MONITORING AND EMERGENCY ACTION PLAN

for the

Mountaineer Bottom Ash Pond Complex ID # 05307

Located at or near New Haven, Mason County, West Virginia

Owned by: Appalachian Power Company

EMERGENCY ACTION PLAN
CFR 257.73 (a)(3)
BOTTOM ASH PONDS COMPLEX DIKES
MOUNTAINEER POWER PLANT

5-YEAR PERIODIC TECHNICAL REVIEW

REVIEWED BY Brett A. Dreger	DATE	10/18/2021
Brett A. Dreger, P.E.		
APPROVED BY Yang F. 3yck	DATE	10/18/2021
Gary F. Zych, P.E		/ /
Manager - AFP Geotechnic	al Engineering	



I certify to the best of my knowledge, information, and belief that the information contained in Emergency Action Plan meets the requirements of 40 CFR § 257.73 (a)(3)

This plan can be found within Mountaineer Plant's Integrated Contingency Plan

INTRODUCTION

Purpose of Plan:

The purpose of this document is to provide for monitoring of the Mountaineer Bottom Ash Pond Complex Dam under various conditions so that an emergency situation at the dam will be observed promptly and reported to agencies and persons who may be affected. This document also provides a plan for the orderly notification and evacuation of downstream residents to a place of safety in the event of a potential or actual dam failure.

Brief Overview of Dam and Observed Problems:

The Mountaineer Bottom Ash Pond Complex contains six main ponds comprised of diked embankments on the north, east, and west sides. The south side is incised. The dams are a homogenous structure that is approximately 30 feet high and impounding a maximum volume of water of 684 acre-feet. The perimeter dike is approximately 7600 L.F. with a crest width of approximately 30' wide and inboard and outboard slopes of 2.5 to 1. The outlet works for the Bottom Ash Pond cells consists of a reinforced concrete drop inlet structure with weir openings on three sides which include slide stop logs approximately 3-feet wide. A wooded surface skimming structure is constructed around the weir box. The outlet works of the Wastewater Pond cells consist of a 250-feet long concrete weir. The weir discharges into a concrete chute which transitions into a box structure leading to a junction chamber. There are no known problems concerning the ponds.

Driving Directions to Dam:

From New Haven, West Virginia, travel about 2.5 miles south on Highway 62. Bottom Ash Pond access road is on the right, opposite the Mountaineer Plant.

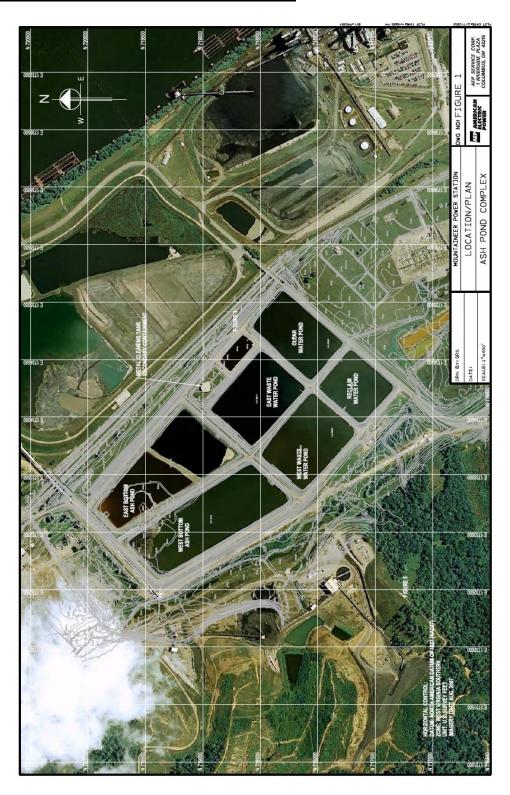
How To Use This Document:

Persons using this plan will find a sequence of actions to be taken depending on rainfall and site conditions. A summary of where to find specific monitoring, reporting and evacuation requirements can be found on the following page (Summary and Index).

