

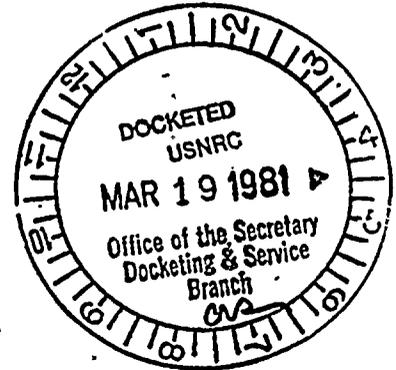
3/13/81

BEFORE THE ATOMIC SAFETY AND LICENSING BOARD

In the Matter of:  
PENNSYLVANIA POWER AND LIGHT COMPANY  
AND  
ALLEGHENY ELECTRIC COOPERATIVES, INC.  
(Susquehanna Steam Electric Station,  
Units 1 and 2)

Docket Nos. 50-387  
50-388

SEA ANSWERS TO INTERROGATORIES:  
ON EMERGENCY PLAN  
AND  
NEW CONTENTIONS



Attached please find the above referenced SEA answers and contentions. I hereby certify that these answers and contentions have been served upon all parties to the proceeding.

*Gerald R. Schultz*

Gerald R. Schultz  
Coordinator SEA

DATED: March 13, 1981



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NUREG 0654 REV. 1 (section A. 1, b.) requires that each organization and suborganization having an operational role shall specify its concept of operations, and its relationship to the total effort. Luzerne County Civil Defense's local plan gives merely an outline of concept, leaving blank important information (page 6 of Luzerne County plan) about telephone and dispatcher communications. Moreover, the Luzerne County plan (page 5; section 5) states that the "county conducts program of public education, training and exercise of emergency forces and posts route signs and evacuation." But the plan fails to mention when, where and how the public education and exercises will take place. Nor does the plan mention where signs will be posted. The plan further states that the "radiological thyroid blocking chemicals are stocked." The plan fails to mention where and how the public will be informed of thyroid blocking chemicals or where they will be stored.

All 3 plans - The Utility, The state, and local - do not meet the requirements of NUREG 0654 REV. 1 (section A. 1. (c)) that requires each plan to illustrate these interrelationships in a block diagram.

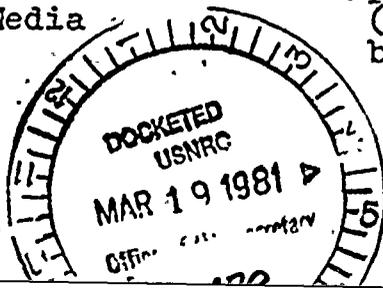
NUREG 0654 (section A. 1, d) requires that each organization shall identify a specific individual by title who shall be in charge of the emergency response. The Luzerne County Civil Defense plan states no such individual.

NUREG 0654 (section A. 2, a) requires that: "Each organization SHALL SPECIFY THE FUNCTIONS AND RESPONSIBILITIES for major elements and key individuals by title of emergency response, including the following: Alerting and Notification; Communications, Public Information; Accident Assessment; Public Health and Sanitation; Social Services; Fire and Rescue; Traffic Control.....

Luzerne County Civil Defense plan (page 11) states "see Annex E" for communications, and goes on to state (page 11) they will notify Luzerne County Chamber of Commerce to pass to business and industry in affected area." Plan does not state how Chamber of Commerce would assume this responsibility. There is no such organization called Luzerne County Chamber of Commerce. Moreover, the plan does not suggest what will happen if a nuclear incident occurs when the Chamber of Commerce is not there to pass to business and industry, i.e. if accident occurs after 5:00 P.M. when offices would be closed.

Public Information in Luzerne County Civil Defense plan is merely an outline (page 17 of LCCD plan). It lists in 4 brief lines:

1. Develop media release (Plan does not state who will do this nor for what purpose)
2. Brief local media (Plan does not state what media will be briefed about)
3. Operate various control centers (What does this have to do with public information)
4. Monitor Media (Plan does not state what media will be monitored about)



Public Information in Utility plan (page 5-8 merely states that--Special Offices of President has been established.

Public Health and Sanitation is not mentioned in LCCD plan. Fire and Rescue: Utility plan (page 5-8) states there will be one drill per calendar quarter and (page 5-7) stated local fire and rescue companies will be invited to participate in a training program. LCCD plan (page 13) merely outlines "Fire & Rescue Group" in 3 sentences, stating "units evacuating from affected area will report to facilities in Annex D." Annex D is not included in plan, nor is there any clear delineation of who the fire companies are.

