



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 15, 1987

Docket No.: 50-412

MEMORANDUM FOR: Thomas T. Martin, Director
Division of Radiation Safety and Safeguards
Region I

FROM: David B. Matthews, Chief
Emergency Preparedness Branch
Division of Radiation Protection
and Engineering Response, NRR

SUBJECT: INTERIM FINDINGS ON OFFSITE EMERGENCY PREPAREDNESS
FOR THE BEAVER VALLEY POWER STATION (PA AND WVA)

Enclosed is a copy of a Federal Emergency Management Agency (FEMA) memorandum dated May 29, 1987 providing interim findings on the offsite emergency preparedness for the Beaver Valley Power Station (BVPS). These findings are based on a review of the offsite emergency plans of the state and local jurisdictions within the plume exposure pathway EPZ in both Pennsylvania and West Virginia and an evaluation of the full scale exercise conducted on November 19, 1986 and the remedial exercise conducted on April 29, 1987. The reviews and evaluations were performed by FEMA Region III and the Regional Assistance Committee.

Based on the offsite emergency plan reviews and the exercise evaluations, FEMA finds that the offsite emergency preparedness in Pennsylvania and West Virginia is adequate to provide reasonable assurance that appropriate measures can be taken offsite to protect the health and safety of the public in the event of a radiological emergency at BVPS. This conclusion will be reflected in our input to the next supplement to the BVPS SER (NUREG-1057).

We recommend that you transmit the enclosed memorandum and its attachments to the licensee.

David B. Matthews, Chief
Emergency Preparedness Branch
Division of Radiation Protection
and Emergency Preparedness, NRR

Enclosure:
FEMA Memo to F. J. Congel
dtd. 5/29/87

CONTACT: Gerald E. Simonds, NRR
492-4870

8706190138 XA

incl



Federal Emergency Management Agency

Washington, D.C. 20472

Nov 29 1987

MEMORANDUM FOR: Frank J. Congel
Director
Division of Radiation Protection and
Emergency Preparedness
Office of Nuclear Reactor Regulation
U. S. Nuclear Regulatory Commission

FROM: *Richard W. Krimm*
Richard W. Krimm
Assistant Associate Director
Office of Natural and Technological Hazards

SUBJECT: Interim Finding on Offsite Radiological Emergency
Planning and Preparedness for the Beaver Valley Power
Station Site-Specific to the Commonwealth of Pennsylvania
and the State of West Virginia

Attached is documentation prepared by the Federal Emergency Management Agency (FEMA) staff in Region III that will form the basis of an interim finding on offsite radiological emergency planning and preparedness around the Beaver Valley Power Station. The offsite jurisdictions addressed in this finding are the Commonwealth of Pennsylvania and Beaver County; and the State of West Virginia and Hancock County.

This interim finding consists of three parts: Part I contains documentation on the review of offsite radiological emergency planning for the Commonwealth of Pennsylvania and Beaver County, and the State of West Virginia and Hancock County; Part II contains the results of the remedial exercise which corrected the remaining deficiency cited for Pennsylvania in the November 19, 1986, exercise; and Part III contains a list of support hospitals.

The only unresolved issue in the Pennsylvania offsite plan concerns the decision making chain for authorizing emergency workers to exceed exposures in the 1-5 rem range. This issue is currently being addressed and does not adversely affect the adequacy of the Pennsylvania plan. As soon as it is finalized, you will be advised. Based on the plan reviews and exercises conducted to date, there is reasonable assurance that offsite radiological emergency planning and preparedness in the Commonwealth of Pennsylvania and the State of West Virginia is adequate to protect the health and safety of the public in the event of a radiological emergency at the Beaver Valley Power Station.

If you should have any questions, please contact Mr. Robert S. Wilkerson, Chief, Technological Hazards Division, at 646-2860.

Attachments

~~8706090160~~
(139 pp)

PART I



Federal Emergency Management Agency

Region III 105 South 7th Street Philadelphia, Pennsylvania 19106

MAY 12 1987

MEMORANDUM FOR: Dave McLoughlin, Deputy Associate Director
State and Local Programs and Support

ATTENTION: Robert S. Wilkerson, Chief
Technological Hazards Division

FROM: *h* Paul P. Giordano *Guy E. Brubaker*
Regional Director

SUBJECT: Interim Finding, Second Unit, Beaver Valley Power Station

As requested by your Memorandum of December 19, 1986, this letter is submitted to provide an Interim Finding on the planning and preparedness capabilities within the 10-mile Emergency Planning Zone of the Beaver Valley Power Station. An Interim Finding is necessary for the licensing process for the second unit at the Beaver Valley site.

Review and Evaluation of the radiological emergency preparedness plans has been underway at this site since 1980. At that time draft plans were submitted by the West Virginia Office of Emergency Services to FEMA Region III for comment. A review of the West Virginia State plan was completed and comments provided to the State in December 1981 (Hancock County plan review, Attachment 1) and in March 1982 (State Plan Review, Attachment 2).

In 1982, West Virginia and Hancock County Radiological Emergency Response Plans were again submitted and underwent another Regional Assistance Committee Review. Comments were provided to the State, with problems still not adequately addressed, in September and October, 1982. (Attachments 3 and 4).

Corrections were made and plans were again submitted. This submission was for formal 350 approval. However, the Regional Assistance Committee evaluation still identified twenty-three planning inadequacies. The evaluation report was submitted to the State on January 10, 1986. (Attachment 5).

FEMA Region III has received plan changes from the State of West Virginia which correct the 23 inadequacies. See the attached Corrective Actions to the FEMA Region III RAC Comments (Attachment 6).

The State of West Virginia and Hancock County participated in a full-scale exercise on November 19, 1986. All elements of the radiological emergency response plans were adequately demonstrated. See Beaver Valley Exercise Report submitted to you January 7, 1987 and April 9, 1987.

The initial Regional Assistance Committee review of the Beaver County, Pennsylvania Radiological Emergency Response Plans was conducted in 1983. The evaluation report was submitted to the State on August 23, 1983, with several inadequacies identified (Attachment 7).

The Beaver County and 27 municipal plans were submitted for formal 350 review and approval in April, 1985. However, after another Regional Assistance Committee review, 12 elements were still identified as requiring additional clarification (Attachment 8). Three of which had to be corrected before the plans could be recommended for 350 approval. A status of corrective actions taken is included in Attachment 9.

Beaver County and the 27 municipalities participated in a full-scale exercise on November 19, 1986. The Exercise Reports were submitted to you on January 7, 1987 and April 9, 1987. Two Deficiencies were identified and have since been corrected. See FEMA Region III Memorandum dated March 30, 1987 and May 11, 1987.

Based on the above documentation, FEMA Region III hereby presents an Interim Finding that the plans and preparedness demonstrated by the State of Pennsylvania, Beaver County, 27 municipalities and four support Counties, the State of West Virginia and Hancock County are adequate to protect the health and safety of the citizens located within the 10-mile EPZ of the Beaver Valley Power Station.

cc: Pennsylvania Emergency Management Agency

West Virginia Office of Emergency Services

December 18, 1981

Mr. Cecil Russell
Director
Office of Emergency Services
Room EB-80
State Capitol Building
Charleston, WV 25305

Dear Mr. Russell:

Enclosed are two copies of an informal FEMA in-house review of the Hancock County Radiological Emergency Plan for the Beaver Valley Nuclear Power Plant.

The purpose of this review is to enable State and County planners to address the identified issues in advance of submitting their plans for a full EAC review.

If you or your staff have any questions or comments, please contact Bruce Swiren directly at 597-7791.

Sincerely yours,

Steven A. Adukaitis
Chairman
Region III Regional Assistance
Committee

cc: Andy Kondik, Director, H.C.O.E.S.

CC:
File
Chron

B.Swiren:mc:12/18/81

	ORIGINATOR	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE
	BS/mc					
Name						
Date						

Hancock County Plan

Rating Key: A-Adequate
I-Inadequate

<u>Element</u>	<u>Rating</u>	
A		Assignment of Responsibility
A.1.a	I	The County plan identifies the County's emergency response organization very well. A clearer description of state agency and federal assignments is needed.
A.1.b	I	Again, the County's concept of operations and how it relates to the total effort is defined very clearly, but the responsibilities and concept of operations for state agencies, (especially those with primary responsibilities in the plan) private organizations, and the responsibilities of federal agencies need to be provided.
A.1.c	I	An organization chart has not been developed yet.
A.1.d	A	The Director of the Hancock County Office of Emergency Services (HCOES) or his designee is in charge of the emergency response. The name of the individual should be included in the final plan.
A.1.e	A	Communications appear adequate. The Hancock County Sheriff is responsible for 24 hour per day manning of the systems. Procedures for the notification of members of the County emergency response organization are provided.
A.2.a	I	No listing of key individuals with title are included in the plan. Within the responsibility matrix in Annex B column headings for Public Information (press relations is inadequate), Accident Assessment (involves monitoring, data evaluation and recommendations for protective actions), Social Services, Fire and Rescue (stated on page B-6 as a responsibility of the United Hancock County Fire Fighters) and Radiological Exposure Control (involving those responsibilities stated in Annex I-1) should be included.
A.2.b	A	Authorities referenced on page I-4.
A.3	I	No written agreements included. They will be developed for final plan.

- A.4 I Capability for continuous emergency response is implied, but not explicitly stated. A Standard Operating Procedure (SOP) for continuous operation of the County Emergency Operations Center should be included in the plan to help demonstrate this capability.
- C Emergency Response Support and Resources
- C.1.c I Although the burden on meeting this criterion rests primarily with the State of Pennsylvania and Beaver County, the County plan states that this is a responsibility of the West Virginia Office of Emergency Services (WVOES). The County's plan should reflect more coordination with the state on this matter.
- C.2.a A This is a state responsibility.
- C.3 The County references West Virginia University and the West Virginia Institute of Technology as sources of radiological monitoring teams, instruments and laboratory support. These sources are not referenced in the state plan. Clarification should be made on this point as to whether the resources at these two institutions will be used in a radiological emergency. This clarification is especially important in the state plan.
- C.4 I Letters of agreement with public and private agencies (e.g., Red Cross, RACES, Weirton School District, Etc.) and the institutions referenced in C.3.
- D Emergency Classification System
- D.3 A The four emergency action levels are consistent with those of the facility.
- D.4 A County response as provided in Section 4 appear adequate. The follow-up notification procedure allows for information to be passed to the County by the Beaver Valley Power Station (BVPS) on recommended emergency actions.
- E Notification Methods and Procedures
- E.1 A The procedures for notification by the BVPS, duplicate notification by the Beaver Valley Police, the notification and verification of WVOES by the County are in place.

- E.2 I Although the procedure for notifying County response personnel is adequate, no names of individuals to be called is provided. It is suggested that the County establish a chain of notification so that one or two persons are not responsible for calling the officials and emergency response personnel listed in Annex C-3.
- E.5 I A detailed EBS plan needs to be developed which is coordinated with the two other jurisdictions in Ohio and Pennsylvania. Also, EBS messages need to be developed. If the messages in Annex K-Attachment 1 are intended to be used by the County, then detailed information as to how and what information on protective measures is incorporated into those messages is required.
- E.6 A Until the siren system is operational, the County will rely on a route alerting system. The County has provided route maps and has identified which vehicles will operate on each route.
- Although this question might more appropriately be addressed by the state, there are means provided in the plan for alerting traffic on the Ohio River and the Penn Central Rail Line.
- E.7 I See comments for E.5.
- F Emergency Communications
- F.1.a A The System is adequate and backup methods of communication are provided for, but comment on element E.2 is relevant here regarding the County response organization.
- F.1.b A The Hancock County communications Center (HCCC) is able to contact Beaver and Columbiana Counties via commercial telephone or the Duquesne Light Industrial Radio System.
- F.1.c A This is a state function in coordination with the Pennsylvania Emergency Management Agency.
- F.1.d A Provision for communication with the BVPS-EOC, State EOC, Beaver and Columbiana County EOC's, and radiological monitoring teams.

- F.1.e I See comment regarding element E.2.
- F.2 A EMS Radio System will be used as the communications link between emergency medical units and the Weirton Area Medical Center. Should the Ohio Valley General Hospital also be included in the communications link?
- F.3 A Monthly test of communications between BVPS and HCCC. Weekly test of Plextron system for county emergency personnel alerting.
- G Public Education and Information
- G.1 I The County states their intent to develop the materials called for under this element and has identified the means of dissemination, but no target dates for development, publication, and dissemination are provided. No outlines of information to be included in these publications are provided.
- G.2 I See comment in element G.1.
- G.3.a A The Public Information Officer will meet with the news media at the New Cumberland Junior High School.
- G.4.a A The name of the individual should be incorporated into the final plan.
- G.4.b I The exchange of information for release to the public between the BVPS, WVOES, and HCOES is not dealt with in the plan. The only statement made in the plan is in regard to referral to the proper source. There should be some means by which the County knows what information BVPS, the state, and federal agencies have released to the public.
- G.4.c I Not developed in the draft plan.
- G.5 I Discussed in Annex K, but details as to the location of the briefing and the approximate scheduling should be given.
- H Emergency Facilities and Equipment
- H.3 A The county EOC is the County Court House. Space available also for a state field EOC.

- H.4 I Again, the comments in element E.2 apply here.
- H.7 A This criterion is a WVOES and West Virginia Department of Health responsibility, although RADEF members will monitor radiation levels outside their homes upon notification of an incident at BVPS. It is suggested that these individuals be assigned locations near population centers. Also, the plan should state how many RADEF members will conduct this confirmatory monitoring. What types of instruments shall be used?
- H.10 I An inventory of radiological equipment is needed. How often will representatives of the WVOES come to Hancock County to calibrate equipment?
- H.11 I See comment in element H.10.
- H.12 I Although this is a state responsibility, provision should be made for a state field EOC for central collection of field monitoring data.
- I Accident Assessment
- I.7 I Although the responsibility of meeting this criterion rests primarily with the BVPS and the state, a concise description of the capability of the RADEF team along with an inventory of radiological equipment available to the County should be provided.
- I.8 I Comment relative to I.7 applies here also.
- J Protective Response
- J.2 Not applicable to Hancock County.
- J.9 A The County has developed a scheme of protective actions consistent with EPA recommendations.
- J.10.a I The County has developed very good plans and maps for evacuation routes, reception and transportation staging, alternate evacuation routes, but the following points still need to be addressed:
- 1) Location of mass care centers on maps.
 - 2) Location of suitable areas for the public to take shelter.
 - 3) Planned location of radiological sampling and monitoring points.
- Also, it is suggested that the use of Route 7 in Ohio be evaluated as an alternate evacuation route.

- J.10.b A Population maps are presented in sector format.
- J.10.c I Plan provides for route alerting by the fire department as an interim measure until a siren system is installed, but information materials and EBS announcements need to supplement that alerting process. The comments in elements E.5 and G.1 should be met to rectify this inadequacy.
- J.10.d I Basic plan is good, but details as to what transportation resources will be available are needed (e.g., how many vehicles and of what type does the county childrens home have, is there an agreement for the use of Hancock County Senior Citizens group vans, etc.).
- J.10.e I County is responsible for administering KI, however this is an overall state responsibility. But state does not have KI plan. Also, County plan should identify the amount and location of KI supplies.
- J.10.f I No information as to what conditions would warrant administration of KI to emergency workers and to the general population.
- J.10.g A Means of relocation is primarily by auto, but County has provisions for non-car owning public, school children, special populations, and transients.
- J.10.h A Both reception centers are outside the EPZ.
- J.10.i I Traffic capacities for evacuation routes is not yet available.
- J.10.j A Control of access is provided by security checkpoints maintained by the County Sheriff. Since each of the three county jurisdictions could possibly declare evacuations at different times, access control can be completely meaningless if traffic can enter from Ohio or Pennsylvania. This point reinforces the need for close cooperation between the three counties within the EPZ.
- J.10.k A The County plan addresses impediments caused by flooding. Other impediments such as accidents on the evacuation routes should be dealt with. Is Waterford Park a suitable reception center if the Ohio River is flooded?

- J.10.1 I Time estimate for the evacuation of the whole EPZ in Hancock County is provided which includes auto-owning population and school children. What about non-auto-owning population and special facility population? Evacuation time estimate is only made for one condition (which is not identified). Evacuation roadway network is provided, but no table of road segment characteristics is provided.
- J.12 I Mass care and reception centers are provided for, but the plan does not state who is responsible for the operation and management of those centers and how long they can be continuously manned.
- K Radiological Exposure Control
- K.3.a I An SOP for RADEF operations during a radiological emergency is needed along with a count of the members of the RADEF team. A decontamination center for emergency workers should be identified as well as inventories of emergency worker dosimetry, survey meters, and dosimeter chargers.
- K.3.b I The above mentioned SOP should include the procedure to be followed in maintaining accurate dose records and instructions to emergency workers as to when dosimetry should be read.
- K.4 I Although the County has stated exposure in excess of general public limits will be voluntary, a decision chain should still be developed for authorizing exposures of emergency workers above those levels which includes a review of a workers dose levels.
- K.5.a A Decontamination levels are set.
- K.5.b I Procedures for decontamination should be included within the plan (preferably with the RADEF SOP). Contaminated waste will include both liquid and solid matter (e.g., clothing), procedures for the disposal of this solid matter should be developed.
- L Medical and Public Health Support
- L.1 I There are no hospitals in the County. Two hospitals serve Hancock County: Weirton Medical Center and the Ohio Valley General Hospital. No statement is provided as to their capability to handle contaminated patients. There is no indication that the Brooke-Hancock Emergency Medical Services Council will be able to properly handle injured individuals who are also contaminated.