Plans for Training, Exercising, and Updating the Emergency Action Plan:

A review of and training for the Mountaineer Bottom Ash Pond Complex EAP will occur on an annual basis. The purpose of an annual review and training of the EAP is to ensure that all contact information listed in the notification charts is accurate and that the owner/operator of the dam and local first responders are familiar with the EAP and understand their respective roles in responding to a dam emergency. Local County Emergency Management Agency/first responders shall be invited to attend the annual training for a face-to-face meeting and to have a general sense of familiarity with the dam site. The plant manager will be responsible for updating and, if revisions are necessary, distributing copies of the revisions. Copies of all updated or revised pages will be provided to all holders of the EAP. An EAP Training Record Form in Appendix C will be used to document each training session.

MAP (PLAN VIEW) OF DAM



SUMMARY AND INDEX

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Part I - Monitoring Plan and Inspection Schedule

HOMELAND SECURITY. In the event of sabotage or security breach **that may lead to failure of the dam**, the county Office of Emergency Management must be notified immediately by calling 911. Proceed immediately to Part I, Section C or D as appropriate.

Section A - Normal Conditions:

Facility will be inspected according to the prescribed schedule. Normal conditions are defined as weather that would not typically stress the dam and the adjoining land. This would include normal weather patterns and normal rainfall. In general, normal rainfall is rainfall not exceeding about 3 inches of rain over a 24 hour period (estimated) or 4 inches over a 7-day period (from weekly measurements). The areas to be inspected will include an examination of the structure for structural weaknesses, status of impounding capacity, excessive erosion, clogging of outlet works, and other potentially hazardous conditions. Reports shall be filed by the person performing the inspections. These reports shall be retained at the operations office, submitted to AEPSC Geotechnical Engineering Section, and shall be made available for inspection by authorized representatives of WVDEP.

<u>Action</u>	Responsibility*
1. Regular weekly inspections of the facility.	Plant Personnel
2. Table 1, Inspection Response Table provides a partial list of potential deficient and unsafe features associated with the performance of the basin. If during the inspection a minor deficiency is found, report the deficiency on inspection checklist and write a job order, if appropriate.	Plant Personnel
3. If a marginal deficiency is found, contact AEPSC, report on inspection checklist and increase inspection frequency in accordance with AEPSC recommendations.	Plant Personnel
4. If an unsafe, non-emergency feature is observed, proceed to Section C-Standby Alert	Plant Personnel
5. If an unsafe, emergency feature is observed, proceed to Section D– Evacuation Conditions	Plant Personnel
6. Annual geotechnical safety inspection	Registered Professional Engineer

^{*}Appropriate names, addresses, and phone numbers are provided in Appendix B

Table 1: Inspection Response

Table 1: Inspection R	esponse	
PERFORMANCE LEVEL OF BASIN	MALFUNCTIONS OR UNDESIRABLE FEATURES	ACTIONS TO BE TAKEN BY FIELD PERSONNEL (In Order Indicated)
Minor Deficiency	 Damaged instrumentation Minor sloughing Rodent burrows Superficial erosion Trees and tall vegetation Poor vegetal cover Deteriorated rip rap 	 Report on inspection checklist. Write repair order, if appropriate
Marginal Deficiency	 Cracks parallel or transverse to dike. Soft zones in downstream face or toe. 	 Contact AEPSC Geotechnical Engineering Section. Report on inspection checklist. Increase frequency of inspection as necessary.
Unsafe Non-Emergency	 Springs on abutments or downstream face with muddy water but stable flow rate. Pipes, cavities or holes, which could be attributed to internal erosion even without evidence of seepage. Clogged drains. Significant slide with no seepage and that does not reach the dike crest. Noticeable increase in amount of foundation or abutment seepage or flow in drains without apparent reason. Previously undetected springs with clear water and stable flow rate on face of dike or abutments. Elevated water levels in piezometers or observation well. 	 Notify Energy Production Supervisor who will issue a Standby Alert Initiate daily or more frequent surveillance program. Report on inspection checklist. Contact AEPSC Geotechnical Engineering Section. Proceed to Section C-Standby Alert
Unsafe Emergency	 Overtopping Excessive settlement of dike. Breach or slide below the waterline which reaches the dike crest and/or seeps water. Springs on abutment or downstream slope with muddy water and progressively increasing flow rate. 	 Notify Energy Production Supervisor who in turn issue a Notification and evacuation should be ordered. Continuous surveillance program. Report on inspection checklist. Contact AEPSC Geotechnical Engineering Section. Proceed to Section D-Evacuation

