

VIII. EMERGENCY PLANNING
(ON-SITE ONLY)

Scope of Contentions

Following are "on-site" emergency planning contentions. Issues raised in these contentions are consistent with 10 CFR §50.47(d) as explained in the Commission's Statement of Consideration, 47. Fed. Reg. 30232 (July 13, 1982), which in turn refers to the pertinent standards of 10 CFR §50.47(b) and Part 50, Appendix E. Contentions essentially relate to those requirements concerning accident assessment; emergency action initiation, including communications (but not including notification to the public); applicant's emergency facilities and equipment; personnel responsibilities; off-site support services for on-site emergencies; protection of on-site persons; and training and drills.

Abbreviations

1. Limerick Generating Station Emergency Plan (hereinafter "Plan" or Plans")
2. NUREG-0654/FEMA-REP-1, Rev. 1, 'Criteria for Preparation and Evaluation of Radiological Emergency Response Plans and Preparedness in Support of Nuclear Power Plants" (hereinafter "NUREG-0654")
3. 10 CFR Part 50, Appendix E (hereinafter "Part 50, Appendix E")

VIII-1.

The Emergency Plan is inadequate, and does not comply with 10 CFR § 50.47 and the planning bases for the Commission's regulations on emergency planning in that the spectrum of postulated accidents in Section 4.2 of the Plan does not encompass the spectrum of credible accidents for which emergency planning is required. The Plan, at § 4.2, states that "the adequacy of this Emergency Plan is demonstrated by applying its provisions and noting that the provisions encompass the estimated radiological consequences of the postulated accidents". Table 4-1 shows that the postulated accidents are merely design basis accidents, with a maximum estimated dose at the LPZ of 1090 mrem (LOCA).

The regulations and planning bases for emergency planning plainly contemplate planning for accidents of much greater severity. (See, e.g. NUREG-0396, "Planning Basis for the Development of State and Local Government Radiological Emergency Response Plans in Support of Light Water Nuclear Power Plants").

BASIS

10 CFR § 50.47; Part 50, Appendix E; NUREG-0654; NUREG-0396; NUREG-0696 (Functional Criteria for Emergency Response Facilities).

VIII-2.

Applicant has not established an adequate emergency classification and action level scheme as required by 10 CFR § 50.47(b)(4) and NUREG-0654 guidance, in that:

(a) Initiating conditions of the Plan do not include all of the postulated accidents in the LGS FSAR, as required by NUREG-0654, Criterion D.2. Section 4.2 of the Plan lists only eleven of the many accidents postulated in the FSAR. No justification is provided for choosing these eleven and omitting all others.

(b) Initiating conditions of Table 4.2 of the Plan do not include all applicable example conditions listed in Appendix 1 of NUREG-0654, as required by Criterion D.2 of that guidance document. Specifically,

- 1) Example initiating conditions 3b and 12 of the Appendix 1 "Unusual Event" classification are not addressed in Table 4.2 of the Plan.
- 2) Example initiating conditions 4, 8, 9, 10, 12, 14, 16, 17b, 18a,b,c,e, and 20 of the Appendix 1 "Alert" classification are not addressed in Table 4.2 of the Plan. 17c is inadequately addressed, in that Applicant's Plan designates "tornado strikes power block" rather than tornado striking any portion of the facility, as an initiating condition for the "Alert" classification. 17d is inadequately addressed, in that wind speeds for "Alert" and "Site Area Emergency" have not been assigned to distinguish between these classifications.

- 3) Example initiating conditions 1, 2, 8, 9, 10, 12, 14 and 15b of the Appendix 1 "Site Area Emergency" classification are not addressed in Table 4.2 of the Plan. If #Ve of Table 4.2 is intended to satisfy initiating condition 2 of Appendix 1 for this classification, Table 4.2 EAL's are incorrect.
- 4) Example initiating conditions 2, 3, 4, 6 and 7 of the Appendix 1 "General Emergency" classification are not addressed in Table 4.2 of the Plan. Note: IE. Information Notice No. 83-28, issued May 4, 1983, addresses this matter.