- L.4 A The Brooke-Hancock Emergency Medical Services Council will provide a minimum of 18 ambulances and three rescue units.
- M Recovery, Reentry, and Post Accident Operations
- M.1 I The County provides the guidelines which will be followed in terminating protective actions and a general plan for recovery and reentry. No procedures, though, are identified by the County (e.g., traffic controls, maintenance of ingestion pathway protective actions, notification, transportation back to evacuated areas, etc.).
- N Exercises and Drills
- N.1.a A Exercises will verify the adequacy of the County plan, SOPs, communications systems, emergency equipment, and the interrelationships of participating organizations.
- N.1.b A See element N.1.a
- N.2.a A Plan states that a drill monitor will evaluate drills. Provision is made for monthly test of communication system with BVPS, WVOES, Columbiana County, and Beaver County. Plextron system in the county is tested weekly.
- N.2.c A Medical emergency capability will be tested at the annual exercise.
- N.2.d I This area is primarily a state responsibility, but RADEF personnel have monitoring responsibility prior to the arrival of state personnel.
- N.3.a I Objective is provided, but no evaluation criteria are included.
- N.3.b.c.d.e.f State responsibility.
- N.4 A The Plan does not provide for local observers, but critique of County organization is provided for in the plan.
- N.5 A Director, HOES will be responsible for ensuring that deficiencies in the County response will be corrected and that corrections will be incorporated into the County plans and SOPs.

- O Radiological Emergency Response Training.
- O.1 I Outlines of topics for orientation sessions are provided, but no specifics are given as to when these sessions will be conducted and who will attend. Has the County looked into training offered by FEMA and the state?
- O.1.b I No assurance that each County response organization will receive training. No discussions of mutual aid organizations.
- O.4.a-j I No identification is provided as to whom the "key personnel" are that will receive training at the BVPS. No indication as to whom in the emergency response organization will receive training.
- O.5 I Although County states that they will undertake a training program, the question as to their ability to provide training especially to RADEF personnel remains to be proven.
- P Responsibility for the Planning Effort.
- P.1 I Training of planners is not addressed in either Annex A or Annex M.
- P.2 A Director, HCOES, but the name of the individual is not provided.
- P.3 A Director, HCOES.
- P.4 A Annual review of plan. Quarterly review of telephone numbers, radio communications, and Plextron assignments.
- P.5 A Director, HCOES, responsible for transmittal of updates to all holders of the plan.
- P.6 I To be provided in final plan.
- P.7 I To be provided in final plan.
- P.8 A
- P.10 A See element P.4.

March 25, 1981

Mr. Thomas Carr
Director of Planning
Office of Emergency Services
Room EB-80
State Capitol Building
Charleston, West Virginia 25305

Dear Mr. Carr:

The following comments are the result of my review of the December 1980 Draft West Virginia State REP plan, as was promised to you in Hancock County on January 22, 1981. My review of the Hancock County plan should be available by the end of April. The delay is the result of expedited staff work at FEMA on revised TMI plans.

It is hoped that most of these comments will be helpful to you in preparing the State plan for FEMA's formal RAC review.

Due to pressing demands on the RAC from TMI, West Virginia's State and county plans will not be reviewed probably until June by the RAC. Therefore, time is available to work out any planning difficulties that currently exist.

The best way to use these comments is side-by-side with NUREG-0654. The comments, for the most part, are geared to each individual planning criteria. The planning criteria are not restated in the text of the comments.

If you or Sam have any questions, or wish to discuss these comments, feel free to call me at (215) 597-0180.

Sincerely yours,

Bruce J. Swiren
Emergency Management Specialist

Enclosure

cc:
Sam Paletta, West Virginia State Planner
Steve LaVie, Health Physicist, NUS Corporation
PP-OR
PP-R
PPD/B. Swiren/dc/3-25-81

COMMENTS ON THE WEST VIRGINIA RADIOLOGICAL EMERGENCY PLAN

- A. ASSIGNMENT OF RESPONSIBILITY (ORGANIZATIONAL CONTROL)
Planning Standard
- Primary responsibilities for emergency response by the nuclear facility licensee, and by State and local organizations within the Emergency Planning Zones have been assigned, and emergency responsibilities of the various supporting organizations have been specifically established, and each principal response organization has staff to respond and to augment its initial response on a continuous basis.
- A.1.a. The State Plan identifies 9 State agencies, 2 county level entities, 2 private agencies, and only 1 Federal Agency (FEMA Region III) specifically in its responsibilities section. However, in Appendix 15, other Federal Agencies are directly referenced. They are the IRAP Teams (DOE), EPA, NRC, and DHEW/FDA. These Federal agencies should be included and adequately described as to their responsibilities in the Responsibilities portion of the State Plan.
- A.1.b. There seems to be considerable gaps in the State Plan regarding how the responsible agencies will actually interface under the concept of operations scheme outlined in the Plan.

SEP 15 1982

Mr. Cecil Russell
Director
Office of Emergency Services
State Capitol Building
Room EB 80
Charleston, WV 25305

Dear Mr. Russell:

Enclosed are the comments of Region III's Regional Assistance Committee (RAC) relative to the West Virginia State Radiological Emergency Plan for the Beaver Valley Power Plant facility.

The draft plan already meets many of the planning standards and criteria outlined in NUREG-0654/FEMA REP-1, Revision 1. Those areas which are still inadequate are identified in these RAC comments, which also provide a clear indication of the detail and procedures necessary to achieve a more complete response to the Federal planning standards. If you or members of your staff have questions concerning these comments, please contact Joseph N. Zagone directly.

Sincerely,

John Wm. Brucker
Regional Director

Enclosures

cc:
File
Chron
Read File

JNZ 9/15/82
J.N.Zagone:mc:9/14/82
JRA 9/15/82

JW
9/15

Regional Assistance Committee (RAC) Review and Comments on the
West Virginia State Radiological Emergency Response Plan
Beaver Valley Power Station

General Comments

1. The plan is difficult to use in its present organization. The pages should be numbered and a consistent organizational framework for the annexes and appendices should be used. The table of contents should be consolidated and expanded to provide a reader subject reference.
2. On page 11-16, Federal roles are briefly summarized. The Environmental Protection Agency (EPA) is not mentioned in this summary although the role is detailed in later sections. This could be misleading to a person using the summary in order to locate the help needed.
3. On page 8-1, it is noted that all of the State monitoring equipment is in Charleston (4 hours away) and there is no equipment capable of measuring radioiodine. If this is not covered by the County, it is a serious deficiency.
4. On page 11-1, the training section is not nearly specific enough. Detailed training was not discussed in the individual SOPs.
5. In section 4.1.2. the statement is made that "it is reasonable to assume" that EPA support would be provided. The State should be aware of the specific capabilities of EPA and should include them in the plan so they know what to ask for.
6. West Virginia University and Marshall University are identified as possible sources of laboratory support. It would be helpful to know the resources and capabilities of these labs and to have agreements to provide support in an emergency. This is especially important in view of the long distance and minimal capabilities of the State.
7. In section 2.2, it is clearly identified that there is insufficient dosimetry for all emergency workers. The plan suggests that one dosimeter could be sent out with each group of workers. This is clearly inadequate. Each person working in the plume should be equipped with a TLD or film badge and should also have high and low-range direct-reading dosimeters. Also, the frequency of dosimeter reading quoted (i.e., daily) is clearly inadequate.
8. On page 19, the Chart, "Interrelationships of State, Local, Federal and Private Organizations" should have the United States Department of Agriculture added as a response agency under FEMA Region III.
9. In Annex 24, "Acronyms," there should be added: USDA -- U.S. Department of Agriculture.

Specific Comments

A - Adequate
I - Inadequate

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
A.1.a.	A	The Plan defines the State, local, Federal, and private sector organizations (including facilities), that are intended to be part of the overall response organization for Emergency Planning Zones.
A.1.b.	A	The Plan has a concept of operations and explanation of organizational relationships for the major operational organizations. However, some improvement is needed in supplying additional concept of operations for those organizations that have lesser roles. These would include West Virginia Department of Highways, American Red Cross, RACES, and others.
A.1.c.	A	
A.1.d.	A	NUREG-0654 clearly requires of each organization the manning of a specific individual by title who is to be in charge of emergency response. This information can be gleaned from the body of the Plan, but should be set out clearly in a separate sheet or bold print.
A.1.e.	A	
A.2.a.	A	
A.2.b.	A	
A.3.	A	
A.4.	A	
C.1.a.	A	
C.1.b.	I	NUREG-0654 requires a tabulation of Federal resources expected and the time of the resource arrival at each specific nuclear facility site. This requirement may be taken care of by reference to the Pennsylvania REP plan.
C.1.c.	A	Specific licensee, State and local resources are not tabulated in a concise format, but are referred to throughout the Plan. A possible improvement would be a "quick reference" chart with operational organizations on one axis and resources on the other.
C.2.a.	A	
C.3.	A	
C.4.	A	
D.3.	A	

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
D.4.	A	
E.1.	A	
E.2.	A	
E.5.	A	There is no clear specification of who has the responsibility to notify the broadcast media (EBS). However, the counties have access to EBS and public media, and have EBS plans.
E.6.	A	The alternate to the President of the United Hancock County Firefighters should be identified in case of the President's absence during a radiological emergency.
E.7.	A	More detail should be added to messages, i.e., respiratory protection, evacuation routes, etc.
F.1.a.	A	
F.1.b.	A	
F.1.c.	A	
F.1.d.	A	
F.1.e.	A	
F.2.	A	The County is responsible for the coordinated communication link for fixed and mobile medical support facilities.
F.3.	A	
G.1.	I	Responsibility for the dissemination of public information is laid on the county and local organizations. However, there is much information that could and should be supplied at state level, and a schedule for distribution should be established.
G.2.	I	The state may pass this responsibility on to the county, but a monitoring effort should be established to assure the requirements are being met. This monitoring effort should be part of the radiological emergency response plan.
G.3.e.	A	Actual sites for rumor control stations should be specified.
G.4.a.	A	
G.4.b.	A	

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
G.4.c.	A	See comment on G.3.a. above.
G.5.	I	There does not seem to be a program designated to acquaint news media with the emergency plans, etc. for the State of West Virginia.
H.3.	A	
H.4.	A	
H.7.	A	
H.10.	I	The plan does not specify the provisions made to inspect, inventory, and operationally check equipment. The plan states it will be done, but does not specify when, where, or how. There is no specification of replacements for inadequate equipment.
H.11.	I	Tabs A, B, and C in Annex 15, Section XIV of the Plan are missing and should be supplied.
H.12.	A	There should be a preselected designated facility described in the plan such that a team could simply pick up the plan, turn to the proper section, and know where to phone in their data.
I.7.	A	Found in Annex 8 and 15 (IX).
I.8.	A	
I.9.	I	No mention of equipment with the stated capability is made. However, this capability is probably in support agencies.
I.10.	A	
I.11.	A	
J.2.	A	More details in Hancock County Plan.
J.9.	A	
J.10.a.	A	Relies on County Plan.
J.10.b.	A	Relies on County Plan.
J.10.c.	A	
J.10.d.	A	
J.10.e.	A	

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
J.10.f.	A	
J.10.h.	I	State plan should note the relocation centers in host areas, especially those outside of Hancock County.
J.10.i.	I	State plan should note non-county evacuation routes.
J.10.j.	A	Found in WVEDP.
J.10.k.	I	State plan should identify alternatives for non-county evacuation routes.
J.10.l.	I	State plan should show time estimates for evacuation routes that are out-of-county.
J.10.m.	A	
J.11.	I	NUREG-0654 specifically requests maps for recording survey data, key land use data (e.g., farming), dairies, food processing plants, water sheds, water supply intake and treatment plants and reservoirs. The maps shall start at the facility and include all of the 50 mile ingestion pathway EPZ. Also, there should be up-to-date lists of the name and location of all facilities which regularly process milk products and other large amounts of food or agricultural products originating in the ingestion pathway EPZ, but located elsewhere. This information may exist elsewhere and could easily be included by reference.
J.12.	A	Relies on County Plan. Could be improved by providing additional detail on the evacuation and monitoring requirements.
K.3.a.	A	
K.3.b.	A	Should be elaboration on reading and recording dose rates.
K.4.	A	
K.5.a.	A	
L.1.	I	The West Virginia Department of Health probably has the information appropriate for this requirement, but it is not referenced in this plan.
L.3.	I	The annexed West Virginia Department of Health Plan refers to a "Tab A" which is not there. This omission should be corrected.
L.4.	I	A reference should be developed for transporting victims of radiological accidents to medical support facilities.

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
M.1.	A	
M.3.	A	
M.4.	A	
N.1.a.	A	
N.1.b.	A	
N.2.a.	A	
N.2.d.	A	
N.2.e.(a)	A	
N.3.a.	A	
N.3.b.	A	
N.3.c.	A	
N.3.d.	A	
N.3.e.	A	
N.3.f.	A	
N.4.	A	
N.5.	A	
O.1.	A	
O.1.b.	A	

O.4.a. through O.4.J. except for O.4.e. and O.4.i. are Not Acceptable. Although the State does not have the resources to present training, there should be some indication of available training from other sources. Who is eligible to go and on what time schedule should be presented. In other words, the State has the responsibility to get the personnel trained, although not able to present the training itself. I suggest that the State compile a list of available courses and their sponsors and a corresponding list of personnel needing training and match the two in a scheduled format.

O.5.	A	See comment above.
P.1.	A	
P.2.	A	

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
P.3.	A	
P.4.	I	The State should specify agreement with the facility for review and update of the plan as called for in NUREB-0654.
P.5.	A	
P.6.	A	
P.7.	I	A Procedures appendix should be prepared. This should be a list of activity phases and what procedure should be implemented at each phase. These procedures should then be referenced to the proper section in the plan.
P.8.	A	
P.10.	A	

A.1.b.
(cont'd)

Specifically, Appendices 15 through 17 describe the specific roles to be performed by the West Virginia Departments of Health, Agriculture, and O.E.S. The State should develop separate appendices, or SOP's as it may be which describe the specific or unique roles that the remaining six State agencies are expected to perform during a fixed nuclear facility emergency.

The above comment also applies to the Red Cross and RACES.

— In general, the format of using the four Emergency Action Levels (EAL's) to organize the concepts of operations is good. Concerning the State concept of operations, there are some questions this reviewer needs to have clarified. Under the Alert classification level, it states that confirmation radiation monitoring of the 10 mile EPZ will be performed if a release has occurred. It is my understanding that the County would be responsible for this. Does the State also plan to conduct confirmatory radiation monitoring? If so, then by whom?

· Another question I have concerns the State's Concept of Operations regarding the Site and General Emergency classifications. In both cases, it is indicated that the State will put personnel needed for evacuation on alert or activate them, and that shelters would be manned and readied to receive evacuees. I thought these two functions were County responsibilities?

A.1.b.
(cont'd)

Finally, it is necessary to include in the State Plan the Concept of operations for the four Federal agencies referred to under Comment A.1.a.

A.1.c.

The block diagram on Page 14 illustrates satisfactorily the interrelationships of the responsible organizations in the State Plan.

A.1.d.

On page 17-8, a listing of facilities and telephone numbers are given. However, no specific individuals and their titles are provided with the facility telephone numbers. There also is no indication of what part of the facilities organization structure is being referenced; i.e., County EOC's, facility EOF, TSC, etc.

On page 17-9, the listing of State Agency Coordinators and their telephone numbers is satisfactory.

A.1.e.

On page 17-9, the 24-hour telephone numbers satisfy this requirement for State agencies. However, there are no 24-hour communication numbers and contacts for the Counties, facility, other State agencies, Federal agencies, etc. Are the facility and agency numbers on page 17-8 24-hour ones? If so, then it should be indicated. If not, then they should be provided along with indicating the specific contact involved, as mentioned in comment A.1.d.

The State Plan should also reference (mention) in its Concept of operations section the capability to establish and maintain 24 hour communications.

A.2.a.

The matrix on page 15 is totally inadequate for meeting this criteria. In fact, it appears that the matrix was xeroxed from the State's Emergency Disaster Plan and inserted directly into the Radiological Emergency Plan. The matrix in its present form does not match the State, local, Federal and private organizations relied on for this Plan. Secondly, the emergency response tasks on the side of the matrix don't match that closely the criteria for this element; ex/no radiological exposure control, requesting Federal assistance, etc.

A new matrix should be designed using the effected State agencies, County agency(s), all Federal agencies with responsibilities (see previous comments), and neighboring State and County agencies.

The new matrix should also use the task functions contained in this element, and more if the State feels that its necessary.

A.2.b.

It would be informative if, in the Authorities and References section on page 2, a brief description were added to each authority (or Act) explaining the powers contained therein.

A.3.

Appendix 22 provides for written agreements between the State and the facilities, PEMA, and the Red Cross. These agreements, as provided, do cause several questions concerning their scope to be raised.

A.3.
(cont'd)

1. PEMA to WV- When will this agreement be signed? Also, will Pennsylvania do any radiological monitoring in West Virginia? Either way, this issue should be stated in this agreement.
2. Beaver Valley to West Virginia - O.K.
3. Shippingport to West Virginia - When will this agreement be available.
4. Red Cross to West Virginia - This appears to be a restating of Red Cross national policy from the Eastern field office to the West Virginia Red Cross State representative. As such, this is not an agreement at all. The State still needs to negotiate an agreement between the appropriate Red Cross Chapter (Pittsburgh or Weirton?) and West Virginia which reflects the services that the Red Cross will supply the State.
5. West Virginia to PEMA - The status and nature of this agreement is unclear. There is no copy of a modified agreement, which is referenced in letter between John Anderson and Colonel Henderson. Apparently, the modification referenced involves a clause committing West Virginia to a planning function subject to the availability of funding. What type and amount of funding is involved?
6. West Virginia to Beaver Valley - adequate
7. West Virginia to Shippingport - adequate

A.4.

The WVOES SOP adequately provides for continuous 24 hour

A.4. operations at the State level.
(cont'd)

C. Emergency Response Support and Resources

Planning Standard

Arrangements for requesting and effectively using assistance resources have been made, arrangements to accommodate State and local staff at the licensee's near-site Emergency Operations Facility have been made, and other organizations capable of augmenting the planned response have been identified.

C.1.a. The Department of Health Plan (Appendix 15) requires that the logistician notify the Federal RAP Team at Oakridge National Laboratory. The responsibility for determining whether the logistician requests federal assistance lies with the Division Incident Manager. This adequately meets this criteria.

C.1.b. In Appendix 15, pages V-5 to V-7 there is a brief discussion of the specific federal resources expected; those being the IRAP Teams, EPA, NRC and FDA. However, in the Concept of Operations part of the State Plan, there are no roles defined specifically for these Federal agencies. See previous comments under Planning Standard A.

