State of West Virginia

WV Radiological Emergency Preparedness Program Plan

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Record of Changes

Change Number	Date	Revision #	Affected Pages	Sections
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Contents

WV REP Program

Overview

An incident at the Beaver Valley Power Station (BVPS) may affect people who reside within West Virginia. Federal law requires special emergency planning and exercises for an area up to 50 miles from the facility. This area is divided into two Emergency Planning Zones (EPZ): The Plume Exposure Pathway EPZ, which extends up to 10 miles from the facility and includes the northern portion of Hancock County, and the Ingestion Pathway EPZ, which extends 50 miles from the facility and includes all of Hancock, Brooke and Ohio Counties and the northern portion of Marshall County (attachment 1A and 1B).

According to criteria established by the Nuclear Regulatory Commission (NRC) and the Federal Emergency Management Agency (FEMA), the State of West Virginia must be prepared to assist those counties in the path of a release from the BVPS. Initially, Hancock County will need to take immediate protective actions (sheltering and/or evacuation) to protect its citizens who are in the Plume Exposure Pathway EPZ at the time of a release serious enough to threaten them with an unacceptably high exposure to radiation. Additionally, the state must be capable of monitoring animal feed and food stuff in the Ingestion Pathway EPZ to prevent any contaminated materials from entering the food chain.

This plan details the policies and procedures the State of West Virginia will follow when responding to an incident at the Beaver Valley Power Station (BVPS) and provides for coordination of its response with those of the Commonwealth of Pennsylvania, the State of Ohio, BVPS, agencies of the Federal government and quasi-public or private relief organizations.

Mission

The mission of the West Virginia Emergency Management Division (WVEMD) is to ensure the protection of life and property by providing coordination, guidance, support, and assistance to local emergency managers and first responders.

Purpose

This plan establishes organizational responsibilities and prescribes actions necessary to mitigate the potential consequences, to the West Virginia populace, of radiation exposure and environmental radioactive contamination, which could result from an incident at the BVPS.

Scope

The WV REPP Plan provides guidance to state and local officials based on the FEMA REP Program Manual and NUREG-0654/FEMA REP-1 Rev. 2. Communities that may be affected by a radiological incident benefit from emergency planning and preparedness activities. The WV REPP Plan has been written in a manner to correlate with the FEMA REP Program Manual to ensure compliance with NUREG-0654/FEMA REP-1 Rev. 2.

Basis for the WV REP Program

The BVPS is in Shippingport Borough, PA, on the Ohio River approximately 4.45 miles east of the Pennsylvania-West Virginia border. It occupies approximately 450 acres on the south bank of the river adjacent to the Shippingport Bridge which links PA Routes 68 and 168. The Universal Transverse

Mercator coordinates are 547,900 meters east (80 degrees 26' 2" west longitude) and 4,496,680 meters north (40 degrees 37' 18" north latitude) (attachment 1A).

Owned by the Energy Harbor Nuclear Operating Company, Beaver Valley Power Station is operated by Energy Harbor and consists of two nuclear reactors. Beaver Valley Unit #1 was activated in 1976; Beaver Valley Unit #2 was activated in 1987. Both units contain a Westinghouse designed light water pressurized water reactor with a design net output of 990 megawatts. The actual operating life span of the Beaver Valley Power Station reactors is not known, it is anticipated they will be in use for 40+ years.

During the operation of a nuclear reactor, a large quantity of radioactive materials is formed. The most hazardous, Plutonium, remains in the fuel rods separated from the environment by three physical barriers: the fuel rod cladding, the reactor vessel, and the Containment Building. So long as this remains true, the threat posed by a nuclear power plant is minimal.

However, if these barriers are breached, a large release of radioactive materials to the environment can take place and the safety of the public around the facility will be seriously threatened. Therefore, the first principle of reactor design and operation is the maintenance of the reactor core at a temperature below the melting point of the fuel rod cladding. This can be done if the heat generated by the fission process is carried off by the Reactor Coolant and Feedwater Systems.

When an incident occurs that is a possible threat to this heat removal process, the fission process is stopped by rapidly inserting control rods into the reactor core. This is known as a scram and reduces the amount of heat generated by the reactor. Then comes a period known as a "hot shutdown", when the heat removal system cools the reactor until the coolant temperature drops to, or below, 200 degrees F, and the pressure has essentially been reduced to atmospheric pressure. At that point, the reactor is said to be in a "cold shutdown" operating status and does not represent a threat to the public.

The public would be endangered if the reactor operators lost the ability to maintain the core at a temperature below the melting point of the fuel rod cladding. A detailed description of the possible causes of this happening is beyond the scope of this discussion, but a general overview of the sequence of events is in order. First, there is a loss of coolant in the Heat Removal System; a Loss of Coolant Accident (LOCA) so severe that the core is no longer covered by the coolant and heat rapidly builds up. If the core cannot be recovered, (e.g., using the Safety Injection System designed to provide emergency core cooling), then the fuel rod cladding will melt, and an extremely hot mixture of molten cladding and radioactive fission products will collect on the bottom of the reactor vessel. The first product barrier will have been breached.

Without coolant, the hot mixture will melt through the steel reactor vessel. Having breached the second barrier, separated from the environment only by the Containment Building itself, two things can now happen that would threaten the public. First, the mixture may melt through the floor of the Containment Building and enter the environment through the ground. This will take a long time and, depending on the rock strata below the plant, may not immediately threaten the public with high doses of radioactive material.

However, when the molten mixture breaches the reactor vessel and hits the containment floor, if it causes a steam or hydrogen explosion, the Containment Building may be quickly breached and an uncontrolled large release of radioactive materials to the atmosphere may commence.

The result of this sequence of events would not be a nuclear explosion, (i.e., an atom bomb blast). There are not enough of the right types of nuclear materials in the core for this to occur. Rather, a cloud or plume of radioactive materials would leave the Containment Building and spread over the countryside. The solid or particulate cloud components would settle out as the plume travels and contaminates exposed surfaces. All the radioactive elements would decay, some more rapidly than others, until at some point the amount of radioactivity contained in the plume would no longer constitute a threat to the public and the amount contained in the fallout could be endured with few, if any, ill effects. Without protective actions being taken, a core-melt accident resulting in the release of large number of radioactive materials into the atmosphere could cause serious injury and/or death to members of the public exposed to the plume or the ground contamination. With protective actions being taken, the public may well be protected from these serious consequences of a core-melt, atmospheric release accident.

Planning Section A-Assignment of Responsibility

Section A.1

Local Agencies

County Commission

Local government bears primary responsibility for the safety and well-being of its citizens during an emergency or disaster. Each county in West Virginia is authorized and directed by the West Virginia Emergency Response & Community Right-To-Know Act (Chapter 15, Article 5A, as amended) and the Local Organization for Emergency Services Section (Chapter 15, Article 5, Section 8, as amended) to establish a local organization for emergency services. This organization is, to the limits of its capabilities, responsible for the disaster preparedness activities within its jurisdiction. Once an emergency develops, this organization assumes direction and control of the operation until local capabilities have been exhausted and state assistance is requested.

State Agencies

The state government can provide a variety of assistance to supplement the efforts and resources of county and local governments when conditions threaten community health, safety, and/or property. This is accomplished through various state agencies.

West Virginia Emergency Management Division (WV EMD)

WV EMD is the coordinating agency for the State of West Virginia in times of emergencies. In the event of an emergency at a fixed nuclear facility, it will be the responsibility of the WV EMD to verify the emergency, establish contact with Hancock County, and if necessary, the other counties in the 50-mile EPZ. The WV EMD will notify and coordinate with all other state agencies necessary to handle the emergency. If the situation dictates, WV EMD will activate the SEOC. When feasible, West Virginia will coordinate their actions with Pennsylvania and Ohio.

WV EMD has the following resources available in the State EOC to support Federal response:

- Office space
- Telephones
- Radio communications

- FAX
- Internet with limited access to FEMA system drops.

WV EMD Director may request Federal assistance through FEMA Region III or other assistance as needed through mutual aid agreements and/or EMAC.

WV EMD may also assist the Federal response in coordinating logistics as needed.

WV EMD will aid local governments in organizing and developing educational material for the general population.

At the State level, all public information will be channeled through WV EMD via approval of the Governors communication team. If requested, they may assist the BVPS with their annual news media contacts organized to acquaint the news media with emergency plans, information concerning radiation and points of contact for the release of public information in an emergency.

West Virginia National Guard (WVNG)

The WVNG is activated by the Governor through the Director, WV EMD. The WVNG has the capability of providing radio communications, transportation support for evacuations, emergency shelters, and assistance in the protection of property. They will also provide access control assistance for evacuation if necessary. These services will be conducted in accordance with the WV EOP.

The WVNG Civil Support Team (CST) may also be requested to provide radiological assistance to the FMT, FST, FTC, and SRC.

Governor's Office

The Governor has responsibility for overall direction and control of emergencies. This is performed through the WV EMD.

WV Department of Health and Human Resources (WV DHHR)

The WV DHHR is responsible for developing and maintaining a radiological monitoring system. If during an emergency there is a release of radioactive material into the atmosphere, it will be the Department's responsibility to assess the situation and advise the Governor, WV EMD, and local officials of the potential radiation problems to the public and to make recommendations on the necessary action for the protection of the public. The Department will provide the necessary personnel to the SEOC to perform dose assessment calculations necessary for providing protective action recommendations. The WV DHHR will also send representatives to the Hancock County Division of Homeland Security and Emergency Management (HC DHSEM) to assist the county with monitoring, and to provide technical assistance to the county. They will also be deployed to the BVPS Emergency Operations Facility (EOF) to coordinate acquisition of technical information and data needed to perform dose assessments.

When possible and necessary, WV DHHR will coordinate with WV EMD to request and arrange for federal support and resources in conjunction with the Pennsylvania Bureau of Radiation Protection (PA BRP).

WV DHHR will maintain a current list of radiological labs that have an active MOU and if further assistance is needed for laboratory purposes federal support will be requested in accordance with the National Response Framework.

WV DHHR will support the Sample Reception Center (SRC), FMTs, and FSTs, as well as the State Response/Recovery Task Force (SRTF) organizations.

The Department may assist, as needed, with public information.

West Virginia Department of Agriculture (WV Dept. of Ag)

The WV Dept. of Ag shall specify the protective measures to be used for protecting the public from consumption of contaminated food stuffs. This shall include criteria for deciding whether animals should be put on stored feed and water. The plan shall identify procedures for detecting contamination, for estimating the dose commitment consequences of uncontrolled ingestion, and for imposing protection procedures such as impoundment, decontamination, processing, decay, product diversion, and preservation.

There will be agriculture representatives on the SRTF during the recovery phase of the emergency and support the FTC as well as on the FSTs, as needed.

West Virginia University Extension Service (WVUES)

The WVUES has county offices that interface with the agricultural community. In the event of an emergency, the WVUES will assist in public communication to help with the implementation of protective actions, education of location agricultural community members, and in the location and availability of uncontaminated livestock feeds.

The WVUES will assist in determining sample location sites, and, if requested, may provide an advisory representative for the SRTF and/or Field Team Center and Field Sampling Teams.

West Virginia Division of Highways (WV DOH)

The WV DOH has radio communications throughout the state. This communications network is at the disposal of the WV EMD during an emergency. The WV DOH can be called upon for transportation assistance as well as assistance during the evacuation.

The WV DOH may be tasked with assisting with public information, as needed, through road blockages and directional signage at traffic control points.

West Virginia Division of Natural Resources (WV DNR)

WV DNR has the responsibility for the control of fish and wildlife, as well as issuing orders for the closing/opening of hunting, fishing, and trapping seasons, and the restriction of recreational use of waterways. WV DNR will provide representatives for the SRTF and support the Field Team Center and Field Sampling Teams as needed. WV DNR Law Enforcement will further provide material support as needed and as requested by the WV State Police in assisting with traffic control, evacuation, security, and other related services.

WV State Police (WVSP)

The WVSP has a statewide radio communications network that is at the disposal of the WV EMD in times of emergencies. If an evacuation is necessary, the WVSP will assist in traffic control, security for the evacuated area, and related services as outlined in the Evacuation and Re-Entry (SPT 6) and the external affairs (ESF 15) Annexes, in the WV EOP.

