# **CCR RULE COMPLIANCE**

# ASH FILTER PONDS HAZARD POTENTIAL CLASSIFICATION INITIAL ASSESSMENT REPORT

## Prepared for:



GenOn Northeast Management Company Conemaugh Generating Station New Florence, Pennsylvania

## Prepared by:



CB&I Environmental & Infrastructure, Inc. Pittsburgh, Pennsylvania 15235

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## 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 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 power plant operated by GenOn Northeast Management Company (a subsidiary of NRG Energy, Inc. [NRG]) and 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 any losses,

ensuring an adequate, ongoing supply of sluice water. Still, the majority of the water that flows through the system is recycled. 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.

NRG engaged the services of CB&I Environmental & Infrastructure, Inc. (CB&I) to conduct a 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 effort included the review of available background and design information and a field visit conducted on June 28, 2016.

This Report has been prepared to identify the initial 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 contains the professional engineer certification, and Section 6.0 lists the references that were consulted during this assessment.

As required, this Initial 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." (Federal Register, 2015). 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 of 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, CB&I 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 NRG. 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). 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 1092 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.

Google Earth imagery (Google Earth, 2015) was consulted to check for notable nearby features and to confirm select elevations. Google Earth indicated a typical crest elevation of approximately 1,092 ft msl around the western, northern, and southern pond perimeters and a slightly higher crest elevation of approximately 1,095 ft msl on the eastern side, which is in agreement with the elevations identified in the design plans (Gilbert Associates, 1995) and topographic mapping (Kimball, 2010). 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 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 June 28, 2016, Laurel Lopez (CB&I senior engineer) met with James Brunson (NRG Environmental Specialist) to perform a site walk and visual reconnaissance of the ponds and surrounding area. CB&I 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. CB&I 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 devised by CB&I 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 **Professional Engineer Certification**

I attest to being familiar with the hazard potential standards of the Rule, and the classification categories as defined in 40 CFR §257.53. I have personally visited and examined the Conemaugh Generating Station Ash Filter Ponds, and hereby certify that the information contained in this report and the selected hazard potential classifications for the subject units are true and accurate to the best of my belief. This initial hazard potential classification has been conducted in accordance with the requirements of 40 CFR §257.73.

Name of Professional Engineer:	Laurel C. Lopez	

Company: CB&I Environmental & Infrastructure, Inc.

Laurel C. Topy 10-13-16 Signature:

Date:

PE Registration State: Pennsylvania

PE Registration Number: PE-055673-E

Professional Engineer Seal:

## 6.0 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 (FEMA). "National Flood Hazard Layer." Indiana County, Pennsylvania. January 27, 2015.

Federal Register, Vol. 80, No. 74. Sections 257.53 (Definitions) and 257.73 (Structural Integrity Criteria for Existing CCR Surface Impoundments). April 17, 2015.

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 4<sup>th</sup> Ash Filter Pond, As-Built Drawing No. D-782-008." Revised October 10, 1995.