Section B - Adverse Conditions:

Dam will be inspected within 12 hours of the conditions described, and twice daily while adverse conditions exist. Adverse Conditions are defined as weather that could be in anyway stressful to the dam and adjoining land. This would include rainfall greater than about three inches within 24 hours (estimated) or greater than 4 inches in 7 days (from weekly measurements), or heavy snow melt. Reports shall be filed by the person performing the inspections. These reports shall be retained at the operations office, submitted to AEPSC Geotechnical Engineering Section as soon as possible, and shall be made available for inspection by authorized representatives of WVDEP.

If no potentially hazardous conditions are identified and adverse conditions no longer exist, then resume routine inspection schedule as outlined in section A - Normal Conditions.

<u>EARTHQUAKE</u> Occurrence of an earthquake of sufficient magnitude to cause structural damage to buildings or property in the general area of the dam shall be considered an "adverse condition." Damage from an earthquake may be internal to the dam and problems may not appear for days or weeks after the event. The dam shall be inspected immediately after the quake, and daily for several weeks thereafter. Attention should be directed to looking for cracks, slips, new wet or seepage areas and leakage, both on the face of the dam and in the natural ground areas downstream and at the abutments of the dam.

<u>Action</u>	Responsibility*
1. Inspect dam within 12 hours of adverse conditions rainfall.	Plant Personnel
2. Table 1, Inspection Response Table provides a partial list of potential deficient and unsafe features associated with the performance of the basin. If during the inspection a minor deficiency is found, report the deficiency on inspection checklist and write a job order, if appropriate.	Plant Personnel
3. If a marginal deficiency is found, contact AEPSC; report on inspection checklist and increase inspection frequency in accordance with AEPSC recommendations.	Plant Personnel
4. If an unsafe, non-emergency feature is observed, proceed to Section C-Standby Alert	Plant Personnel
5. If an unsafe, emergency feature is observed, proceed to Section D– Evacuation Conditions	Plant Personnel

^{*}Appropriate names, addresses, and phone numbers are provided in Appendix B

Section C - Standby Alert:

The Bottom Ash Pond Complex has specific problem(s), which could lead to an unsafe, emergency condition requiring evacuation. Continuous surveillance is initiated and a Standby Alert is issued. Emergency repairs begin, if possible.

Specific problems or undesirable features are summarized in Table 1.

<u>Action</u>	Responsibility*	
Notify Energy Production Supervisor and continuous surveillance of dam	Plant Personnel	
2. Standby Alert shall be issued in accordance with wording and checklist below.	Plant Manager, Environmental Supervisor, Safety Supervisor, or Energy Production Supervisor in consultation with AEPSC Geotechnical Engineering Section	
3. Respond to notification of Standby Alert.	DWWM Dam Safety Section, Mason County OEM, Mason County Sherriff, Fire and Rescue Departments.	
4. Start emergency communications network, if necessary based upon the continuing deterioration of site conditions. Request additional assistance as necessary.	Mason Co. OEM or Mason Co. Sheriff or Plant Personnel	
5. If a problem is observed which could lead to failure, proceed immediately to Section D.	Plant Personnel & AEPSC Geotechnical Eng. section	
6. Commence corrective/emergency repairs, if possible	Plant Personnel or Hired Contractor	
*Appropriate names, addresses, and phone numbers are provided in Appendix B		
<u>Standby Alert Notifications</u> : The responsible person shall phone or contact each agency listed below in sequence and cover the following items:		
Check when completed:		
 identify yourself refer to the dam by name, location and ID number (on title page) advise the person contacted that you are calling as required by the monitoring and emergency action plan state the condition of the dam state that a standby alert is declared advise the person contacted of any requested assistance or action 		
_		

answer any questions	
Check when notified:	Phone
DWWM Dam Safety Section	
County Office of Emergency Management	

Note: The primary means of communication is a 450 Mhz radio system with a 12.5 khz analog split. The FCC license for site communications is WZW635. The radio frequencies used are: (transmit) 451.200 or 451.575; and (receive) 456.200 or 456.575.