West Virginia Department of Environmental Protection (WV DEP)

The WV DEP Homeland Security and Emergency Response may provide field deployable personnel experienced in sample collection procedures and protocols. They may be utilized as team leaders for the Field Monitoring teams (FMT) and Field Sampling Teams (FST).

The WV DEP Public Information Officer (PIO) may assist the WV EMD PIO.

The WV DEP may supplement manpower at the SEOC, SRTF, and EOF during activations.

West Virginia University (WVU)

WVU may provide radiological health support to the WV DHHR (in the form of dose assessment, or supplemental staff to the EOF), as well as support on the field sampling and monitoring teams and in the form of being a liaison for FRMAC.

Marshall University (MU)

MU may provide radiological health support to the WV DHHR (in the form of dose assessment), as well as to the field sampling teams as well as be a liaison for FRMAC.

West Virginia Voluntary Organizations Active in Disasters (WV VOAD) and American Red Cross (ARC)

Although the WV VOAD and ARC are not state agencies, they may aid in times of emergencies. Coordination of resources is covered in the Hancock County REP Plan.

Radio Amateur Civil Emergency Services (RACES)

RACES is a statewide radio network operated by civilians. RACES is available to the four counties within the Ingestion Planning Zone through contact with the local jurisdictions.

Federal Agencies

Agencies of the federal government can make available a wide variety of assistance to supplement the efforts and resources of State and local governments when conditions threaten community health, safety, or property. Assistance will be in line with the National Response Framework.

Federal Emergency Management Agency (FEMA):

Serves as the primary point of contact for requests for federal assistance from state officials and other federal agencies.

Provide a Lead Federal Official to coordinate and ensure the provision of appropriate non-technical assistance, including telecommunications support, requested by federal, state, and local agencies.

Serve as the primary point of contact and coordination between the Nuclear Regulatory Commission (NRC) and other federal agencies for non-technical response activities.

Coordinate the dissemination of all public information concerning federal non-technical emergency response activities and ensure that public information releases are coordinated with state/local authorities and the NRC. Establish an interagency public affairs group.

Review and integrate all federal agency implementation plan to ensure that all required actions and interfaces are adequately addressed through the National Response Framework (NRF)

Nuclear Regulatory Commission (NRC):

Coordinate the technical response activities of the licensee, Department of Energy (DOE), and other federal agencies.

Provide technical advice to state/local agencies.

Develop, for state and local agencies, a federal technical recommendation on protective actions, which reflects all substantive dissenting views of other federal agencies and the licensee. Participate with the Lead Federal Official in discussing federal recommendations for protective actions with appropriate State/local officials, except in situations of imminent peril to the public health and safety where the NRC may be required to make direct contact with appropriate state/local officials regarding recommendations for protective actions.

Ensure that the NRC's radiological monitoring activities are coordinated with DOE's Offsite Technical Director.

Coordinate the release of public information concerning the federal technical response, including the status of the reactor, radiological monitoring activities and other federal technical support and ensure that such releases are coordinated with the state(s), FEMA, and the licensee.

Assess the nature and extent of the radiological accident and the potential offsite consequences to the health and safety of the public.

Department of Energy (DOE) and Federal Radiological Monitoring and

Assessment Center (FRMAC):

Coordinate the offsite radiological monitoring, assessment, evaluation, and reporting activities of all federal agencies during the initial phases of an accident and maintain a technical liaison with state and local agencies with similar responsibilities. Ensure the orderly transfer of responsibility for coordinating the intermediate and long-term radiological monitoring function to EPA after the initial phases of the emergency at a mutually agreeable time.

Provide the personnel, including the Offsite Technical Director, and equipment required to coordinate and perform the offsite radiological monitoring and evaluation activities.

Assist the NRC in assessing the accident potential and in development.

Maintain a common set of all offsite radiological monitoring data and provide this data and interpretation to the NRC and to appropriate state and local agencies requiring direct knowledge of radiological conditions.

Provide consultation and support services to all other entities (e.g., private contractors) having radiological monitoring functions and capabilities.

Assist the U.S. Department of Health and Human Services (HHS) and other federal, state, and local agencies providing technical and medical advice concerning treatment of radiological contamination.

Provide telecommunications support and interface with Nuclear Emergency Search Team (NEST) capabilities as provided for by existing NRC/DOE agreements.

Assist other federal agencies in developing and establishing guidelines on effective systems of emergency radiation detection and measurement, including instrumentation.

Review and integrate agency radiological monitoring plans into the Federal Radiological Monitoring and Assessment Plan.

Department of Agriculture (USDA):

Assist the NRC, in coordination with HHS, in developing technical recommendations for state and local officials regarding protective measures related to food and animal feed.

Assist state and local officials, in coordination with HHS, on the implementation of protective actions to minimize contamination through food ingestion.

Provide guidance to state and local officials on how to minimize losses to agricultural resources from radiation effects.

Monitor, in coordination with HHS, emergency production, processing, and distribution of food resources during a radiological accident.

Assure the safety and wholesomeness of agricultural products in establishments under federal inspection and agricultural commodities and products owned by the Commodity Credit Corporation/USDA.

Assist in providing lists of uncontaminated livestock feed to replace contaminated feed and pasture.

Provide advice on and assist state/local officials in the disposition of food animals affected by radiation in coordination with the EPA and HHS.

Provide a mechanism to state agricultural agencies to keep state/local officials informed of Federal efforts.

Provide a representative to HHS to facilitate cooperation between USDA and HHS.

Provide National Radio Fire Cache assistance under the provision of NRC/Forestry Service Agreements.

Department of Commerce (DOC):

Estimate the damage to industrial resources and recommend actions to deal with industrial sector problems.

Provide current and forecast meteorological information about wind direction and speed, boundary layer mixing, precipitation, and any other meteorological and hydrological parameters affecting radiological contamination.

Provide gamma radiation level readings from National Weather Service Offices as requested by DOE.

Provide a representative to both the onsite and offsite radiological monitoring agencies as required (i.e., DOE and NRC) to coordinate meteorological operations, provide meteorological and hydrological information, and arrange for supplemental meteorological measurements.

Department of Defense (DOD):

Provide military assistance, in the form of manpower, technical support, and logistical support, including airlift services and telecommunications support, as requested by FEMA, under the Federal Response Plan.

U.S. Department of Health and Human Services (HHS):

Coordinate the federal health service response.

Assist the NRC, in coordination with USDA, in developing technical recommendations for state and local government officials regarding protective actions related to food and animal feed.

Aid state and local officials on the use of prophylactic drugs to minimize the radiation doses of affected persons.

Provide advice and guidance to state and local officials in assessing the impact of the offsite consequences of radiological accidents on the health of persons in the affected area.

Provide advice to medical care personnel regarding proper medical treatment of people exposed to or contaminated by radioactive material.

Ensure the capability of public health service hospitals to respond to radiological accidents.

Conduct epidemiological surveys and implement communicable disease control measures.

Department of Transportation (DOT):

Coordinate the federal transportation response in support of transportation plans and actions of state and local authorities.

Provide, through Regional Emergency Transportation Coordinators, representation to State and local transportation authorities.

Direct air traffic in and around the affected area.

Environmental Protection Agency (EPA):

The Office of Radiation Programs maintains an interest in environmental radiation. Supplementary laboratory facilities and appropriate personnel will be made available in the event of a reactor accident of any offsite significance. The Regional Radiological Health Representative is in Philadelphia, PA. The

nearest EPA radiological laboratory is in Montgomery, Alabama. This facility also has a mobile laboratory.

National Communications System (NCS):

Provide and coordinate, in response to a FEMA request, the necessary communications for the federal government response in accordance with the National Plan or Communications Support in Emergencies and Major Disasters. Be prepared to provide this support to an affected state under a formal declaration of an emergency or major disaster.

Provide technical representation to appropriate state agencies to assist in meeting their communications requirements.

National Weather Service (NWS)

Provide current and forecast meteorological information about wind direction and speed.

Provide current and forecast meteorological information about weather hazards affecting the northern panhandle of West Virginia.

Provide liaison capabilities from NWS Charleston to WV EMD with information from NWS Pittsburgh.

Facility

Beaver Valley Power Station

The fixed nuclear facility is required by federal regulations to develop and implement emergency preparedness plans for the facility as a condition of the facility operating license. These plans are required to handle both conventional and nuclear emergencies. In the case of nuclear generating stations, Title 10 of the Code of Federal Regulations, Part 50, (10CFR50), and NUREG-0654 establish requirements for the content of the emergency preparedness plans. While the fixed facility is primarily responsible for onsite planning, it is also necessary for them to coordinate with local and State governments to assist in developing county and state emergency plans.

The fixed facility will be responsible for the notification of primary offsite authorities of the existence or occurrence of an emergency condition at the facility. In West Virginia, the primary offsite authorities are the HC HSEM and the WV EMD.

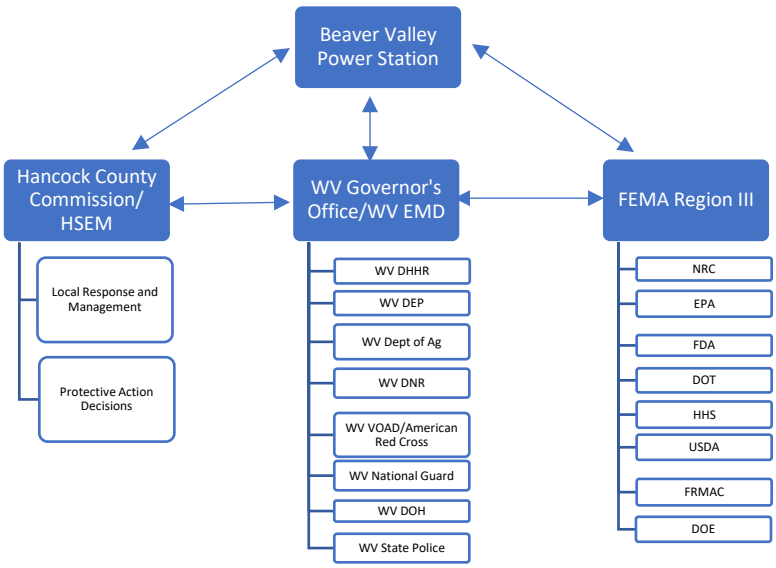


Figure 1 Organizational Relationships

Section A.2

Authorities and References

NUREG-0654/FEMA-REP-1, Rev. 2, *Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants*, December 2019.

FEMA-REP-2, *Guidance on Offsite Emergency Radiation Measurement Systems, Phase 1 – Airborne Release*, June 1990.

FEMA-REP-10, *Guide for Evaluation of Alert and Notification Systems for Nuclear Power Plants*, November 1985.

NUREG-1442/FEMA-REP-17, Rev. 1, *The Emergency Response Resources Guide for Nuclear Power Plant Emergencies*, July 1992.

FEMA-REP-21, *Contamination Monitoring Standard for Portal Monitors used in Radiological Emergency Response*, March 1995.

FEMA-REP-22, Contamination Monitoring Guidance for Portable Instruments used in Radiological Emergency Response to Nuclear Power Plant Accidents, October 2002.

FEMA *Program Manual – Radiological Emergency Preparedness, October 2011*.
FEMA *Federal Policy on Use of Potassium Iodide (KI)*, January 2002.

FEMA REP *Guidance to States and Local Governments for Shelf-Life Extension of Potassium Iodide (KI)*, April 2007.

Robert T. Stafford Disaster Relief and Emergency Assistance Act, Public Law 93-288, as amended by Public Law 106-390, October 2000.

44 CFR 350, *Review and Approval of State and Local Radiological Emergency Plans and Preparedness*,

44 CFR 351, *Radiological Emergency Planning and Preparedness*,

44 CFR 352, *Commercial Nuclear Power Plants: Emergency Preparedness Planning*.

40 CFR 141.66, National Primary Drinking Water Regulations (NPDWR): Maximum Contaminant Levels for Radionuclides

National Response Framework, January 2008.