BASIS

10 CFR § 50. 47 (b) (4); NUREG-0654, Criterion D.2 and Appendix 1; LGS Plan § 4.2.

VIII-3.

The on-site plans do not identify and establish the on-site monitoring systems that are to be used to initiate emergency measures in accordance with Appendix 1 of NUREG-0654, as required by Criterion H.5 of that document. Applicant's response to Q. 810.32 states that this information will not be available until the fourth quarter of 1983.

BASIS

NUREG-0654, Criterion H.5.

VIII-4.

The on-site Plan fails to demonstrate establishment of a mechanism for direct notification of protective action recommendations directly to the off-site authorities responsible for implementing protective measures within the plume exposure EPZ, as required by NUREG-0654, Criterion J.7. While the Plan provides that the interim emergency director or emergency director make protective action recommendations directly to the counties "when warranted" (see Plan, §5.2.1.1.(g)), no criteria are established for making the decision to make such direct recommendations. It is therefore not possible to determine from the Plan when such direct notification will, or will not, take place.

BASIS

10 CFR §50.47(b)(10); Part 50, Appendix E; NUREG-0654, Criterion J.7; Plan, §5.2.1.1(g).

VIII-5.

The Plan fails to comply with Criterion J.10(m) of NUREG-0654, which requires the Applicant to set forth the bases for a choice of recommended protective actions for the plume exposure pathway, considering expected local protection afforded in residential units or other shelter, and evacuation time estimates. Applicant's response to Q 810.52 suggests that this information will be provided in implementing procedures that will not be available until fourth quarter, 1983. Applicant's response to Q810.54 states that a "commitment to define guidelines for determining plume exposure protective action recommendations" is found in the Plan, but no specific guidelines and bases have yet been established.

BASIS

10 CFR §50.47(b)(10); Part 50, Appendix E; NUREG-0654, Criterion J.10(m).

VIII-6.

The on-site plans for emergency notification fail to comply with 10 CFR § 50.47 (b) (5) and the guidance of NUREG-0654, in that:

(a) The Plan does not yet demonstrate that the bases established for the Applicant's notification of response organizations are mutually agreeable;

(b) The Plan fails to make adequate provisions for follow-up messages to off-site authorities in that the notification formats set forth in Appendix F are for initial notification only, and thus fail to contain all the information required by NUREG-0654, Criterion E. 4, (p. 44).

(c) The Plan's provisions for prompt notification do not comply with the guidance of NUREG-0654, Appendix 1, in that the Plan at § 6.1 provides for notification of emergency organizations "within about 15 minutes after classifying the event" for each emergency class. NUREG-0654, Appendix 1, p. 1-3 requires that notification take place within 15 minutes from the time at which operators recognize that events have occurred which make declaration of an emergency class appropriate, not from the time of classification, and requires notification sooner than 15 minutes for classes more serious than unusual events.

BASIS

10 CFR § 50.47, Part 50, Appendix E; NUREG-0654, Criteria E. 1, 4; Appendix 1; Plan § 6.1, Appendix F.

VIII -7.

The on-site plans fail to demonstrate that the on-shift facility licensee responsibilities for emergency response are unambiguously defined, adequate staffing to provide initial facility accident response in key functional areas is maintained at all times, timely augmentations of response capabilities is available, and the interfaces among various on-site response activities and off-site support activities is specified, as required by 10 CFR § 50.47 (b) (2), especially in that:

(a) The plans fail to establish a line of succession for the emergency coordinator position beyond a single alternate for the interim emergency director and emergency director, and fails to identify specific conditions for higher level utility officials assuming this function, all as required by NUREG-0654, Criterion B.3 (p. 34). Failure to establish a sufficient line of succession will cause chaos in the event of the unavailability of the persons listed, as the responsibilities of the emergency director are specifically not delegated to other segments of the emergency organization, which include the initiation of protective measures on-site.