Section D - Evacuation Conditions:

A dam failure is imminent or has occurred. Notification shall be initiated and an evacuation order shall be given, if warranted.

Features that would necessitate evacuation conditions are listed on Table 1 under Unsafe Emergency Performance Level.

Action Responsibility*

1. Continue constant surveillance of basin condition.

Issue evacuation notice if warranted.

DWWM Dam Safety Section, Mason County OEM, or Plant Manager

2. If evacuation notice is given, proceed immediately with Part II

Plant Manager, Environmental Supervisor, Safety Supervisor, Energy Production Supervisor, or DWWM Dam Safety Section

NOTE: The primary means of communication is digital radio system. Most plant vehicles are equipped with radios so communication can be maintained with individuals inspecting the dam.

^{*}Appropriate names, addresses, and phone numbers are provided in Appendix B

Part II - Emergency Action and Evacuation Plan

Section A - Notification of Agencies:

Action

Responsibility*

1. Notify agencies not on-site according to checklist and wording below.

Plant Manager, Environmental Supervisor, Safety Supervisor, Energy Production Supervisor, or DWWM Dam Safety Section

*Appropriate names, addresses, and phone numbers are provided in Appendix B

Check when completed:	
identify yourself refer to the dam by name, location (on title page) advise the person contacted that you are calling as required by the monitoring and emergency action plan state the condition of the dam state that an evacuation notice is declared advise the person contacted of any requested assistance or action answer any questions	e
Check when notified:	<u>Phone</u>
Mason County Office of Emergency Management	911 or 304-675-9911
DWWM Dam Safety Section	1-800-642-3074

Section B - Evacuation Notification of Downstream Persons:

In accordance with WV Code 22-14-10, it is the responsibility of the dam owner to notify downstream persons, if county emergency authorities are not available or are unable to notify downstream persons.

Note to evacuating authorities: No person may be ordered to leave or to be physically removed from the evacuation area against their will. Notification to persons and providing of assistance to persons in the evacuation area should fulfill agency responsibility under this section of the plan

Once notification has been given by AEP to the Mason County OEM/911/Sheriff's Office to begin evacuation procedures (Section A), the OEM/911/Sheriff's offices will follow their County Emergency Operations Plan. Roadblocks should be established to assist in the evacuation process. Notice to evacuate will be given personally to residents or by loudspeaker or bullhorn, or other means deemed necessary by the OEM. If possible, evacuation teams and roadblock personnel should utilize radio contact throughout the evacuation process. The Mason County OEM will be the agency in charge once evacuation orders have been issued to begin the implementation of evacuation procedures. The following measures will be implemented for an evacuation.

Action Responsibility*

1. Notification of downstream residents.	Plant Personnel, Mason County OEM, Mason County Sheriff, Fire Department, or State Police.
2. Contact and transport downstream residents to point(s) of safety with priority to the infirm or disabled.	Plant Personnel, Mason County OEM, Mason County Sheriff, Fire Department, or State Police.
3. Establish a command post at the AEP Mountaineer Plant if necessary, direct emergency operations to organize recovery efforts and direct officials of cooperating agencies.	Mason County OEM Director or local officers.
4. Notify Mason County OEM, or agencies in charge of evacuation centers, including food and medical facilities. Handle inquiries on the status of evacuees.	Planned by Mason County OEM Director and executed by local officers.
5. Police security of area to maintain or initiate alternate vehicular traffic and to prevent looting.	Ranking local law enforcement officers.
6. Establish roadblocks to prevent unauthorized entry.	Planned by Mason County OEM Director and executed by local officers.

7. Locate additional or alternate evacuation centers, as needed. Planned by the Mason County OEM director and executed by local officers.