In general, it is felt that the discussion of Federal resources is not extensive enough. If circumstances warrant, what specific services would the State expect the Federal

C.1.b.
(cont'd)

government to perform? How many sampling points? How much laboratory analysis? etc.

Also needing to be included are estimated times of arrival at the Beaver Valley power plant, or Hancock County (see comment C.1.c.)

C.1.c.

There is no discussion of resources to be made available to the Federal teams to support their responses. For instance, page V-6 of appendix 15 states that if the request for Federal assistance is coordinated, then it will be handled through PEMA's EOC at Blackhawk High School. If it is not, then it will interface with the Hancock County EOC. What resources will be made available under both circumstances in Hancock County? And how much of this is the State's responsibility?

C.2.a.

The Department of Health will send two representatives to the near-site EOF for technical assistance. WVOES will also send two representatives to the EOF to assist in coordinating State actions. This adequately meets this criteria.

C.3.

It is the responsibility of the Department of Health to identify radiological laboratory capabilities and availability. On page V-7 of Appendix 15, West Virginia University, and the West Virginia Institute of Technology are identified as available in an emergency in the State of West Virginia. The Presbyterian University Hospital in Pittsburgh is a source of radiation medicine expertise, which could be

C.3.
(cont'd)

accessed through PEMA.

While the State has obviously identified suitable facilities, the State Plan should also enumerate the level of support which can reasonably be depended upon; i.e., numbers of samples and types of analysis which could be performed, turn around time, and so forth.

Significantly, there was no mention of in-house State laboratory support. Is this available, and if so, what are its capabilities? See comment C.4.

C.4.

The Department of Health has identified the Beaver Valley Power Plant as being responsible for offsite radiological monitoring until Divisional personnel or IRAP personnel can be deployed. This raises a couple serious questions. First, does this mean that the utility intends and has agreed to perform offsite monitoring in Hancock County? If so, this is not stated in the letter of agreement between the utility and West Virginia. Secondly, does this imply that should IRAP personnel be called up, then State employees will not perform offsite monitoring?

On page 1X-2 of Appendix 15, it is stated that the Department of Health has an agreement with West Virginia University to analyze environmental samples. A copy of that agreement should be provided in the Plan. Referring back to a comment under C.3., does this agreement with the

C.4.
(cont'd)

University supplement in-house capabilities, or substitute for them?

D.

Emergency Classification System

Planning Standard

A standard emergency classification and action level scheme, the bases of which include facility system and effluent parameters, is in use by the nuclear facility licensee, and for determinations of minimum initial offsite response measures.

D.3.

The emergency classification and action level scheme for the Shippingport facility, as found in Appendix 14, is the same as that found in NUREG-0654, Appendix 1.

The emergency classification and action level scheme for the Beaver Valley facility, as found in Appendix 13, uses basically the same classification and action levels as NUREG-0654.

The State Plan has an emergency classification scheme consistent with both utilities (contained in Appendices 15 through 17). Appendix 15 (Department of Health) also incorporates the emergency action levels utilized by Beaver Valley and Shippingport. Since the Department of Health is the lead agency for making State accident assessments, the EAL's location in their plan is appropriate.

D.4.

The State level emergency actions seem to be consistent with the nuclear power facilities recommendations. However, it is somewhat difficult to pick up the specific recommendations associated with the EAL's and classification levels for Beaver Valley; the reason being that Beaver Valley does not have a table or distinct section dealing with recommended off-site actions. However, since the State's recommended off-site actions are consistent with NUREG-0654 and the Shippingport facility, the present scheme is adequate for the Departments of Health, Agriculture, and O.E.S.

D.4.
(cont'd)

It becomes less clear how the other 6 State agencies with response functions fit into the action levels and associated responses. It is recommended, as mentioned in previous comments, that SOP's be developed for these other 6 agencies specific to FNF emergency response. These SOP's do not have to be particularly long, and should be designed to tie in agency responses to the classification and action levels.

E.

Notification Methods and Procedures

Planning Standard

Procedures have been established for notification, by the licensee of State and local response organizations and for notification of emergency personnel by all response organizations; the content of initial and followup messages to response organizations and the public has been established; and means to provide early notification and clear instruction to the populace within the plume exposure pathway Emergency Planning Zone have been established.

E.1.

The procedures for notification and verification of an incident at the utility appear to be adequate. Pages 1-1 thru 1-3 indicate that the facility will notify Hancock County directly and immediately concerning any serious or potentially serious incident. Beaver County will also notify Hancock County, providing an acceptable back-up notification.

E.1.
(cont'd)

WVOES also receives its notification initially from two sources; PEMA and Hancock County.

There is one inconsistency, however, that needs to be cleared up. On Page 12, under Facility Responsibility, it states that the facility will notify Hancock County O.E.S. immediately in the event of an Alert, Site Emergency, or General Emergency. On page 17-4, under WVOES Plan, it states that the facility will notify Hancock County immediately for a Site or General Emergency. Which is it? Hopefully the first.

Verification occurs by the Hancock County OES director or his representative calling the facility back, then calling WVOES. If the County can't verify, then WVOES will verify by calling the facility and PEMA.

E.2.

The WVOES Duty Officer Procedures, on pages 17-62 and 17-7, provides for the alerting of State agencies, activating the State EOC consistent with the four classification levels, and for mobilizing WVOES emergency response personnel.

The Department of Agriculture Plan indicates that field personnel will be put on alert during an emergency, and that representatives will be sent as required to the State EOC. The Department of Agriculture plan should outline the procedure or details, of how this will be done.

The Department of Health plan does include procedures for mobilizing emergency response personnel.

E.2.
(cont'd)

To be complete, all three above State agency plans also should provide the names, titles, locations, and phone numbers of the emergency response personnel to be relied upon. The other State agencies should also have their own procedures for the above mentioned items included in the State Plan.

E.5.

The reference cited in the cross reference, pages 1-1 through 1-3, does not address this criteria. Appendix 9 does say that the public information center established at Beaver County, Pa., will provide a location for news media to receive information.

What about the public's access to early information? Will Hancock County be responsible for disseminating periodic bulletins to the broadcast media? Or will the State? Or will PEMA? Whichever alternative is accurate, the State Plan should describe in detail how notification to the public will be coordinated.

E.6.

The discussion in Appendix 2 does not address this criteria; it merely states what types of things Hancock County should do in providing prompt notification and warning instructions to the public.

Recognizing that this is the County's primary responsibility, the State Plan should describe what the County is actually planning to do to administratively and physically carry out its notification and warning functions.

E.7. Appendix 18, News Releases, is very skimpy and does not address adequately this criteria. The concept is to have pre-positioned, already prepared (just need to fill in a few blanks) messages for the public regarding various protective actions; such as sheltering, respiratory protection, evacuation, etc.

F. Emergency Communications
Planning Standard

Provisions exist for prompt communications among principal response organizations to emergency personnel and to the public.

F.1.a. There is a 24-hour capability at the State level through the W.V.O.E.S. duty officer. Back up radio communications will supplement the above commercial telephone lines at both the County and State levels through their respective Emergency Communications Centers. Duquesne Light also has direct radio communications capability with Hancock County via the utility's radio network. According to Annex C of the W.V.E.O.P. radio communications capability exists between W.V.O.E.S. and Hancock County.

Concerning the telephone links they all seem to be commercial. Are there any plans to have dedicated lines installed between the Utility and Hancock County and between Hancock County and the State?

F.1.a.
(cont'd)

Concerning the various radio communications systems, there should be a description of the frequencies involved and their locations (proximity) via the primary communications links.

F.1.b.

The reference (page 17-1) for communications with contiguous State/local governments is not adequate. On page 17-8, telephone numbers of facilities are listed. There is none for Ohio and Columbia County. Are there any alternate radio links between the parties, such as: W.V.O.E.S. to Beaver County EOC to PEMA EOC to Hancock County EOC to Columbia County to Ohio?

F.1.c.

The reference provided (page 19-1) for communications with Federal emergency response organizations is inadequate. In the Department of Health Plan, it is envisioned that a coordinated request for IRAP assistance will come from the PEMA EOC in Blackhawk High School. It is also the responsibility of the I.H.D. for notifying IRAP in Oakridge, Tennessee. Is this primarily just a notification function, which in reality backs up PEMA, or a requesting function?

On page 17-8, telephone numbers for DOE are listed, along with FEMA Region III. I assume the DOE numbers are for Oakridge, Tennessee?

F.1.d.

Appendix 19 indicates that there are a duplicity of communications links between the facility control room, EOF and TSC. The TSC has the radio communications

F.1.d.
(cont'd)

capability . The EOF has commercial and PAX telephone lines, with commercial communication links to State and local organizations. Are there any dedicated telephone lines available from the EOF? Is there any back-up (radio) communications from the EOF to State and local organizations? If commercial power is lost, is there a back-up power system?

I was unable to find any mention of communications to radiological monitoring teams. This must be elaborated on.

F.1.e.

The reference cited (page 17-3) does not unequivocally provide for alerting or activating emergency personnel in each response organization. The W.V.O.E.S. does provide for activation and staffing of the State EOC. However, except for Department of Health, W.V.O.E.S. and to lesser degree the Department of Agriculture, there are no written procedures provided for activating emergency personnel in the other State agencies. Agency plans should be developed for these other agencies (including the sprucing up of Agriculture's) outlining alerting and activating procedures.

F.2.

The reference in the State Plan (page 3-1) does not address at all the coordination of communication for fixed and mobile medical support facilities.

F.2.
(cont'd)

If this is a County responsibility, which in fact I believe it is, then the State Plan should state so and give a synopsis of how it will be accomplished.

F.3.

Appendix 10, seems to deal adequately with the requirement for periodic testing of the emergency communications system, as described.

G.

Public Education and Information

Planning Standard

Information is made available to the public on a periodic basis on how they will be notified and what their initial actions should be in an emergency (e g., listening to a local broadcast station and remaining indoors), the principal points of contact with the news media for dissemination of information during an emergency (including the physical location or locations) are established in advance, and procedures for coordinated dissemination of information to the public are established.

G.1.a. thru
G.1.d.

Public education and information is identified as being the responsibility of the County. The Governor's Press Office Secretary will provide assistance as needed. In what way?

On page 10, the categories of informational material required to be developed by the County is not inclusive enough. For instance, not included are cer-

G.1.a. thru
G.1.d.
(cont'd)

tain protective measures such as relocation centers and radioprotective drugs, and the special needs of handicapped.

What the State Plan should really reflect is a synopsis of how Hancock County intends to implement this entire planning standard.

G.2.

Not covered in State Plan. See comment for G.1.

G.3.a.

On page 9-1, it states that the Public Information Center established in Beaver County will be the Central location for all news media. However, the Governor's Office (Press Secretary) is assigned the responsibility for all State-level press releases.

It is unclear how these two seemingly conflicting procedures fit together.

Also, are there physical facilities for use by the media at the State EOC?

G.4.a.

In general, the State has an adequate amount of appropriate representation at Hancock County and Pennsylvania EOC's to have access to all necessary information.

As such, the Governor's Press Secretary has adequate sources to function as the principal State spokesman.

There is a strong need, however, to tie it all together in an expanded public information appendix containing

G.4.a.
(cont'd)

the State's concept of operations and procedures in this very important area. This comment applies to all elements in planning standard G.

G.4.b.

It is unclear from the State Plan as to how a timely exchange of information among spokesman from different organizations would be accomplished. Page 18-1 seems irrelevant to this criteria.

G.4.c.

Pages 9-1 and 9-2 describe the State's intention of using its EOC as the State rumor control center. However, the State Plan does not adequately discuss how Hancock County will deal with this issue. It is appropriate that the State plan do this, since there is a great need for coordination between the County and State governments.

G.5.

Appendix 10 is not an adequate reference, since it does not deal at all with the news media. The State should develop plans for an annual briefing of the news media about its FNF emergency planning in coordination with Hancock County, preferably through the Governor's Office.

H.

Emergency Facilities and Equipment

Planning Standard

Adequate emergency facilities and equipment to support the emergency response are provided and maintained.

H.3 and
H.4

The State Plan adequately provides for the establishment of a State EOC, and for timely activation and representative State staffing of the State EOC, facility near-site EOF, Hancock County EOC representation, etc.

It would be useful for the State Plan to indicate the individuals by title and name who are to be utilized in representing the State in Hancock County, Beaver County and the facility.

H.7.

Appendix 8 provides for monitoring stations to be established by the Department of Health in the 10 and 50 mile EPZ's. TLD's will be permanently located at these monitoring stations to determine background radiation levels.

During an incident, if more monitors are needed, the State can provide additional monitors and survey equipment through the West Virginia State Radiological Assistance Program, which is activated through the W.V.O.E.S.

The State plans also to make use of IRAP monitoring resources.

Appendix 8, as it stands, is more a statement of general intentions than monitoring capability. How many monitoring stations are to be established, and when? Where are they located? What types of equipment will be at them? What types, and in what quantity, of equipment is available

H.7.
(cont'd)

under the W.V.R.A.P.? And where is this equipment located?

H.10.

Appendix 15 XIII-2 states that equipment will be checked and tested at least once a year. What equipment, instruments etc. Why not quarterly?

The State Plan does not address this criteria adequately at all.

H.11.

The State Plan does not identify emergency equipment at all. Appendix 15, Section XIV does call for this, but the tables describing such are missing.

H.12.

The State Plan does not make clear at all whether a central point is established for the receipt and analysis of all field monitoring data and coordination of sample media. Will this be out of the Hancock County EOC?

I.

Accident Assessment

Planning Standard

Adequate methods, systems and equipment for assessing and monitoring actual or potential offsite consequences of a radiological emergency condition are in use.

I.7.

I could not find a comprehensive description of capabilities and resources for field monitoring within the 10 mile EPZ by the State. If the State does not intend to provide any field monitoring teams, it should clearly state so and describe the County's capabilities, or how both efforts will interface if the State does have monitoring teams for accident assessment.

- I.8 I could not find any described State capability, particularly concerning field level staffing and equipping of monitoring teams, for rapid accident assessment. There are no complete field teams SOP's for accident assessment, no discussion of monitoring team deployment times, field team communications, etc.
- I.9. There does not seem to be any field capability described for detecting airborne radioiodine concentrations as low as 10^{-7} uCi/cc.
- I.10. This reviewer does not have the technical background to comment adequately on this criteria. The tables provided seem to deal with known dose rates. How will projecting dose rates (estimating) be accomplished?
- I.11. It is not clear at all what the planned arrangements are for locating and tracking an airborne radioactive plume. Will both Federal and State resources be used? Just Federal? And how?
- J. Protective Response
Planning Standard
A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place, and protective actions for the ingestion exposure pathway EPZ appropriate to the locale have been developed.

J.2. Licensee on-site evacuation plans fall within the purview of Pennsylvania.

J.9. Appendix 15, Section VI uses the EPA PAG's for exposure to the plume. The facility recommends protective actions based on these PAG's. DER/BRP will confirm and relay this information to PEMA, who in turn informs W.V.O.E.S. W.V.O.E.S. then informs the Department of Health. It is the responsibility of the Director, H.C.O.E.S. to implement recommended protective actions.

Will the Department of Health use the PAG's to make their own assessment, or rely entirely on PEMA? And who in the Department of Health will use them?

J.10.a. thru
J.10.d.

The Governor will order or recommend an evacuation. If Governor is absent, then the President of the County Commission, then the Director of H.C.O.E.S. The rest of these four criteria are all County responsibilities.

In general, the State has not demonstrated its responsibility to offer assistance to the County in such areas as would be appropriate under these criteria; ex/monitoring locations.

J.10.e. and
J.10.f.

Appendix 4 identifies the West Virginia Department of Health as being responsible for a plan to use radioprotective drugs (KI). However, there is no plan for such in Appendix 15. This needs to be developed.

J.10.g. thru
J.10.l.

These are all County responsibilities. The State plan should include at least a synopsis of how the County will accomplish these tasks, and indicate what potential State involvement, if any, is possible (and as such planned for).

J.10.m.

The bases for the choice of recommended protective actions from the plume is not adequately discussed in Appendix 15. There should be a range of pre-decided decision criteria to assist in making a rapid decision. The reference 4-1 is far too general to have planning significance.

J.11.

Appendices 16 and 15 describe the activities and responsibilities of the Department of Agriculture and Health relating to protective measures for the ingestion pathway. The criteria seem to be pretty well covered although final judgement will have to be deferred to the RAC. There are some areas still requiring elaboration, however. Dosimetry and survey equipment are planned to be drawn from State and local emergency service organizations, by Department of Agriculture personnel. What kind of equipment?

The Department of Agriculture Plan does not tie together the protective action criteria as well as the Department of Health Plan does. One suggestion to remedy this would be a common chart for both plans linking specific PAG ranges with specific protective action recommendations.

J.11.
(cont'd)

If possible, it would also be beneficial to include maps showing locations of water supplies and ingestion products, which are maintained in-house already.

J.12.

This is a responsibility of the County. As for all elements which are County responsibilities, the State Plan should give a synopsis of the County scheme and integrate possible areas of State assistance to the County.

K.

Radiological Exposure Control

Planning Standard

Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides.

K.3.a.

In general, Appendix 15, Section XI provides a very sketchy picture at best, for determining doses and exposure control for emergency personnel.

The State Plan allows for the distribution of dosimetry equipment by the County OES organization. W.V.O.E.S. and the Department of Health will obtain additional dosimetry from the Federal Government to satisfy unmet needs. If this is the case, then the types and amount of dosimetry equipment available should be described and so must the types and amount of equipment expected to be provided by the Federal government.

K.3.a.
(cont'd)

Whole body and organ scanning will be performed on a small sample of emergency workers. Also, there will probably be only one TLD badge per group, when available. Before they are available, in-place TLD's will be relied upon for estimating exposures. From this discussion, there is no understanding gained concerning 24 hour capability for reading the available dosimeters. There is definitely an insufficient number of TLD's. And there are no provisions described for self-reading dosimeters.

K.3.b.

I could not find any provisions for the reading of TLD's at appropriate frequencies. Such frequencies should be established in the Plan, and then taken into account in the planning.

Also, how will dose records be maintained?

K.4.

County and local emergency workers must be authorized by the Director of the County OES, and then the individual's agency chief, to exceed the exposure recommended by the EPA PAG's.