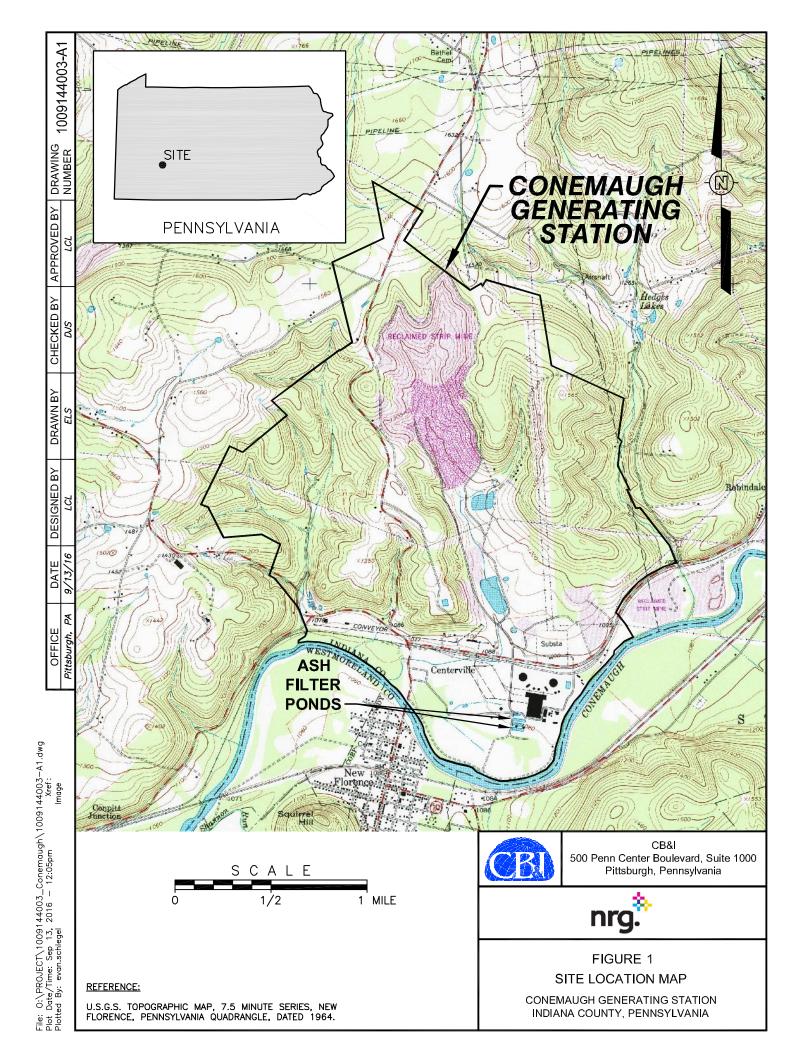
Google Earth. Imagery for Conemaugh Generating Station, New Florence, Pennsylvania. Dated October 11, 2015.

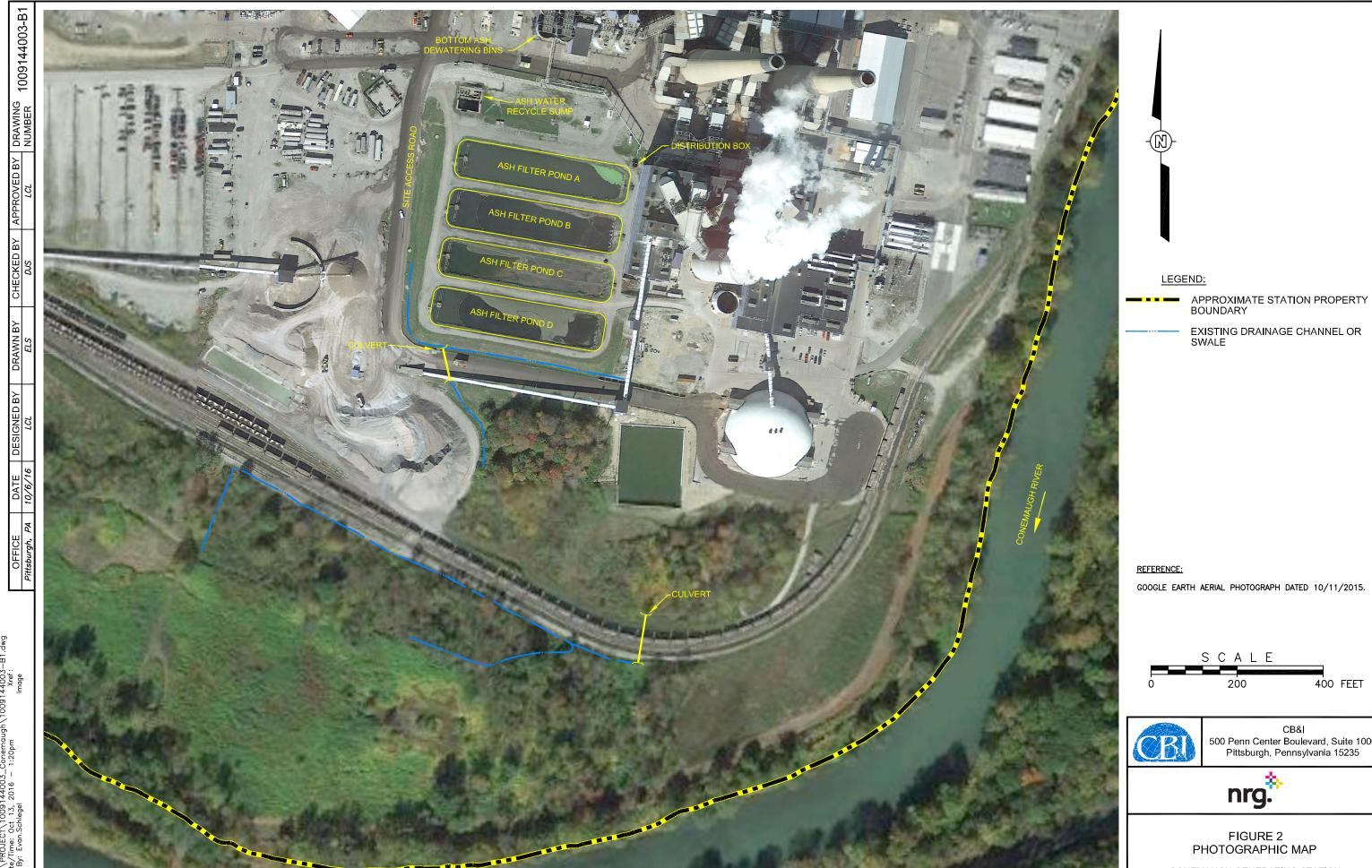
Kimball, L. R., "Conemaugh Station Base Mapping." Drawing No. E-744-3093-0. August 4, 2010.