(b) The Alternate Site Emergency Coordinator (Plan, § 5.2.1.3) is the Peach Bottom Station Superintendant. This arrangement is inadequate because of the travel time, well in excess of one hour, from Peach Bottom to either the Limerick EOF or PECO Headquarters Emergency Support Center.

Travel time may prevent the alternate site emergency coordinator from carrying out his designated responsibilities under § 5.2.1.3 of the Plan under accident conditions which require rapid response.

(c) The Applicant's staffing provisions (See Plan, Figures 5-1, 5-2, 5-5 and Table I-1) do not comply with the minimum staffing requirements set forth in NUREG-0654, Table B-1 (pp 37-38) in that:

- (1) NUREG-0654 Table B-1 requires 2 control room operators to be on-shift with 2 auxiliary operators, while Figure 5-5 shows one control operator and 2 assistant control operators. Reliance on augmentation from Unit 2 is not possible pending Unit 2 staffing;
- (2) Table B-1 requires 2 health physics technicians to be on-shift, and Figure 5-5 shows only 1 H.P. technician on-shift;
- (3) 30 and 60 minute augmentations of minimum staffing does not comply with Table B-1 (See Plan, Table I-1) and while Figure 5-2 is referenced in Table I-1, neither augmentation timing, nor position augmentation are coherently shown.

(d) Table B-1 requires in-plant surveys to be performed by H.P. technicians, with one on-shift, while Plan Table I-1 has these surveys

performed by radiation chemistry technicians.

(e) The responsibilities imposed upon the Interim Emergency Director or Emergency Director in §5.2.1.1 (which are explicitly "not delegated to other segments of the emergency organization") are excessive and cannot reasonably be implemented by a single individual. According to Fig. 5.3 of the Plan, the Interim Emergency Director (or Emergency Director) is responsible for making a very large number of initial contacts in the event of an emergency. In addition, the list of other non-delegable duties of the Interim Emergency Director, as listed in §5.2.1.1 of the Plan, is lengthy and complicated. It is unreasonable to assume that one individual can receive all relevant information from plant operators, transpose it into complete, accurate and useful information for emergency-relevant organizations, and transmit it to them in a timely manner, while carrying out all of his other duties. The Interim Emergency Director should concentrate on decision-making and managing and coordinating the appropriate response mechanism; initial notification responsibilities themselves should be delegated to other qualified individuals.

BASIS

10 CFR §50.47(b)(2); Part 50, Appendix E; NUREG-0654, Criteria B.2, B.3, B.4, B.5, Table B-1; Plan §§5.2.1.1, 5.2.1.2, 5.2.1.3, Figures 5-1, 5-2, 5-5, Table I-1; LEA communications with emergency response consultants.

VIII-8.

The LNGSEP fails to demonstrate that adequate emergency facilities and equipment to support emergency response are provided and maintained as required by 10 CFR § 50.47 (b) (8), especially in that:

(a) The documents to be supplied in or made accessible to the Technical Support Center (see Plan § 7.1.3) are inadequate to properly perform the function of the center in that they fail to include copies of plant operating records, and plant operations reactor safety committee records and reports (see NUREG-0814, p. 2-15), which may be vital in determining the plant-specific behavior of equipment; they also fail to include documentation for procedures to access and use the system for remote interrogation of atmospheric measurements and predictions (NUREG-0654, Appx. 2, p. 2-5).

(b) The Plan's descriptions of the Emergency Operations Facility (Plan § 7.1.2), the Technical Support Center (Plan § 7.1.3), the Operational Support Center (Plan § 7.1.4), and emergency equipment and supplies are all insufficient to meaningfully assess compliance with 10 CFR § 50.47 (b) (8) and to evaluate the facilities with respect to the criteria of NUREG-0654, Supplement 1 to NUREG-0737 (§8), and NUREG-0696. Intervenor contends the applicant has not demonstrated that the facilities proposed are adequate. Applicant's response to Q 810.30 states that the Plan will be expanded when final information is available on these facilities.