Traffic Control: Luzerne County Civil Defense plan gives an outline of traffic control under "Police Group". It does not list what "units" are available for traffic control.

Emergency Medical: Utility plan (page 6-13) lists Berwick Hospital, and Radiation Medical Center, Hospital of University of Pa. Philadelphia as the two organizations responsible for emergency medical. Berwick hospital is a small hospital suited to the needs of a small rural area. If there is a general emergency. Utility does not state how Berwick Hospital would be able to handle 100's of patients. Luzerne County Civil Defense plan gives a mere outline of responsibilities of medical groups. (page 15 of LCCD plan). There are no names of medical organizations who would be involved in an evacuation. Under LCCD's "general evacuation," it states they will evacuate Saint Stanislaus Home to \_\_\_\_\_ and evacuate invalids whose evacuation requires use of ambulance. The LCCD plan does not tell us who the ambulance associations are nor if they are equipped to handle such an emergency.

NUREG 0654 (section A. 2a) cites the description of these functions shall include a clear and concise summary such as a table of primary and support responsibilities. None of the above, from Communications to Emergency Medical - Fulfills this requirement.

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NUREG 0654 REV. (section A. part 3 page 32) requires that each plan shall include written agreements of referring to that concept of operations. Neither the State nor the Local plan fact, Civil Defense does not clearly name these support organizations.

NUREG 0654 REV. 1 "Notification Methods and Procedures" (page 43) requires "the content of initial and follow-up messages to response organization and the public has been established and means to provide early notification and clear instruction to the populace." Luzerne County Civil Defense plan (page 16) cites under both Selective evacuation and general evacuation that "County will notify Chamber of Commerce to pass on notification to business and industry. There is no clear

outline of how this will be accomplished and no letters of agreement appear between Civil Defence and Chamber of Commerce. Cited under general evacuation (Luzerne County plan (page 6), political subdivisions will be responsible for door to door notification within political boundaries. There is no mention of this notification would be executed within political subdivision nor who would be responsible for such notification if a general evacuation is called. There are no letters of agreements with political subdivisions to assume that responsibility of notification.

NUREG 0654 (section E. 1; page 43) requires that procedures for notification include means for verification of messages. Luzerne County plan makes no mention of any verification of messages. Luzerne County plan does not meet the requirements of NUREG 0654 (appendix 3 page 3 -2 ) which states "plan should give a description of the information that would be communicated to the public under given circumstances, for continuing instruction on emergency actions to follow, and updating of information."

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NUREG 0654 (section G 1 page 49) requires that each organization shall provide a coordinated periodic dissemination of information to the public. It shall include:

- a) education information on radiation
- b) protection measures
- c) special needs of the handicapped

Neither the State plan or the Luzerne County Civil Defense plan gives any mention to periodic dissemination of information to the public.

Luzerne County Civil Defense plan doesn't meet NUREG 0654 section G 2 required to see that the public information program should include provision for written material that is likely to be available in a residence during an emergency. Nor does Luzerne County plan meet NUREG 0654 (section G 4 a ) requirement designating a spokesperson who should have access to all necessary information. Luzerne County plan gives no provision for the Planning standard of NUREG 0654 (section G), which states "procedures for coordinated dissemination of information to the public are established." Luzerne County plan gives 4 brief lines to "Public Information."

NUREG\* 0654 REV. 1 (H 7, p. 54) states that "each organization, where appropriate, shall provide for offsite radiological monitoring equipment in the vicinity of the nuclear facility." The Luzerne County plan makes no provision for such equipment.

NUREG- 0654 REV 1(H 10 p. 54) requires that "each organization shall make provisions to inspect, inventory and operationally check emergency equipment/instruments at least once each calender quarter and after each use. There shall be sufficient reserves of instrument/equipment to replace those that are removed from emergency kits for calibration or repair." The state plan does not meet this requirement since it does not mention inspection, inventory, or checking og such equipment, nor does it mention reserves. The licensee's plan fails to mention reserves.

NUREG\*0654, REV. 1(H11, p. 54) requires that " each plan shall, in an appendix, include identification of emergency kits by general category (protective equipment, communications equipment, radiological monitoring equipment and emergency supplies)." The state plan and county plan both fail to meet this requirement since they do not include this information in an appendix or elsewhere.