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.







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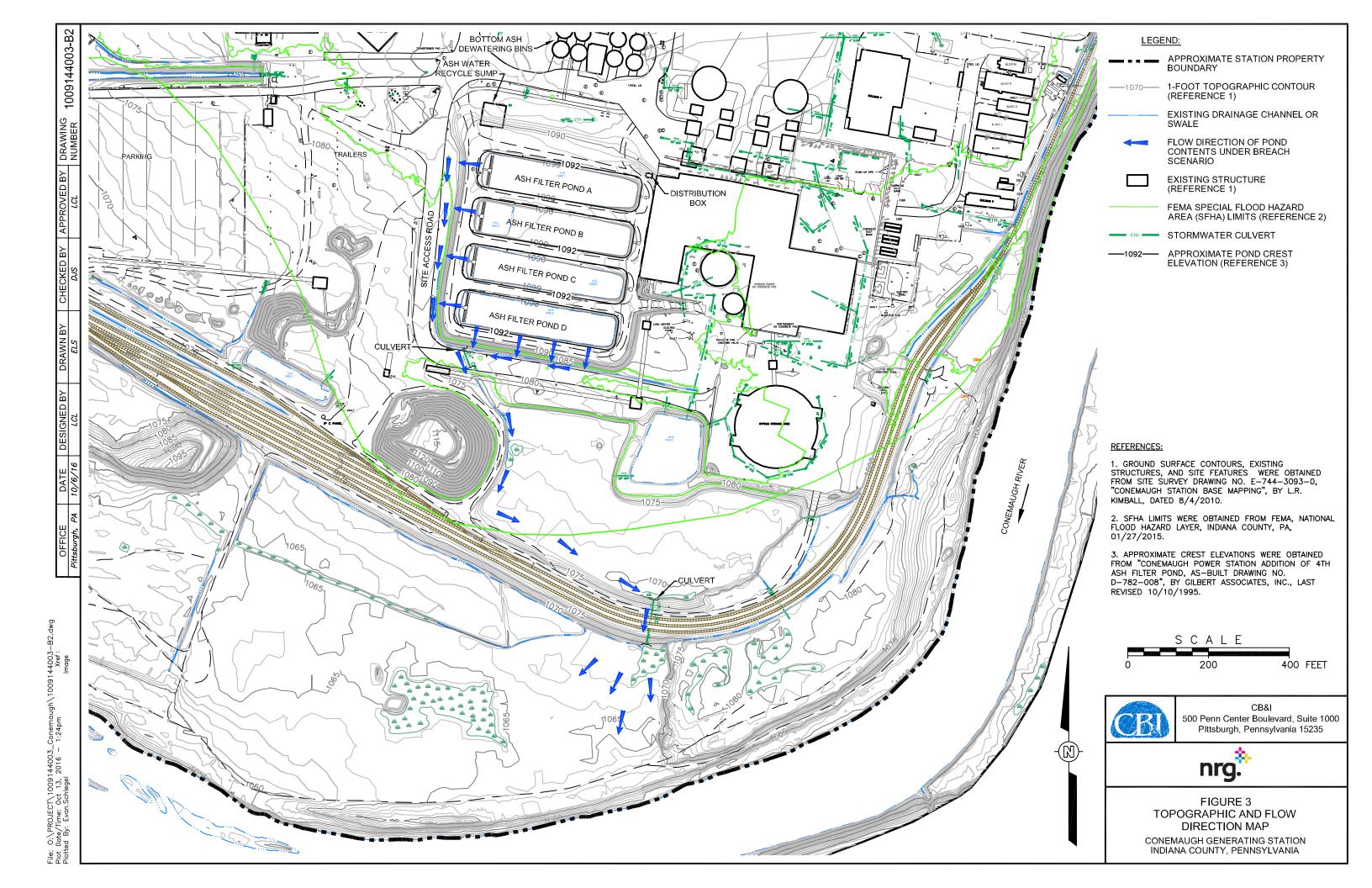
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GOOGLE EARTH AERIAL PHOTOGRAPH DATED 10/11/2015.