10 CFR 20, *Standards for Protection Against Radiation*.

EPA-400-R-17-001, *Manual of Protective Action Guides and Protective Actions for Nuclear Incidents*, January 2017.

Food and Drug Administration Accidental Radioactive Contamination of Human Food and Animal Feeds Recommendations for State and Local Agencies, August 1998.

Food and Drug Administration Guidance on Use of Potassium Iodide as a Thyroid Blocking Agent in Radiation Emergencies, December 2001.

United States Department of Agriculture Radiological Emergency Manual for Livestock, Poultry and Animal Products, December 1987.

West Virginia Emergency Operations Plan, As amended.

West Virginia Radiological Emergency Preparedness Plan, As Amended.

West Virginia Division of Homeland Security and Emergency Management Standard Operating Procedure for BVPS, As amended.

West Virginia Field Team Center Standard Operating Procedure, As amended.

West Virginia Field Sampling Team Standard Operating Procedure, As amended.

West Virginia Field Monitoring Team Standard Operating Procedure, As amended.

West Virginia Sample Reception Center Standard Operating Procedure, As amended.

WV Division of Homeland Security and Emergency Management REP Public Information Standard Operating Procedure, As amended.

WV 15-5, *State Emergency Services Act*.

Radiological Emergency Information for Farmers and Food Processors in the State of West Virginia, As amended.

West Virginia University Disaster Handbook for Extension Agents, As amended.

West Virginia Emergency Alert System Plan, August 2010.

West Virginia Division of Health and Human Resources Bureau of Public Health Policy on Distribution and Use of Potassium Iodide, As amended.

Hancock County Radiological Emergency Response Plan, As amended.

Beaver Valley Power Station Emergency Preparedness Plan, As amended.

Planning Section A.3

Functional Assignments

P = Primary Responsibility S = Support Responsibility C = Cooperating Agency Function	ORGANIZATION												
	WV Office of the Governor	WV EMD	WV DHHR	WV Dept. Of Agriculture	WV State Police	WV DNR	WV DOH	WV National Guard	WV VOAD and ARC	RACES	WV State Fire Commission	WV DEP	WV Dept. Of Adim. Services
Command & Control	P	C											
Alerting & Notification		S											
Communications		P						S		S			
Protective Response	P	C	C	S	S	S	S					S	
Public Information	P	C	S			S		S				S	
Fire & Rescue											S		
Traffic Control					S			S					
Emergency Medical Services			S										
Accident Assessment		C	P										
Law Enforcement					S								
Public Health			S										

= P Primary Responsibility **S = Support Responsibility** **C= Cooperating Agency** **Function**	**WV Office of the Governor**	**WV EMD**	**WV DHHR**	**WV Dept. Of Agriculture**	**WV State Police**	**WV DNR**	**WV DOH**	**WV National Guard**	**WV VOAD and ARC**	**RACES**	**WV State Fire Commission**	**WV DEP**	**WV Dept. Of Adim. Services**
Sanitation			S										
Social Services			S										
Transportation							S	S					
Mass Care Facility			S						S				
Evacuation	P	C	S										
Radiological Exposure Control			P										
Public Education		C											
Prevention & Preparedness		C											
Protective Response Training		P											
Resource Management		C											
Compensation/Claims													P
Procurement/Cost													P
Time													P

Table 1 Functional Assignments

Functional Responsibilities and Key Individuals

FUNCTION**	AGENCY	KEY INDIVIDUAL	ALTERNATE INDIVIDUAL
Command and Control	West Virginia Emergency Management Division	Director	Deputy Director
Alert and Notification	West Virginia Emergency Management Division	Director of Operations	Operations Chief
Communications	West Virginia Emergency Management Division	Communications Officer	Volunteer Coordinator
Public Information	West Virginia Emergency Management Division	Public Information Officer	PIO from Other Agencies
Accident Assessment	DHHR, BPH	Chief, Radiological Health	Radiological Health Personnel
Protective Accident Recomm.	DHHR, BPH	Chief, Radiological Health	Radiological Health Personnel
Protective Active Response	West Virginia Emergency Management Division	Director	Director of Operations
Public Health & Sanitation	DHHR, BPH	Dir. Environmental Health	Chief of Drinking Water Div.
Social Services	DHHR, Human Resources	Commissioner	Deputy Commissioner
Fire and Rescue	State Fire Commission	State Fire Marshal	Deputy State Fire Marshal
Traffic Control	State Police	Superintendent	Deputy Superintendent
Emergency Medical Service	DHHR, WV Division of EMS	Director of EMS	Associate Director EMS
Law Enforcement	State Police	Superintendent	Deputy Superintendent
Transportation	DOH	Secretary of Transportation	Deputy Secretary of Transportation
Mass Care	American Red Cross (ARC)	ARC ES Director	ARC Chapter Manager
Radiological Exposure Control	DHHR, BPH	Chief, Radiological Health	Radiological Health Personnel
Agriculture Community	WV Department of Agriculture	Director of Quality Control Emergency Preparedness Supervisor	Director of Animal Health Division
Agriculture Community	WVU Coop. Ext. Service	Division Director	Division Director
Field Team Center	WV EMD/WV DHHR/WV DEP	REP State Coordinator	Radiological Health Personnel
Field Monitoring/Sampling Team	DHHR /DEP/Ag.	Field Team Leader	Asst. Field Team Leader

Table 2 Functional Responsibilities and Key Individuals

Planning Section A.4

Written Agreements

The following written agreements are maintained by WV EMD:

- Pennsylvania Emergency Management Agency
- Ohio Emergency Management Agency
- State of Ohio Radiological Lab
- Emergency Alert System
- West Virginia University Radiation Safety Office
- Marshall University Radiation Safety Office

All agreements are reviewed annually to verify validity, including developing new written agreements and updating signatories as necessary.

Planning Section A.5

Continuity of resources is the responsibility of the Mission Support Section Chief and Assistant Section Chief. A roster listing 24-hour staffing by name and the positions that will be filled is in the WV Watch Center and is maintained by the Mission Support Section Chief. Shifts may be 12 hours or other lengths as appropriate per the incident requirements and briefings will be provided using approved ICS forms during shift changes.

Planning Section B-Reserved

Reserved

Planning Section C-Emergency Response Support and Resources

Planning Section C.1

BVPS Emergency Operations Facility (EOF)

The State of WV will provide personnel to the BVPS EOF from the Bureau of Public Health Office of Environmental Health Services Radiation, Toxics & Indoor Air Division. Alternate personnel may be utilized to staff the BVPS EOF at the discretion of decision-making executives.

Personnel are deployed to the BVPS EOF to coordinate acquisition of technical information and data needed to perform dose assessments. Personnel will also provide any information to BVPS EOF regarding response efforts and conditions of state or county infrastructure.

Personnel deployed to the BVPS EOF will provide the necessary equipment and supplies to perform their assigned duties.

Planning Section C.2

Emergency Response Support and Resource Request

Emergency response support and resource requests are requested on behalf of the Governor by the Director of EMD or their designee. The request is also made in consideration of Emergency Support Function 7 of the WV State Emergency Operations Plan.

Events involving an incident at BVPS potentially could have such a broad impact on the State of WV that identifying specific gaps, capabilities, and resources are too large to list. Gaps may be from requests that the local jurisdiction requires or from lack of state resources or capabilities. Most gaps would not be identified until there was an incident. Gaps that are identified would require assistance from most likely federal partners and/or other states. In the event of an identified gap that needs to be fulfilled a request for federal assistance would be made through the Region 3 FEMA office and/or a request for other states assistance would be made through Emergency Management Assistance Compact (EMAC). The categories of resources and support that may be requested could be, but not limited to, support for shelter operations, accident assessment, laboratory analysis, field team activities. The arrival of requested resources and support would depend on the specific request, but it is understood that it may take up to 72 hours to arrive at a given location. Instructions on integration of requested resources and

support would be provided at the time of the request as well as all pertinent information required for the mission.

The State of WV will provide requested assistance to Pennsylvania and Ohio as well as their respective local jurisdictions but is not a primary response agency to the BVPS site therefore does not require site access.

Planning Section C.3

Principal Organization Coordination

Coordination among the lead organizations for an incident at BVPS is important for successful operations. BVPS is unique in that the EPZ's involve three states, three counties, three NRC regions, and two FEMA regions. The lead in providing common communication with these agencies is the State of Pennsylvania and during an incident provides what is referred to as the "PEMA Bridge". The PEMA Bridge is a conference line that is opened during an event and is left open for briefings and updates by all the above-listed organizations.

State level principle and support organizations as well as their roles and responsibilities are identified in Planning Section A.

A liaison from WV EMD, most likely a WV EMD Regional Liaison, is provided to the Hancock County Emergency Operation Center during an event at BVPS to assist with situational awareness and information sharing between the county and the state. BVPS provides a liaison to both Hancock County EOC and the State EOC during an event at BVPS to provide technical information specific to BVPS operations.

Planning Section C.4

Radiological Laboratories

The State of WV does not have laboratory analysis capabilities and has an MOU with the State of Ohio to provide those initial services. The specific information regarding the lab capabilities is listed below as per the 2023 State of Ohio REP Plan Section II part 1.c pg. 54.

c. Laboratories

Ohio Department of Health Laboratory

i. The ODH-Lab is located on the ODA campus at 8995 East Main Street, Building 22, Reynoldsburg, OH.

ii. The ODH-Lab is the primary laboratory available for the analysis of both emergency and ingestion phase samples (e.g., air, milk, soil, water, meat, fish, crops, vegetation, etc.).

iii. The ODH-Lab's current capacity for environmental samples (including log in and prep)

1) Air filters: 70-80 per day based on a five-minute run time for gross alpha and beta analysis.

2) Air cartridges and other samples: 30 per day based on a twenty-minute run time for gamma analysis.

Note: If count times are adjusted, the number per day will change.

iv. The maximum acceptable surface dose rate of a sample is defined in the RAD-REP-0355 Field Sample Screening Station SOP.

v. The ODH-Lab is responsible for the maintenance of all radiological laboratory equipment. Laboratory equipment is calibrated annually or per manufacturer's recommendations. A calibration log is maintained by the ODH-Lab and is available upon request. This information is reported in the ALC.

vi. Dependent upon the location of Sample Screening, the estimated transportation time of samples is approximately three hours. Transportation will be coordinated through ESF-1.

vii. Upon receipt of samples, the ODH-Lab will retain each sample's Chain of Custody in accordance with ODH policy.

viii. A temporary storage location has been identified on ODA's campus near the ODH-Lab. Refrigerated storage containers will be sourced and leased or rented through ESF-7. Ancillary needs, such as generators, will also be identified and procured.

ix. The ODH-Lab does not have the capability to analyze Sr-90. FRMAC will be asked to assist in sending samples to laboratories who can analyze Sr-90.

x. Sample analysis results will be uploaded to Dose Assessment using RadResponder, if available. Backup methods may include the use of email, fax, and/or telephone.

The State of WV will request additional laboratory support from federal agencies to address any gaps that are found during an event involving BVPS.

Planning Section D-Emergency Classification System

Emergency Classification Levels

The severity of events at BVPS are measured utilizing Emergency Classification Levels (ECL's). The ECL's are determined by criteria provided by the NRC and implemented by BVPS. The four ECL's are:

Notification of Unusual Event (NOUE): an ECL indicating that events are in progress or have occurred which indicate a potential degradation of the level of safety of the plant or indicate a security threat to facility protection. No releases of radioactive material requiring offsite response or monitoring are expected unless further degradation of safety systems occurs. This term is sometimes shortened to Unusual Event (UE) or other similar site- specific terminology. The terms Notification of Unusual Event, NOUE, Unusual Event, and UE are used interchangeably.

Alert: an ECL indicating that events are in progress or have occurred which involve an actual or potential substantial degradation of the level of safety of the plant or a security event that involves probable life-threatening risk to site personnel or damage to site equipment because of hostile action. Any releases are expected to be limited to small fractions of the EPA PAG exposure levels.