NUREG 0654 Rev. 1 (I 7 p.57) requires that "each organization shall describe the capability and resources for field monitoring within the plume exposure Emergency Planning Zone which are an intrinsic part of this concept of operations for the facility." The Luzerne County plan makes no provision for such monitoring. The state plan provides for such monitoring, but omits specifics such as type of equipment, number of fixed monitoring sites on their location. With respect to in-place surveillance, the state plan (DER, p. XIV-1) states that "Generally these include air samplers and TLD's which is too vague to comply with the NUREG requirement.

Referring to the licensee and state, NUREG 0654, REV. 1 (I 9, p.58) states "each organization shall have a capability to detect and measure radiiodine concentrations in air in the plume exposure EPZ as low as  $10^{-7}$  uCi/cc (microcuries per cubic centimeter) under field conditions." Neither the plan of the licensee or state mentions whether they have this capability.

NUREG 0654, REV. 1 (I 10, p.58) requires that the licensee and state "establish means for relating the various measured parameters (e.g. contamination levels, water and air activity levels) to dose rates for key isotopes" and provide for estimating integrated dose from the projected and actual dose rates and for comparing these estimates with the protective action guides." The requirement states that the "detailed provisions shall be described in separate procedures." Both plans fail to meet this requirement by being too vague about the procedures to be used, failing to mention specific isotopes, and not referring to detailed provisions in separate procedures. The state plan (DER, p. XIII-2) says "estimates of direct population exposure from the passing cloud and from ground deposition are made from in-place air samples (sic) and from energy compensated TLD's." The licensee's plan (p.6-9) states "data from the meteorological tower and radiological monitors such as the contained monitor and vent monitors will be used together with isopleths and monographs to project whole body and thyroid doses." The licensee's plan (pp. 6-7 and 6-8) describes a computer program that cannot fully meet this requirement because it requires the selection of one of nine Design Basis Accidents, therefore being useless for Class 9 Accidents.

The Luzerne County plan would not adequately protect the public in the plume exposure pathway EPZ, as required by NUREG 0654, REV 1 (J), in part because the county plan has in some cases assigned tasks to organizations that do not exist or are not aware of having been assigned such tasks:

1) The County plan states (pp. 6,11,12) that in the event of a decision to take cover or evacuate, the county will notify the "Luzerne county Chamber of Commerce" to pass notification to business and industry. No organization by this name exists.

2) The county plan states (p. 7-8) "individuals with no transportation may request same through local fire companies. Commercial buses will be dispatched to local fire stations in the affected area to transport these individuals." The county did not consult either the fire companies or bus companies before including this procedure in the plan, or inform them of having included it.

Maps are not provided by either the licensee, or county, state showing, "preselected radiological sampling and monitoring points, relocation centers in host areas, and shelter areas" as required by NUREG-0654, REV. 1 (J. 10a, p. 61).

In the state plan (PEMA, p. 10) assigning to the state Department of Health the responsibility to "Develop procedures for stockpiling, in adequate supply, disturbing, and administering thyroid blocking agents and such other radiological health materials as may be required." does not meet the requirement either as it states that 1) thyroid blocking chemicals are to be stocked (p. 5), 2 the county medical officer will coordinate the distribution with the state Department of Health (p.7), and 3 the county medical group will assist the state Department of Health to their distribution (p.15) but gives no more specifics.

Neither the state or county plan meet the requirement of NUREG-0654, REV. 1 (J 10 f, p. 63) that "State and local organizations' plans should include the method by which decisions by the State Health Department for administering radioproductive drugs to the general public are made during an emergency and the pre-determined conditions under which such drugs may be used by offsite emergency workers". Neither plan addresses these decision-making issues at all.

The state and county plans do not adequately meet the requirement of NUREG-0654, REV.1 (J 10 g p. 63) that they specify the means of relocation." The county plan (pp. 7-8) states "individuals with no transportation may request same through local fire companies. Commercial buses will be dispatched to local fire stations, or specify the logistics of the procedure. It states (p,7) "schools will be evacuated by school authorities with school bus transportation to designated schools outside the 10-mile area," but does not name the school outside the 10 mile EPZ, name the designated schools to which the children are to be evacuated, or specify whether the capacity of the school buses are sufficient to evacuate the students without making return trips.