8. Notification of utilities on following page. Plant personnel

Check When Notified		Telephone Number
Electric Service	Appalachian Power	(800) 982-4237
Potable Water	Mason County Public Service District	(304) 675-6399
Potable Water	Town of New Haven	(304) 882-3203
Telephone	Frontier	(866) 226-5170
Transportation	WV Division of Highways	(304) 675-0853
Railroad	CSX	(800) 232-0144

Section C - Evacuation Notification Map

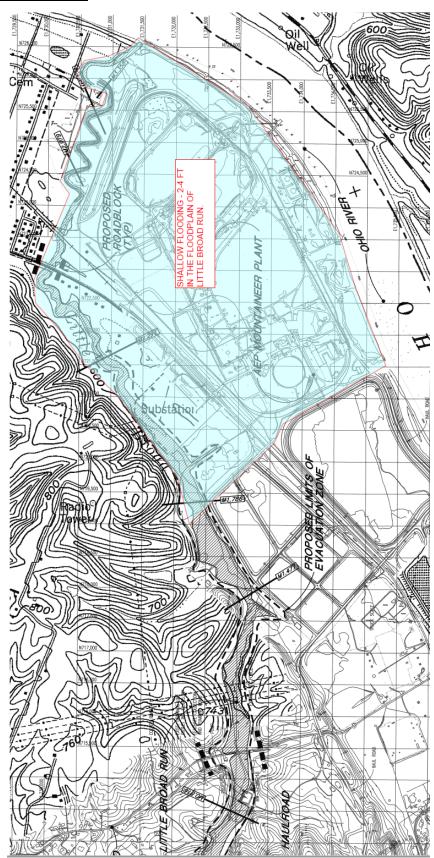
The Evacuation Notification Map has been included in a map pocket following this page. This map shows the locations of the ponds, inundation area, potential evacuation area, and potential road blocks.

It should be noted that, due to the method and procedure used to develop the flooded area, the limits of flooding shown are approximate and should be used solely as a guideline for establishing evacuation zones. Actual evacuation zones may be greater than the area covered by the flood areas shown and should be re-established by local officials based on their judgment and knowledge of local conditions. Evacuation of residents outside of the area shown may be warranted and shall be at the discretion of the Mason County OEM and/or sheriff's department.

In accordance to the Mason County emergency operations plan, the location of an evacuation center will be determined at the time of the incident at the discretion of the Mason County Director of Emergency Services. Facilities at the Mountaineer Plant will be offered as evacuation center or command post to the proper authorities if an event occurred.

^{*}Appropriate names, addresses, and phone numbers are provided in Appendix B

Evacuation Map



Part III - Post Evacuation Notification Action

Section A: No Failure

Should no failure occur:

<u>Action</u>	Responsibility*
1. Cancel Evacuation Notification	DWWM Dam Safety Section or Mason County OEM director
*Appropriate names, addresses, and phone numb	ers are provided in Appendix B
Check when notified:	Phone
Mason County Office of Emergency Manageme	nt 911 or 304-675-9911
DWWM Dam Safety Section (if not on-site)	

Section B: Failure

Should failure occur:

Should failule occur.		
<u>Action</u>	Responsibility*	
1. Notify agencies according to checklist below.	Plant Manager, Environmental Supervisor, Safety Supervisor, Energy Production Supervisor, or DWWM Dam Safety Section	
 Evacuation or assistance to persons stranded in homes due to highway/bridge washout. Search and Rescue. 	Mason County OEM or Plant personnel	
	Mason County OEM or Plant personnel	
4. Cleanup Crews and Equipment.	Planned by Mason County OEM Director and executed by local officers.	
5. Long-term relief and lodging.	Mason County OEM, Plant personnel, or American Red Cross	
*Appropriate names, addresses, and phone numbers are provided in Appendix B		
Check when notified:	<u>Phone</u>	
Mason County Office of Emergency Management 911 or 304-675-9911		

1-800-642-3074

____ DWWM Dam Safety Section (if not on-site) . . .

Part IV - Administrative and Record Keeping Section A - Signature and Distribution List

SIGNATURE:

(Note to Preparer- The signature page of the draft plan must be signed by the dam owner/preparer and the appropriate County Office of Emergency Management Director(s) prior to submittal to Dam Safety for review and potential approval. If more than one County OEM is involved with the MEAP, additional signature statements must be added.)