Site Area Emergency (SAE): an ECL indicating that events are in progress or have occurred which involve an actual or likely major failure of plant functions needed for protection of the public or hostile action that results in intentional damage or malicious acts; 1) toward site personnel or equipment that could

lead to the likely failure of or 2) prevents effective access to equipment needed for the protection of the public. Any releases are not expected to result in exposure levels which exceed EPA PAG exposure levels beyond the site boundary.

General Emergency (GE): an ECL indicating that events are in progress or have occurred which involve actual or imminent substantial core degradation or melting with potential for loss of containment integrity or hostile action that results in an actual loss of physical control of the facility. Releases can be reasonably expected to exceed EPA PAG exposure levels offsite for more than the immediate site area.

The ECL's and Emergency Action Levels (EAL's) specific to BVPS are reviewed by BVPS and the State of WV annually.

The minimum response from WV for each ECL is listed below:

Unusual Event: Response to a notification of Unusual Event is normally within the capabilities of the Hancock County emergency organizations and resources; therefore, activation of the State Emergency Operations Center (SEOC) is unlikely. After being notified by BVPS, the Hancock County Homeland Security and Emergency Management (HC HSEM), or the Pennsylvania Emergency Management Agency (PEMA), WV EMD may choose to notify other state agencies.

Alert: At the Alert Level, after notification from BVPS, HC HSEM, or PEMA, the WV EMD will initiate activation of the State Emergency Operations Center (SEOC), if necessary, which will include notification of appropriate State agencies and advising them of the possibility of fully activating the SEOC. Department of Health and Human Resources (DHHR) and Department of Environmental Protection (DEP) personnel assigned to the field monitoring teams (FMTs) as well as other critical staffing DHHR personnel will be put on notice that they may have to deploy to the Northern Panhandle and other emergency response locations. If the situation becomes more serious, the SEOC will be fully activated according to the standard operating procedures for the SEOC, and appropriate state personnel deployed. With the activation of the SEOC, the Joint Public Information Center (JPIC), the State Response/Recovery Task Force (SRTF), and the State Accident Assessment Center (SAAC) will also be activated. Additionally, the Governor's Office and FEMA Region III will be notified and kept informed of the situation.

Site Area Emergency: After notification from BVPS, HC HSEM, or PEMA of a Site Area Emergency, the SEOC and supporting groups, including the SRTF, JPIC, shall be fully activated and state personnel assigned to the FMTs will be deployed to the Northern Panhandle. The Governor's Office will be informed and kept current of the situation. Any county in the 50-mile EPZ will be notified by the WV EMD through the county's 24-hour warning point. WV EMD will notify FEMA Region III. If additional personnel are needed to assist with an evacuation, they will be activated and deployed. Reception Centers will be manned and made ready to receive evacuees in accordance with the County's plan.

General Emergency: Upon notification from BVPS, HC HSEM, or PEMA of a General Emergency, the SEOC and supporting groups, including the SRTF, JPIC, and SAAC, shall be immediately activated if not already. State personnel, consisting of the FMTs, Field Sampling Teams (FSTs), communications personnel, staff and equipment to support the Mobile Emergency Operations Center (MEOC)/Field Team Center (FTC), and Sample Reception Center (SRC) personnel and equipment will be deployed to the Northern Panhandle if not already. Monitoring of the 10-mile EPZ and the 50-mile EPZ will begin as soon as

possible. The Governor's Office will be kept informed of the situation. Any county in the 50-mile EPZ will be alerted by the WV EMD through the county's 24-hour warning point. WV EMD will notify FEMA Region III.

Planning Section E-Notification Methods and Procedures

Planning Section E.1

The State of West Virginia will be notified of an incident through the West Virginia Emergency Management Division (WV EMD). WV EMD can be reached through its telephone number (304-558-5380), which is answered seven days a week, 24-hours a day. Alternate notifications are through the WV State Police Communications Center or the Hancock County 24-Hour Warning Point (the Hancock County 911 Dispatch Center).

In the event of an incident and declaration of an Emergency Classification Level, the Beaver Valley Power Station (BVPS) will activate the "Initial Notification Conference" call.

The conference call dials the 24-hour warning points for Pennsylvania; Beaver County, PA; Ohio; Columbiana County, OH; West Virginia and Hancock County, WV. The six warning points are automatically put into the conference call. The BVPS "Initial Notification Form" is faxed to all locations (See Attachment 2B). An email may also be sent from BVPS to the six warning points with the "Initial Notification Form" attached. BVPS confirms contact with the agencies and ensures they have the FAX. If an agency does not have the FAX, BVPS will read the information to the agency. If WV EMD is not on the initial notification conference, Hancock County will notify WV EMD or vice versa.

WV EMD notification to Hancock County will be done by established WV EMD procedures. WV EMD will notify state agencies, as needed, to respond to an event at the BVPS. Any county in WV may be notified by WV EMD through its county 24-Hour Warning Point. The Warning Point will relay any information to the proper emergency services personnel.

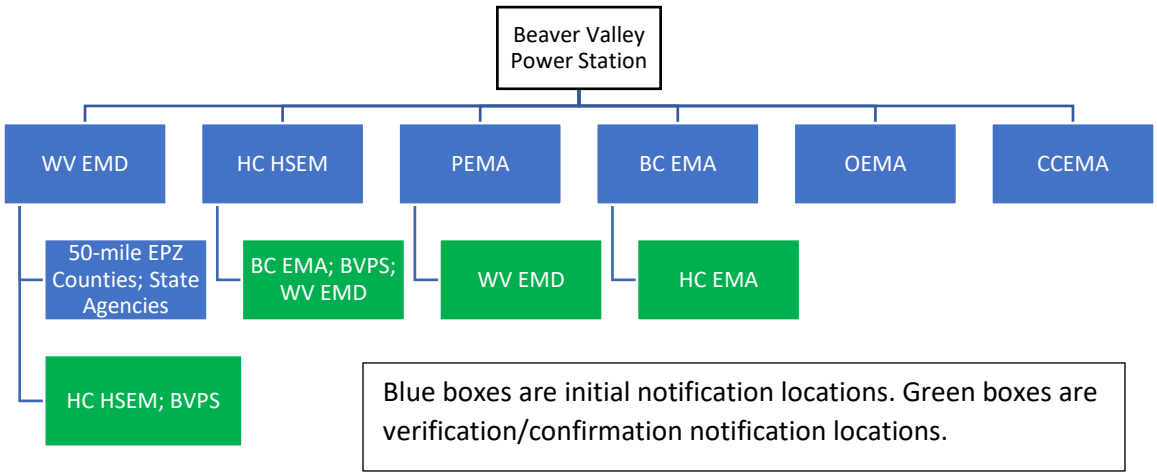
In the event of an incident at the fixed nuclear facilities there are defined notification procedures that will be followed. The fixed nuclear facility will notify:

- Beaver County, PA
- Pennsylvania Emergency Management Agency (PEMA)
- Hancock County, WV
- WV EMD
- Columbiana County, OH
- Ohio Emergency Management Agency (OEMA)

Beaver County will notify Hancock County to ensure that the information was sent to them. PEMA will notify the State of West Virginia by contacting WV EMD. HC HSEM will contact WV EMD to confirm notification. When receiving notification of an emergency from other offsite response agencies, but not BVPS, the State of West Virginia will confirm the incident with the fixed nuclear facility via telephone.

The WV EMD will notify selected state agencies and the WV counties (Brooke, Ohio, and Marshall) within the 50-mile Emergency Planning Zone (EPZ). These notification procedures are designed so that there is an overlapping of information to ensure the key contacts are informed of the incident.

See “Standard Operating Guidelines for Incidents Involving Beaver Valley Power Station”



Notification flow for events at BVPS

Planning Section E.2

The Alert and Notification System Design Report is kept and maintained by BVPS. Incidents at the Beaver Valley Power Station (BVPS) may require that the public be warned. Hancock County Homeland Security and Emergency Management (HC HSEM) is responsible for notification within the 10-mile Emergency Planning Zone (EPZ) in Hancock County. The procedures for warning the public are outlined in the Hancock County Radiological Emergency Preparedness Plan. The Hancock County Plan addresses:

- Persons authorized to activate the public warning system.
- Means for notifying all segments of the transient and resident population.
- Means of coping with failures in the system during time of need.
- Means of ascertaining that all members of the population have received the warning.
- Having a compatible system with contiguous counties and states.
- Notification of the emergency to the WV EMD.
- Integrated Public Alert and Warning System (IPAWS) and Emergency Alert System (EAS) procedures, messages, approval, and verification.

WV EMD will notify Ohio County, Brooke County, and Marshall County. These counties will notify the public by the EAS plans for their area and any other public media that is available to the counties. WV EMD may notify the counties in the 50-mile EPZ through their county Warning Points by:

- Telephone
- WV State Interoperability Radio Network (SIRN)
- West Virginia State Police

The warning, in both the 10 and 50-mile EPZ, will provide all necessary protective actions required, such as sheltering or evacuation. State assistance for warning to the counties will follow the guidelines established in Emergency Support Function (ESF) 2 (Communications) of the West Virginia Emergency Operations Plan.

The State may warn the public through the EAS. The EAS will be activated by procedures outlined in the State EAS Plan. Additional information to the public will follow the procedures outlined in Annex K (Public Information) of the Hancock County Radiological Emergency Preparedness Plan and Planning section G (Public Education and Information) of the WV REP Plan.

Planning Section E.3

An initial notification form as well as follow-up information forms used by BVPS are found in attachments 2B and 2C. The forms are a standard form utilized by BVPS for notifications to the appropriate offsite response organizations. The forms may include but are not limited to:

- Location of incident, and name and telephone number (or communication channel identification) of caller.
- Date/time of incident.
- ECL.
- Type of projected or actual release (airborne, waterborne, surface spill, etc.) and estimated duration/impact times.
- Estimate of quantity of radioactive material released or being released, and the points and height of releases.
- Chemical and physical form of released material, including estimates of the relative quantities and concentration of noble gases, iodine, and particulates.
- Meteorological conditions at appropriate levels (wind speed, during [to and from site], indicator of stability, precipitation, if applicable).
- Actual or projected dose rates at the site boundary and/or projected integrated dose at site boundary.
- Projected dose rates and integrated dose at the projected peak at 2-, 5-, and 10 miles, including any affected sector(s).
- Estimate of any surface radioactive contamination in the plant, onsite, or offsite.
- Any licensee emergency response actions underway.
- Recommended emergency actions, including protective measures.
- Request for any onsite support by offsite organizations; and
- Prognosis for worsening or termination of event based on plant information.

Planning Section E.4

An incident at the Beaver Valley Power Station (BVPS) may require that the public be warned. The Hancock County Division of Homeland Security and Emergency Management (HC DHSEM) is responsible for notification within the 10-mile Emergency Planning Zone (EPZ) in Hancock County. The procedures for warning the public are outlined in the Hancock County Radiological Emergency Plan.

The Hancock County Plan addresses:

- Persons authorized to activate the public warning system.

- Means for notifying all segments of the transient and resident population.
- Means of coping with failures in the system during time of need.
- Means of ascertaining that all members of the population have received the warning.
- Having a compatible system with contiguous counties and states.
- Notification of the emergency to the WV EMD.
- Emergency Alert System (EAS) procedures, messages, approval, and verification.

WV EMD will notify Ohio County, Brooke County, and Marshall County. These counties will notify the public by the EAS plans for their area and any other public media that is available to the counties.

WV EMD may notify the counties in the 50-mile EPZ through their county Warning Points by:

- Telephone
- National Warning System (NAWAS)
- West Virginia State Police

The warning, in both the 10 and 50-mile EPZ, will provide all necessary protective actions required, such as sheltering or evacuation.

State assistance for warning to the counties will follow the guidelines established in ESF 2 (Communications) of the West Virginia Emergency Operations Plan.

The State may warn the public through the EAS. The EAS will be activated by procedures outlined in the State EAS Plan. Additional information for the public will follow the procedures outlined in Annex K (Public Information) of the Hancock County Radiological Emergency Plan and Planning Section G (Public Education and Information) of the WV REP Plan.

