

CLOSURE PLAN

CHESWICK STATION BOTTOM ASH PONDS INDIANA TOWNSHIP, ALLEGHENY COUNTY, PENNSYLVANIA

Prepared for:



**NRG POWER MIDWEST LP
CHESWICK GENERATING STATION
100 PITTSBURGH STREET
SPRINGDALE, PENNSYLVANIA 15144**

Prepared by:



**CIVIL & ENVIRONMENTAL CONSULTANTS, INC.
333 BALDWIN ROAD
PITTSBURGH, PA 15205**

CEC Project 154-532

October 2016



Civil & Environmental Consultants, Inc.

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1.0 PURPOSE

On behalf of NRG Power Midwest LP (NRG), Civil & Environmental Consultants, Inc. (CEC) has prepared this Closure Plan for the Bottom Ash Recycle Pond and the Emergency Ash Pond (Ponds) in accordance with the United States Environmental Protection Agency (USEPA) Coal Combustion Residuals (CCR) Rule 40 CFR 257.102 (§257.102) dated April 17, 2015. This Closure Plan has been prepared to describe the steps necessary to close the ponds at any point during the active life consistent with recognized and generally accepted good engineering practices.

For existing CCR impoundments, the plans must be prepared no later than October 17, 2016 and placed in the facility's operating record. The owner or operator of the CCR unit must obtain a written certification from a qualified professional engineer that the design meets the requirements of this section. The professional engineer certification is provided in Appendix A.

2.0 BACKGROUND

The Ponds are located at 100 Pittsburgh Street, Springdale, Pennsylvania 15144. A Site Location Map is provided in Appendix B. The Ponds currently accept bottom ash fines from the Cheswick Generating Station (Station). Bottom ash is slurried via pipeline from the Station to the hydrobins located adjacent to the Ponds. The overflow containing bottom ash fines from the hydrobins are piped to the Ponds. The Existing Conditions Plan is provided in Appendix B. Both Ponds will be closed by removing all CCR from the CCR Unit.

3.0 COMPLIANCE WITH §257.102(B)

The following sections address the information required by §257.102(b).

3.1 NARRATIVE OF CLOSURE - §257.102(b)(1)(i)

The impoundments will be closed by removing CCRs in accordance with §257.102(c). CCR removal will be completed as described in the following section.

3.2 CCR REMOVAL AND DECONTAMINATION – §257.102(b)(1)(ii)

Prior to CCR removal, each Pond will be dewatered in accordance with National Pollutant Discharge Elimination System (NPDES) Permit No. PA0001627. CCR in the Ponds will be dewatered and removed using the same methods currently used to dredge the Ponds. An excavator is used to excavate the ash and place it at the top of the Pond embankment where the material can dewater. Dewatered CCR are loaded onto trucks and hauled to the Cheswick Ash Disposal Site (Landfill) for disposal. CCR removal will continue until all bottom ash and visibly impacted soils underneath the ash are removed.

Closure of the Ponds is expected to generally include the following activities:

- Obtain all necessary Federal, State and Local permits (including preparing construction bid specifications and contract work);
- Install erosion and sedimentation controls;
- Dewater one Pond in accordance with the approved NPDES Permit;
- Remove CCR based on visual assessment. Excavated CCR will be dewatered using current operations techniques and hauled to the Landfill for disposal;
- Remove visibly impacted soils beneath the ash;
- Repeat the steps above for the second Pond;
- Remove existing structures and piping systems or decontaminate the existing facilities and leave in-place;
- Dispose of removed structures and piping systems in accordance with applicable regulations;
- Construct downgradient swale and breach a section of the existing embankment for each Pond;

- Seed and mulch disturbed areas.

NRG may elect to retrofit the closed Ponds for an alternate use.

The Final Conditions Plan provided in Appendix B shows the general closure procedures for the Ponds.

3.3 FINAL COVER REQUIREMENT – §257.102(b)(1)(iii)

CCRs will be removed from the Ponds in accordance with §257.102(c); therefore, a final cover system is not required.

3.4 MAXIMUM CCR INVENTORY - §257.102(b)(1)(iv)

Based on review of annual disposal records provided by NRG, the maximum volume of CCR in the Ponds since 2013 was 5,300 tons.