(c) The Plan fails to set forth the procedures for or manner of maintenance of the emergency facilities so as to preclude degradation of facility effectiveness, which maintenance is required by 10 CFR § 50.47 (b) (8).

BASIS

10 CFR § 50.47 (b) (8); Part 50, Appendix E; NUREG-0654, Criteria H. 1, 2, 9, NUREG-0696, "Functional Criteria for Emergency Response Facilities: NUREG-0814, pp. 2-15; Supplement 1 of NUREG-0737, §8.

VIII-9.

The on-site plans fail to demonstrate that provisions exist for prompt communications among principal response organizations to emergency personnel and to the public, as required by 10 CFR § 50.47 (b) (6) especially in that:

(a) The Plan fails to establish reliable backup means of communication for the Applicant, except for backup radio communication between the control room and Montgomery County Office of Emergency Preparedness, and backup power for the PABX telephone system described in § 7.2.2 of the Plan;

(b) The Plan contains no provision for communications by the licensee between EOF and the radiological monitoring team assembly area, as required by Criterion F.1(f). See Figure 7-2 of the Plan.

(c) The Plan does not demonstrate that the Applicant has ensured the existence of a coordinated communications link for the fixed and mobile medical support facilities as required by Criterion F. 2.

(d) The provision for testing of the communications system is inadequate, in that (1) The Plan does not show that the communications drills require the aspect of understanding the content of messages; (2) there is no provision for testing of the communications system between organizations other than those specified in § 8.1.2.5 of the Plan, thus failing to constitute a test of the entire emergency communications system, as required by NUREG-0654, Criterion F. 3. Omitted, for example, are the Pennsylvania State Police, RMC, Conrail, ambulance services, Pottstown Hospital, and any other off-site response organizations.

BASIS

10 CFR § 50.47; Part 50, Appendix E; NUREG-0654, Criteria F 1, 2, 3.

VIII-10.

The on-site plans fail to comply with 10 CFR §50.47(b)(2) and the guidance of NUREG-0654, Criterion B.9, in that:

(a) Where the Applicant has identified the services to be provided by some local agencies for handling emergencies, the agreements with those local support sources do not delineate the authorities, responsibilities and limits on the actions of the contractors/agencies, but merely briefly describe the general nature of the service to be provided.

(b) Section 2.2.4 of the Plan lists the Radiation Medicine Center of the Hospital of University of Pennsylvania (HUP) as a local agency that has agreed to respond to requests for assistance at Limerick. Section 5.3.2.1 of the Plan states that HUP will be one of two hospitals to which victims are evacuated from the site, and lists the extensive capabilities of that organization, which is designated as the "central point" of PECO's Emergency Medical Assistance Plan. On the other hand, section 6.5.4 of the Plan, entitled Medical Treatment, totally omits mention of HUP as a support service. The Plan contains no written agreement for support services from HUP, as required by NUREG-0654, Criterion B.9. The fact that the director of Radiation Management Corporation, which is under contract with PECO, is on the staff of HUP (see Plan, §5.3.2.1) in no way guarantees that HUP will provide services without a prior written agreement.

BASIS

10 CFR §50.47(b)(2); Part 50, Appendix E; NUREG-0654, Criterion B.9; Plan §§ 2.2.4, 5.3.2.1, 6.5.4, Appendix A.

Note: LEA has not submitted a contention alleging missing county agreements, since the Plan indicates that those are forthcoming.

VIII-11.

The agreement with Linfield Fire Co. #1 to provide "all needed fire protection for the Philadelphia Electric Power generating station" is not adequate, as the Linfield Fire Co. #1 does not have adequate equipment to respond alone to the entire range of fires which may occur at the facility. Additional agreements should be reached with other local fire companies to provide additional fire protection.

BASIS

The Linfield Fire Co. #1 has only 4 vehicles: one fire truck in good condition, 1 old fire truck, one van and one jeep. Disability of any one of the fire trucks, a more than one alarm fire, or the fire company's response to another fire within its service area, would each operate to render the response inadequate. The information on equipment is premised upon LEA personal communications with Linfield Fire Co. See agreement letter in Plan Appendix A.