County Office of Emergency Management:

As the Director of the Mason County Office of Emergency Management (OEM), I hereby certify that I have reviewed this Monitoring and Emergency Action Plan (MEAP) and agree with the actions and responsibilities assigned to this office within this MEAP. It is noted that designated response activities may be altered during an actual event based on consideration of other emergency concerns and relative priorities.

TITLE

Mason

TITLE

County OEM

Responsible Person for Distribution of the Monitoring & Emergency Action Plan:

The undersigned states he/she will distribute a copy of the Monitoring and Emergency Action Plan for the

Mountaineer Bottom Ash Pond Complex Dam within fifteen days after receipt of DWWM Dam Safety

Section approval to the persons named in the Distribution List below:

Director of

Note for Preparer:

Alan Miles

The DWWM Dam Safety Section will not approve draft plans without an up-to-date signature and distribution page. The signature page of the draft plan must be signed by the dam owner/preparer and the appropriate County Office of Emergency Management Director(s) prior to submittal to Dam Safety for review and potential approval.

(dam owner or NRCS sponsor)

Once complete, a paper copy of the draft plan may be submitted to Dam Safety by regular mail to the Charleston office at the address provided on the cover sheet. Alternatively, the plan may be sent by email to <u>DEPDamSafetyProgram(a wy.gov</u> in Adobe pdf or other word processing format. The Dam Safety Section will review the submitted MEAP(s) and approve the plan by letter and/or email when determined adequate. **Upon approval, the owner may distribute approved copies of the MEAP in Adobe Acrobat (pdf) format or in paper form by regular mail to responsible persons and agencies.**

DATE 1 SAVG 22

Distribution:

Names and addresses of all persons or agencies retaining a copy of the plan:

Name	Complete Mailing Address	Copy No.
David Dove, PE Engineer	DEP Division of Water and Waste Management EE/Dam Safety Section 1159 Nick Rahall Greenway Fayetteville, WV 25840	1
Bryan Brunton, P.E. Manager of Geotech. Eng.	AEPSC Civil Engineering Section 1 Riverside Plaza Columbus, OH 43215	2
Bryan Mabe Plant Manager	AEP Mountaineer Plant P.O. Box 419 New Haven, WV 25265	3
Tim Kerns Vice President, Generation	Appalachian Power Company Suite 800, Laidley Tower 500 Lee Street East, 08 Charleston, WV 25301	4
Alan Miles	Mason County Office of Emergency Services 911 Emergency Dr. Point Pleasant, WV 25550	5
Corey Miller Mason County Sheriff	200 6 th St Point Pleasant, WV 25550-1131	6
Dave Meadows	Corps of Engineers, Water Resources 502 Eighth Street Huntington, WV 25701	7
David A. Miller Director	AEPSC Environmental Services, Water Quality 1 Riverside Plaza Columbus, OH 43215	8
Aaron Walker President & COO	Appalachian Power Company Suite 800, Laidley Tower 500 Lee Street, 08 Charleston, WV 25301	9
Brad Hall Vice President External Affairs	Appalachian Power Company 40 Franklin Road, SW	10

Mountaineer Bottom Ash Pond Complex, Mason County, WV ID#05307, August 2022

Roanoke, VA 24011

West Virginia Emergency Management Division

2403 Fairlawn Avenue Dunbar, WV 25064 www.emd.wv.gov 11

Section B - Inspection Record

Date Inspected	<u>Inspector</u>	Comments

APPENDIX A –EMERGENCY EVENT LOG

Monitor or responsible person to enter the following as events occur:						
Dam Name	»:					
When and how was the event detected?						
General des	scription of the	emergency situation:				
	AC	CTIONS AND EVENT PROGRES	SION			
Date	Time	Action/Event Progression	Taken by			
Paport prai	parad by:		Dote			