Planning Section E.5

The State of WV in coordination with Hancock County, Beaver Valley Power Station, State of Ohio, State of Pennsylvania as well as any other agency as appropriate will periodically provide supplemental information to the public as it is deemed appropriate. The supplemental information could be updates on incident progression/operations, reminders/updates on current protective actions, and/or any other information as appropriate to ensure the safety and well-being of the public. The information may be distributed, but not limited to fax, telephone, email, social media, print, wireless distribution, or main-stream media channels.

Planning Section F-Emergency Communications

Planning Section F.1

Communications serve as the link between governments at all levels and the fixed nuclear facility. The State of West Virginia has several different communications links that can be established. The telephone will serve as the primary link in all cases. The decision to use an alternate means of communication will be made as the situation warrants. The Emergency Communications Center for the State is in the SEOC. The SEOC will be activated and staffed for 24-hour coverage according to the West Virginia Emergency Operations Plan.

WV EMD / HC HSEM

Telephone, BVPS GEC (Gold Executive Conference Phone), and the Statewide Interoperable Radio Network (SIRN) net are the three main communication links available for use between the State and Hancock County. The telephone (landline or mobile) will be the primary means of communication. The BVPS GEC is a telephone link between the state, county and BVPS Emergency Operations Facility. The West Virginia SIRN links the SEOC with Hancock County and will serve as a backup system. Additional radio nets can be established between the SEOC and the HC DHSEM, if appropriate (See ESF 2 - Communications of the WV EOP).

WV EMD / BVPS

The commercial telephone (including fax), the BVPS INC (Initial Notification Conference line) and the BVPS GEC are the primary communications systems between the WV EMD and the BVPS. An alternative method would be a relay through the HC DHSEM. Hancock County has a BVPS radio and can communicate messages to and from the facility.

WV EMD / PEMA / OEMA / FEMA

The commercial telephone and the BVPS GEC will be the primary method of communication.

ADDITIONAL COMMUNICATION SYSTEMS

- Federal National Radio System (FNARS)
- State and Personal Cell Phones
- Satellite Telephone at WV EMD
- National Warning System (NAWAS)
- National Guard Liaison Officers (LNOs), if dispatched, may provide satellite telephone capability to the counties of the northern panhandle.

WV EMD / OTHER FEDERAL AGENCIES

Other federal agencies will establish their own communications network as needed.

FIELD MONITORING TEAM

State Field Monitoring Teams (FMT) will respond to the HC EOC and be dispatched from there for field monitoring. Radio and/or telephone communications will be established between the field monitoring teams and the HC EOC. The HC EOC will relay information from the field monitoring teams to the WV SEOC. The Field monitoring team leader will remain in the HC EOC to receive and relay the information.

FIELD TEAM CENTER

Communications for the Field Team Center (FTC) will be through the WV EMD Communications Vehicle. The vehicle is self-contained with programmable radios installed. Other communications equipment available includes telephone, internet, fax, and satellite phone.

FIELD SAMPLING TEAM

The Field Sampling Teams (FST) will verify communications with the FTC. If available, state vehicles with communications capabilities will be used. In the event private vehicles or state vehicles without communications capabilities need to be used, the FTC has mobile radios available.

Personnel Activation

The activation of personnel within WV EMD is done according to the procedure in the *Standard Operating Guidelines for Incidents Involving Beaver Valley Power Station*.

Planning Section F.2

Communication methods between fixed/mobile medical support facilities, EOC's and licensee is telephone as primary with SIRN radio and/or appropriate legacy radio system as backup.

Planning Section F.3

Many communication methods utilized for incidents involving BVPS are utilized daily for day-to-day operations. The systems that are not used daily the following testing period is recommended:

- Offsite Response Organization systems tested monthly.
- Communication systems with Federal Response organizations and ingestion EPZ are tested Quarterly.
- Communication with BVPS, ORO EOC's, and field assessment teams are tested annually.
- All communication drills include message content Check.

Planning Section G-Public Education and Information

Planning Section G.1

Emergency Information is provided to people living within the 10-Mile EPZ of the power plant by an annual mailer. Annual mailers are available from HC HSEM for those residents that did not receive one, have misplaced theirs, or live outside the 10-mile EPZ. Copies of the annual mailer are also posted in the HC HSEM webpage.

Hancock County distributes information packets throughout the 10-mile EPZ to locations where transient people might be (motels, parks, etc.). This information is updated and redistributed on an as-needed basis. However, all organizations are contacted, and their supply of fliers checked/restocked annually or as needed.

The State of West Virginia distributes information for the ingestion EPZ to the four ingestion counties so that it is available to residents upon their request.

No non-English versions of the information are disseminated due to the non-English speaking voting population being less than 10,000 and less than 5% of the total voting population.

Planning Section G.2

An incident at Beaver Valley Power Station (BVPS) will be an unfamiliar emergency to the local population. This, added to the fears people already have about nuclear radiation, could lead to rumors or panic among the public. To minimize this, the public will be made aware of the incident. Therefore, it is important that the news media be provided with current, accurate information.

A Joint Public Information Center (JPIC), established by the BVPS, will allow all public information officers to coordinate news releases, and participate in joint news briefings. It will also provide a location for all news media to get accurate, timely and consistent information. If Hancock County is not

represented at the JPIC, A State of West Virginia PIO will serve as JPIC point of contact for the county, as well as the state.

The BVPS JPIC is located at 181 Spring Run Rd Extension Coraopolis, PA (Flaugherty Run Rd. exit off I-376 or Old Business Rt. 60)

- Off Flaugherty Run exit, go toward Charlie Brown's Airport Parking.
- Turn left at the end of Charlie Browns onto Spring Run Road Extension.
- Follow the road approximately 1 mile, Whispering Woods Housing Plan is on the right. Just past Whispering Woods is the Airport Industrial Park on the left.
- Stay to the left down the hill. Turn right between Buildings 2 and 3 and park in the gravel lot at the end of the buildings.

Resources: Available for State and County personnel:

- BVPS representatives
- Technical Advisors
- Telephones
- Telecommunications
- Computer with Internet Access
- Work Area
- Briefing Room

Planning Section G.3

The release of public information should be coordinated with all authorities involved, including:

- State PIO at the State EOC
- Governors Communications Team
- State representative at the JPIC
- County PIO
- Facility PIO
- Ohio and Pennsylvania PIO's
- Representatives from other jurisdictions
- Nuclear Regulatory Commission (NRC)

While most news releases will be written at the time of the incident, news releases that can be used as a guide depending on the situation are contained in the WV REP Public Information Standard Operating Procedures (WV REP PIO SOP).

Hancock County will disseminate information to the county population according to Annex K - Public Information of the Hancock County, Radiological Emergency Plan.

All releases at the state level will follow the procedures outlined in ESF 15 – External Affairs, of the WV Emergency Operations Plan (WV EOP).

- Information concerning incidents at the nuclear facility will be sent to the SEOC by the state representative at the JPIC.
- News releases will be written at the SEOC and sent to the state representative at the JPIC.
- The designated Federal Public Affairs/Information Officer furnishes information on the federal activity when federal agency resources are utilized.

The West Virginia representative at the JPIC will only release information that has been approved at the SEOC. It is important that each representative only issue information concerning their areas of responsibility, such as West Virginia only talking about West Virginia or Hancock County issues.

Planning Section G.4

Rumor control will be needed at the state and county levels to help keep the public informed and minimize rumors. At the state level, the SEOC will serve as the rumor control for West Virginia. The SEOC has sufficient staffing and telephones to handle this function. Rumor Control/Public Inquiry will operate according to the WV EMD *REP Public Information Standard Operating Procedure*. At the county level, rumor control will be handled according to the county plan.

Planning Section G.5

BVPS distributes information packets annually to the media. Providing the media with a list of contact people and background information on the plant and the emergency procedures.

Planning Section H-Emergency Facilities and Equipment

Planning Section H.1-5

Reserved

Planning Section H.6

The state EOC is located at the same location as the WV Emergency Management Division Office. The EOC is maintained for operational readiness by the WV Emergency Management Division Mission Support Section. The equipment necessary to support EOC operations includes but is not limited to computers, faxes, internet service provider, pens, paper, charts, easels, wall hangers, television or projection equipment, telephone/other communication devices, as well as any other equipment or supplies necessary to facilitate EOC operations. Access to the facility is by electronic keycard any individual without a keycard must be let in then must sign in and is escorted to the appropriate location. Currently the State EOC does not have a connected back up power source and would require the utilization of mobile power units which are available when needed. The backup EOC is a mobile “bus” style unit that is capable of the basic functions to support the operation of the EOC.

Planning Section H.7 & 8

Reserved

Planning Section H.9

Radiological equipment utilized by the local offsite response organizations is owned and maintained by HCHSEM and available in the Hancock County REPP Plan. The equipment necessary for the operation of field monitoring teams is owned and maintained by WV BPH and stored at the HCHSEM office. A list of equipment and supplies utilized by the field teams is available in the *WV Field Monitoring Team SOP*.

WV EMD owns and maintains the equipment and supplies utilized by the Field Sampling Teams; the list is available in the *WV Field Sampling Teams SOP*.

The location of fixed monitoring stations is collocated with the BVPS fixed sirens within the 10-mile EPZ. The fixed monitoring points utilize Thermoluminescent Dosimeters that are physically attached to the siren control box and are exchanged quarterly. The List of locations is available in the *WV Field Monitoring Team SOP.*

Planning Section H.10

Reserved

Planning Section H.11

WV EMD maintains an inventory of the appropriate equipment and supplies necessary to operate the field monitoring and sampling teams according to their respective procedures as well as provide replacement supplies for continued operations. WV EMD also has the capability to request additional equipment and/or supplies as a backup through the HCHSEM and WV National Guard.

Agencies are responsible for calibration of their own respective equipment and maintaining the calibration/repair documentation.

All equipment owned and maintained by WV EMD will be calibrated at a minimum annually. Calibration will be done by a third-party lab and according to manufacturer recommendation. The calibration lab will provide documentation of the process as well as mark the appropriate equipment as being calibrated. Damaged equipment and/or equipment in need of repair will be sent to an adequate facility for repair if the calibration lab is not capable of repairing the equipment.

Planning Section H.12

The location and quantities of response kits as well as supply lists for each kit can be found in the *WV Field Monitoring Team SOP* and *WV Field Sampling Team SOP* respectively. Hancock County maintains its own list of response kits according to the Hancock County REPP Plan.

Planning Section H.13

In the event of an accident at the Beaver Valley Power Station, the West Virginia Bureau of Public Health (WV BPH) has the responsibility for assessing the accident. To do this, they will be tasked with determining:

- The severity of the accident,
- The impact on the public,
- The impact on the emergency workers, and
- Possible actions to limit the impact.

To perform this function, personnel from WV DHHR or other agencies supporting this function will be assigned to three (3) locations:

- State Emergency Operations Center (SEOC), Charleston, WV.
- Hancock County Emergency Operations Center (HCEOC), New Cumberland, WV.
- Beaver Valley Power Station - Emergency Operations Facility (BVPS-EOF), Chippewa, PA

The WV Field Monitoring Teams will be based at the HCHSEM office for deployment by the Field Team Leader for the purpose of obtaining radiological readings throughout the EPZ. The Field Team Leader will:

- Assist in the coordination of accident assessment at the HC EOC.
- Provide technical information to the accident assessment coordinator at the SEOC.
- Coordinate information with the state representative at the BVPS - EOF.
- Coordinate transportation, if needed, for response team personnel with the HC EOC.
- Coordinate "second shift" for 24-hour coverage with the accident assessment manager.
- Assist the Accident Assessment Coordinator at the SEOC.
- Coordinate the activities of the Field Monitoring Team (FMT).
- Assist the county radiological officer.
- Provide technical support for the HCEOC.

The Field Monitoring Standard Operating Procedure (SOP) manual is included with the equipment located in the county. The FMT will follow all procedures and guidelines contained in the Field Monitoring SOP in performing those duties including but not limited to:

- The response team leader will assign the field monitoring points to be surveyed.
- The FMT will conduct all radiological surveys in accordance with the guidelines prescribed in the Field Monitoring Team SOP and report them to the field team leader via phone and/or CBRNResponder (formally RadResponder).
- The field team leader will report the field readings to the SEOC via phone and/or CBRNResponder.

