >		No (to all) = 1 Yes (to any) = 2	1			
Other Concerns  Are there any other significant concerns relative to the potential impacts due to the failure or mis-operation of this impoundment? If yes, please specify.		\(\sigma\)		No = 1 Yes = 2 (Depending on Severity)	1			
IV. Conclusions/Final Rating  The Final Rating is equal to the Maximum of all "Selecte  Final Score =  Hazard Potential Classification =	1	DW	(=Ma	ximum "Selected Score" from a .ow 2 = Significant 3 = High eering Manager, GAI Const	)			
Printed Name				Company	ction was no	rformed as indicated, and that		
Signature*			_	formation contained herein i		=		

inspector's knowledge.

Facility Name:_	Cone	maugh	Gener	ating Station		
Unit Name:		Ash Filt	er Pon	d C		
Type of Inspection (Circle One):		Initial		Periodic	Date of Visit	:: <u>10/6/2021</u>
Impoundment Configuration (Circle or Specify):		Cross-V	/alley	Side-Hill D	oiked Incised	Other:
Notes:				-		
If the impoundment is entirely incised, hazard potential cl	assificati	ion is no	t neces	sary.		
2. For the purposes of selecting a hazard potential category, 1 = Low			s nume	•	ies listed in 40 CFR §2 3 = High	257.53, as follows:
I. Risk to Human Life				ngillicant	3 - 111611	
Pursuant to 40 CFR 257.53, the probable loss of human	life resu	ılts in a ı	High h	azard potential rating.		
Consideration	Yes	No	N/A	Scoring	Selected Score	Comments
<b>Loss of Human Life</b> Would a failure or mis-operation of the unit probably cause loss of human life?		V		No = 1 Yes = 3	1	
II. Economic Losses						
40 CFR 257.53 associates economic loss with a Significan property may be associated with a Low hazard potentia			ntial ra	ting, except that low ed	conomic losses prir	ncipally limited to the owner's
Consideration	Yes	No	N/A	Scoring	Selected Score	Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	7			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Are the anticipated economic losses due to a failure or mis- operation of the impoundment relatively low compared to the resources available to the owner/operator to correct	>			Yes = 1 No = 2	1	
foreseeable impacts?						
III. Environmental Losses						
40 CFR 257.53 associates environmental damage with a to the owner's property may be associated with Low haz				tential rating, except ti	hat low environme	ntal losses principally limited
Feature	Yes	No	N/A	Scoring	Selected Score	Comments
Affected Areas Would environmental losses be principally limited to the surface impoundment owner's property?	7			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on Station property, eitherby natural features or through reasonably applied remedialmeasures, so as to prevent offsite migration of these materials?	>			Yes = 1 No = 2	1	Existing topography and site configuration encourage solids drop out and the spreading and dissipation of flow before exit of Station property.
Restoration  Is it expected that the area(s) impacted by a failure or mis- operation of the impoundment could be readily restored to pre-incident conditions?				Yes = 1 No = 2	1	
Sensitive Species Are there any protected or endangered species in the area that would likely be impacted by a failure or mis-operation of the impoundment?		V		No = 1 Yes = 2	1	
Wetlands Are there any jurisdictional or other identified wetlands in the area that would likely be impacted by a failure or mis- operation of the impoundment?		<b>V</b>		No = 1 Yes = 2	1	No adverse or lasting impacts to wetlands are anticipated.
<b>Waterways</b> Are there any navigable streams or rivers that would likely  be impacted by a failure or mis-operation of the  impoundment?		<b>▽</b>		No = 1 Yes = 2	1	Appreciable impacts to the Conemaugh River are not anticipated for reasons previously noted above.

Facility Name: Conemaugh Generating Station									
Unit Name:_		Ash Filt	er Pon	d C					
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	t: <u>10/6/2021</u>			
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities w facilities as distributive systems and related facilities ne communications.				· -					
Condition	Yes	No	N/A	Scoring	Selected Score	Comments			
Lifeline Facilities Would a failure or mis-operation likely cause disruption to any distributive systems or facilities that provide electric power, oil and natural gas, water and wastewater, or communication services?		V		No = 1 Yes = 2	1	Critical Station infrastructure is located outside of the anticipated inundation area.			
V. Other Concerns  40 CFR 257.53 notes the potential for other concerns not specifically identified in the regulation to justify a Significant hazard rating. GAI recognizes probable impacts to "Critical Facilities" as another concern that may trigger a Significant hazard rating. Critical Facilities as identified by the National Weather Service are listed below. Lifeline Facilities are also considered to be Critical Facilities, but are not listed below due to being addressed in Item IV. The inspector shall also consider any other site-specific concerns not previously addressed that may impact the hazard rating, and shall write in any such concerns below.									
Condition	Yes	No	N/A	Scoring	Selected Score	Comments			
Critical Facilities Would failure or mis-operation of the impoundment likely cause damage or sustained closure of any of the following critical facilities? If yes, please specify. Emergency Response Facilities Medical Facilities Designated Emergency Shelters Transportation Telecommunications Data centers Financial Major industrial/commercial		> > > > > > > > > > > > > > > > > > > >		No (to all) = 1 Yes (to any) = 2	1				
Other Concerns  Are there any other significant concerns relative to the potential impacts due to the failure or mis-operation of this impoundment? If yes, please specify.		✓		No = 1 Yes = 2 (Depending on Severity)	1				
IV. Conclusions/Final Rating  The Final Rating is equal to the Maximum of all "Selecte  Final Score =  Hazard Potential Classification =  Adam B. Scheller  Printed Name	1	) W	(=Ma (1 = L Engine	ximum "Selected Score" from a .ow 2 = Significant 3 = High eering Manager, GAI Const Company	)				
Signature*			_	ature certifies that the inspec formation contained herein		rformed as indicated, and that ccurate to the best of the			

inspector's knowledge.