VIII-12.

The on-site plans fail to demonstrate that adequate arrangements have been made, or will be made, for medical services for contaminated injured individuals on-site, as required by 10 CFR §50.47(b)(2) and (12), in that:

(a) While medical services and facilities are described in sections 5.3.2.1 - 5.3.2.5 of the Plan, it has not been demonstrated that these services and facilities are adequate for the potential number of persons contaminated by the spectrum of credible accident scenarios for which planning is required, including some core-melt sequences (see NUREG-0396). The plans contain an agreement with Pottstown Memorial Hospital, a facility only two miles from the site, to provide emergency treatment to contaminated patients. In a general emergency, the hospital will be required to evacuate its own patients, which will preclude acceptance and treatment of radiation victims coming from the site. The status of medical support from the Hospital of University of Pennsylvania is unclear as well (see contention VIII-9(b), above). These are the only two hospitals listed in the Plan as available for medical services to on-site contaminated victims. See NUREG-0654, Criteria B.9 and L.1.

(b) The Plan does not demonstrate that the Applicant has arranged adequate transportation of victims of radiological accidents to medical support facilities, as required by NUREG-0654, Criteria B.9 and L.4. The Applicant's provisions as described in §6.5.3 of the Plan fail to demonstrate the availability of sufficient ambulance service, and shielding for such service, in view of the potential number of contaminated persons.

While the plans contain an agreement with Goodwill Ambulance Unit to transposrt on-site accident victims to off-site medical facilities, in a general emergency the Unit will be required to evacuate non-ambulatory patients requiring critical care from Pottstown Memorial Hospital. The Unit has, as of late 1982, only 4 well-equipped vehicles, and is the only ambulance unit in the plant vicinity. Therefore, additional provisions for ambulance service will be necessary.

BASIS

10 CFR §§50.47(b)(2) and (12); Part 50, Appendix E; NUREG-0654 Criteria B.9 and L.1 and 4; NUREG-0396; Plan §§ 5.3.2.1 -5.3.2.5, 6.5.3; personal communications with Goodwill Ambulance Unit facilities.

VIII-13.

The on-site plans fail to demonstrate that arrangements for requesting and effectively using assistance resources have been made, and other organizations capable of augmenting the planned response have been identified as required by 10 CFR §50.47(b)(3), especially in that:

(a) The Plan does not properly incorporate on-site Federal response capability into its operation plan, as it neither specifies the nature of the resources expected from Federal agencies, including estimated arrival time at Limerick, nor incorporates specific licensee, State and local resources available to support the Federal response (e.g., air fields, command posts, telephone lines, radio frequencies and telecommunications centers), as required by NUREG-0654, Criterion C.1.

(b) The Plan does not sufficiently identify the radiological laboratory capabilities and availabilities for augmented response to emergencies, as required by NUREG-0654, Criterion C.3.

(c) The Plan does not identify what specific assistance and support are to be furnished by the States of Maryland, New Jersey and Delaware, or by the nuclear industry, and no letters of agreement are provided in the Plan, as required by NUREG-0654 Criterion C.4.

BASIS

10 CFR §50.47 (b)(3); Part 50, Appendix E; NUREG-0654 Criteria C.1, 3, 4.

VIII-14.

The on-site Plans fail to demonstrate that adequate methods, systems and equipment for assessing and monitoring actual or potential off-site consequences of a radiological emergency condition will be in use by the Applicant, as required by 10 CFR §50.47 (b)

(9) especially, in that the Plans do not demonstrate or describe:

(a) With adequate particularity the plant system and effluent parameter values characteristic of an adequate spectrum of off-normal conditions and accidents, as required by NUREG-0654, Criterion I.1; values in Table 4.2 of the Plan have not been supplied.

(b) That adequate arrangements have been made to locate and track an airborne radioactive plume emanating from the plant, as required by NUREG-0654, Criterion I.11.