The state and county plans do not meet the requirement of NUREG-0654, REV. 1 (J 10 h, p. 63) that they include "relocation centers in host areas" since neither plan names specific relocation centers. The county plan (p.7) states "red cross will open reception centers at \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, and mass care centers in County to accommodate 18,000 persons." The capacity of 18,000 persons is inadequate since the population of the

10-mile EPZ is 47,171 (PEMA, appendix 1a, p.1). The plan does not state that the Red Cross is capable of staffing adequate relocation centers.

Neither the state or county plan includes "projected traffic capacities or evacuation routes under emergency conditions" as required by NUREG-0654, REV. 1 (J 10 i, p. 63).

Neither the state or county plan includes "identification of and means for dealing with potential impediments (e.g., seasonal impassability of roads) to use of evacuation routes, and contingency measures," as required by NUREG-0654, REV. 1 (J 10 k, p. 63). The only such references in the state plan are (PEMA, p. 13) "identification of and means for dealing with potential restrictions to the use of evacuation routes to include alternates" is assigned to the Department of Transportation, and DER, Bureau of Radiation Protection's plan states (p. VIII 4) "bad weather will also obviously influence the feasibility of evacuation, thereby making sheltering and other options attractive." The county plan only states (p. 7) that "based primarily on police and PennDot advice, modifications and detours will be made to evacuation routes as situations develop."

Neither the state or county plan include "time estimates for evacuation of various sectors and distances based on a dynamic analysis (time-motion study under various conditions) for the plume exposure pathway emergency planning zone" as required by NUREG-0654, REV. 1 (J 10 l, p. 63). The state plan only assigns to PEMA the function "continue to assess time estimates for protective action responses and update procedures with an objective of reducing actual response times to the extent possible" (PEMA, p. 12)

The plans of the licensee and state do not adequately meet the requirement of NUREG-0654, REV. 1 (J 10m, p. 64) that they contain "the bases for the choice of recommended protective actions from the plume exposure pathway during emergency conditions. This shall include expected local protection afforded in residential units or other shelter for direct and inhalation exposure, as well as evacuation time estimates."

Neither the state or county plan meet the requirement of NUREG-0654, REV. 1 (J 12, p.65) that "each organization shall describe the means for registering and monitoring of evacuees at location centers in host areas." The state plan (PEMA, p. 10) only assigns to the state Department of Environmental Resources the responsibility to "provide for the monitoring of evacuees at relocation centers." The county plan mentions (p. 14) initiating a "human locator system for transients in area" but does not mention registering or monitoring other evacuees.

The state plan does not adequately specify protective actions for the ingestion exposure EPZ. In particular, it fails to meet the following requirements of NUREG-0654, REV. 1 (J ii, p. 64):  
1) The requirement that "the plan shall identify procedures for detecting contamination" is not met by the plan stating "collection and analysis of environmental materials will be useful in evaluating the ingestion pathway." (DER, p. XIV-2)

2) It is required that the plan "identify procedures for imposing protective procedures such as impoundment, decontamination, processing, decay, product diversion, and preservation." The plan discusses the protective procedures mentioned, but fails to specify mechanisms for imposing and enforcing any of them. It states, "protocol for the implementation of any protective action involving dairy products or any agriculture product will require the evaluation of the circumstances with the appropriate agency of the Pennsylvania Department of Agriculture." (DER, pIX-1)

3) For the 50 mile ingestion pathway EPZ, or mention "maps for recording survey and monitoring data, key land use data (e.g. farming), dairies, food processing plants water sheds, water supply intake and treatment plants and reservoirs" except to state that "a map of dairy herd locations is given in the specific site plan" (DER, p. XIV-2), which is not included.

4) The plan does not include or mention "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 emergency planning zone, but located elsewhere."

#### Section K - Radiological Exposure Control

3.b. No mention of how this should be done in any way of the 3 plans. In state plans it is generally stated that the Dept. of Environmental Resources shall be in charge of radiological protective and health matters but nothing specific.

4. No such decision chain in any of the plans.

5a. The DER, Bureau of Radiation Protection, is to provide guidance in all such matters, but there is no specific plan. No mention in PF&L or county plans.

b. same as above

6. a.b.c. No mention.