State personnel need the approval of the Department of Health and W.V.O.E.S., and the individual's agency chief, to exceed the PAG's.

The concept of operations here seems adequate. However, referring back to the comments for K.3.b. and K.3.a., this whole process hinges on the State's capability for accurately determining an emergency worker's dose or exposure.

- K.5.a. Action levels for determining the need for decontamination are covered in Appendix 15, Section XI -4. I will defer any comments on these to the EPA RAC member.
- K.5.b. The means for radiological decontamination and waste disposal are the responsibility of the County. The State Plan, then, should give a synopsis of how the County will accomplish this, and outline any areas where State assistance would be appropriate.
- L. Medical and Public Health Support
Planning Standard
Arrangements are made for medical services for contaminated injured individuals.
- L.1. I could not find any description of arrangements for local and back-up hospital and medical services specific to radiation exposure and associated contamination problems. Appendix 15, Section XII, Table A is supposed to list hospitals and medical facilities. It was not in the plan, however.
- L.3. Nothing in this criteria was present in the State Plan. It needs to be developed, in coordination with the County.
- L.4. The transporting of victims of radiological accidents to medical facilities is assumedly a County responsibility. If so, a synopsis of the County capability should be provided. The State should also indicate how it would assist, if needed, in this effort. At any rate, this criteria is not covered at all in the State Plan.

M. Recovery and Reentry Planning and Postaccident Operations
Planning Standard

General plans for recovery and reentry are developed.

M.1. In general, the State Plan does not contain very much in the way of procedures for reentry, recovery, and the decision process to relax protective measures.

Page 7-1 says the decision to reenter comes from the Governor or President of the County Commission. Which one will it be, and under what circumstances?

Appendix 15, Section X says an agreement will be established between the Department of Health and other State agencies with regard to exposure monitoring for emergency workers. This must be done before formal submittal of the State Plan, and included in such.

M.3. The means for initiating a recovery operation, and its organizational ramifications, are not clearly described. The best way to handle this would be the designing of a recovery SOP for every involved agency, or a master SOP covering all agencies.

M.4. The State plans to rely on IRAP, particularly the EPA, for periodically estimating total population exposure. This is acceptable, although the State should make specific provisions for EPA staff to perform this function (i.e., where will they be located, how will they interface with the Department of Health, etc.).

N.

Exercises and DrillsPlanning Standard

Periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills are (will be) corrected.

N.1.a.

This criteria is adequately covered.

N.1.b.

There is no mention of times of exercises, weather conditions, and unannounced exercises.

N.2.a.

Communications between State and Federal organizations are planned to be conducted on an annual basis. The criteria calls for quarterly testing.

Also, there is no mention in the drills section for assessing the understanding of message content.

N.2.d.

For radiological monitoring drills, there is no mention of local participation, which would be appropriate in this circumstance. Also, there is no mention of record-keeping and communications associated with the sampling.

N.2.e.1.

No discussion is given as to what actually constitutes a health physics drill.

N.3.a.

There is no mention of evaluation criteria.

- N.3.b. Adequate.
- N.3.c.,d., & e. Verbatim from N-0654.
- N.3.f. No mention is made of advance materials to be provided to official observers.
- N.4. There is no mention of a formal evaluation.
- N.5. Verbatim from N-0654. The State Plan must describe how this will be done.
- O. Radiological Emergency Response Training
Planning Standard
Radiological emergency response training is provided to those who may be called on to assist in an emergency.
- O.1. What are the W.V.O.E.S. training procedures which page 11-1 says will be used for conducting training? Also, what specific organizations will require training of their personnel, and how many?
- O.1.b. What organizations? What mutual aid agreements?
- O.4.a. The directors or coordinators should be identified by organization.
- O.4.b. Personnel responsible for accident assessment should be identified.
- O.4.c. Radiological monitoring teams and analysis personnel are not mentioned, even by category (i.e, a verbatim quote).

- 0.4.c.
(cont'd) This is a very important group which must be accounted for, both here and elsewhere in the plan.
- 0.4.d. The State indicates it may assist Counties in the training of police, security, and and fire fighting personnel. This is not an adequate training committment.
- 0.4.f. The State's committment to first aid and rescue personnel is not adequate. See previous comment.
- 0.4.h. The State should specify and identify the medical support personnel to be involved in training.
- 0.4.j. There is no mention of personnel responsible for transmission of emergency information and instructions in the Plan. These personnel should be identified and included for appropriate training.
- 0.5. Verbatim from N-0654. There are no details provided, no demonstrable committments to training, etc. In general, what still needs to be done in addition to all the above comments, is for the State to develop a comprehensive schedule of appropriate training courses for its effected personnel. Courses offered by FEMA should be utilized, along with possibly some offered in adjacent States. What about in-house training?

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

Planning Standard

Responsibilities for plan development and review and for

- P. Planning Standard (cont'd)
distribution of emergency plans are established, and planners are properly trained.
- P.1. The State has not adequately provided for the training of individuals responsible for the planning effort. In its training appendix the State should develop a list of those requiring training, their training needs, and provide for training courses to meet those needs.
- P.2. In Appendix 12, the Director of Planning, WVOES, is assigned overall planning responsibility. This is adequate.
- P.3. Responsibility of Director of Planning, WVOES. Adequate.
- P.4. Adequate.
- P.5. For the purpose of clarity, the plans should list those organizations which would receive updated planning material.
- P.6. Adequate.
- P.7. Appendix 17 does not address this criteria. A new appendix needs to be developed which lists all implementing procedures which effect this Plan. Included in this list should be a cross reference to the sections of the plan impacted.
- P.8. The cross reference supplied with this plan is inadequate. It is much less specific than it should be.

P.10.

The reference given, page 12-1, is not inclusive enough. All telephone numbers relevant to the State Plan should be updated quarterly. The same goes, of course, for changes in personnel.

OCT 5 1982

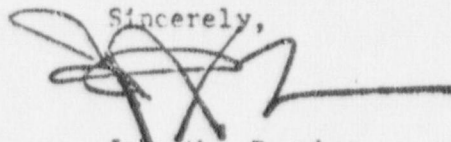
Mr. Cecil Russell
Director
Office of Emergency Services
Room EE 80
State Capitol Building
Charleston, WV 25305

Dear Mr. Russell:

Enclosed are the comments of Region III's Regional Assistance Committee (RAC) relative to the Hancock County, West Virginia Radiological Emergency Plan for the Beaver Valley Power Plant facility.

The draft plan already meets many of the planning standards and criteria outlined in NUREG-0654/FEMA KEP-1, Revision 1. Those areas which are still inadequate are identified in these RAC comments, which also provide a clear indication of the detail and procedures necessary to achieve a more complete response to the Federal planning standards. If you or members of your staff have questions concerning these comments, please contact Joseph N. Zagone directly.

Sincerely,



John Wm. Brucker
Regional Director

Enclosure

cc:
File
Chron

J.N. Zagone mc: 90/4/82

JPA 10/4/82

WP
10/4

Regional Assistance Committee (RAC)
Review and Comments on the Hancock County, West Virginia
Radiological Emergency Response Plan -
Beaver Valley Power Station

General Comments

1. Pages should be numbered and the Table of Contents should reflect these numbers.
2. Under Definitions:
 - a. Under Alert, change to read:

...indicate an actual or potentially substantial degradation...
 - b. Under General Emergency, add as first phrase An emergency classification. Also change last sentence to read: Off site protective actions most likely.
 - c. Under Site Area Emergency, add as first phrase An emergency classification. Also change last sentence to read: Off site protective actions may be necessary.
3. Under Section 2.6.4. General Emergency, paragraph 4, change to read:

...required actions will include activation....
4. Under Annex E, Accident Assessment; under Section 3. County and State Government;
 - a. Wording should be modified to show that the County only has the capability to confirm dose rate projections and will be supplemented by State projections for airborne (iodine) thyroid dose and projected total dose.
 - b. Under paragraph 2: change second to last sentence to read: ...survey data to confirm the facility operator's off site dose rate projections can be available.
 - c. Under paragraph 4: modify wording to stress that the RADEF officer should also coordinate with State liaison on protective action recommendations if time permits.
5. The county plan should address internal (inhalation) contamination to the workers and the general public and the need for follow-up surveys and bioassays. This can be done by reference to State plan or other assistance groups.
6. Under Annex H:

Section 5. Control of Internal Exposure; paragraphs 2 and 3 talk about both respirators and SCBA. The present wording and sentence structure could lead to the erroneous conclusion that SCBA is ineffective against noble gasses. The statements should be rearranged to avoid confusion.

7. Under Annex J:
 - a. Section 2. Medical Support: The Emergency Medical Services Council should have a designated organization to report to, and it should be explained how the EMS Council interfaces with the State Department of Health.
 - b. Under Section 3. Public Health, under subsection 3): The plan should state who is responsible in the Public Health organizations for monitoring potentially contaminated supplies and where and what kind of equipment they will have. Also, there should be a statement of what level of radiation is acceptable.
8. Under Annex K: The discussion in subsection 4. should be expanded to include monitoring, decontamination, and accident assessment drills and a frequency should be recommended for all drills.
9. The Appendix 1 to Annex M should be provided.
10. References to the interim use of the route alerting procedure pending installation of the siren system should be eliminated. The third paragraph of Annex P has one such reference.
11. All tables that have information that could change with time should be dated and have a revision number. An example is the EAL table in Annex Q.
12. Under SOP #1:
 - a. Under section 3.0 Responsibilities add:
 - 3.1.8 Habitability
 - 3.1.9 Assessment
 - b. Under section 6.0 Procedure there should be a subsection showing the appropriate action steps for surveying.
13. Under SOP #2, attachments #1 and 2 should be made available and the notification procedure should also include de-escalation notifications.
14. Under SOP #5:
 - a. Under section 4.0 Precautions, subsection 4.7, there should be a backup method of communication for RADEF survey personnel. Emergency contact phone lists and change for pay phones should be available in survey kits.
 - b. Under subsection 6.1.5, there should be an explanation of what to do if the State cannot be contacted.
 - c. Under subsection 4.4: Regarding radiological monitoring, it is indicated that a handkerchief or scarf over the nose and mouth should be part of the dress for the survey team personnel. This seems to imply that this action affords protection from particulate inhalation. If in fact it is considered necessary to provide protection from inhalation, this should be accomplished by using appropriate respiratory protective equipment as a handkerchief or

scarf affords little protection from such hazards. If respiratory protective equipment is required, then an appropriate respirator program (e.g., fit testing, training, etc.) is required. A decision on this issue would most appropriately be made through the joint efforts of county and state personnel.

15. Under SOP #6, subsection 6.4.3., there should be a clarification of the dosimeter range for the high range dosimeter.
16. Under SOP #8, there should be a discussion of:
 - a. If contamination is found among the populace, when will decontamination be conducted and what attempts will be made to track where those persons have been.
 - b. How to communicate back to RADEF officer when contamination is found in general populace.
 - c. Procedures for separation of contaminated persons by degree of contamination and methods recommended for follow-up.
17. In SOP #9, attachment #2, there should be a warning against evacuating at this time because of the risk of receiving radiation exposure and that the release will be short term, etc.
18. The background discussion on radiation is quite useful in providing insight to county personnel whose main expertise is not in the radiation field. It is a good feature.
19. In Annex C, the notification list given should include telephone numbers. In addition, it would be helpful if the caller were instructed as to a priority order for the calls in view of the length of the list. This may be the order given in the list, but an explicit instruction would be helpful.
20. The long transit time to the state offices places a great burden on the county. For example, the four-hour transit time for the state monitoring teams places the burden on the county if radiological monitoring is to be performed within a reasonable time of a sudden occurrence. When one adds the transit time to the time needed to issue equipment and get on the road, a state response to an incident could probably not be expected within five hours of an incident. In addition, the state monitoring capability does not appear to be complete - in particular there is no capability to measure radioiodine. Since the bulk of the monitoring capability seems to rest with the county, it would make the best sense if the county were to obtain a SAM-2 or other instrument capable of radioiodine measurements.
21. In radiological monitoring, the civil defense survey meters are often used to measure the gamma radiation from noble gasses, but since the county is heavily involved in monitoring, there should be a cautionary statement in the SOP which describes the energy-dependence error associated with the low-energy gamma from ^{133}Xe . This can result in a substantial error in the readings obtained with a G-M survey meter.

22. In addition to the fact that they are in the residences of the emergency workers, the number of survey meters available in each district should be specified in the plan. Also, as noted previously, there is no capability to measure radioiodines. It would make sense for the county to assume this responsibility unless one of the University labs mentioned is equipped to do so. In any case, the capabilities of the University labs and support agreements should be in the plan.
23. In personal dosimetry, the plan shows good use of the ALARA concept in attempting to limit emergency worker dose to the 5 REM PAG for the general public. Also, the introductory section on radiation fills the need to explain to decision-makers the consequences of emergency exposures. Note, however, that the dosimetry planned for issue to emergency workers is not adequate. It is highly desirable to include a TLD or film badge along with the direct-reading dosimeters because it provides a permanent record. In addition, the dosimeters can show erroneous readings due to electrical leakage or mechanical shock. A TLD is not subject to these effects and so can confirm or deny that an excessive dose has been received. Also note that the range of the dosimeters to be provided is too low. The plan specifies 0-1 or 0-5R units for the high range and 0-200mR units for the low range. The recommended ranges in FEMA-REP 2 are 0-20R for low range and 0-200R for high range.
24. Note that the county plan specifies dosimetry for every worker while the state plan provides a dosimeter for each group of workers. This conflict should be resolved in favor of issuing dosimetry to every worker. The number of available dosimeters and their location should be specified in the plan. The daily reading frequency specified as a minimum in the plan is insufficient. The recommended 1/2 hour reading time should be mandatory. Also note that the self-reading dosimeters are not subject to the energy dependence error associated with the survey meters, so they might be used by survey teams as a supplementary measurement.
25. There is no designation of airports and other local facilities for use by Federal assistance teams.

Key to Rating
 A = Adequate
 I = Inadequate

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
A.1.a.	A	Appendices 1-1, 2-1, 3-1, 7-1 Pages 9-16
A.1.b.	A	Pages 16-22 Appendix 2-1
A.1.c.	A	Appendices 1-1, 3-1
A.1.d.	A	Page 9 Appendices 1-1, 4-1 Although the plan establishes the Commissioner as the person responsible for emergency responses, and the Emergency Management Coordinator as the implementor of emergency response, a statement should be added which individual is <u>in charge</u> of the emergency response.
A.1.e.	A	Annex B-2 It should be clearly stated that the Emergency Response organization is prepared for response 24 hours a day.
A.2.a.	A	Appendices 2-1, 4-1, 3-1 Pages 9-16
A.2.b.	A	Page 1
A.3.	I	Annex T must be expanded to show that the agencies and organizations mentioned in the body of the plan agree to provide the support as mentioned in the plan. An acceptable alternative would be for the plan to have a signature page which would serve to verify the agreements. A notation indicates this will be provided at a later date.
A.4.	I	Annex B.3. Although the plan obliquely refers to the Emergency Management Coordinator as the person responsible for assuring continuity of resources (technical, administrative, and material), it does not clearly state that. A sentence should be added to the explanation in part K., Section E, page 12-13, under paragraph 1. "Emergency Management Coordinator" saying that he has been given the responsibility for assuring continuity of resources (technical, administrative, and material).
C.1.c.	A	Covered in detail in the State Plan.
C.4.	A	There are no letters of agreement in the County Plan, but the State Plan covers identification of nuclear facilities and various agreements. The County Plan identifies hospitals that can handle irradiated or contaminated individuals in Annex G, Appendix 6.

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
D.3.	A	Parts 2.5 and 2.6 Pages 2-17 and 2-18
D.4.	A	Section 4, pages 4-1 through 4-7
E.1.	A	Section 4 Annex C
E.2.	A	Section 4 Annex C Annex D.3
E.5.	A	Section 4 Annex P
E.6.	A	Section 4 Annex P
E.7.	I	There are no draft written messages that tell the public about emergency respiratory measures to take. Messages should be written and copies should appear in the Plan. As note indicates these are to be provided in future.
F.1.a.	A	SOP #4, part 3.1.1.1 Annex D, Communications Section 4.3 and 4.4
F.1.b.	A	Section 4 Annex B, part 4.0 Annex D
F.1.c.	A	Annex B Also covered in State Plan
F.1.d.	A	Annex D
F.1.e.	A	Sections 3 and 4 Annex D
F.2.	A	Annex D
F.3.	I	Annex D and Annex M There is no provision documented to inspect, inventory, and operationally check emergency equipment/instruments at least once each calendar quarter and after each use. There is no mention of reserve instruments for use when others are out for repair. There is no provision documented to test the communications with State and local governments within the plume EPZ on a monthly basis. Nor is there mention of testing communications with Federal emergency response organizations and States on a quarterly basis.

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
G.1.a., b.,c.,d	A	<p>Annex K</p> <p>The plans do provide for the dissemination of information to the public regarding how they will be notified and what actions should be taken in an emergency as part of the public information program. Appropriate protective actions should be directed to affected farmers and other agribusinesses in the EPZ by the USDA County Emergency Board.</p> <p>When requested by the State, the USDA State Emergency Board will aid recovery efforts by providing economic assistance from regular Federal assistance programs. Cost share financing may be available to farmers and other rural residents in rehabilitation efforts; dairy farmers will be indemnified for milk removed from commercial channels; loans and other assistance may be provided to farmers, ranchers, agriculture and other rural residents. Other assistance will be available from regular USDA programs as necessary. Assessment of damage to crops and livestock will be performed by the SEB through the County Emergency Boards (CEB). The CEBs will estimate damage based on radiological contamination and monitoring data. Damage reports will be made to the USDA SEB for consideration in emergency relief programs.</p>
G.2.	A	Annex K
G.3.a.	I	There was no designated physical location specified for use by news media. Although the PIO was designated and his responsibilities were described, no location was mentioned in the plan where he could be contacted.
G.4.a.	A	Annex K
G.4.b.	A	Annex K
G.2.c.	I	There is no mention of coordinated arrangements of rumor control.
G.5.	A	Annex K
H.3.	A	Section 3 Annex N.2
H.4.	A	Section 4 Annex N.2
H.7.	A	Not appropriate
H.10	I	See F.3.
H.11.	I	The listing of emergency equipment should be in Appendix 1 of Annex N, but the appendix is missing. There is a note that it will be provided at a later date.