CB&I 500 Penn Center Boulevard, Suite 1000 Pittsburgh, Pennsylvania 15235

CONEMAUGH GENERATING STATION INDIANA COUNTY, PENNSYLVANIA







Facility Name:	Conemaugh Generating Station		_			
Unit Name:	Ash Filter Pond A			nd A	_	
Type of Inspection (Circle One):		Initial		Periodic	Date of Vis	it: <u>6/28/2016</u>
Impoundment Configuration (Circle or Specify):		Cross-\	√alley	Side-Hill	Diked Incised	Other:
Notes:  1. If the impoundment is entirely incised, hazard potential c 2. For the purposes of selecting a hazard potential category  1 = Low			ns num	•	egories 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 I	life resu	ults in a	High h	azard potential rat	ing.	
Consideration	Yes	No	N/A	Scoring	Selected	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 Significal property may be associated with a Low hazard potentia		•	ntial ra	iting, except that lo	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?	7			Yes = 1 No = 2	1	Anticipated flow path follows NRG property.
Magnitude Are the anticipated economic losses due to a failure or misoperation of the impoundment relatively low compared to the resources available to the owner/operator to correct foreseeable impacts?	7			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				otential rating, exce	ept 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?	7			Yes = 1 No = 2	1	Anticipated flow path follows NRG property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on NRG property, either by natural features or through reasonably applied remedial measures, 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 NRG property.
Restoration Is it expected that the area(s) impacted by a failure or misoperation of the impoundment could be readily restored to pre-incident conditions?	7			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.
Waterways 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:	Cone	emaugh	Gener	rating Station		
Unit Name:	Ash Filte		ter Pond A			
Type of Inspection (Circle One):		Initial		Periodic	Date of Vis	it: <u>6/28/2016</u>
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities of 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 no probable impacts to "Critical Facilities" as another concerns and National Weather Service are listed below. Lifeline Faciliaddressed in Item IV. The inspector shall also consider and shall write in any such concerns below.	ern tha lities ar	t may tı e also c	rigger o onside	a Significant hazard rating. red to be Critical Facilities, I	Critical Facili but are not lis dressed that	ties as identified by the sted below due to being
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.		V		No = 1 Yes = 2 (Depending on Severity)	1	
IV. Conclusions/Final Rating  The Final Rating is equal to the Maximum of all "Selecter Final Score = Hazard Potential Classification =  Laurel C. Lopez  Printed Name	1	es" abov	(=Ma ] (1 = L Senio	ximum "Selected Score" from ow 2 = Significant 3 = Hig or Engineer, CB&I / Company	,	
Saurel C Sopy				ature certifies that the insp formation contained herein		erformed as indicated, and that curate to the best of the

inspector's knowledge.