<u>APPENDIX B – LIST OF CONTACTS</u>

Appalachian Power Mountaineer Plant

Plant Mailing Address – P.O. Box 419, New Haven, WV 25265

Plant Physical Location – 2 miles southwest of New Haven, WV on US Route 62

Plant Telephone: 304-882-2151

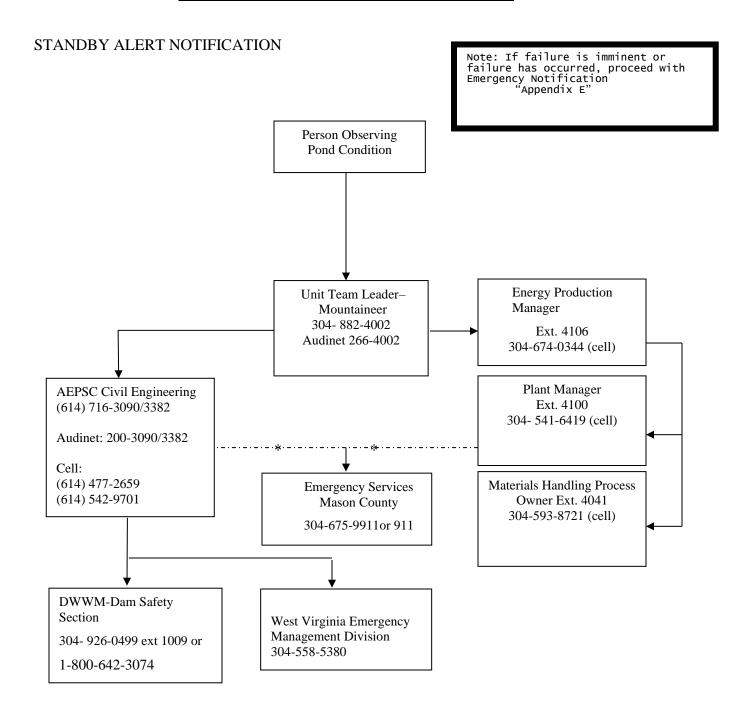
Mountaineer Plant Contacts:

Unit 1 Team Leader:	Office 304- 882-4002	Cell
Bryan Mabe Plant Manager	304- 882-4100	304- 541-6419
J.L. Perry Energy Production Superintendent	304-882-4106	304-674-0344
Dave Thompson Environmental & Lab Supervisor	304-882-4023	304-638-2022
Randy Brown Environmental Coordinator	304-882-4024	740-288-5232
Christopher Purdum Little Broad Run Landfill Supervisor	304-882-4193	304-812-4626
Derrick Watterson Materials Handling and Process Supervisor	304-882-4041	304-593-8721
AEP Service Corporation Contacts: Bryan Brunton, P.E.	Office 614-716-3090	Cell 614-477-2659
Manager, Geotechnical Engineering Brian Palmer, P.E.	614-716-3382	614-542-9701
Engineer, Civil Engineering		
AEP Appalachian Power Company Contacts: Aaron Walker, President & COO	Office 304-348-4191	
Brad N. Hall, VP External Affairs	540-982-7435	
Regulatory Contacts:	<u>Office</u>	
Alan Miles Mason County Office of Emergency Services	911 or 304-675-9911	
David Dove, Engineer WV Dam Safety	(304) 574-4471 Extension: 1021042178	
WVDEP Dam Safety	304- 926-0499 ext 1009 o	or
	1-800-642-3074	

<u>APPENDIX C – EAP TRAINING FORM</u>

Use this form to record training sessions. File the completed form in the EAP. A thorough review of all items in the EAP should be discussed during training. Appropriate employees and EAP team members should attend the training session, annually or participate in a simulated exercise.				
TRAINING LOCATION:				
DATE: INSTR	UCTOR:			
CLASS SIGN-IN				
Summary and Commentary:				

APPENDIX D – STANDBY ALERT NOTIFICATION CHART



^{*} Denotes that the contact to the "Office of Emergency Management" may be made by either entity or preferably after consultation between both parties.

APPENDIX E - EMERGENCY ACTION AND EVACUATION NOTIFICATION CHART