3.5 MAXIMUM AREA REQUIRING FINAL COVER – §257.102(b)(1)(v)

CCRs will be removed from the Ponds in accordance with §257.102(c); therefore, a final cover system is not required.

3.6 CLOSURE SCHEDULE – §257.102(b)(1)(vi)

At this time, NRG anticipates ceasing CCR and non-CCR disposal operations in the Ponds before December of 2020. In accordance with §257.102(e)(1)(i), closure activities will commence no later than 30 days after the date on which the CCR unit receives the final receipt of waste, either CCR or any non-CCR waste stream, unless an extension is requested. In accordance with §257.102(f)(1), NRG will complete closure activities within 5 years of beginning closure activities.

Once the ash filter ponds are closed, a professional engineer will verify and certify that closure has been completed in accordance with the Closure Plan [§257.102(f)(3)]. Within 30 days of completing closure of the ash ponds, a notification of closure will be prepared by NRG and will include the professional engineer's certification of completion [§257.102(h)].

4.0 CONCLUSION

The Closure Plan demonstrates compliance with §257.102. The certification statement by a qualified professional engineer is provided in Appendix A. Supporting documents are provided in Appendix B. The Ponds are not required to meet the Post-Closure Care requirements in §257.104(a)(2).

This demonstration will be placed in the operating record by October 17, 2016. Based on site conditions, the Closure Plan may be amended at any time.

APPENDIX A

ENGINEER'S CERTIFICATION STATEMENT

PROFESSIONAL ENGINEER CERTIFICATION

This Closure Plan fulfills the CCR Rule Closure requirements for a Written Closure Plan (§257.102(b)), dated April 17, 2015. This Closure Plan will be placed in the operating record by October 17, 2016.

I, Rick J. Buffalini, P.E., a registered professional engineer in the state of Pennsylvania certify that the Closure Plan for the Cheswick Bottom Ash Recycle Pond and Emergency Ash Pond fulfills the requirements of §257.102(b). This certification is based on my review of the Cheswick Ash Recycle Pond and Emergency Ash Pond Closure Plan.

Rick J. Buffalini, P.E.

Printed Name of Professional Engineer

Rick J. Buffalini

Signature

041196-E

Registration No.