7. No mention.

The state and county plans do not adequately make arrangements for medical services for contaminated injured individuals. Specifically, they do not meet the following requirements of NUREG-0654, Rev. 1 (p. 69):

"L1) Each organization shall arrange for local and backup hospital services having the capability for evaluation of radiation exposure and uptake, including assurance that persons providing these services are adequately prepared to handle contaminated individuals.

L3) Each state shall develop lists indicating the location of public, private and military hospitals and other emergency medical facilities within the state of contiguous states considered capable of providing medical support for any contaminated individual.

The Luzerne County plan fails to adequately meet the reentry and recovery planning requirement of NUREG-0654, REV. 1 (M, p. 70). Beyond stating that Pennsylvania Department of Environmental Resources Bureau of Radiological Health "will establish and disseminate appropriate re-entry criteria" (p.18), the only other

reference to reentry and recovery in the county plan (p. 7) "reentry to evacuated areas will be denied to all but residents who will be accompanied by mobile patrol, Pa. drivers license will be used as identification, and police cordon blocking entry to evacuated area will make maximum use of local police to facilitate identification of area residents" and (p. 19) "reentry will be based on advice (sic) of BRH, DER. Evacuated area will be denied to individuals not holding Pa. drivers license showing them to be a resident of the area. Residents of the area will be allowed entry accompanied by mobile patrol only with the exception granted by Chief Police Group Luzerne County CD. Emergency services of the area for a period of time before reentry to the general public is authorized."

The plans of the licensee and state do not need the NUREG-0654, REV. 1 requirement (M 3, p.70) that "each licensee and state plan shall specify means for informing members of the response organizations that a recovery operation is to be initiated, and of any changes in the organizational structure that may occur."

NUREG-0654, REV. 1, requires (N, p.71) that "periodic exercises are (will be) conducted to evaluate major portions of emergency response capabilities, periodic drills are (will be) conducted." The Luzerne County plan fails to meet this requirement, as it makes no mention of exercises or drills, except to list an annex entitled "Training and exercises," which is not included.

NUREG-0654, REV. 1 (N 1b) requires that "each organization should make provisions to start an exercise between 6:00 p.m. and midnight and another between midnight and 6:00 a.m. once every 6 years." The plans of the licensee and state fail to make this provision. NUREG-0654, REV.1 (N 1b, p.71) "exercises should be conducted under various weather conditions." The plans of the licensee and state both fail to specify this. NUREG-0654, REV. 1 (N 1 b) states "some exercises should be unannounced." The state plan makes no mention of having some unannounced exercises. The licensee's plan states (p.8-4). "the Supervisor-Nuclear Emergency Planning will notify the off-site emergency response organizations and agencies at least thirty days in advance of the scheduled date of the drill or exercise," making no mention of also having some unannounced exercises.

The state plan (FEMA, REV. 6/80) states (p. 14-1) that "communication with federal emergency response organizations and states within the ingestion pathway shall be tested annually," whereas NUREG-0654, REV.1 (N 2a) requires this to be done quarterly.

NUREG-0654, REV.1 (N2a, p. 72) states that "communications between the nuclear facility, state and local emergency operations centers, and field assessment teams shall be tested annually." Neither the state plan or that of the licensee mention the involvement of field assessment teams in exercises or drills.

NUREG-0654, REV1 (N 2a p.72) states "communication drills shall also include the aspect of understanding the content of measures." Neither the states' plan or that of the licensee mention including this aspect in drills.

NUREG-0654, REV. (N2d, p.73) requires that "plant environmental and radiological monitoring drills (onsite and offsite) shall be conducted annually." The licensee's plan makes no mention of such drills.

The licensee's plan makes no mention of Health Physics drills required by NUREG-0654, REV. 1 in N2e, (p.73).

Section O - Radiological Emergency Response Training.

1. State plan just gives general objectives in Appendix 10. In the county plan, Annex M is listed "Training and Exercises" but there is no Annex M. (see p. 21).
- 1.b same as above for state and county plans.
- 4 a. thru j. " " " "
- 5: " " " "
4. d. in PP&I, plan no mention of training for police.

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

1. County plans same as in section O
2. " " no mention
3. " " " "
4. State plan fails to mention that they will "certify it to be current on an annual basis.
5. " " " " ; also no mention in state plan.
6. " " " " ;
7. " " " " ; for the state plan, does their list of appendixes satisfy this requirement?
8. " " " "
9. No mention of this in any of the plans.