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
H.12.	A	Annex B
I.7.	A	Annex E - It would be useful to have the type and capability of the instruments listed.
I.8.	A	Annex E, Section 4, Annex N The County depends heavily on the State capabilities.
J.9.	A	Annex O, Annex P, Annex F, Annex G, Annex H
I.10.	A	Annex H, Annex E, Annex F, Annex G Sampling and monitoring largely handled by State. However, maps showing monitoring points and sampling points would improve this plan.
J.10.b.	A	Section 2 Annex H
J.10.c.	A	Annex P Section 3 Annex H
J.10.e.	A	Annex G, Annex I, Annex O Primarily a responsibility of the State Health Organization and covered in the State plan.
J.10.f.	A	Annex G, Annex I, Annex O Covered in the State plan.
J.10.g.	A	Annex H
J.10.h.	A	Annex H
J.10.i.	I	Annex H gives some indication but more information must be provided. A note indicates it will be provided in the future.
J.10.j.	A	Annex H
J.10.k.	A	Annex H
J.10.l.	A	Annex H
J.12.	A	Annex H, Annex I
K.3.a.	A	Annex I The West Virginia Office of Emergency Services has primary responsibility for monitoring personnel radiation exposure.
K.3.b.	A	Annex I
K.4.	A	Annex I

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
K.5.a.	A	Annex I
K.5.b.	A	Annex I Primary responsibility for decontamination lies with the State.
L.1.	A	Annex J
L.4.	A	Annex J
M.1.	A	Annex L
N.1.a.	A	Annex M
N.1.b.	A	Annex M. This Annex should mention that the exercises are followed by critiques; have the scenario varied from year to year; that all major elements of the plans and preparedness organization are tested within a 5 year period; that exercises will be scheduled to start between 6:00 PM and midnight or midnight and 6:00 AM once every 6 years; and that some exercises will be unannounced.
N.2.a.	I	See F.3.
N.2.d.	I	"Refer to State Plan" is not sufficient. The County plan should emphasize the State Plan by rewriting the County's portion.
N.3.a.	A	Annex M
N.3.b.	A	Annex M
N.3.c.	A	Annex M
N.3.d.	A	Annex M
N.3.e.	A	Annex M
N.3.f.	A	Annex M
N.4.	A	Annex M
N.5.	A	Annex M
O.1.	A	Annex M and SOPs
O.1.b.	A	Annex M
O.4.a.	A	Annex M The Director should be mentioned <u>directly</u> and <u>specific</u> training at specific intervals should be <u>scheduled</u> and <u>shown</u> .
O.4.b.	A	Annex M

<u>Element</u>	<u>Rating</u>	<u>Comments</u>
O.4.c.	A	Annex M
O.4.d.	I	There is no mention of specific training for police, security, and fire-fighting personnel.
O.4.f.	I	There is no mention of specific training for first aid and rescue personnel.
O.4.h.	I	There is no mention of specific training for medical support personnel.
O.4.j.	A	Annex M There should be specific references to specific training for personnel responsible for transmission of emergency information and instructions.
O.5.	A	Annex M
P.1.	A	Annex A
P.2.	A	Annex A
P.3.	A	Annex A
P.4.	A	Annex A
P.5.	A	Annex A
P.6.	I	There is no list in the plan, but a notation that such a list will be provided at a later date.
P.7.	I	This plan does not contain the title listing of procedures required to implement the plan. However, it is noted that this will be provided in the future.
P.8.	A	Table of Contents
P.10.	A	The plan should note specifically who is responsible to update these telephone numbers.

January 10, 1986

Mr. Mannie R. Griffith, Director
Office of Emergency Services
State Capitol Building, Room EB-80
Charleston, West Virginia 25305

Dear Mr. Griffith:

Enclosed are two (?) copies of the FEMA Region III/Regional Assistance Committee evaluation of the Radiological Emergency Response Plans for the Beaver Valley Power Station which were submitted for formal review and approval. The evaluation has identified twenty-three (23) planning inadequacies. We request that you provide one copy of the report to Hancock County Office of Emergency Services.

As soon as the twenty-three (23) inadequacies are adequately addressed in the State and county plans, FEMA Region III will submit them to FEMA National with the recommendation that formal 350 approval be granted.

If we can be of assistance in addressing the inadequacies, please contact Janet Lamb, Project Officer for Beaver Valley, at (Area Code 215) 597-1789.

Sincerely,

James R. Asher
Chairman
Regional Assistance Committee

Enclosures

cc: Sam Paletta
Duquesne Light

Rdg Chron
RD Chron
File

NTH/JLamb/1789/jj/1-10-86

	ORIGINATOR	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE
Name	JLamb	JAsher				
Date	11-10-86	1-10-86				

OFFICIAL RECORD COPY

BEAVER VALLEY POWER STATION

EVALUATION OF STATE AND LOCAL PLANS

SUBMITTED FOR FORMAL REVIEW AND APPROVAL

BY

THE STATE OF WEST VIRGINIA

FEDERAL EMERGENCY MANAGEMENT AGENCY

REGION III

JANUARY 1986

BEAVER VALLEY POWER STATION

EVALUATION OF STATE AND LOCAL PLANS SUBMITTED FOR FORMAL REVIEW AND APPROVAL

I. Introduction

A. Evaluation Background

This report represents the Regional Assistance Committee, Region III evaluation of the State and local Radiological Emergency Response Plans (RERPs) submitted by the State of West Virginia for formal review and approval, in accordance with the Federal Emergency Management Agency's (FEMA) regulations published under 44 CFR 350. The planning package submitted included the Radiological Emergency Response Plan for the State of West Virginia and the Radiological Emergency Response Plan for Hancock County, West Virginia. This evaluation incorporates all plan changes which have been submitted to date.

Previous plan evaluations for the West Virginia plans were submitted by the Office of Emergency Services in March 1981, December 1981, October 1982, and January 1984.

A separate review entitled Beaver Valley Power Station Alert and Notification Evaluation was completed in conjunction with this review of the radiological emergency response plans. The findings of that report, which was submitted to West Virginia Office of Emergency Services on August 20, 1985, have been incorporated into this evaluation.

B. Scope of Review

This Report includes evaluations of the following Plans:

1. "West Virginia Emergency/Disaster Plan," West Virginia Office of Emergency Services, May 1981.
2. "West Virginia Radiological Emergency Preparedness Plan," West Virginia Office of Emergency Services, 1983, with change, March 1985.
3. "Hancock County Radiological Emergency Response Plan for the Beaver Valley Power Station," Hancock County Office of Emergency Services, May 1985.
4. Local EBS Operational Area Plan for Wheeling, West Virginia.

5. "Beaver Valley Emergency Alert and Notification System Design," Duquesne Light, July 1984.

11. Planning Evaluation

The plans are evaluated against the criteria of Planning Standards A through P, as established by NUREG-0654/FEMA REP-1, Rev. 1. Additional evaluation criteria for Planning Elements E.5, E.6, F.1, N.1, N.2, N.3, and N.5 are provided by FEMA-REP-10, (formerly FEMA-43.)

A. Assignment of Responsibility

All response organization have been identified in both state and county plans. The state plan refers to federal participation and addresses each federal agency separately. The plan should be updated to reflect the Federal Radiological Emergency Response plan (FRERP) published on September 14, 1984. With the FRERP, federal response is now a single phone call away, if a state requests it. EPA has been noted twice, item 9 and item 11, in the listing of federal agencies. Item 9 is obsolete and should be deleted.

Concepts of Operation and interrelationships to the total response effort have been provided for each organization and suborganization at the state and local level.

Block diagrams and charts depict interrelationships and functional responsibilities of organizations at each response location.

The West Virginia State plan implies that the Office of Emergency Services uses a duty officer system to maintain 24-hour notification coverage. More detailed procedures on how the duty officer system works should be included in the state plan.

The Hancock County Emergency Communications Center and the Beaver Valley Power Station are manned 24 hours a day, seven days a week.

The state and county plans do include a table of primary and support functions of major elements and key officials of emergency response organizations. However, the state plan, on page 8 indicates that the Department of Health is responsible to assess the situation and to advise the Governor and local officials of potential radiation problems to the public and to make recommendations for applicable protective actions. It is understood that each element of response should list one primary responsible organization; however, in this case it may be clearer if a primary organization was included for each level of response as was done for Command and Control, since all levels will have responsibilities when protective actions are initiated.

The appropriate authorities, laws and references have been included in the state and county plans to permit response in an emergency.

The State of West Virginia Office of Emergency Services has entered into mutual aid agreements with the Commonwealth of Pennsylvania, the Duquesne Light Company, the American Red Cross, the West Virginia University Medical Center, Marshall University and with the United States Department of Energy.

During an emergency in any portion of the state, the Governor may be required to activate the state EBS Operational Plan in order to provide information to residents of the State of West Virginia. Letters of Agreement should be established with the CPSC-1 radio station for West Virginia and with the RACES organization who is listed in the plan to provide backup communications for the state. All letters of agreement should be included in the state plan at Annex 20.

The Hancock County Emergency Response Plan contains Letters of Agreement with various agencies who have accepted responsibility to provide assistance during an emergency at the Beaver Valley Power Station. The Letters of Agreement do not state specifically what service or assistance will be provided. In addition, there are no letters of agreement with the School Districts who have been tasked to provide buses for transportation of evacuees and schools to be used as mass care centers.

Although 24 hour staffing is implied in the state plan and in Standard Operating Procedures, first and second shift personnel for each staff position in the EOC and for other state support agencies should be identified and included in the state plan.

C. Emergency Response Support and Resources

The Federal response capabilities have been incorporated into the state plan. However, the state plan (as discussed in Planning Standard A above) should be updated to reflect the new Federal Radiological Emergency Response Plan. The West Virginia Office of Emergency Services is responsible for requesting Federal assistance.

Minimal state and local resources have been identified to support the federal response personnel. Since the facility is located in Pennsylvania it is felt that the federal response team will locate in that state. West Virginia State will provide resources if necessary.

The state has adequately planned for dispatching technical analysis representatives to both the EOF and Hancock County EOC. It is recommended that since the state personnel will be providing additional dosimetry equipment to Hancock County that these people be dispatched at the alert stage in an incident.

The West Virginia Office of Emergency Services has identified two laboratories who have signed Letters of Agreement to provide technical and laboratory support to the West Virginia Department of Health. The Letters of Agreement are included at Annex 20 of the state plan.

The state and county have identified facilities and individuals who will assist in an emergency. As stated in Planning Standard A; however, the letters of agreement with these facilities or individuals should state the specific services that will be supplied, laboratory, medical emergency treatment, etc.

D. Emergency Classification System

The four emergency action levels contained in the state and county plans are consistent with those used by the utility.

State and local plans contain procedures and checklists that provide emergency actions to be taken at each emergency classification level. Follow up notification procedures provide the necessary information to off-site response organizations from the utility on recommended emergency actions. However, the PAGs listed in the Hancock County plan on page F-2 are not consistent with EPA PAGs or with those given on page I-2 of the same county plan. There is no problem with a recommendation to shelter at a 170 m/rem dose, but the choice of the top of the range of the EPA PAGs does not allow evacuation at the low end of the range if deemed appropriate. Evacuation should also be a recommendation based solely on plant conditions, even if there is no projected dose and the plan should allow for this.

E. Notification Methods and Procedures

Initial notification of an incident is provided by the Beaver Valley Power Station to Hancock County ECC. Hancock County ECC will verify the information with the utility and then notify the ECC. Backup notification procedures through Pennsylvania Emergency Management Agency and the West Virginia Office of Emergency Services have been established in the appropriate plans.

The State of West Virginia Office of Emergency Services is responsible for notification of Federal and State agencies, involved in the response operations and West Virginia counties within the 50 mile EPZ of the Beaver Valley Power Station.

The Utility is responsible for notifying Hancock County communications center. The Hancock County dispatcher will notify the Emergency Services. Backup notification to the state is provided by the Pennsylvania Emergency Management Agency; backup notification to Hancock County is provided by

the Beaver County EOC. Procedures and rosters for notification of other organizations involved in the response are contained in the plans.

The Hancock County Office of Emergency Services has the overall responsibility for alerting the public within the 10-mile EPZ of the Beaver Valley Power Station. EBS stations, both CPCS-1 and CPCS-2 stations, are identified in the Hancock County Radiological Emergency Response Plans. Both stations operate 24 hours a day, seven days a week.

The Hancock County Commissioners have designated the County Emergency Services Director as the official responsible for the activation of the alert and notification (siren/EBS) system. Due to the unique location of the Beaver Valley Power Station (the 10 mile EPZ impacts three states, Pennsylvania, West Virginia and Ohio) the state and local plans call for the coordination of siren and EBS activation between the three states and the three counties involved.

Specific procedures for EBS activation for Hancock County officials and radio station personnel are contained in the Wheeling, West Virginia Extended EBS Operational Area Plan which is referenced as a support document in the Hancock County Radiological Emergency Response Plan.

The State Office of Emergency Services is responsible for notifying those counties within the 50 mile Ingestion Pathway and for providing information to the general public through the Governor's office. The West Virginia Radiological Emergency Plan should list the West Virginia EBS Operational Plan as a support document.

Hancock County participates in the Wheeling EBS Operational Area Plan. In addition, the county plan contains letters of agreement with the specific radio stations involved. The state plan should contain letters of agreement with the CPCS-1 station in Charleston. The prescribed announcements to be aired over EBS are included in the state and county plans. Protective action announcements for sheltering will be repeated every five minutes. General evacuation announcements and school evacuation announcements will be aired continually until the station is informed to end transmissions by the county Emergency Services Director.

The Emergency Alert and Notification System Design report states that Hancock County has equipment in the EOC to monitor the EBS station to insure announcements are accurate. This has been observed to be correct in past exercises. In addition, copies of prescribed messages have been provided to EBS stations, thereby precluding the station from broadcasting erroneous information.

The primary means of alerting the public is via a siren system which is installed within the 10 mile EPZ of the Beaver Valley Power Station. Special alerting requirements have been well documented in the county plans. Specific route alert teams have been assigned and route maps included in the plan.

The utility is responsible for provision, operability and maintenance of the siren system. Hancock County, in coordination with Pennsylvania, Ohio and West Virginia OES, is responsible for activation of the system as needed.

The county plan contains pre-scripted messages which include instructions for specific protective actions.

F. Emergency Communications

Provisions have been made for 24 hour notification and activation of state and local response functions. However, although the state plan implies that a duty officer system is used to maintain 24 hour coverage, specific procedures should be included in the state plan.

Communications with the Pennsylvania Emergency Management Agency, Ohio State Disaster Agency and the Federal Emergency Management Agency will be via telephone, dedicated hot line, CDNARS, CDNATS and NAWAS.

Hancock County Communications Center is manned 24 hours per day. Communications between the three risk counties is via dedicated telephone, commercial telephone and the Duquesne Light Radio System.

The West Virginia Office of Emergency Services will communicate with federal response agencies through the FEMA Region 3 office in Philadelphia via telephone, NAWAS, CDNARS and CDNATS.

Provisions for communications with BVPS/EOF, State EOCs, County EOCs and radiological monitoring teams have been established in the state and local plans.

Personnel call down lists have been included in the Hancock County plans for each position. Procedures for alerting and activating emergency personnel have been included in the Standard Operating Procedures. A coordinated communications net between fixed and mobile medical support teams has been documented in the county plan at Annex R, SOP 5.

The state plans include test schedules for the entire communications network as outlined in NUREG-0654.

G. Public Education and Information

Public Information brochures containing specific information as outlined in NUREG-0654 have been prepared and are distributed annually. Information to the transient population is distributed to hotels, motels and recreational areas in the EPZ. Brochures were last mailed to the public in August 1985. In addition, full page ads are published in the local newspapers annually.

News media will be briefed periodically during an incident by the Governor's Press Secretary at the State EOC and the Hancock County Public Information Officer in the New Cumberland Courthouse. A Joint Media Center has been established by Duquesne Light. A County Public Information Officer will be dispatched to the Joint Media Center during an emergency.

The Governor's Press Secretary has been appointed as the state spokesperson. The Hancock County Public Information Officer, with the coordination and approval of the Hancock County Office of Emergency Services Director, has been designated as the County Spokesperson.

Telephone lines have been assigned as rumor control numbers at both the State and County EOCs. Staff persons are available to man these telephone lines.

A policy of coordinating public information releases with all spokespersons has been established in the plans. The County will send a public information representative to the Joint Public Information Center who will be responsible for coordinating all public information with other agency representatives.

H. Emergency Facilities and Equipment

Emergency Operations Centers have been established for both the State and Hancock County Response organizations.

The Hancock County plan does not call for activation of the County EOC until General Emergency. In order to respond to an emergency, if at all possible, the EOC should be activated much earlier in an incident. The State should consider mobilizing state response personnel to Hancock County earlier than the times specified in the plan. These people will be responsible for bringing needed radiological exposure control equipment and monitoring equipment needed to Hancock County.

The State Department of Health is responsible for bringing monitoring equipment and personnel from Charleston to Hancock County. As stated in Planning Standard C, the monitoring equipment and personnel should be dispatched as soon as possible.

Provisions have been made to inventory and check emergency equipment once each quarter. Calibration of equipment will occur at intervals recommended by the manufacturer.

There are inventory lists contained in the plan as to what equipment is included in emergency kits. However, the kits do not contain dosimeters of any kind, potassium iodide or communications equipment.

The State Department of Health will send technical representatives to the Emergency Operations Facility to receive and analyze field monitoring data and provide protective action recommendations to Hancock County EOC and the State EOC.

I. Accident Assessment

Field monitoring will be provided initially by the utility. The State Department of Health will deploy monitoring teams from the State EOC. Once they arrive in the EPZ, they will begin monitoring and analysis. The County RADEF Officer will serve as a liaison with State and Utility monitoring teams. He will apprise the County Director of conditions in the EPZ and provide appropriate recommendations.