The coordination of analysis of sample media is in the *WV Field Team Center SOP*, *WV Sample Reception Center SOP, WV Field Sampling Team SOP,* and *WV Sample Reception Center Sample Shipping SOP*.

Planning Section I-Accident Assessment

Planning Section I.1

Reserved

Planning Section I.2

DRINKING WATER

During a reactor incident, surface water may become contaminated because of the release of incident-related liquid radwaste from the plant. The release may be controlled, as part of a planned maneuver to protect against greater risks, or uncontrolled, as in the case of the rupture or overflow of a liquid radwaste treatment or storage tank. The water supplies at risk are downstream users of the receiving stream.

Water contamination can also occur due to direct deposition of airborne activity on the surface of supply streams, reservoirs, and other uncovered impoundments during plume passage. Surface water supplies in any direction can be impacted by plume deposition.

Runoff from contaminated land areas to supply streams can also lead to contaminated water supplies.

DRINKING WATER PAG ANALOGUES

Protective Action Guides (PAGs) for drinking water have been formally promulgated by the EPA. The EPA has published under the National Primary Drinking Water Regulations (NPDWR) (40 CFR 141.66 "Maximum Contaminant Levels for Radionuclides") promulgated under the Safe Drinking Water Act (SDWA) for use during normal operating conditions. Under the NPDWR, the average annual concentration of beta particles and photon radioactivity from man-made radionuclides in drinking water must not produce an annual dose equivalent to the total body or any internal organ greater than 4 millirem/year (0.04 mSv/year). The Maximum Contaminant Levels (MCLs) for individual radionuclides used to compute the dose commitment in drinking water are based on data found in the National Bureau of Standards (NBS) Handbook 69. The MCL values are found in NPDWR *40 CFR 141.66 "Maximum Contaminant Levels for Radionuclides".*

DRINKING WATER PROTECTIVE ACTIONS

The two types of releases that can result in contaminated drinking water are airborne and liquid releases. The releases can be broken down into controlled, uncontrolled, and crisis conditions. During the emergency phase of a radioactive incident all water sources that are potentially contaminated will be stopped and bottled water will be provided to the public until it can be determined that contamination levels do not exceed the NPDWR recommendations of 4 mrem/year. Crisis situations where supplied water is unavailable, and water is needed to sustain life then the two-tier drinking water PAG as outlined in the 2017 EPA PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents EPA-400/R-17/001 may be utilized during the intermediate phase. The projected dose for the general population over the age of 15 excluding those that are pregnant and/or nursing should not exceed 500 mrem/yr., and the projected dose for those that are pregnant and/or nursing as well those 15 years of age and under should not exceed 100 mrem/yr.

Water contamination from direct deposition or with rainwater runoff from a contaminated area protective action options are less straightforward. Protective actions must be developed after characterization of deposition patterns and will consider the operational features of the water treatment and storage facilities in question.

Contamination concentrations in domestic water supplies, that exceed the PAGs, the water may still be useful for other purposes such as firefighting and sanitation. Uses such as bathing, laundering, decontamination, and certain non-food production industrial processes will require evaluation at the time.

Planning Section I.3 – I.4

Reserved

Planning Section I.5

The agency that has overall responsibility for FMT activities is WV BPH. The capabilities and resources of the FMT's are in the WV Field Monitoring Team SOP.

Planning Section I.6

Notification and/or activation of the FMT is done according to the *Standard Operating Guidelines for Incidents involving Beaver Valley Power Station* and internal WV BPH policies. The FMT's will consist of members from the WV BPH, WV DEP, and/or other state agencies as appropriate. Two FMT's will be

available for deployment during each operational period consisting of a minimum of two people as stated in the *WV Field Monitoring Team SOP*. Transportation of the FMT's shall be by state-owned vehicles, if state-owned vehicles are not available then the HCHSEM may provide transportation or transportation may be provided by private means such as rental car. The FMT's initial staging and operational coordination will be located at the Hancock County Emergency Operations Center. Hancock County utilizes predetermined monitoring locations within the 10-mile EPZ. Travel time to any of the predetermined monitoring sites is less than 20 minutes from the Hancock County Emergency Operations Center. Hancock County's 10-mile EPZ is relatively small and starts at 5 miles from the BVPS, for this reason Hancock County has predetermined FMT sites. A 12-point monitoring plan may be devised and implemented with neighboring jurisdictions should a plume edge or centerline not be identified with the pre-designated site information. Communication will be by WV SIRN, cellphones, CBRNResponder, Hancock County legacy radio system, or other system (email, messaging app, etc.) as appropriate and approved by the FMT Leader. The specific monitoring and sampling equipment, processes, and calculation methods can be found in the *WV Field Monitoring Team SOP* and *WV Field Sampling Team SOP* respectively. The designated laboratories that will receive sampling specimens is addressed in planning section C.4. The FMT exposure control is addressed in both planning section K as well as the *WV Field Monitoring Team SOP*.

Planning Section I.7

The locations of air sampling points as well as the processes and timing for collecting samples and the calculation methods to determine airborne radioactive iodine concentration as low as 10^{-7} µCi/cc is in the *WV Field Monitoring Team SOP*.

Planning Section I.8

Plume Accident Assessment

In the event of an accident at the Beaver Valley Power Station, the WV BPH has the responsibility for assessing the accident. To do this, they will be tasked with determining:

- The severity of the accident,
- The impact on the public,
- The impact on the emergency workers, and
- Possible actions to limit the impact.

To perform this function, personnel from WV BPH or other agencies supporting this function will be assigned to three (3) locations:

- State Emergency Operations Center (SEOC), Charleston, WV.
- Hancock County Emergency Operations Center (HCEOC), New Cumberland, WV, and
- Beaver Valley Power Station - Emergency Operations Facility (BVPS-EOF), Chippewa, PA.

WV EMD will ensure that accident assessment personnel have the appropriate equipment and supplies necessary to perform the required functions which may include but not be limited to computers, office supplies, wall boards, communication equipment, maps, and software.

The current data calculations are done with Unified Rascal Interface (URI) but may also be done for verification or backup purposes on other software as well (RASCAL, MIDAS, TurboFRMAC, etc.). "Hand calculations" may also be utilized should the need arise. The specific operations of the assessment, the

variables/information needed, and the pathways to acquire the information for the software is in the appropriate procedure respectively. Field data as it is received will be utilized to verify or provide justification for changes to protective action recommendations (PAR's) as the incident progresses. All information used to establish PAR's will be made available to neighboring jurisdictions and states to facilitate a more coordinated response.

Post-Plume Assessment

The Emergency Planning Zone (EPZ) for the ingestion pathway extends to a radius of 50 miles through 360 degrees from a nuclear power plant. Major potential pathways for ingestion include fresh fluid milk and other food commodities (especially those consumed fresh, such as leafy vegetables and fruit), and public water supply systems using surface water.

WV BPH maintains responsibility for assessment and calculations based on projections and field values received through sampling then provides that information to the State Recovery Task Force who will coordinate PAR's that will be presented to local decision makers within the respective jurisdictions.

Planning Section I.9

Hancock County's 10-mile EPZ is relatively small and starts at 5 miles from the BVPS, for this reason Hancock County has predetermined FMT sites. A 12-point monitoring plan may be devised and implemented with neighboring jurisdictions should a plume edge or centerline not be identified with the pre-designated site information.

Planning Section I.10

An incident involving BVPS is understood to be a complex incident especially since the response involves multiple states, counties, FEMA regions, and NRC regions. It is understood that since BVPS does not physically reside in WV, some federal resources may only deploy to the home state (Pennsylvania). The importance of identifying and coordinating the appropriate resources is understood and will remain a priority. Resources that will be deployed to assist within WV will be integrated according to WV EOP and the National Response Framework. Information regarding the incident will be available and provided to all organizations with need to know across common platforms (email, fax, RadResponder, etc.).

Planning Section J-Protective Response

Planning Section J.1

Reserved

Planning Section J.2

The State of West Virginia and Hancock County are approximately 5 miles from the BVPS and are not part of the primary or secondary onsite response to events at BVPS. Any requests for resources from Hancock County or West Virginia will be received through normal mutual aid agreements or EMAC.

Planning Section J.3, J.4, J.5

Reserved

Planning Section J.6

The EPZ for WV starts approximately 5-miles from the BVPS for this reason it is not practical in times of an emergency to base decisions off field data. The protective actions will be determined initially by

projections and/or plant conditions then any decisions will be confirmed or updated when field data is available.

The protective actions are based on current plans and procedures as well as information received from BVPS and following guidance from the U.S. EPA and FDA. The protective actions may be but are not limited to relocation of school aged children, placing animals on stored feed and water, monitoring of Emergency Alert Stations (EAS), Evacuation, Sheltering-in-Place, and/or taking of radioprotective drugs.

The recommendation to evacuate or shelter is based on the recommendation of BVPS, and the guidance found in the 2017 EPA PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents EPA-400/R-17/001. The recommendation to shelter-in-place may be used when the wind direction is toward WV and plume levels are above background but not exceeding 1 rem TEDE received over 4 days. The decision to evacuate the EPZ may be recommended if the wind is toward WV and the plume levels are equal to or will exceed 1 rem TEDE over 4 days at 5-miles from the plant or anywhere within the 10-mile EPZ that WV is located in. WV no longer uses child-thyroid doses as an indicator for evacuation recommendation.

The recommendation to administer the radioprotective drug Potassium Iodide (KI) is based on the projections of receiving a child thyroid dose of 5 rem CDE. The 2017 EPA PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents EPA-400/R-17/001 does provide guidance on a tiered administration based on the age of the individual, but WV has decided to go with the conservative approach of once an exposure of 5 rem CDE child thyroid at the start or within the 10-mile EPZ is reached to order all individuals to take KI. WV officials believe this will be easier for most members of the public and reduce confusion about who should take KI and when.

The above recommendations are not all inclusive and it is understood that all events are different and may require special considerations that may alter the recommendations. WV reserves the right to make recommendations that may be appropriate at the time of the event even if it does not match recommendations that are listed in the plans and procedures.

Planning Section J.7

Recommendations and decisions made by WV are for the purpose of protecting the citizens of WV. It is recognized that even though the processes utilized in WV are specific to WV there is a need for coordination and information sharing between all jurisdictions involved including but not limited to the State of WV, State of OH, Commonwealth of PA, Hancock County in WV, Beaver County in PA, and Columbiana County in OH as well as BVPS and federal partners. Coordination of this information with local jurisdictions allows for location and area specific information, such as population and Evacuation Time Estimates (ETE) to be utilized for protective action strategies. The considerations of protective action recommendation and decision making may be shared across the Gold Executive Conference (GEC) line and the PEMA Conference line, both lines are established during events for this purpose. The state agencies in WV make protective action recommendations to the Hancock County Commission through HCHSEM and the Hancock County Commission is the party responsible for making and implementing the protective action decisions.

Planning Section J.8

The latest ETE information for protective action considerations is found in attachment 3.

Planning J.9

Protective action recommendations are essential to the effective operation and protection of the public. The flow of information regarding PAR's is of equal importance. BVPS when it determines it appropriate will provide a PAR to the State of WV and based on that recommendation as well as information acquired through WV accident assessment process will create a PAR and provide that information to decision-makers in Hancock County, WV via phone, conference call, virtual platform, or other means appropriate for the situation. The State PAR should be made and communicated to the appropriate decision-makers in a timely manner, preferably but not limited to 15 minutes of receiving the PAR from BVPS. Hancock County will be provided the opportunity to review the PAR as well as ask any questions that may be needed.

Planning Section J.10

Maps, Charts, and other pertinent Plume Exposure EPZ information see Part 3 of the WV REPP Plan.

Planning Section J.11

Protective action Decision (PAD) processes and the implementation of the PAD is the responsibility of the Hancock County Commission and can be found in the Hancock County REPP Plan.

The means for identifying and protecting residents who would have difficulty implementing PAD's is the responsibility of the Hancock County Commission and can be found in the Hancock County REPP Plan.