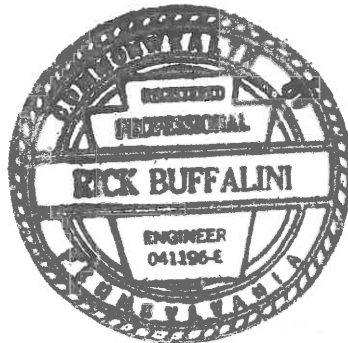
Pennsylvania

Registration State

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Date

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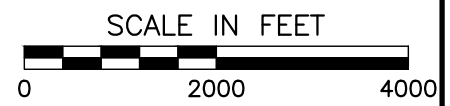
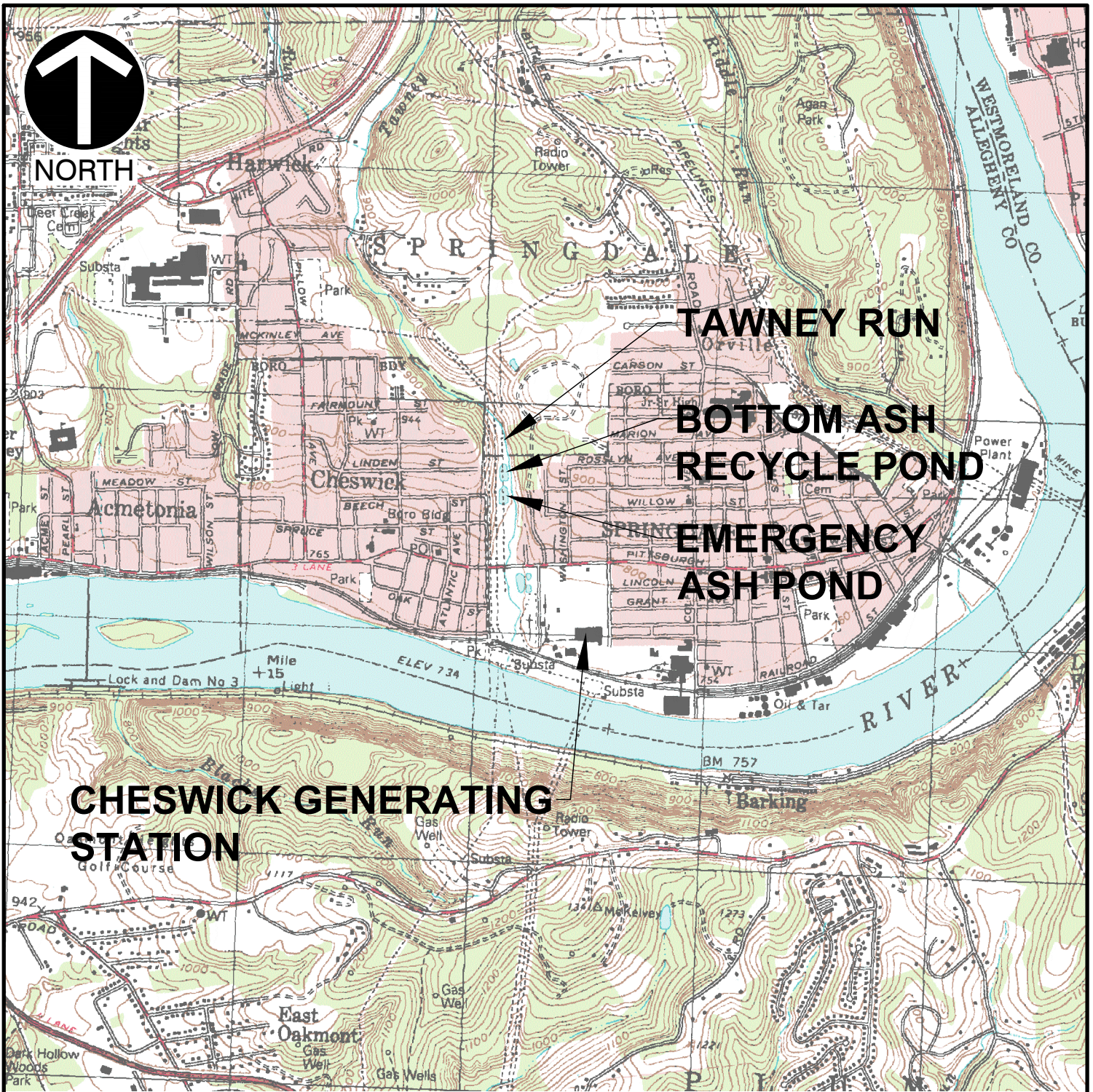
October 2016

APPENDIX B

DRAWINGS

**SITE LOCATION MAP
EXISTING CONDITIONS PLAN
FINAL CONDITIONS PLAN**

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 BOTTOM ASH PONDS CLOSURE PLAN
 SPRINGDALE, ALLEGHENY COUNTY
 PENNSYLVANIA