Annex 15 of the State plan has provided methods, equipment and expertise for accident assessment. The annex addresses team activation, notification, composition, transportation, monitoring equipment, communications and travel time from the State EOC. It is recommended that the monitoring teams and Department of Health representatives be dispatched from Charleston to Hancock County earlier than the Site Area Emergency since they will be bringing additional self-reading dosimetry and TLDs with them for use by emergency workers in Hancock County.

Although Annex 15 of the State Plan includes an equipment list that shows the instruments needed to measure radioiodine concentrations are available, the specific procedures to perform this function have not been described.

J. Protective Response

Since the plant is physically located in Beaver County, Pennsylvania, the evacuation of non-essential plant employees will be coordinated with offsite officials in Pennsylvania.

State and local plans have developed the capability for implementing protective actions which may include sheltering or evacuation. As stated in Planning Standard D, on page F-2 in the Hancock County plan, the PAGs are not consistent with EPAs PAGs, nor with those on page I-2 of the same plan. There is no problem with the recommendation of sheltering at a 170 m/rem dose, but the choice of the top of the range of the EPA PAGs

does not allow evacuation at the lower end of the range if deemed appropriate. Evacuation should also be recommended based solely on plant conditions, even if there is no projected dose and the plan should allow for this.

Actions included in the plans to support protective actions include: activation of alert and notification systems, traffic and access control, mass care, transportation, agricultural and medical support assistance.

The plans state that the County Agent will provide technical assistance to the agricultural community in the vicinity to include effective liaison with the county emergency services and farmers in the affected area.

Farmers within the 10 mile EPZ may insist on reentering the EPZ to feed their livestock. If this occurs, procedures must be developed to monitor and limit radiological exposure to this segment of the population.

A method used at other sites to address this problem is the designation of farmers as emergency workers. Once this designation is made farmers would be called into a central location, issued dosimetry, KI, record keeping forms and instructions on the use of this equipment.

Radiological exposure control actions will be used to protect emergency workers. However, page XI-3 mentions dosimetry to be obtained from Federal sources. The plan also states that "unless additional dosimetry can be acquired from outside sources, it is unlikely that each emergency worker could be issued a dosimeter." One dosimeter per group is not sufficient. Self-reading dosimeters are subject to mechanical shock and leakage, making them less than perfectly reliable. The ideal complement of dosimetry is one high-range (0-200R), one mid-range (0-20R) and a TLD. At a minimum each worker should be issued a TLD and a dosimeter.

Page VI-2 makes reference to EPA's protective action guides. While these guides are still only recommendations and parts of them are still under development, the 1979 reference is not current. It is recommended that the latest version of the PAGs be obtained by the state and county. Reference could be made to this set and allowance made for the continuing development of the PAGs.

On page 0-3 of the Hancock County plan, the ingestion PAGs given are not consistent with the latest EPA guidance. Hancock County uses 1.5 rem thyroid dose and 0.5 rem whole body. EPA specifies these levels for preventative response and 15 rem thyroid and 5 rem whole body as emergency action levels. The

.05 rem PAG for water given by Hancock County conflicts with the .5 rem PAG in EPA guidance.

All appropriate maps are contained in the state and county plans. It is recommended that different symbols be used to depict traffic and access control points and monitoring points. Presently the symbol for both locations is a triangle.

Populations of the 10 mile and 50 mile EPZ are discussed in both state and county plans.

The primary means of alerting and notifying the public is the siren system and EBS activation. Route alert teams have been designated in case of siren failure and to notify hearing impaired individuals (See Planning Standard E).

There are three institutions in Hancock County that will be evacuated and may require assistance. Arrangements for evacuation of patients have been addressed in the county plan to include transportation, both buses and ambulances. Transportation has also been arranged for those residents who may be mobility impaired. Letters of Agreement have not been included from the School Districts, who will provide bus transportation (See Planning Standard A).

The State Department of Health is responsible for making the decision for the use of KI. The state plan indicates that the administration of KI will not be considered as a protective action for the general public. The county plan infers that KI will be used for institutionalized individuals. This decision should be consistent in both plans.

Both the state and county plans contain detailed procedures on the use of KI. However, the plans do not state how much KI is available, where it is stored, if it is prepositioned in Hancock County or who is responsible for delivering it to Hancock County.

As stated in Planning Standard J, the State and county plans contain detailed instructions and procedures for determining the need for the use of KI.

The means of relocating the population within the 10 mile EPZ of Hancock County has been discussed in detail for five different group classifications to include: School children, non-car-owning population, car-owning population, special populations with restricted mobility and transients. Buses will be supplied by the Hancock County Department of Education and if needed the Brook County Department of Education (see planning standard A).

Reception and relocation centers have been identified in the Hancock County Plan. Relocation Centers are at least 15 miles from the plant.

There is no discussion as to expected traffic capacities during an evacuation of the area of Hancock County located within the 10 mile EPZ of the Beaver Valley Power Station. The only information regarding traffic is that "traffic will initially be restricted and then controlled consistent." There is a graph depicting time estimates to evacuate sections or specific population categories.

Traffic and Access control is the responsibility of the Sheriff's Department. The traffic and access control points have been identified for primary and alternate evacuation routes and have been depicted on a map in Annex H of the County plan.

An alternate evacuation route has been identified from the reception centers to the relocation centers in case of flooding of the Ohio River. However, the county plan does not address how traffic impediments (such as stalled, vehicles, snowbound roads, etc) from within the EPZ to the reception centers will be handled.

A time estimates graph depicting various population groups evacuation times is contained in annex H of the Hancock County Plan.

The West Virginia Department of Agriculture is responsible for providing protective measures for the ingestion pathway. The Rural Resources Division maintains crop and herd lists which tabulate actual agricultural activity in the risk area. County extension Agents will provide technical assistance to the agricultural community.

County Fire Departments are responsible for providing monitoring of vehicles at the reception centers and evacuees at the relocation centers. Evacuees are registered at the relocation centers. The Hancock County Plan contains specific standard operating procedures on activation and operation of mass care centers.

K. Radiological Exposure Control

A dosimetry short-fall is mentioned in the plans which also states that unless additional dosimetry is obtained from outside sources it is unlikely that each emergency worker could be issued a dosimeter. The ideal complement of dosimetry is high-range (0-200R), one mid-range (0-20R) and a TLD. At a minimum each worker should be issued a TLD and a dosimeter. If

one dosimeter is issued it is recommended that the mid-range or 0-20R be used since this dosimeter covers most of the range of interest (5-20R). It is not acceptable to have emergency workers unmonitored. The County plan calls for each emergency worker to be issued two self-reading dosimeters, and one TLD. However, the county plan indicates the availability of 120 CDV 742 dosimeters (0-20R) only. The plan does not indicate the availability or amount of TLDs and KI at the county level.

In the Emergency Worker Procedures, in the county plan, emergency workers are instructed to inform their supervisors if they receive a total of 1 rem during that day. However, the CDV 742 dosimeters (0-200R) will not accurately measure 1 rem.

On page XIV-C-1 of the State plan, there are 3000 CDV-742 dosimeters. It would be prudent if the state prepositioned some of these dosimeters in the Hancock County EOC.

The emergency worker procedures for reading dosimetry and recording and/or reporting exposures are contained in the plan.

The Emergency Worker Procedures for dose control are good (page R-10-21), but there is no link from the supervisors to the County Radiological Officer. When a worker is to exceed the 5 rem dose for the general population, and especially the 25 rem emergency worker dose, the decision, as stated in the county plan, should be made by the Emergency Management Coordinator in coordination with the County Radiological Officer. It should not be made by the supervisor unless he is trained and qualified to interpret dose readings. An untrained supervisor does not constitute a decision chain for radiological exposure control.

Decontamination limits given are unusually detailed for emergency response and are expressed in terms that can only be understood by a health physicist. There is no quarrel with the levels indicated for surfaces as they are drawn from standard practice in the radiation field. However, for personnel contamination, the level indicated is somewhat different from what has been seen in other plans. Typically a gamma level of .05 mR is used since it is readily detectable using a CDV-700 survey meter. The philosophy being that anything that is readily detectable should be removed if possible. This is consistent with the ALARA principle. The West Virginia State limit is .002 mR/hour which is not detectable on a survey meter. In contrast, Hancock County specifies a decontamination limit of .75 mR/hour. This is 15 times higher than most states specify and 375 times higher than that specified by the West Virginia State Plan. Although there is no "correct" level, State and local plans should agree on decontamination limits and those limits should be at the lowest level detectible on survey meters.

Decontamination stations for emergency personnel equipment and disposal of contaminated wastes have been adequately addressed.

L. Medical and Public Health Support

State and county plans have identified primary and backup medical facilities who can be relied on to assist in a radiological emergency. None of the medical facilities supplying services to Hancock County are within the EPZ.

The licensee has provided for onsite first aid and medical support through medical and ambulance associations in Beaver County, Pennsylvania.

The State plan lists various facilities capable of providing medical support for any contaminated injured victims. Training is provided through either the parent state or the utility.

M. Recovery and Reentry Planning and Post Accident Operations

General plans and procedures have been developed for reentry and recovery. The State Department of Health is responsible for assessment of an incident to include recommendations to terminate imposed protective actions and post accident assessment of emergency workers and the general public. The licensee and state government will use existing methods to inform response organizations to initiate recovery phase.

N. Exercises and Drills

The state and county plans have been updated to reflect the requirement for participation in an exercise every two years. However, the county plan indicates that the county may participate with the State and in some years may be required to participate in a joint exercise with Federal, West Virginia State, Ohio State, Pennsylvania State, risk county agencies and the utility. 44 CFR, Part 350, "Review and Approval of State and local Radiological Emergency Response Plans and Preparedness," published in the Federal Register on September 28, 1983, states that "each State which has a commercial nuclear power site within its boundaries or is within the 10 mile plume exposure pathway EPZ of such a site shall fully participate in an exercise jointly with the nuclear power plant licensee and appropriate local governments at least every two years." The state and county plans should be changed to reflect that the county will participate fully in an exercise with the utility, the State of West Virginia and other states and local governments within the 10 mile EPZ of the Beaver Valley Power Station at least once every two year.

West Virginia will arrange for Federal observers to evaluate the exercises. FEMA evaluators will provide a critique of the exercise. The critique will provide an evaluation of the

ability of State and local governments to respond as called for in their plans. Participants in the exercise will be invited to the critique.

Communications drills between Hancock County, the utility, West Virginia OES, Beaver County EOC, and Columbiana County EOC are held monthly. All elements of the communications system are tested on an annual basis.

The Beaver Valley Power Station has made special arrangements for medical treatment and transportation of contaminated/injured individuals with hospitals and ambulance services in Pennsylvania. Hancock County EMS personnel routinely respond to emergency situations. The County feels that this routine response plus participation in required exercises adequately addresses this requirement.

Radiological monitoring drills will be conducted with local organizations during the annual on-site exercise and the off-site biennial exercise. Since radiological monitoring assistance is provided by state agencies the state plans should indicate this participation in required drills.

Health physics drills will be held semi-annually with the assistance of the West Virginia Department of Health.

The state and county plans contain lists of items to be provided to official observers in advance of the exercise.

The Director, Hancock County, Office of Emergency Services, with assistance from West Virginia Office of Emergency Services, is responsible for planning, scheduling and coordinating all emergency plan related exercises. Preparation of scenarios for joint exercises will be coordinated by West Virginia Office of Emergency Services with the State of Ohio, the Commonwealth of Pennsylvania and the utility.

Official observers from federal government agencies will be requested by West Virginia Office of Emergency Services through the Federal Emergency Management Agency.

A critique, which will be attended by exercise participants will be held as soon as possible after the exercise. A formal exercise report will be prepared.

Each organization shall establish means for evaluating observer comments on deficiencies and areas needing improvement, including emergency plan procedural changes and for assigning responsibility for implementing corrective actions. Management controls will be established to insure corrective actions are taken.

O. Radiological Emergency Response Training

The Director, West Virginia Office of Emergency Services is responsible for insuring that training is offered on an annual basis to all appropriate response individuals.

Basic core courses and annual refresher training is available for all emergency workers. This is illustrated in the State plan at Annex 11, page 2, attachment 1, and in the county plan in Annex M, page 2-1, attachment 2.

P. Responsibilities for the Planning Effort: Development, Periodic Review and Distribution of Emergency Plans

Training matrixes contained in both state and county plans indicate that training for those individuals responsible for the planning effort is conducted annually.

Both state and county plans indicate the individual by title who is responsible for radiological emergency response planning.

The West Virginia Office of Emergency Services Director is the official at State level responsible for development, review, update and coordination of plans with other appropriate organizations. The State Department of Health and State Department of Agriculture will provide assistance for updating respective annexes to the State plan.

The Director, Hancock County Office of Emergency Services is responsible for reviewing the county Plan at least annually. Telephone call down lists are reviewed at least quarterly.

Summary List of Deficiencies/Recommendations

1. All reference to the IRAP in the state and county plans should be updated to reflect the Federal Radiological Emergency Response Plan (FRERP) published on September 14, 1984. Under federal responsibilities, EPA has been listed at number 9 and 11. Number 9 is obsolete and should be deleted. (A1a)
2. The West Virginia Office of Emergency Services uses a duty officer system for 24 hour coverage. The state plan should contain more detailed information and instructions on how the duty officer system functions. (A1d, F1a)
3. The State Department of Health has the responsibility for accident assessment and protective action recommendations. It is understood that each element of response should list one primary responsible organization; however, in this case it may be clearer if a primary organization was included for each level of response as was done for Command and Control, since all levels will have responsibilities when protective actions are initiated. (A2a)
4. The state plan should include Letters of Agreement with the CPCS-1 radio station for West Virginia and with the RACES organization. (A.3)
5. The Hancock County plan does not contain Letters of Agreement with School Districts who are to provide buses for transportation and schools to be used as mass care centers. All letters of agreement do not state specifically what service or assistance will be provided. (A.3)
6. The state plan does not contain first and second shift personnel for each staff position. (A4)
7. It is recommended that state personnel bringing additional dosimetry equipment to Hancock County be dispatched to Hancock County at the alert stage. (C2a, H4)
8. PAGs listed in the Hancock County plan on page F-2 are not consistent with EPA PAGs or those given on page 1-2 of the same county plan. The use of the top of the range of the EPA PAGs does not allow evacuation at the low end if deemed appropriate. Evacuation should also be recommended based solely on plant conditions even if there is no projected dose and the plan should allow for this. (D4)
9. The Hancock County plan does not call for activation of the EOC until General Emergency. In order to adequately respond to an emergency the EOC should be activated much earlier in an incident (H4)
10. Inventory lists contained in the plan as to what equipment is included in emergency kits do not include dosimeters of any kind, potassium iodide or communications equipment. (H-11)

11. Although Annex 15 of the state plan includes an equipment list that shows the instruments needed to measure radioiodine concentrations are available, this specific capability has not been described. (I9)
12. Farmers within the 10 mile EPZ may insist on reentering the EPZ to feed their livestock. If this occurs, procedures must be developed to monitor and limit radiological exposure to this segment of the population. (J9)
13. The plans indicate that there is not sufficient dosimetry available to provide each emergency worker adequate dosimetry. In addition, there are only enough CDV-742s to provide one per group. It is not acceptable to have any emergency worker unmonitored. At a minimum each worker should be issued one TLD, on high range (0-200R) dosimeter and one mid-range (0-20R). No indication of the number of TLDs available to Hancock County has been included in the plans. (J9, K3a)
14. State and County plans should be consistent as to who will be authorized to take KI as a protective action. There is no statement as to how much KI is available, where it is stored, if it is pre-positioned in Hancock County or who is responsible for delivering it to Hancock County. (H11, J10e)
15. Emergency workers are to report an exposure of 1r to their supervisors. The county plan indicates the availability of CDV 742s only. The CDV 742 will not accurately measure 1R. (K3a)
16. The state plan states that there are 3000 CDV-742 dosimeters stored in the state EOC. It is recommended that some of these dosimeters be pre-positioned in Hancock County (K3a)
17. There is no link from an emergency worker's supervisor to the County Radiological Officer for authorization to exceed the 1-5 rem and 5 to 25 rem exposure. This decision, as stated in the county plan, should be made by the County Emergency Management Coordinator in conjunction with the Radiological Officer. It should not be made by a supervisor unless he is trained and qualified to interpret dose readings. The Emergency Worker Procedures, page R-10-21 of the county plan should include the link between the supervisors and the County Radiological Officer. (K4)
18. Although there is no "correct" level at which decontamination of individuals is required, the state and county plans should agree on what that level is. In addition those levels should be at the lowest level detectable on survey meters. (K5a)
19. The state and county should obtain the most current version of EPA PAGs. (J9)
20. Ingestion PAGs given in the Hancock County plan are not consistent with the latest EPA guidance. (J9)

21. Different symbols should be used on appropriate maps to depict traffic and access control points and monitoring points. (J10a)
22. The county plan does not address how traffic impediments (stalled vehicles, snowbound roads, etc.) will be cleared from evacuation routes. (J10k)
23. State and county plans should be changed to state that the county will participate fully in an exercise with the utility, West Virginia and other states and local governments within the 10 mile EPZ of the Beaver Valley Power Station at least every two years. (N1a)

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Corrective Actions to the WVREP
For the January 1986
FEMA III RAC Comments

The comments and responses in this report reflect the "Summary List of Deficiencies/Recommendations" on pages 16, 17 and 18 of the FEMA Report.

1. Comment

All reference to the IRAP in the State and County Plans should be updated to reflect the Federal Radiological Emergency Response Plan (FRERP) published on September 14, 1984. Under Federal responsibilities, EPA has been listed at number 9 and 11. Number 9 is obsolete and should be deleted. (Ala)

Response

- All references to IRAP have been updated in the State Plan to reflect FRERP.
- Under Federal responsibilities, #9-EPA, has been removed, #11, has been renumbered #9. Basic Plan-Page 18.

2. Comment

The West Virginia Office of Emergency Services uses a duty officer system for 24-hour coverage. The State Plan should contain more detailed information and instructions on how the duty officer system functions. (Ald, Fla)

Response

- [Comment should reference Ale and Fla not Ald, and Fla].
- Ale of the Cross Reference has been changed to include Annex 1, Page 1-1.
- A "Twenty-four Hour Notification" section has been added to Annex 14. This section provides more detailed information on the duty officer system. Annex 14, Page 14-4.
- Annex 1 has been updated to reflect the addition of the "Twenty-four Hour Notification" section to Annex 14. Annex 1, Page 1-1.