(c) Adequacy of procedures for analysis of off-site dosimetry and procedures describing methods for calculating off-site doses, as referred to in section 6.2, pp. 6-3 and 4 of the Plan, in that these procedures have not been provided, and assessment of adequacy is impossible.

(d) The specific kinds of monitoring instruments to be used and their capabilities.

(e) Adequate on-site capability and resources to provide initial values and continuing assessment throughout the course of an accident. Applicant's response to Q 810.48 states that the design of the assessment system will not be complete until 1984.

(f) Adequate methods and techniques to be used for determining the source term of releases of radioactive material within plant systems, and the magnitude of the release of radioactive materials based on plant system parameters and effluent monitors. Applicant's response to Q 810.40 states that this information will not be available until 1984.

(g) The capability of acquiring and evaluating meteorological information sufficient to meet the criteria of Appendix 2 to NUREG-0654; provisions for access to meteorological information by the Emergency Operations Facility and the Technical Support Center; availability to the Commonwealth of Pennsylvania of suitable meteorological data processing interconnections which permit independent analysis by the Commonwealth of Pennsylvania. The Applicant's response to Q 810.42 states that this information will not be available until 1984.

(h) The methodology for determining the release rate and projected doses if the instruments used for assessment are off scale or inoperable. Applicant's response to Q 810.44 states that these procedures will not be available until 1984.

(i) The specific capability and resources for field monitoring within the plume exposure EPZ;

(j) That the Applicant has adequate capability to detect and measure radioiodine concentrations in air in the plume exposure EPZ as low as 10^{-7} u Ci/cc under field conditions, and that any interference from the presence of noble gases and background radiation will not decrease the stated minimum detectable activity, as required by NUREG-0654, Criteria I. 9., p. 58. Applicant's response to Q 810.46 does not verify sensitivity of 10^{-7} u Ci/cc, and does not state that interference from noble gases and background radiation will not decrease the minimum detectable activity.

(k) That the Applicant has established means for relating the various measured parameters to dose rates for key isotopes, and gross radioactivity measurements; nor has the Applicant shown that provisions have been made for estimating the integrated doses from the projected and actual dose rates, and for comparing these estimates with the protective action guides, as required by NUREG-0654, Criterion I.10. Applicant's response to Q 810.48 states that this information will not be available until 1984.

BASIS

10 CFR §50.47(b)(9); Part 50, Appendix E; NUREG-0654 Criteria I.1-11 inclusive; Plan § 6.2.

VIII-15.

The on-site plans fail to demonstrate that an adequate range of protective actions has been developed for the Plume Exposure Pathway for persons on-site, as required by 10 CFR §50.47 (b) (10), in that:

(a) The Plan fails to demonstrate that the Applicant has made sufficient provisions for evacuation routes and transportation for on-site individuals to a suitable off-site location, including alternatives for inclement weather, high traffic-density, and specific radiological conditions, as required by NUREG-0654, Criterion J. 2., especially in that no routes have been designated in the Plan, no suitable off-site location has been designated, and no alternatives for any contingencies have been established

(b) The Plan fails to establish that the Applicant has provided for adequate radiological monitoring of people evacuated from the site, as required by NUREG-0654, Criteria J. 3., (p. 59), especially in that the plans do not reflect the time within which the taking of whole body counts and the processing of dosimetry devices of evacuees, can be completed; nor do the plans indicate that all plant personnel, visitors, construction workers, etc. who may be exposed to radioactivity during an accident will have possession of dosimetry devices; nor do the plans indicate when and how techniques will be established which will provide data for estimating neutron dose where suspected. With respect to neutron

dose, the plan refers to implementing procedures which have not been provided (p. 6-12).