Facility Name:_	Cone	maugh	Genera	ating Station	-	
Unit Name:_	Ash Filter Pond D					
Type of Inspection (Circle One):	Initial		Periodic	Date of Visi	it: <u>10/6/2021</u>	
Impoundment Configuration (Circle or Specify):		Cross-V	′alley	Side-Hill	Diked Incised	Other:
Notes:						
<ol> <li>If the impoundment is entirely incised, hazard potential cl.</li> <li>For the purposes of selecting a hazard potential category,</li> <li>1 = Low</li> </ol>			s nume	-	gories listed in 40 CFR § 3 = High	257.53, as follows:
I. Risk to Human Life Pursuant to 40 CFR 257.53, the probable loss of human l	li <u>fe</u> resu	ıl <u>ts in a l</u>	High ho	azard potential rati	ng	
Consideration	Yes	No	N/A	Scoring	Selected Score	Comments
<b>Loss of Human Life</b> Would a failure or mis-operation of the unit probably cause loss of human life?		7		No = 1 Yes = 3	1	
II. Economic Losses  40 CFR 257.53 associates economic loss with a Significan property may be associated with a Low hazard potential			ntial rai	ting, except that lov	w economic losses pri	ncipally limited to the owner's
Consideration	Yes	No	N/A	Scoring	Selected Score	Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	7			Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Magnitude Are the anticipated economic losses due to a failure or mis- operation of the impoundment relatively low compared to the resources available to the owner/operator to correct foreseeable impacts?				Yes = 1 No = 2	1	
III. Environmental Losses 40 CFR 257.53 associates environmental damage with a to the owner's property may be associated with Low haz				tential rating, excep	ot that low environme	ental losses principally limited
Feature	Yes	No	N/A	Scoring	Selected Score	Comments
Affected Areas Would environmental losses be principally limited to the surface impoundment owner's property?				Yes = 1 No = 2	1	Anticipated flow path follows Station property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on Station property, eitherby natural features or through reasonably applied remedialmeasures, so as to prevent offsite migration of these materials?	ב			Yes = 1 No = 2	1	Existing topography and site configuration encourage solids drop out and the spreading and dissipation of flow before exit of Station property.
Restoration Is it expected that the area(s) impacted by a failure or mis- operation of the impoundment could be readily restored to pre-incident conditions?				Yes = 1 No = 2	1	
Sensitive Species  Are there any protected or endangered species in the area that would likely be impacted by a failure or mis-operation of the impoundment?		7		No = 1 Yes = 2	1	
Wetlands Are there any jurisdictional or other identified wetlands in the area that would likely be impacted by a failure or mis- operation of the impoundment?		<b>&gt;</b>		No = 1 Yes = 2	1	No adverse or lasting impacts to wetlands are anticipated.
<b>Waterways</b> Are there any navigable streams or rivers that would likely be impacted by a failure or mis-operation of the impoundment?		<b>V</b>		No = 1 Yes = 2	1	Appreciable impacts to the Conemaugh River are not anticipated for reasons previously noted above.

Facility Name: Conemaugh Generating Station

Unit Name:_		Ash Filt	er Pon	d D		
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	t: <u>10/6/2021</u>
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities w facilities as distributive systems and related facilities ne communications.				· -		
Condition	Yes	No	N/A	Scoring	Selected Score	Comments
Lifeline Facilities Would a failure or mis-operation likely cause disruption to any distributive systems or facilities that provide electric power, oil and natural gas, water and wastewater, or communication services?		✓ 		No = 1 Yes = 2	1	Critical Station infrastructure is located outside of the anticipate inundation area.
V. Other Concerns  40 CFR 257.53 notes the potential for other concerns not probable impacts to "Critical Facilities" as another concent National Weather Service are listed below. Lifeline Faciliaddressed in Item IV. The inspector shall also consider a and shall write in any such concerns below.  Condition	cern the	at may i re also d	trigger conside	a Significant hazard rating. ered to be Critical Facilities,	Critical Faci but are not l	lities as identified by the isted below due to being
Critical Facilities	163	NO	IV/A	No (to all) = 1	Score 1	Comments
Would failure or mis-operation of the impoundment likely cause damage or sustained closure of any of the following critical facilities? If yes, please specify.  Emergency Response Facilities  Medical Facilities  Designated Emergency Shelters  Transportation  Telecommunications  Data centers  Financial  Major industrial/commercial				Yes (to any) = 2	-	
Other Concerns  Are there any other significant concerns relative to the potential impacts due to the failure or mis-operation of this impoundment? If yes, please specify.		V		No = 1 Yes = 2 (Depending on Severity)	1	
IV. Conclusions/Final Rating  The Final Rating is equal to the Maximum of all "Selecte  Final Score =  Hazard Potential Classification =	1	s" abov	(=Ma	iximum "Selected Score" from a .ow 2 = Significant 3 = High	•	
Adam B. Scheller Printed Name				eering Manager, GAI Cons Company	ultants	
Signature*			_	ature certifies that the inspectors formation contained herein	-	rformed as indicated, and that

inspector's knowledge.