3. Comment

The State Department of Health has the responsibility for accident assessment and protective action recommendations. It is understood that each element of response should list one primary responsible

organization; however, in this case it may be clearer if a primary organization was included for each level of response as was done for Command and Control, since all levels will have responsibilities when protective actions are initiated. (A2a)

Response

- The State and County "Task Assignments" charts have been redeveloped to clarify this comment. Basic Plan, Pages 24, 25 and 26.

4. Comment

The State Plan should include Letters of Agreement with the CPCS-1 radio station for West Virginia and with the RACES organization. (A.3)

Response

- Letters of Agreement with the State EBS Organization and the State RACES Organization have been added to the Plan. Annex 20

5. Comment

The Hancock County Plan does not contain Letters of Agreement with School Districts who are to provide buses for transportation and schools to be used as Mass Care Centers. All Letters of Agreement do not state specifically what service or assistance will be provided. (A.3)

Response

- Hancock County Plan only.

6. Comment

The State Plan does not contain first and second shift personnel for each staff position. (A4)

Response

- Key and alternate individuals (first and second shift) are listed by position. Basic Plan, Page 26.
- Key and alternate individuals (first and second shift) are listed by name. Annex 14, Page 14-10.
- WVOES staffing of the EOC has been added by position and name. Annex 14, Page 14-11.

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7. Comment

It is recommended that state personnel bringing additional dosimetry equipment to Hancock County be dispatched to Hancock County at the alert stage. (C2a, H4)

- Sufficient dosimetry has been relocated to Hancock County on a permanent basis. Annex 15, Section XIV, Tab-C, Page XIV-C-5

8. Comment

PAGs listed in the Hancock County Plan on Page F-2 are not consistent with EPA PAGs or those given on Page 1-2 of the same County Plan. The use of the top of the range of the EPA PAGs does not allow evacuation at the low end if deemed appropriate. Evacuation should also be recommended based solely on plant conditions even if there is no projected dose and the Plan should allow for this. (D4)

Response

- Although this comment does not reference the State Plan, it does apply. The State Plan has been changed to reflect the entire range of the EPA PAGs.
 - Annex 15, Section VI, Page VI-7, 6.3.1 has been changed from "5 rem" to "1 rem to 5 rem".
 - Annex 15, Section VI, Page VI-7, 6.3.2 has been changed from "25 rem" to "5 rem to 25 rem".
 - Annex 15, Section VII, Page VII-6, Under 3. Evacuation, the second paragraph has been changed from: "An appropriate situation would...does approaching or exceeding 5 rem whole body and 25 rem..." to: "An appropriate...dose of 1 rem to 5 rem whole body or 5 rem to 25 rem...".
- A section titled "Plant Conditions" has been added to the Plan. Annex 15, Section IX, Page IX-9, #5.

9. Comment

The Hancock County Plan does not call for activation of the EOC until General Emergency. In order to adequately respond to an emergency, the EOC should be activated much earlier in an incident. (H4)

Response

- Hancock County Plan only.

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10. Comment

Inventory lists contained in the Plan as to what equipment is included in emergency kits do not include dosimeters of any kind, potassium iodide or communications equipment. (H-11)

Response

- Dosimetry and potassium iodide has been added to the WVDH Resources. Annex 15, Section XIV, Tab A, Page XIV-A-1 and XIV-A-2
- Communications equipment is outlined in Annex 3. A note has been added to Annex 15, Section XIV, Tab A, Page XIV-A-2, referencing Annex 3.

11. Comment

Although Annex 15 of the State Plan includes an equipment list that shows the instruments needed to measure radioiodine concentrations are available, this specific capability has not been described. (I9)

Response

- Analysis sheet added. Annex 15, Section XI, Tab B, Page XI-B-1

12. Comment

Farmers within the 10-mile EPZ may insist on reentering the EPZ to feed their livestock. If this occurs, procedures must be developed to monitor and limit radiological exposure to this segment of the population. (J9)

Response

- Hancock County Plan only.

13. Comment

The Plans indicate that there is not sufficient dosimetry available to provide each emergency worker adequate dosimetry. In addition, there are only enough CDV-742s to provide one per group. It is not acceptable to have any emergency worker unmonitored. At a minimum each worker should be issued one TLD, on high range (0-200R) dosimeter and one mid-range (0-20R). No indication of the number of TLDs available to Hancock County has been included in the Plans. (J9, K3a)

Response

- Sufficient dosimetry has been relocated to Hancock County on a permanent basis. This includes: High Range (-0200 R), Mid-Range (0-20 R), and TLDs. Annex 15, Section XIV, Tab A, Page XIV-A-1; Annex 15, Section XIV, Tab C, Page XIV-C-5.

1/87

14. Comment

State and County Plans should be consistent as to who will be authorized to take KI as a protective action. There is no statement as to how much KI is available, where it is stored, if it is prepositioned in Hancock County or who is responsible for delivering it to Hancock County. (H11, J10e)

Response

- The State Plan now states that KI is for emergency workers only. Annex 15, Section VII, Page VII-9.
- KI is now prepositioned in Hancock County. Annex 15, Section XIV, Tab A, Page XIV-A-1; Annex 15, Section XIV, Tab C, Page XIV-C-5.

15. Comment

Emergency workers are to report an exposure of 1R to their supervisors. The County Plan indicates the availability of CDV 742s only. The CDV 742 will not accurately measure 1R. (K3a)

Response

- Mid-range dosimeters (CDV-730) have been relocated to Hancock County. Annex 15, Section XIV, Tab C, Page XIV-C-5.

The State Plan states that there are 3000 CDV-730s in the State EOC. It is recommended that some of these dosimeters be prepositioned in Hancock County. (K3a)

Response

- A sufficient number of CDV-742s have been relocated to Hancock County. Annex 15, Section XIV, Tab C, Page XIV-C-5.

17. Comment

There is no link from an emergency worker's supervisor to the County Radiological Officer for authorization to exceed the 1-5 rem and 5 to 25 rem exposure. This decision, as stated in the County Plan, should be made by the County Emergency Management Coordinator in conjunction with the Radiological Officer. It should not be made by a supervisor unless he is trained and qualified to interpret dose readings. The Emergency Worker Procedures, Page R-10-21 of the County Plan should include the link between the supervisors and the County Radiological Officer. (K4)

1/87

Response

- Hancock County Plan only.

18. Comment

Although there is no "correct" level at which decontamination of individuals is required, the State and County Plans should agree on what that level is. In addition, those levels should be at the lowest level detectable on survey meters. (K5a)

Response

- The State Plan has been changed to agree with the County Plan. Annex 15, Section XI, Pages XI-4, XI-10, XI-12.

19. Comment

The State and County should obtain the most current version of EPA PAGs. (J9)

Response

- The USEPA Manual of PAGs is currently in draft form. Once it is finalized, the State Plan will be changed to reflect the final EPA PAGs.

20. Comment

Ingestion PAGs given in the Hancock County Plan are not consistent with the latest EPA guidance. (J9)

Response

- Hancock County Plan only.

21. Comment

Different symbols should be used on appropriate map to depict traffic and access control points and monitoring points. (J10a)

Response

- Hancock County Plan only.

22. Comment

The County Plan does not address how traffic impediments (stalled vehicles, snowbound roads, etc.) will be cleared from evacuation routes. (J10k)

1/87

Response

- Hancock County Plan only.

23 Comment

State and County Plans should be changed to state that the County will participate fully in an exercise with the utility, West Virginia and other states and local governments within the 10-mile EPZ of the Beaver Valley Power Station at least every two years. (N1a)

Response

- The State Plan now reflects an exercise once every two years. Annex 10, Page 10-1.

Corrective Action to the
HANCOCK COUNTY RADIOLOGICAL EMERGENCY RESPONSE PLAN
For the January, 1986 FEMA III RAC COMMENTS

NOTE: Numbers correspond with the Summary List on pages 16, 17 and 18 of the FEMA Report.

<u>Item</u>	<u>HCRERP Pages Changed</u>
1. References to IRAP should be updated to reflect FRERP.	Section 1, Page 4 Annex A, Page A-5 Annex E, Page E-2 Annex N, Page N-2
5. Include letters of agreement with School Districts that provide buses and/or schools for use as mass care centers. Letters should state specifically the service or assistance that will be provided.	Annex S, all pages. Brooke schools letter included; Hancock schools letter and all other letters revised and renewed.
7. State personnel to bring Radiological monitoring equipment to County at "Alert".	Section 2, Page 18 Section 4, Pages 30, 32 Annex R, SOP #1, Page R-1-6 Annex R, SOP #10, Page R-10-4
8a. Incorrect PAGs.	Annex F, Pages F-1, F-2 Annex I, Page I-1 Annex J, Page J-2
8b. Evacuation should be considered based on plant conditions.	Annex H, Page H-4 Annex R, SOP #1, Pages R-1-2, R-1-53
9. Hancock EOC should activate at "Alert".	Section 2, Page 18 Section 4, Pages 30, 31 Annex C, Page C-2 Annex N, Page N-1 Annex P, Page P-4 Annex R, SOP #1, Pages R-1-2, R-1-16, R-1-17, R-1-30 Annex R, SOP #2, Page R-2-27

Corrective Actions to HCRERP for FEMA III RAC Comments (Continued)

<u>Item</u>	<u>HCRERP Pages Changed</u>
10. Dosimetry, KI and communications equipment not shown in inventory lists.	Annex N, Pages N-4, N-5, N-6 Annex R, SOP #3, Page R-3-17 Annex R, SOP #10, Pages R-10-8, R-10-9, R-10-28
12. Arrange to monitor farmers and limit their exposure.	Annex H, Page H-12 Annex R, SOP #8, Pages R-8-2, R-8-3 Annex R, SOP #10, Pages R-10-3, R-10-4, R-10-6
13. Insufficient dosimetry, TLDs.	Annex N, Pages N-4, N-5, N-6 Annex R, SOP #3, Page R-3-17 Annex R, SOP #10, Pages R-10-8, R-10-9, R-10-28
14. Plans do not agree on who is authorized to take KI; no statement of how much is available or where it is stored.	Annex G, Page G-2 Annex N, Pages N-4, N-5, N-6 Annex R, SOP #3, Page R-3-17 Annex R, SOP #5, Pages R-5-4, R-5-5, R-5-6 Annex R, SOP #10, Pages R-10-1, R-10-8 R-10-24, R-10-28
15. No dosimetry available other than CDV-742s.	Annex N, Pages N-4, N-5, N-6 Annex R, SOP #3, Page R-3-17 Annex R, SOP #10, Pages R-10-8, R-10-9, R-10-28

Corrective Actions to HCRERP for FEMA III RAC Comments (Continued)

<u>Item</u>	<u>HCRERP Pages Changed</u>
17. Include a link from field supervisor to Radiological Officer when discussing emergency exposure authorization.	Annex R, SOP #10, Pages R-10-5, R-10-6, R-10-22
19. Current EPA PAGs should be obtained.	Annex F, Pages F-1, F-2 Annex I, Page I-1 Annex J, Page J-2
20. Ingestion PAGs are not consistent with latest EPA guidance.	Annex F, Page F-2
21. Different symbols should be used on maps to depict traffic and access control points and monitoring points.	Annex I, Pages I-5, I-7 NOTE: FEMA comment should reference <u>Reception Centers</u> and monitoring points; in previous issue, both were depicted by triangles. Revised Plan uses dome shapes to represent monitoring points.
22. Plan does not address removal of impediments from evacuation routes.	Annex F, Page F-3 Annex H, Pages H-1, H-14
23. Plan should state that County will participate every two years in full-scale BVPS exercise.	Annex M, Page M-2

August 23, 1983

Mr. Craig Williamson
Acting Director
Pennsylvania Emergency Management
Agency
Transportation and Safety Building
Room B-151
Harrisburg, PA 17120

Dear Mr. Williamson:

Enclosed are the comments of Region III's Regional Assistance Committee (RAC) concerning the Beaver County radiological emergency plans for the Beaver Valley Power Station and the Shippingport Atomic Power Station. The plans were reviewed for their conformance with NUREG-0654/FEMA REP-1, Rev. 1.

The County plans meet most of the planning standards and criteria of NUREG-0654. Those areas which the RAC believes are not adequately met are so indicated by an "I" in the "Rating" column of the review. The comments column explains the reason for such a rating.

In addition, there are comments for various elements that were judged to be adequately met but which could be improved or clarified.

Following the comments on the Beaver County plan are general comments on the plans of the County's plume zone municipalities.

If you or your staff have questions concerning these comments, please contact Joseph Gavin at the above address or at (215) 597-1849.

Sincerely,

James R. Asher
Chairman
Regional Assistance Committee

Enclosure

cc:
File
Chron

J.Gavin:mc:8/23/83

	ORIGINATOR	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE
Name	J. Gavin					
Date	8/23/83					

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0654 Reference	A or I	Comments	Corrected Cross Reference
A.1.a.	A	Appendix 1 charts the County and sub-County response entities; Appendix 3 lists and briefly summarizes the responsibilities of the major state, local, federal and private sector organizations in regard to off-site planning and response.	Basic Plan: Appendix 1 (p.1-1) Appendix 3 (p.3-1)
A.1.b.	A	The Plan specifies concepts of operations for each organization and sub-organization through a combination of Paragraphs VIII. RESPONSIBILITIES and IX. CONCEPT OF OPERATIONS; Appendices 2 and 3 of the Basic Plan; and Annexes B through I, K through Q and V. The concept of operations applicable to a particular County sub-organization is set forth in the annex or annexes devoted to the function(s) for which the sub-organization is responsible. Concepts of operations for the twenty-seven municipalities within the 10 mile EPZ are found in the municipal plans: Annex V.	Basic Plan: Par. VIII (p.9-16) Par. IX (p.16-23) Annexes B through Annexes K through Annex V Basic Plan Annexes 2 and 3 (p.2-1 and 3-1)
A.1.c.	A		Basic Plan Appendix 1 (p.1-1) Appendix 3 (p.3-1)
A.1.d.	A	County Commissioner and Emergency Management Coordinator.	Basic Plan Par. VIII A (p.9)
A.1.e.	A		Annex A, Par. A. (p.A-1) Annex B, Par. IV. (p.B-2)
A.2.a.	I	The criterion has been met for all of the required functions except Public Health and Sanitation, and Social Services. <i>Public Health and Sanitation and Social Services are covered in the County Plan.</i>	Basic Plan Par. VIII (p.9-16) Basic Plan Appendix 2 (p.2-1)
A.2.b.	A		Basic Plan Par. I.A. (p.1)
A.3.	I	Written support agreements are under development. <i>Agreements are being developed in accordance with the County Plan and will be submitted for review.</i>	Basic Plan, Appendix 3 (p.3-1) Annexes T, U, V.
A.4.	A		Annex A, Par. A (p.A-1)
C.1.c.	A	Addressed in Annex E of the Commonwealth Disaster Operations Plan.	Annex Q (p.Q-1)

0654 Reference	A or I	Comments	Corrected Cross Reference
C.2.a.	A	Beaver County will rely upon the Pennsylvania Bureau of Radiation Protection for representation at the Beaver Valley Emergency Operations Facility.	Annex M: Par. II.A. (p.M-1) Par. IV (p.M-3)
C.4.	I	Additional agreements are being developed with facilities and organizations who can be relied upon in an emergency to provide assistance.	Annexes T, U, V, E, F, G, H, and I.
D.3.	A		Basic Plan Appendix 6
D.4.	A		Basic Plan, Par. I (p.16-23) Annex B, Par. V (p.B-2) Annex C, Par. IV (p.C-2 to C-4) Annex D, Par. IV (p.D-2 to D-4) Annex E, Par. V (p.E-2 to E-4) Annex F, Par. IV (p.F-2 to F-4) Annex G, Par. IV (p.G-1 to G-3) Annex H, Par. IV (p.H-2) Annex I, Par. V (p.I-2 to I-3) Annex J, Par. VI (p.J-3) Annex K, Par. IV (p.K-1 to K-3) Annex L, Par. V (p.L-2 to L-3) Annex M, Par. IV (p.M-3) Annex N, Par. IV (p.N-2 to N-3)
E.1.	A	Verification is implied for telephone messages, but a specific step of message verification would be desirable in Appendix 2 of Annex C.	Basic Plan, Par. IX (p.16) Annexes B and C
E.2.	A		Annex C
E.5.	A	The plan should include back-up means of communication between the EOC and EBS radio stations.	Annex B, Par. III B.4. (p.B-2) Annex D, Appendix 1 through 7

0654 Reference	A or I	Comments	Corrected Cross Reference
E.6.	A		Annex C
E.7.	A		Annex D, Appendices 1 through 7
F.1.a.	A		Annex A, Par. A (p.A-1) Annex B and Appendices 1-4 of Annex B
F.1.b.	A		Annex B, Par. III (p.B-1) Basic Plan Par. VIII.D.3. (p.10) and K.2 (p.13)
F.1.c.	A	PEMA responsibility.	Annex B, Par. III (p.B-2)
F.1.d.	A	Communications with EOF will be handled through PEMA.	Annex B, Par. III (p.B-2)
F.1.e.	A		Basic Plan, Par. (p.16) Annex A, Par. B (p.A-1) Annex C, Appendix (p.C-1-1)
F.2.	A		Annex B, Par. III (p.B-1)
F.3.	A		Annex C, Appendix (p.C-5-1) Annex S
G.1	I	Examples of pre-emergency information should be presented. <i>May, 1974, Reg. 1-15</i>	Annex D, Par. II. (p.D-1) Par. III.A&B (p.D- Par. IV, A,B,C (p.D-2)
G.2.	A		Annex D, Par. III A,B,&D (p.D-2) Par. IV A&B (p.D-
G.3.a.	A		Annex D, Par. IV. (p.D-3)
G.4.a.	A		Annex D, Par. IV. (p.D-3)