Facility Name: Conemaugh Generating Station

Unit Name:		Ash Fil	ter Por	nd B	_	
Type of Inspection (Circle One):		Initial		Periodic	Date of Vis	it: <u>6/28/2016</u>
Impoundment Configuration (Circle or Specify):		Cross-\	/alley	Side-Hill	Diked Incised	Other:
Notes:  1. If the impoundment is entirely incised, hazard potential category 2. For the purposes of selecting a hazard potential category 1 = Low			ns num	•	itegories 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	life resu	ılts in a	High h	azard potential ra	ting.	
Consideration	Yes	No	N/A	Scorir	Selected Score	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 Significa property may be associated with a Low hazard potentia			ntial ro	iting, except that I		incipally limited to the owner's
Consideration	Yes	No	N/A	Scorin	Selected Score	Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	<b>V</b>			Yes = 1 No = 2	1	Anticipated flow path follows NRG property.
Magnitude  Are the anticipated economic losses due to a failure or misoperation 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 ha Feature			-	otential rating, exc	Selected	eental losses principally limited  Comments
Affected Areas	<b>√</b>			Yes = 1	Score 1	Anticipated flow path follows NRG
Would environmental losses be principally limited to the surface impoundment owner's property?				No = 2		property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on NRG property, either by natural features or through reasonably applied remedial measures, 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 NRG property.
Restoration  Is it expected that the area(s) impacted by a failure or misoperation 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?		<b>V</b>		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?		V		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:	me: Conemaugh Generating Station					
Unit Name:		Ash Fil	ter Por	nd B		
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	it: <u>6/28/2016</u>
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities w facilities as distributive systems and related facilities nec				· ·		
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 Facil addressed in Item IV. The inspector shall also consider a and shall write in any such concerns below.	ern tha lities ar	t may tr e also c	rigger d onside	a Significant hazard rating. C red to be Critical Facilities, b	Critical Facilis ut are not lis	ties as identified by the ted below due to being
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.		7		No = 1 Yes = 2 (Depending on Severity)	1	
IV. Conclusions/Final Rating  The Final Rating is equal to the Maximum of all "Selected Final Score = Hazard Potential Classification = Laurel C. Lopez  Printed Name  Yaurel C. Lopy	1	es" abov	(=Ma] (1 = L	ximum "Selected Score" from a ow 2 = Significant 3 = High or Engineer, CB&I / Company	)	erformed as indicated, and that
Hazard Potential Classification =		) DW	Senio Title * Sign	ow 2 = Significant 3 = High or Engineer, CB&I	) ection was pe	-

inspector's knowledge.



Facility Name: Conemaugh Generating Station

Unit Name:		Ash Fil	ter Por	nd C	_	
Type of Inspection (Circle One):		Initial		Periodic	Date of Vis	it: <u>6/28/2016</u>
Impoundment Configuration (Circle or Specify):		Cross-\	/alley	Side-Hill	Diked Incised	Other:
Notes:  1. If the impoundment is entirely incised, hazard potential category  2. For the purposes of selecting a hazard potential category  1 = Low			ns num	-	tegories 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	life resu	ılts in a	High h	azard potential ra	ting.	
Consideration	Yes	No	N/A	Scorin	Selected Score	Comments
Loss of Human Life 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 Significa property may be associated with a Low hazard potentia			ntial ro	ting, except that lo		incipally limited to the owner's
Consideration	Yes	No	N/A	Scorin	Selected Score	Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	<b>V</b>			Yes = 1 No = 2	1	Anticipated flow path follows NRG 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 ha Feature			-	otential rating, exc	Selected	ental losses principally limited  Comments
Affected Areas	<b>V</b>			Yes = 1	Score 1	Anticipated flow path follows NRG
Would environmental losses be principally limited to the surface impoundment owner's property?				No = 2		property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on NRG property, either by natural features or through reasonably applied remedial measures, 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 NRG property.
Restoration  Is it expected that the area(s) impacted by a failure or misoperation 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?		<b>V</b>		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?		V		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:	Cone	emaugh	Gener	rating Station		
Unit Name:		Ash Filter Pond C		nd C	-	
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	it: <u>6/28/2016</u>
IV. Lifeline Facilities  40 CFR 257.53 associates disruption of lifeline facilities of facilities as distributive systems and related facilities necommunications.				· -		
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?		<b>▽</b>		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 no probable impacts to "Critical Facilities" as another concerns no National Weather Service are listed below. Lifeline Facily addressed in Item IV. The inspector shall also consider and shall write in any such concerns below.	ern tha lities ar	t may tr e also c	rigger o onside pecific	a Significant hazard rating. ( red to be Critical Facilities, b	Critical Facilis out are not lis	ties as identified by the steed below due to being
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 "Selecter Final Score = Hazard Potential Classification = Laurel C. Lopez	1	es" abov	(=Ma ] (1 = L	ximum "Selected Score" from a ow 2 = Significant 3 = High or Engineer, CB&I		
Printed Name  Saurel C Sopy  Signature*			* Sign	/ Company	-	erformed as indicated, and that ccurate to the best of the