(c) While applicable guidance (NUREG-0654, Criterion J. 4.) requires that the Applicant must provide for the evacuation of on-site non-essential personnel in the event of a site or general emergency, the Plan fails to make any distinction between "essential" and "non-essential personnel", and it is unclear how the Applicant will administratively enforce such a distinction;

(d) The Plan fails to describe the decontamination capabilities at the point of radiological monitoring, with sufficient specificity to determine adequacy of the monitoring required by NUREG-0654, Criterion J. 3, 4;

(e) The Plan fails to demonstrate a capability within 30 min to account for all individuals on-site at the time of an emergency, as required by NUREG-0654, Criteria J. 5;

(f) The Plan fails to establish that the Applicant has made provisions for each person remaining or arriving on-site during the emergency to have individual respiratory protection, protective clothing and individual thyroid protection, as required by Criterion J. 6.

BASIS

10 CFR § 50.47 (b) (10); Appendix E; NUREG-0654, Criteria J.2, 3, 4, 5, 6 (a-c).

VIII-16.

The on-site plans fail to demonstrate that adequate means for controlling radiological exposures in an emergency have been established for emergency workers and that such means include exposure guidelines consistent with EPA Emergency Worker and Lifesaving Activity Protective Action Guides, as required by 10 CFR § 50.47 (b) (11) in that:

(a) While the on-site plans provide for distribution of KI "per approved procedure", these procedures are not available for review, and their adequacy cannot be assessed. Further, the plan provides that distribution shall be limited to specific emergency workers judged in need of treatment. Such a distribution arrangement is inadequate, because KI is only effective if the stable iodine is administered before or shortly after the start of intake of radioiodine. (US EPA, Manual of Protective Action Guides, p. 142). See also Applicant response to Q. 810.53.

(b) The Plan fails to meet the guidance of NUREG-0654 Criteria K. 2., without justification, in that it fails to set forth advance procedures for permitting on-site volunteers to receive radiation exposures in the course of carrying out lifesaving and other emergency activities, which procedures must include expeditious decision-making and a reasonable consideration of relative risks, especially in that no advance procedures

have been established at all, no reasonable consideration of relative risks has been made, and other than the impermissibly vague guidance of Table 6-1, the determination of exposure limits is left utterly to the individual;

(c) The Plan does not demonstrate how emergency workers will have sufficient information concerning radiation risks upon which to make an informed judgment regarding radiation exposure, although the plan leaves exposure limits to the individual;

(d) The Plan fails to establish that the Applicant has made provisions for 24 hour-per-day capability to determine the doses received by emergency workers involved in an accident at Limerick, has made provisions for distribution of sufficient dosimeters, has ensured that the dosimeters are read at appropriate frequencies, and that dose records are maintained, as required by NUREG-0654, Criteria K. 3. (a) - (b). While the Plan (§6.5.1) makes reference to emergency access procedures, these have not been provided for review.

(e) The Plan fails to establish that the Applicant has specified action levels for determining the need for decontamination, or has established adequate means for radiological decontamination of emergency personnel wounds, supplies, instruments, equipment, and for waste disposal as required by NUREG-0654, Criteria K. 5, in that the action levels are to be determined in emergency implementing procedures which have not yet been pro-

vided, and the decontamination capabilities are not described with sufficient detail to assess their adequacy. Applicant's response to Q 810.57 states that the information will be provided shortly before fuel loading. Intervenor requests access to the information as soon as available, and reserves the right to file contentions based upon the information set forth therein.

(f) The Plans fail to demonstrate that the Applicant has established procedures for, and capability for, on-site contamination control measures, including area access control, drinking water and food supplies, and criteria for permitting return of areas and items to normal use, all as required by NUREG-0654, Criteria K. 6., p. 67. The Plan provides that some of these matters will be addressed by implementing procedures (See Plan, § 6.4.3.1. and Applicant Response to Q 810.58) but no procedures have yet been submitted by the Applicant. Intervenor requests access to the implementing procedures as soon as available, and reserves the right to file contentions based upon the information set forth therein.

(g) The Plans fail to demonstrate that the Applicant has established the capability for decontamination of relocated on-site personnel, including provision for extra clothing and decontaminants suitable for expected contamination, including radioiodine contamination of the skin, as required by NUREG-0654, Criteria

K. 7., p. 68. The quantity of extra clothing is nowhere mentioned in the equipment lists set forth in the plans, and while mention is made of "decontamination chemicals", these are not described sufficiently either in the Plan or in the Applicant's response to Q 810.59 to ascertain effectiveness for radioiodine skin contamination.