0654 Reference	A or I	Comments	Corrected Cross Reference
G.4.b.	A		Annex D, Par. IV.G. (p.D-3)
G.4.c.	A		Annex D, Par. IV.E. (p.D-3)
G.5.	A		Annex D, Par. IV.C. (p.D-2)
H.3.	IA	<i>Location of Resource Security K-3, 5, 7, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100</i>	Annex A, Par. A (p.A-1)
H.4.	A		Annex A, Par. B (p.A-1) Annex C, Appendix 1 (p.C-1-1) Basic Plan, Appendix 5
H.7.	A	State responsibility.	Annex M, Par. IV.A. (p.M-3)
H.10.	A		Annex M, Appendix 2 Par. II.C. (p.M-2-2)
H.11.	A		Annex M, Par. II.D, G, H, I, J and X (p.M-1 to M-3) Appendix 3 (p.M-3-1)
H.12.	A		Annex M, Par. IV.A. (p.M-3)
I.7.	A		Annex M, Par. IV.A. (p.M-3)
I.8.	A		Annex M, Par. IV.A. (p.M-3)
J.9.	A		Basic Plan, Par. IX.F. (p.18) and Appendix (p.6-1) Annexes C through O
J.10.a.	A		Annex W
J.10.b.	A		Annex W
J.10.c.	A		Annex C, Annex D, Basic Plan, Par. IX.D. (p.18) Annex E, Par. II.B. (p.E-1)

0654 Reference	A or I	Comments	Corrected Cross Reference
J.10.d.	I	<p>The plan does not make any provision for evacuation of handicapped persons residing at home. In a population as large as that of the Beaver Valley EPZ, a substantial number of home-bound handicapped could be expected. The municipal plans do provide for a list of such persons to be maintained by police or fire departments. However, none of the municipal plans actually include this list, nor even give an estimate of numbers. It appears that prompt evacuation of the confinement institutions alone will require 75-100 ambulances. The ambulance list in Annex G includes only 34 vehicles in all of the area up to 20 miles from the plant and another 120 in the 20-40 mile radius. Some of these will obviously be required to remain in their home area for local emergencies. Therefore, there are very few vehicles available beyond those needed for institutional evacuation. Further, the plan does not address requirements and sources for other specialized vehicles, e.g. lift-equipped vans and buses, which might be used to evacuate handicapped residents. The county must take the lead in identifying vehicle requirements and vehicle sources and establishing procedures to insure protection for the handicapped citizens.</p>	<p>Basic Plan, Par.VIII. D.11 (p.11) Basic Plan, Par. VIII E.9 (p.12) Basic Plan, Par. IX.F. (p.18-2) Annex I, Par. III. (p.1-1) Annex G, Par. II. (p.G-1)</p>
J.10.e.	A		Annex M (p.M-1 to M-3-
J.10.f.	A	<p>KI is to be taken only on advice of the Secretary of the Commonwealth Department of Health.</p>	<p>Annex M, Appendix 2, Par. III.B.2. (p.M-2- and Attachment C to Appendix 2 (p.M-2-C-1)</p>
J.10.g.	I	<p>Principal means for relocation will be private vehicle, supplemented by buses for residents without access to private vehicles, which is satisfactory. Annex I, Appendix 1, lists 2 sources for buses. However, a number of vehicles (80) is given for only one source, McCarter Transit. Eighty buses are obviously inadequate to meet the probable demand of an EPZ population exceeding 100,000. Unfortunately, no demand figures are given. The county plan refers readers to the municipal plans for estimates of the number of persons needing bus transportation and vehicle requirements and the location of pickup points. In actuality, none of the local plans give demand estimates and only a few give the number of buses required. However, all of the local plans do list pickup points. Given the probable high demand for bus evacuation, the county plan should at the very least list unmet needs by jurisdiction, identify sources adequate to meet the demand, and provide a coordinated procedure for mobilizing and dispatching buses.</p>	Annex I

0654 Reference	A or I	Comments	Corrected Cross Reference
J.10.h.	A		Annex L, Par. IV.E. (p.L-2)
J.10.i.	A	Traffic capacities are given on the Penn DOT evacuation plan map for major routes.	Annex J, Appendix 3 (p.J-3-1) Annex W
J.10.j.	I	Annex F presents several lists of access control posts to be set up by the Pennsylvania State Police (PSP). These are repeated in Annex K. Unfortunately, the posts cover only the northern boundary of the EPZ from the Ohio line to Route 588 and the southern boundary from Route 60 to the West Virginia border. A review of the Penn DOT map suggests that even within these areas, coverage is incomplete. Additional posts would appear to be required at:	Annex F, Par. I, II, IV (p.F-1 and F-2) Annex K, Appendix 2 (p.K-2-1)

1. S.R. 251 at T-342, South Beaver Township
2. T-360 and 115 Spur at Beaver/Washington Township County line
3. T-476 and 115 Spur, Hanover Township

The eastern EPZ boundary from S.R. 588 on the north, along the Beaver and Ohio Rivers, to Crescent and S.R. 60 on the south is not covered by the lists. This boundary includes densely populated areas adjoining Beaver Falls, a number of river bridges, and the industrial South Heights/Crescent area. Obviously, scores of streets and highways cross the EPZ boundary. Notes at the bottom of the lists in Annexes F and K indicate that 9 municipalities share the access control responsibility with PSP. Seven of these municipalities are in Beaver County and 2 are in Allegheny County. Only 2 are actually in the EPZ (Hopewell and Patterson Townships), while the remainder are outside, but adjacent to the EPZ.

The only municipal plans available are those from within the EPZ. Neither of the two municipal plans involved mention the access control responsibility. It is not known if non-EPZ municipalities have or will be developing response plans. Lack of control of access into the EPZ along the most populous corridors is a critical deficiency. Specific plans for post locations and manning procedures must be developed by PSP, the two counties, or appropriate municipalities.

0654 Reference	A or I	Comments	Corrected Cross Reference
J.10.k.	A		Annex K, Par. III (p.K-1)
J.10.l.	A		Annex J, Appendix 3 (p.J-3-1)
J.12	A	Evacuee monitoring is adequate as described in Annex M.	Annex L, Par. III.B&C (p.L-1) Annex M, Par. V.B. (p.M-5)
K.3.a.	A	Emergency worker dosimetry is adequate as described in Annex M.	Annex M, Par. VI. (p.M-6)
K.3.b.	A	Dosimeter reading frequency is accurate.	Annex M, Appendix 2 (p.M-2-1)
K.4.	I	The plan does not include a decision point for emergency worker exposure in the 1-5 rem whole-body range (PAG for general population exposures). More detail should be given as to exactly which "elected officials in authority" may authorize an emergency worker to volunteer to exceed the protective action guidelines.	Annex M, Appendix 2 Par. IV.B.2. (p.M-2-5)
K.5.a.	A		Annex M, Appendix 1 (p.M-1-1)
K.5.b.	A		Annex M, Appendix 1 (p.M-1-1) Annex G, Par. III (p.G-1) Annex G, Appendix 2 (p.G-2-1)
L.1.	I	This evaluation criterion requires capability for evaluation of radiation exposure and uptake. Appendix 2 of Annex G does not address the radiation exposure related capabilities of the medical facilities listed.	Annex G, Appendix 2 (p.G-2-1)
L.4.	I	The paragraphs listed in the County cross reference for this evaluation criteria do not exist. Annex G makes reference in several places to the provision of emergency ambulance services onsite as requested. A reference to a broader provision of transportation of victims of radiological accidents is needed.	
M.1.	A		Annex P

0654 Reference	A or I	Comments	Corrected Cross Reference
N.1.a.		As of this review publication of revised FEMA regulations (44 CFR 350) governing exercise frequency is anticipated within the next few weeks. As soon as notification of publication is received, the FEMA regional office will notify PEMA. If PEMA or Beaver County is ready to submit the plan for formal approval prior to notice from FEMA concerning publication, the regional office should be contacted for consultation regarding how to handle N.1.a. and N.1.b.	<i>Annex S</i>
N.1.b.		See N.1.a. above.	
N.2.a.	A		Annex S, Par. II.D.1. (p.S-2)
N.2.c.	A		Annex S, Par. II.D.2. (p.S-3)
N.2.d.	A	Radiological monitoring and health physics are a State responsibility, so the county's participation in drills involves only decontamination monitoring personnel.	Annex S, Par. II.D.3.
N.3.a. through N.3.f.	A	The county will rely on PEMA for the development of exercise scenarios.	Annex S
N.4.	A		Annex S, Par. IV. (p.S-3)
N.5.	A		Annex S, Par. IV. (p.S-3 & S-4)
O.1.	A		Annex R
O.1.b.	A		Annex R, Par. III.B. (p.R-3)
O.4.a.	A		Annex R, Par. II.B. (p.R-1)
O.5.	A	The entire Annex R should be included in the cross-reference.	Annex R (p.R-1 to R-3)
P.1.	A		Annex R, Par. II.A. (p.R-1)

0654 Reference	A or I	Comments	Corrected Cross Reference
P.2.	A	Emergency Management Coordinator	Basic Plan, Par. VIII. (p.9)
P.3.	A		Basic Plan, Par. VIII. (p.9) Basic Plan, Par. VIII.K.1.d. & e. (p.13)
P.4.	A		Annex S, Par. IV.B&C (p.S-3) Basic Plan, Par. VIII. (p.9)
P.5.	A		Basic Plan, Par. X.D. (p.24)
P.6.	A		Annex U and Annex V
P.7.	A		Annex U
P.8.	A		Table of Contents (p.iii)
P.10.	A		Basic Plan, Appendix 5 (p.5-1) Annex A, Appendix 1 (p.A-1-2)

Comments on Municipal Plans
Beaver County, Pennsylvania

General

All 27 municipal radiological response plans follow an identical format. However, in some plans, key tables are blank or incomplete and other information is missing.

Each of the plans contains an "Appendix 4." intended as a listing of non-ambulatory residents. However, in each case, the list is not included and the reader is informed that the list is maintained in the municipal police or fire department. While we can appreciate the need for privacy, the list is a key informational element. There is no assurance that the police and fire departments are aware of this critical responsibility assigned to them and that the responsibility has been accepted and implemented. Therefore, the list should be included in the controlled copies of plan or, at least, the number and location of handicapped individuals and the number and type of vehicles required to evacuate them given. This is particularly important since the Beaver County plan does not address homebound, non-ambulatory residents at all.

Another deficiency common to a number of the municipal plans relates to location of pickup points for bus evacuation of residents without access to private vehicles. In several jurisdictions, there are only a few pickup points each covering many square miles. It may be as much as two or three miles from a residence to the nearest pickup point. By definition, citizens requiring bus evacuation do not have a vehicle available. Therefore, many may require transportation from home to pickup point, particularly older residents or families with small children. This would require vehicles and a dispatching plan and should be provided for in the municipal plans. The comment applies to Brighton Township, Centre Township, Chippewa Township, Greene Township, Hanover Township, Independence Township, Industry Borough, Ohioville Borough, Raccoon Township, and South Beaver Township.

Finally, none of the plans gives an estimate of the number of residents who would require evacuation by bus. Some plans do include an estimate of the number of buses required, but do not give the basis for this estimate. It was noted during the 1982 Beaver Valley exercise that although the Shippingport Borough plan lists a requirement for 8 buses, there are actually only 4 borough residents who normally have no private vehicle and those persons will be picked up by a single van. Each municipality should include demand and vehicle requirements, so that the county can adequately plan for bus services, assembly procedures, etc.

Comments on specific plans (in addition to general comments above) are as follows:

Aliquippa Borough - List of required resources (Appendix 9) is blank. Map in Appendix 8 does not show bus pickup points, traffic control posts (TCP), or evacuation routes.

Beaver Borough - Acceptable

Bridgewater Borough - Acceptable

Brighton Township - The list of required resources (Appendix 9) is blank.

Center Township - The plan designates only two alert sectors for this very large jurisdiction, some of which is not covered by sirens. Route alerting would, therefore, take many hours. The plan lists 2 bus pickup points, but the map in Appendix 8 shows only one. Finally, the list of required resources (Appendix 9) is incomplete.

Chippewa Township - Plan incorrectly lists the evacuation center as "Lawrence Village Plaza," rather than West Gate Shopping Plaza. School evacuation destination is not listed. The list of required resources (Appendix 9) is incomplete (buses and ambulances are not listed).

Fallston Borough - The plan lists only 3 bus pickup points, but the map in Appendix 8 shows 5 points.

Frankfort Springs Borough - The list of required resources (Appendix 9) is blank.

Georgetown Borough - Although there is a long and detailed list of available resources, bus and ambulance requirements are not given. Bus pickup points and evacuation routes are not shown on map in Appendix 8.

Glasgow Borough - The list of resource requirements (Appendix 9) is incomplete. Evacuation center is incorrectly listed as "Lawrence Village Plaza."

Greene Township - Plan lists 3 bus pickup points, but only one is shown on the map in Appendix 8. Also, the Township is divided into only two very large (16 sq. mi.+) alert sectors, which would take many hours to alert through route alerting.

Hanover Township - Resource requirements are not listed in Appendix 9. Large areas of the Township are not covered by sirens, according to Appendix 5. But the Township is divided into only 3 very large (12 sq. mi. +) alert sectors for route alerting, which would take many hours to cover.

Hookstown Borough - Ambulance requirements are not shown in Appendix 9. Further, Appendix 9 lists the 28 available school buses as adequate to meet bus needs. However, would these school buses not be needed for school evacuation? Also, are these same 28 school buses listed in the plan for surrounding Greene Township?

Hopewell Township - This Township was one of those listed as having access control responsibility in the county plan. The PSP posts do not cover the southern border of the Township and the Ohio River Bridge to Ambridge. The Township plan does not mention access control. Also, the plan does not designate alert sectors, even though according to Appendix 5 large areas are not covered by sirens. Bus pickup points, TCPs, and evacuation routes are not shown on the map in Appendix 8. Finally, there is no list of required resources.

Independence Township - The entire Township, about 25 square miles, is a single alert sector, much too large for prompt route alerting. From the map in Appendix 5, it appears that much of the Township is not covered by sirens, so route alerting is necessary. Map in Appendix 8 does not show bus pickup points, TCPs and evacuation routes. The resource list (Appendix 9) is missing.

Industry Borough - School evacuation center (Union Area School) is not listed. Appendix 9 indicates that no buses or ambulances are needed. Does this mean that all Borough residents have constant access to a private vehicle and none will require evacuation by ambulance?

Midland Borough - Plan incorrectly lists "Lawrence Village Plaza" as evacuation center and does not list the school evacuation center. The plan lists 4 bus pickup points, but 6 are shown on the map in Appendix 8. Appendix 9 indicates that bus needs will be met entirely with school buses. Will these buses not be needed for evacuation of the schools?

Monaca Borough - Acceptable

Ohioville Borough - The evacuation center is incorrectly listed as "Lawrence Village Plaza" and the school evacuation center is not listed. The resource listing (Appendix 9) is missing.

Patterson Heights Borough - The evacuation center is incorrectly listed as "Lawrence Village Plaza" and the school evacuation center is not listed. Bus pickup points, TCPs, and evacuation routes are not shown on the map in Appendix 8. Finally, Appendix 9 indicates that no buses are needed for evacuation. Does this mean that all Borough residents have constant access to a private vehicle?

Patterson Township - Appendices 5 and 6 are missing. The plan incorrectly lists "Lawrence Village Plaza" as the evacuation center and does not list the school evacuation center. The Township is assigned access control responsibility in the County plan, but this is not discussed in the municipal plan. Note that the PSP posts do not cover the Township's border with Beaver Falls and White Township.

Potter Township - The resource listing (Appendix 9) is blank.

Raccoon Township - The plan lists Arden Downs as the evacuation center and Canon-MdMillen School as the school evacuation center, which is inconsistent with the County plan.

Shippingport Borough - Acceptable. The plan calls for the Shippingport-Industry Bridge to be closed by Borough police. During the 1982 exercise it was observed that the bridge was closed on both ends by nuclear plant security personnel. The authority of such persons to close a public highway was questioned, and this question remains. Also, closure of the bridge would isolate many workers employed in the Shippingport area from their families north of the river and vice versa. The workers would be forced to evacuate one direction while their families evacuate in the opposite.

South Beaver Township - The plan incorrectly lists "Lawrence Village Plaza" as the evacuation center and does not list the school evacuation center. Only a portion of the Township is in the EPZ, but this is not shown on any map in the plan. The map in Appendix 8 does not show bus pickup points, TCPs, or evacuation routes. The entire Township is shown as a single, huge alert sector in Appendix 6, even though not all is in the EPZ. The area is too large to be covered promptly with a single route alerting team. Since siren coverage is incomplete, according to Appendix 5, route alerting is critical.

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South Heights Borough - The plan lists "South Park High School" as the school evacuation center, while the county plan lists "South Park Fairgrounds." Otherwise, plan is acceptable.

Vanport Township - This excellent plan gives much more thorough evacuation procedures than the other municipal plans. The only question is the need for 40 buses for evacuation of residents without access to private vehicles, as shown in Appendix 9. This sounds excessive for a population of only 2000.

July 1, 1985

Mr. John L. Patten, Director
Pennsylvania Emergency Management Agency
Transportation and Safety Building
Room B-151
Harrisburg, Pennsylvania 17120

Dear Mr. Patten:

FEMA Region III has completed its review of the formal submission of State and local plans applicable to the Beaver Valley Power Station.

We have identified twelve elements which require additional information. Three elements must be addressed prior to submission of these plans for formal 350 approval. These elements are:

1. A.4. - Twenty-four hour staffing capability.
2. J.10.d. - The county plans do not address protective actions for prisoners and staff of the Beaver County Jail. The RERP for this facility is still under development.
3. H.3. - Although the Beaver County EOC is located within the 10-mile EPZ, County plans do not include protective measures for the staff of the EOC.

The other nine elements that require additional information should be addressed during the next annual plan review and update. If you have any questions concerning the review, please contact me or Janet Lamb at (215) 597-1789.

Sincerely,

James R. Asher
Chairman
Regional Assistance Committee

Enclosure

cc: Chron
File

NTH/JLamb/1789/jj/7-1-85

	ORIGINATOR	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE	CONCURRENCE
	JLamb	JAsher				
Name	JL 7/1/85	JRA				
Date		7-1-85				