Facility Name: Conemaugh Generating Station

Unit Name:		Ash Fil	ter Por	nd D	<u> </u>	
Type of Inspection (Circle One):		Initial		Periodic	Date of Vis	it: <u>6/28/2016</u>
Impoundment Configuration (Circle or Specify):		Cross-\	/alley	Side-Hill	Diked Incised	Other:
Notes:  1. If the impoundment is entirely incised, hazard potential category  2. For the purposes of selecting a hazard potential category  1 = Low	, this fo		ns num	-	tegories 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	life resu	ults in a	High h	azard potential ra	ting.	
Consideration	Yes	No	N/A	Scorin	Selected Score	Comments
Loss of Human Life 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 Significa property may be associated with a Low hazard potentia			ntial ro	ting, except that l		incipally limited to the owner's
Consideration	Yes	No	N/A	Scorin	Selected Score	Comments
Affected Parties Would economic losses be principally limited to the surface impoundment owner's property?	<b>V</b>			Yes = 1 No = 2	1	Anticipated flow path follows NRG property.
Magnitude  Are the anticipated economic losses due to a failure or misoperation 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 ha Feature			-	ntential rating, exc	Selected	ental losses principally limited  Comments
Affected Areas	<b>V</b>			Yes = 1	Score 1	Anticipated flow path follows NRG
Would environmental losses be principally limited to the surface impoundment owner's property?				No = 2		property.
Containment In the event of a failure or mis-operation, is it likely that the CCR materials would be contained on NRG property, either by natural features or through reasonably applied remedial measures, so as to prevent offsite migration of these materials?	V			Yes = 1 No = 2	1	Existing topography and site configuration encourage solids drop out and the spreading and dissipation of flow before exit of NRG property.
Restoration  Is it expected that the area(s) impacted by a failure or misoperation 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?		<b>V</b>		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?		V		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:	Cone	emaugh	Gene	rating Station		
Unit Name:		Ash Fil	ter Por	nd D		
Type of Inspection (Circle One):		Initial		Periodic	Date of Visi	it: <u>6/28/2016</u>
IV. Lifeline Facilities 40 CFR 257.53 associates disruption of lifeline facilities of facilities as distributive systems and related facilities necommunications.				· -		
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?		<b>▽</b>		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 no probable impacts to "Critical Facilities" as another concerns notational Weather Service are listed below. Lifeline Facily addressed in Item IV. The inspector shall also consider and shall write in any such concerns below.	ern tha lities ar	t may tr e also c	igger ( onside	a Significant hazard rating. ( red to be Critical Facilities, b	Critical Facili out are not lis	ties as identified by the ted below due to being
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	es" abov	(=Ma	ximum "Selected Score" from a ow 2 = Significant 3 = High		
Laurel C. Lopez  Printed Name  Saurel C Sopy  Signature*			* Sign	or Engineer, CB&I / Company nature certifies that the inspectory formation contained herein	-	erformed as indicated, and that ccurate to the best of the