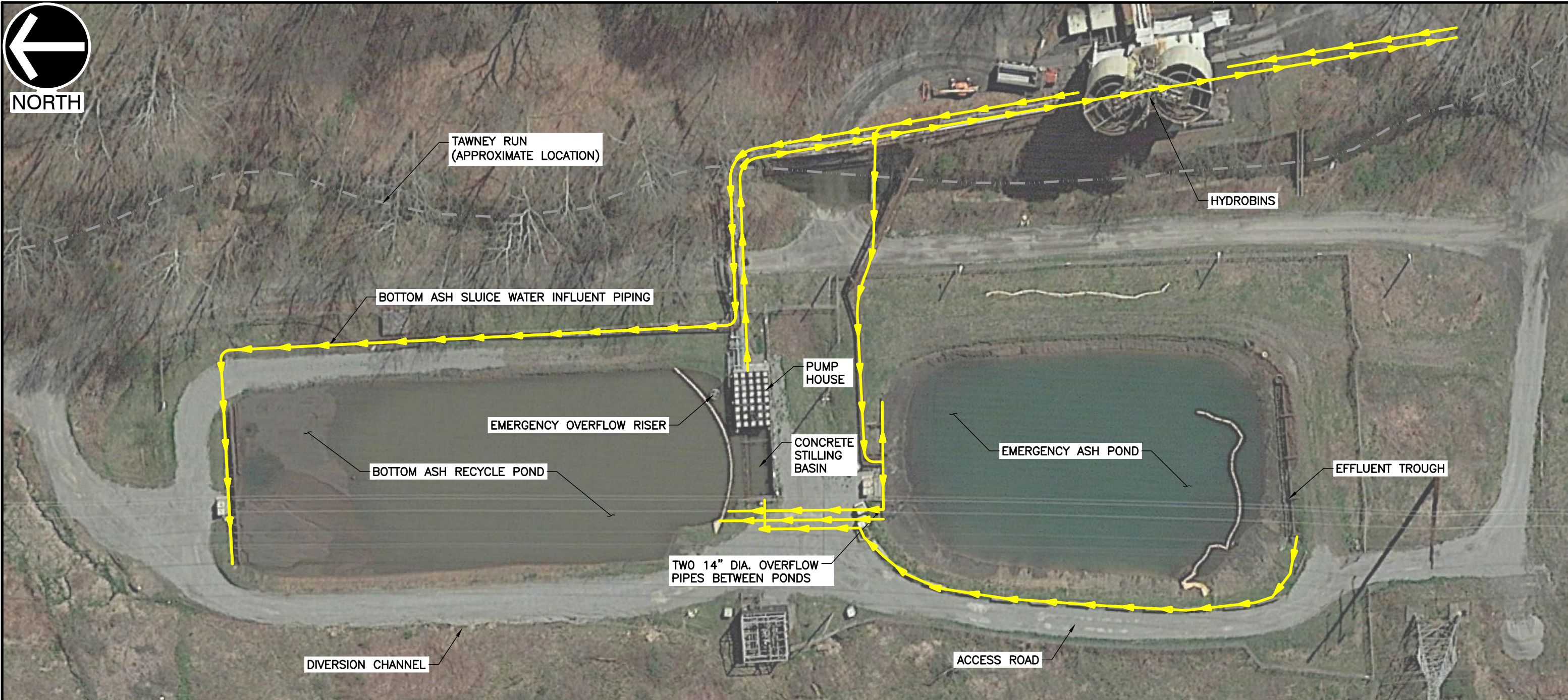
SITE LOCATION MAP

DRAWN BY:	MJI	CHECKED BY:	DMD	APPROVED BY:	RJB *	FIGURE NO.:	1
DATE:	9/27/16	DWG SCALE:	1"=200'	PROJECT NO:	154-532.0004		



NORTH

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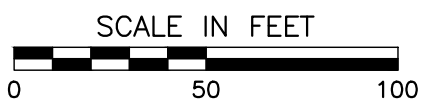