The use of radioprotective medication is the responsibility of the WV State Health Officer. The recommendation to administer the radioprotective drug Potassium Iodide (KI) is based on the projections of receiving a child thyroid dose of 5 rem CDE. The EPA PAG Manual does provide guidance on a tiered administration based on the age of the individual, but WV has decided to go with the conservative approach of once an exposure of 5 rem CDE child thyroid at the start or within the 10-mile EPZ is reached to order all individuals to take KI. WV officials believe this will be easier for most members of the public and reduce confusion about who should take KI and when. The KI for public distribution is kept at the Hancock County Health Department and the KI for the distribution to Emergency Workers is kept at the Hancock County 911 and Emergency Services Building. Quantities and methods of distribution as well as the methodologies for communicating the order to take KI is addressed in The Hancock County REPP Plan.

Evacuation routes and transportation resources are addressed in the Hancock County REPP Plan.

The locations of Community Reception Centers as well as the plans and procedures to establish and operate the facilities are addressed in the Hancock County REPP Plan.

The establishment and implementation of traffic/access control points (TCP/ACP) is the responsibility of the Hancock County Commission and is addressed in the Hancock County REPP Plan.

The responsibility of identifying and correcting traffic impediments to evacuation routes is the responsibility of the Hancock County Commission and is addressed in the Hancock County REPP Plan.

Precautionary protective actions can be implemented prior to or in addition to PAR's. precautionary protective actions can be implemented at certain times during an event based on plant conditions, conditions within Hancock County and/or the State of WV, or in response to real world findings or events. Precautionary protective actions and the times of implementation may be but are not limited to:

- Alert – closing of schools and extracurricular activities.
    - Advising residents to monitor their EAS stations.
- Site Area Emergency – closing of schools and extracurricular activities.
    - Relocation of schools
    - Relocation of nursing home/access functional needs residents
    - Sheltering of livestock
    - Placing livestock and animals on stored feed and water
    - Closing of recreational/transient locations
    - Closing of waterways, rail traffic, and air space within or above Hancock County, WV
    - Monitoring of EAS Stations
    - Sheltering or Evacuation of residents
    - Administration of KI
- General Emergency- closing of schools and extracurricular activities.
    - Relocation of schools
    - Relocation of nursing home/access functional needs residents
    - Sheltering of livestock
    - Placing livestock and animals on stored feed and water
    - Closing of recreational/transient locations
    - Closing of waterways, rail traffic, and air space within or above Hancock County, WV
    - Monitoring of EAS Stations
    - Sheltering or Evacuation of residents
    - Administration of KI

Implementation of precautionary protective actions is addressed in the Hancock County REPP Plan.

Planning Section J.12

The overall responsibility for management of the ingestion exposure pathway is the State Recovery Task Force (SRTF). Implementation of decisions made by the SRTF is done by local governments within their respective jurisdictions with the assistance of state resources. The SRTF is comprised of state agencies with responsibilities and authorities in the areas of concern of the ingestion pathway. The SRTF should be comprised of WV EMD, WV BPH, WV DEP, WV DNR, and WV Ag but additional agencies may sit on the SRTF as needed. The SRTF will also receive support from federal agencies such as FRMAC as appropriate.

The director of WV EMD or their designee will chair/coordinate the SRTF as the official representative of the Governor's Office. Commissioners or their designee(s) will represent the other agencies on the SRTF and will maintain responsibility over their respective areas of authority. WV BPH will also be responsible for providing accident assessment information to the SRTF so that informed coordinated PAR's/PAD's can be recommended/decided.

The methodology for designating an area of concern for monitoring and sampling will be established by the SRTF with support from the post plume accident assessment team.

The collection of agricultural samples as well as the composition of sampling teams, supplies needed, and chain of custody is addressed in WV Field Sampling Team Procedure and WV Sampling Reception Center Procedure.

Laboratory capabilities is addressed in Planning Section C.4

Information regarding agribusiness within and outside of the ingestion exposure pathway can be obtained through WV Ag, USDA, WVU Extension Service, and/or with the assistance of local government offices, including land use, harvest times, point of contact information, etc.

Derived Intervention Levels (DIL) and Derived Response Levels (DRL) for implementation of protective actions can be found in WV Post Plume Accident Assessment Procedure.

Maps, charts, forms, and other information regarding ingestion pathway can be found in Part 3 of the WV REPP Plan.

Notification of agribusiness regarding PAD's can be through their respective state agency, local agencies/governments, and/or media releases and alerts.

Planning Section J.13

Hancock County Commission has the responsibility for the implementation and operations of CRCs within the plume exposure pathway. The Hancock County REPP Plan addresses the operation and processes of the CRC.

Planning Section J.14

The SRTF utilizing information and data from accident assessment, field measurements, Aerial Measurements, etc. will determine if there is a need to establish restricted zones and the need to relocate any residents within those restricted zones. The restricted zones will be determined based on the recommended EPA relocation PAG of an annual exposure of 2 rem TEDE the first year and/or 0.5 rem TEDE annually the second and following years. A buffer zone may be established to provide further protection from contamination due to weather, topography, or other situations that would cause further contamination. The restricted area plus the buffer zone shall be referred to as the relocation zone. Residents and individuals within the relocation zone may be notified by press releases, alerts, or directly from government representatives. Relocation zones will be prioritized based on exposure rate to individuals and population remaining and dose projections will be assessed at a minimum of daily until all residents are relocated.

A minimal number of access points will be established to ensure no unauthorized entry is made back into a restricted zone once all residents have been removed. The process for reentry into a restricted zone is addressed in the Hancock County REPP Plan. Access control points as well as the locations of monitoring and decontamination facilities within the buffer zone will be coordinated with the local government or authority having jurisdiction (AHJ) specific to the location of the restricted area. The monitoring and decontamination facilities should be established prior to relocation of the residents from areas that were not evacuated during the emergency phase.

The State of WV with assistance from FEMA, BVPS, and the American Nuclear Insurers (ANI) shall establish provisions to assist residents with physical, economical, and financial needs that have been relocated.

Planning Section K – Radiological Exposure Control

Planning Section K.1

Reserved

Planning Section K.2

Emergency worker dose limits for WV are based on guidance from 2017 EPA PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents EPA-400/R-17/001. Utilizing the concept of As Low As Reasonably Achievable (ALARA) all emergency worker dose limits for working within and outside of the plume EPZ are set at 5 rem over 96 hours. Emergency Workers that may exceed their respective dose limits while working during a BVPS event should be replaced as soon as possible, if a replacement is not available then the following priority should be placed on tasks based on guidance form the 2017 EPA PAG Manual: Protective Action Guides and Planning Guidance for Radiological Incidents EPA-400/R-17/001:

Guideline	**Activity**	**Condition**
5 rem (50 mSv)	All occupational exposures	All reasonably achievable actions have been taken to minimize dose.
10 rem (100 mSv)a	Protecting critical infrastructure necessary for public welfare (e.g., a power plant)	Exceeding 5 rem (50 mSv) unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
25 rem (250 mSv)b	Lifesaving or protection of large populations	Exceeding 5 rem (50 mSv) unavoidable and all appropriate actions taken to reduce dose. Monitoring available to project or measure dose.
>25 rem (250 mSv)	Lifesaving or protection of large populations	All conditions above and only for people fully aware of the risks involved.

a For potential doses >5 rem (50 mSv), medical monitoring programs should be considered.
b In the case of a very large incident, such as an IND, incident commanders may need to consider raising the property and lifesaving emergency worker guidelines to prevent further loss of life and massive spread of destruction.
This guidance does not address or impact site cleanups occurring under other statutory authorities such as the United States Environmental Protection Agency's (EPA) Superfund program, the Nuclear Regulatory Commission's (NRC) decommissioning program, or other federal or state cleanup programs.

Tasks or assignments that do not fall into any of the above listed categories and the dose limit may be reached should be suspended until a time that the task can be completed without exceeding dose limits.

Lifesaving operations that may require exposure greater than 25 rem are strictly on a voluntary basis and the emergency worker must be educated on the risks and processes involved with that exposure. WV Emergency Worker Radiological Exposure Control Procedure addresses this process and forms needed for exposures greater than 25 rem. The state health officer or county health officer are responsible for approval to exceed 25 rem.

Emergency worker dose limits for the post-plume and intermediate phase are 5 rem per year and do not consider any exposure received during the plume or emergency phase.

Planning Section K.3

The types, quantities, and location of dosimetry is addressed in the Hancock County REPP Plan.

The Hancock County REPP Plan addresses the use of, how dosimetry is distributed, and when dosimetry is distributed as well as administrative processes such as record keeping and radiological briefings.

The Hancock County REPP Plan also addresses how often DRD's are to be read and reported. The means to record the DRD information, how the records are to be maintained, and the administrative limits as well as the reporting of reaching or exceeding those limits.

Planning Section K.4

The responsibility for the establishment and operation of CRC's and Emergency Worker Decontamination Centers is the responsibility of the Hancock County Commission and can be found in the Hancock County REPP Plan.

Planning Section L – Medical and Health Support

Planning Section L.1

The primary hospital for incidents involving BVPS in WV is Weirton Medical Center. The next closest facility that is recognized to receive patients from an event at BVPS would be Washington Hospital in Washington, PA.

Information regarding Weirton Medical Centers capabilities as well as specific plans and procedures regarding events at BVPS can be found in Weirton Medical Centers Radiation Exposure Plan. Information regarding Washington Hospital can be found in the Pennsylvania REPP Plan and Beaver County, PA REP Plan.

Planning Section L.2

Reserved

Planning Section L.3

Additional hospitals capable of general hazardous materials decontamination and treatment can be found in attachment 4.

Planning Section L.4

Hancock County does not have any hospitals located within the county and all patients during an event at BVPS that originate with Hancock County will be transported to Weirton Medical Center. The preferred method for transporting patients is by ambulance but in the event of a Mass Casualty Incident or resource shortage other means of transportation can be arranged.

The request for additional emergency medical transportation can be requested through local mutual aid or through the state EOC if local resources are exhausted.

Communications between the ambulance crews and the destination hospital is addressed in the appropriate WV EMS Statewide Protocol.

The ambulance staff does not carry monitoring and/or survey equipment. The ambulance staff is issued dosimetry by Hancock County HSEM. The handling of contaminated patients and contamination control methods are addressed in the *"EMS Handling Contaminated Person Procedure"*.

Planning Section M-Recovery, Reentry, and Post-Accident Operations

Planning Section M.1

The State Recovery Task Force is responsible for the coordination and implementation of recovery efforts which may include but are not limited to:

- Develop and implement a process for monitoring and tracking the long-term effects of the incident on the population, the economy, and the environment, in the affected area by the responsible agencies as a part of their continuing functions.
- Establish, as appropriate, study groups with federal, state, and local representation for documentation and analysis of the incident.
- Provide a process for long-term agricultural and land management practices (e.g., soil removal, crop rotation, tillage) which will further reduce future contamination of feed and food crops.
- Provide a process to reduce the long-term impacts of the incident on markets for state and local agricultural products and goods.
- Provide a process to assess the long-term impacts on markets for state and local products, goods, and services.
- Provide a process to reduce the long-term impact on state and local tourism and travel.
- Provide a process to mitigate the long-term impacts on the affected area's indigenous wildlife.
- Evaluate the potential for the spread of contamination because of wildlife migratory patterns.
- Provide a process to study long-term health risks and to provide a program of periodic follow-up health monitoring of the affected populations.

The process and implementation of reentry into restricted areas that have either been evacuated or relocated including exposure control and monitoring facilities is addressed in the Hancock County REPP Plan.

The process for establishing restricted zones is addressed in Planning Section J.14 of the WV REPP Plan.

The SRTF will determine which areas are able to have the residents return/re-occupy evacuated/relocated areas with coordination from local governments. The process to achieve this may include but is not limited to:

- Provide the governor with a comprehensive evaluation of the potential impact of allowing the public to return to their homes, farms, and businesses.
- Advise the governor when preparations are completed to the extent that return of the public is feasible.
- In coordination with affected counties, revise and implement human services and economic assistance plans and procedures to aid the physical return of resident individuals, business, and industries to previously evacuated areas. These plans and procedures will include what kind of support will be offered, who will provide it, and how, when, and where such support will be provided.