LEGEND

- STREAM
- EXISTING PIPE

REFERENCE

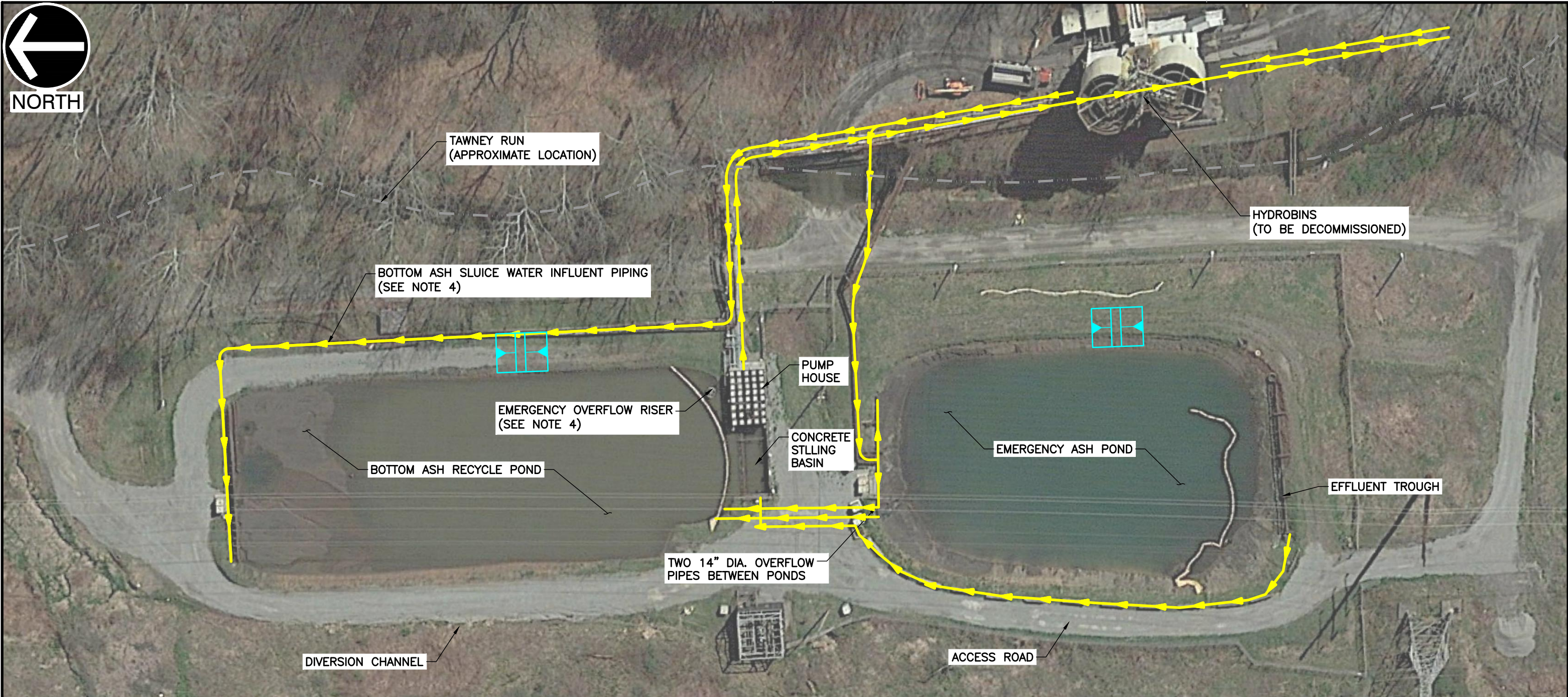
1. AERIAL PHOTOGRAPHY COPYRIGHT GOOGLE EARTH PRO VERSION 6.2, IMAGERY DATE 4-17-2016.



 Civil & Environmental Consultants, Inc. 333 Baldwin Road · Pittsburgh, PA 15205 412-429-2324 · 800-365-2324 www.cecinc.com		NRG POWER MIDWEST LP BOTTOM ASH PONDS CLOSURE PLAN SPRINGDALE, ALLEGHENY COUNTY PENNSYLVANIA	
		EXISTING CONDITIONS PLAN	
DRAWN BY: MJI DATE: 9/16/16	CHECKED BY: DMD DWG SCALE: AS SHOWN	APPROVED BY: RJB * PROJECT NO: 154-532.0004	FIGURE NO.: 2



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LEGEND

- STREAM
- EXISTING PIPE
- PROPOSED EMBANKMENT EXCAVATION

NOTES

1. NRG WILL OBTAIN ALL NECESSARY PERMITS AND INSTALL EROSION AND SEDIMENTATION CONTROLS PRIOR TO SITE DISTURBANCE. DISCHARGE FROM THE PONDS DURING DEWATERING WILL BE MANAGED IN ACCORDANCE WITH NPDES PERMIT NO. PA0001627.
2. BOTTOM ASH WILL BE DEWATERED AND HAULED TO THE LANDFILL FOR DISPOSAL.
3. ONCE BOTTOM ASH HAS BEEN REMOVED, THE EXISTING EMBANKMENT WILL BE BREACHED. THE PROPOSED EXCAVATION DIMENSIONS WILL BE DETERMINED UPON FINAL DESIGN.
4. EXISTING STORMWATER AND PIPING FACILITIES WILL EITHER BE REMOVED OR DECONTAMINATED AND LEFT IN PLACE.

REFERENCE

1. AERIAL PHOTOGRAPHY COPYRIGHT GOOGLE EARTH PRO VERSION 6.2, IMAGERY DATE 4-17-2016.



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<p>FINAL CONDITIONS PLAN</p>			
DRAWN BY:	MJI	CHECKED BY:	DMD
DATE:	9/16/16	DWG SCALE:	AS SHOWN
APPROVED BY:	RJB *	PROJECT NO.:	154-532.0004
			FIGURE NO.:
			3