- Identify agencies and organizations which will be managing the returning public effort and determining their roles and responsibilities, to include coordination between federal, state and county governmental agencies.
- Establish an economic assistance hotline to provide information to businesses and individuals concerning where this type of assistance can be obtained.
- Provide periodic information updates to media outlets on the progress of return activities so the public will remain informed.
- Provide information and advice to individuals, business and industries about further personal decontamination activities that need to take place upon return to their facilities.
- Notify (based on the governor's decision) appropriate counties when evacuees can return to their residences.
- Realign staff responsibilities (if necessary) to encompass recovery duties.
- Advise the governor of the classifications and locations of the non-restricted areas and when the return of the public to those areas may commence.
- Develop a long-term environmental monitoring program for each zone of classification.
- Develop (in coordination with WV Department of Agriculture) a long-term ingestion pathway-monitoring program for each zone of classification.
- Set stand-down and/or cutoff dates with the FRMAC for sampling programs as their usefulness for assessment diminishes.
- Provide radiological monitoring of emergency worker monitoring and decontamination stations, and reception and mass care centers.
- Assist in and support decontamination of emergency worker monitoring and decontamination stations, and reception and mass care centers to certify them for return to public use.
- Provide the governor with an assessment of the physiological impacts of recovery.
- Aid individuals with long-term medical problems associated with real or perceived radiation exposure.
- Coordinate the collection of samples.
- Provide field teams for the purpose of taking samples.
- Coordinate food product and agricultural sampling activities with WV Department of Agriculture.

Planning Section M.2 & M.3

Reserved

Planning Section M.4

The planning and implementation of recovery efforts should be started as soon as all life safety objectives of the emergency phase have been achieved. The Governor will initiate recovery planning with advisement from the Director of Emergency Management Division or their designee. The Governor of WV is responsible for direction and control of emergency services in WV. The governor receives advisement from the director of emergency management division who is tasked with management and coordination of state resources during an emergency event. The emergency phase of an event at BVPS is structured as a singular command structure with director of EMD advising the governor. The move from emergency phase to intermediate phase and even recovery phase requires a unified command structure with representatives from all stakeholders providing input so that all objectives can be identified and

implemented. The SRTF is formed to provide this structure and the director of EMD, or their designee, is the chair and advises the governor based on decisions from the SRTF. The SRTF may change members throughout the progression of the incident, briefings will be held to inform those stakeholders that may not be involved in decisions but have a need for updates at an interval determined appropriate by the SRTF.

Planning Section M.5

Returning the public to their respective residences and areas is the overall goal to recovery operations. The relaxing of protective actions and return of public is addressed in Planning Section M.1.

Planning Section M.6

The overall responsibility for cleanup belongs to the owner of the material which is BVPS. The State of WV and local governments that are affected will coordinate with BVPS as well as federal agencies such as the CDC, FEMA, US EPA, DOE, etc. to establish an appropriate plan and resource list needed to clean up the radiological waste produced during the incident.

Planning Section M.7

The development and changing of sampling plans are addressed in the *Field Team Center* and *Field Sampling Team* SOP.

The laboratories and capabilities of those specific labs are addressed in Planning Section C.4 of the WV REPP Plan. WV also reserves the right to utilize other labs such as those contracted with FRMAC/DOE during the time of an incident as is determined necessary.

Planning Section M.8

WV BPH has responsibility for accident assessment within the State of WV during all phases of an incident involving BVPS. An accident assessment plan will be created with the assistance of BVPS and federal partners as part of the recovery plan to address the long-term monitoring and assessment of future health impacts of individuals involved.

Planning Section N-Exercises and Drills

Planning section N.1

The State of WV REP Program participates in exercises according to the program guidance as stated in the FEMA REP Program Manual and NRC NUREG 0654 REP 1 Rev 2. The State of WV also utilizes HSEEP methodology for all exercise activities.

The State of WV utilizes the methodology in the FEMA REP Program Manual Part 3 under the assessment demonstration and guidance section of the specific target capability to evaluate and critique exercises and drills.

The tracking of identified findings and associated corrective actions are documented within the appropriate After-Action Report in the Corrective Action Section from identification through resolution.

Planning Section N.2

The major elements of the WV REPP Plan as identified in Part 3 of the REP Program Manual are tested at the intervals found in the FEMA REP Program Manual Part 3 Exhibit III-1: REP Assessment Process Matrix.

The State of WV does participate in all Plume Exposure Pathway Exercises though due to the location of WV's portion of the Plume EPZ it is not always possible to achieve a magnitude that exceeds the appropriate PAG's. The use of simulation is utilized when these cannot be achieved.

The State of WV does participate in the Ingestion Exposure Pathway Exercise at a minimum of once in an eight-year cycle and utilizes enough personnel from the appropriate agencies to demonstrate all capabilities required in the FEMA REP Program Manual. The State also encourages the participation of all counties within the Ingestion Exposure Pathway to participate in an exercise or attend appropriate ingestion related training within the same period.

Planning Section N.3

Working with BVPS and the neighboring jurisdictions during the exercise planning process the planning team should ensure that scenarios vary from exercise to exercise. The exercise scenario should also utilize the situations found in the FEMA REP Program Manual so that the scenario situations are all accomplished within an eight-year cycle. The situations are:

- A Hostile Action Based (HAB) Scenario
- A Rapid Escalation Scenario
- A No/Minimal Release Scenario
- Resource Integration Scenario

Due to WV location in relation to the BVPS WV is not a primary response agency for the HAB scenario. Resources that may be needed by the Commonwealth of PA for onsite response from WV would go through regular local mutual aid agreements.

The No/Minimal Release scenario would have no bearing on WV. WV does participate in the scenario and any target capabilities that cannot be met by the scenario would have to be simulated. Simulation would be addressed and negotiated as part of the Exercise Extent of Play.

The resource integration element of the scenario is not applicable to WV due to the location of WV as it relates to BVPS which is in the Commonwealth of PA and does not have any response jurisdiction within the Commonwealth of PA.

Planning Section N.4

The major elements of the WV REPP Plan as identified in Part 3 of the REP Program Manual are tested at the intervals found in the FEMA REP Program Manual Part 3 Exhibit III-1: REP Assessment Process Matrix.

Medical Services Drills are conducted annually with a federally evaluated exercise happening every two years.

The State of WV does not have any laboratories within the state. The laboratory that is utilized is in the State of OH which is in FEMA Region V. WV relies on an assurance from FEMA Region V to FEMA Region III to satisfy the exercise requirement.

Environmental monitoring drills are conducted annually with a federally evaluated drill held in conjunction with federally evaluated plume exercise.

Ingestion Pathway and Post-Plume Exercises a conducted at a minimum of every two years. The non-evaluated exercises are not all inclusive but may include but are not limited to:

- Sample plan development.
- Analysis of lab results from samples.
- Assessment of the impact on foodstuffs and agricultural products.
- Protective decisions for reentry, relocation, return, and Reoccupancy.
- Foodstuffs/crop embargo.
- Dissemination of ingestion exposure pathway EPZ information to pre-determined individuals and business.
- Assessment of emergency worker knowledge of ingestion exposure pathway EPZ procedures.
- Identification of the individual authorized to make decisions in the ingestion exposure pathway EPZ.

The biennial ingestion drills should be planned so that all elements on the above list are accomplished within an eight-year cycle.

Communication Drills are listed in Planning Section F.3 of the WV REPP Plan.

Planning Section O-Radiological Emergency Response Training

Planning Section O.1

The overall responsibility of ensuring that training requirements are met belongs to the EMD and the REP Program Manager. The two positions under the REP Program Manager are directed to provide training to Offsite Response Organizations (ORO) as follows the REP Local Coordinator coordinates training for all local responders identified in the Hancock County REPP Plan. The State Agency Coordinator coordinates training for those state agencies identified in the WV REPP Plan.

The WV REP Training Program, which includes identification of stakeholders as well as addresses initial, annual retraining, and just-in-time training can be found in attachment 5.

All training will be recorded on a roster with who attended, the training attended, and date of the training.

Planning Section O.2

Reserved

Planning Section P-Responsibility for the Planning Effort: Development, Periodic Review, and Distribution of Emergency Plans

Planning Section P.1

The WV EMD REPP staff are responsible for the planning and upkeep of the WV REPP Plan with the WV REP Program Manager having overall responsibility for the WV REPP Plan. The REPP staff undergo initial training provided by the WV REP Program Manager and it is highly recommended that all REPP staff attend an approved FEMA REP Plume Exposure Pathway and Post-Plume Planning Course as soon as reasonable.

Planning Section P.2

The Governor of WV has the overall responsibility and authority to protect the citizens of WV. The Governor has delegated the tasks of preparedness and planning as they relate to emergencies to the Director of EMD. EMD has taken provisions to ensure that adequate planning and preparedness activities are accomplished by delegating radiological emergency preparedness to the WV EMD REP Program Manager and their staff.

Planning Section P.3

The overall responsibility for developing, maintaining, reviewing, updating, and distributing the REPP Plan/procedures is held by the REP Program Manager with assistance from the REP Local Coordinator as well as the REP State Agency Coordinator. The REP Local Coordinator is responsible for coordinating with local governments and ORO's regarding planning and training. The State Agency Coordinator is responsible for coordinating with state agencies and ORO's regarding planning and training.

Planning Section P.4

The West Virginia Radiological Emergency Plan for the Beaver Valley Power Station will be reviewed on an annual basis and updated, as needed by WV EMD. The update will consider any changes identified by drills, exercises, and changes of regulations. These changes will be forwarded to all organizations and individuals with responsibilities for implementation of the plan.

Any changes to the plan affecting Hancock County will be coordinated with the Director, HC HSEM. Changes concerning the Beaver Valley Power Station will be coordinated with the Emergency Preparedness Manager at BVPS.

Plan updates and custodial changes are completed by the WV EMD Radiological Emergency Preparedness Program Manager, or designee. Changes should be noted on the Record of Changes page at the beginning of Part 1 of the WV REPP Plan.

Planning Section P.5

The following organizations/individuals should receive updated plans/procedures as they become available:

- WV BPH Office of Environmental Services Radiation, Toxics & Air Division Director
- WV DEP Homeland Security Emergency Response Chief
- WV Ag Threat Preparedness Response Officer
- Hancock County HSEM Director

- Beaver Valley Power Station Emergency Preparedness Manager
- FEMA REP BVPS Site Specialist

The process for distribution to the appropriate agencies can be via mail, e-mail, or other methods as appropriate. It is the responsibility of the directors/chiefs of the listed agencies to ensure that appropriate personnel within their respective agencies receive the updated copies of the WV REPP Plan. All other stakeholders and ORO's can receive a copy either by request or downloading the REPP Plan/Procedures from the WV EMD REPP website. The verification of receipt at a minimum will be received during the quarterly REPP meetings with WV agencies.

Planning Section P.6

The list of annexes, appendices, and plans that support the WV REPP Plan as well as their originating agencies:

- Beaver Valley Power Station Emergency Operations Plan - BVPS
- WV Emergency Operations Plan (EOP) – WV EMD
- WV EAS Plan – WV EMD
- Hancock County EOP – Hancock County HSEM
- Hancock County REPP Plan – Hancock County HSEM
- Brooke County Radiological Emergency Response Ingestion Zone Plan – Brooke County EMA
- Ohio County Radiological Emergency Response Ingestion Zone Plan – Ohio County EMA
- Marshall County Radiological Emergency Response Ingestion Zone Plan – Marshall County EMA

Planning Section P.7

The implementation procedures for the WV REPP Plan can be found in Part 2 of the WV REPP Plan. The implementation procedure list as part of the procedures those sections of the WV REPP Plan are implemented by the procedure.

Planning Section P.8

A table of contents can be found at the beginning of each part contained within the WV REPP Plan. A cross-reference or cross -walk of the plan as it relates to the FEMA REP Program Manual/ NRC NUREG-0654 REP 1 Rev 2 can be found at the end of part 1 of the WV REPP Plan.

Planning Section P.9

Reserved

Planning Section P.10

The emergency telephone numbers and other pertinent contact information that will be used during an incident at BVPS will be checked and updated quarterly by the WV EMD Radiological Emergency Preparedness Program Personnel.