BASIS

10 CFR § 50.47 (b) (11); Part 50, Appendix E; NUREG-0654, Criteria K. 1, 2, 3, 5, 6, 7; EPA Emergency Worker and Lifesaving Activity Protective Action Guides (EPA 520/1-75/001); LNGSEP, §§ 6.5.1., 6.5.2., 7.1.5 (c), Table 6-1, 6.4.3.1.

VIII-17.

The on-site Plans fail to establish that the Applicant has developed adequate plans for recovery and re-entry as required by 10 CFR § 50.74 (b) (13), in that:

(a) The Applicant's "plans" consist merely of a string of titles and personnel functions (Plan, §§5.4.1 --5.4.11) without any evidence of any plans or procedures to guide these functions. Section 9 of the Plan submitted to date indicates that no recovery and re-entry plans have been developed, and specific plans will not be developed until needed. (Plan, § 9.2). Intervenor contends that the failure to provide even general plans violates 10 CFR § 50.47 (b) (13).

(b) The Plans fail to describe the means by which decisions to relax protective measures will be reached, considering both existing and potential conditions;

(c) The Plan fails to specify the method to be used for periodically estimating the total population exposure. Applicant's response to a 810.60 states that this information will not be available until shortly before fuel loading.

BASIS:

10 CFR § 50.47 (b) (13); Part 50, Appendix E; NUREG-0654, Criteria M. 1, 4.

VIII-18.

The on-site plans fail to demonstrate that adequate radiological emergency response training will be provided to those who may be called upon to assist on-site in an emergency, as required by 10 CFR § 50.47 (b) (15), in that the training programs are not sufficiently described to assume compliance with the guidance of NUREG-0654, Criteria 0.2 and 4. Intervenor requests access to all training materials to be used for the purpose of compliance with 10 CFR § 50.47 (b) (15) as soon as available, and reserves the right to file contentions based upon the information contained therein, including contentions placing in issue the adequacy of such training materials. Applicant's response to Q 810.63 states that the procedures for training will not be developed until training needs are identified (and vice versa).

BASIS

10 CFR § 50.47 (b) (15); Part 50, Appendix E; NUREG-0654, Criteria 0.1, 2, 4; Plan § 8.1.1, Table 8-1.

VIII- 19.

The on-site plans fail to demonstrate that responsibilities for plan development and review and for distribution of emergency plans are established and planners are properly trained as required by 10 CFR § 50.47 (b) (16), in that:

(a) The Applicant has not provided for proper training for the individuals involved in the planning effort. The Plans' provisions for training of Applicant's staff set forth in Table 8-1 are provisions for training for implementation of the Plan, and there is no indication that Planners will be trained or qualified as such;

(b) The Plan fails to demonstrate that the organization or persons responsible for annual review of the emergency preparedness for the Applicant are independent; and that the results of review and recommendations will be reported to all involved federal, state and local organizations, and retained for five years, as required by NUREG-0654, Criteria P. 9. Applicant's response to Q. 810.67 and 810.68 indicate that procedures will be developed by the third quarter of 1984.

BASIS

10 CFR § 50.47 (b) (16); Part 50, Appendix E; NUREG-0654, Criteria P. 1, 4, 9; Plan § 8.2.1, 8.2.4.

VIII-20.

The on-site plans fail to demonstrate that adequate periodic exercises will be conducted to evaluate major portions of emergency response capabilities, periodic drills will be conducted to develop and maintain key skills, and deficiencies identified as a result of exercises or drills will be corrected, as required by 10 CFR § 50.47 (b) (14), in that:

(a) The Plan fails to demonstrate that the Applicant has made provisions for an exercise starting between 6:00 P.M. and midnight, and another between midnight and 6:00 A.M. once every six years, and for the conduct of unannounced exercises, as required by NUREG-0654, Criterion N. 1. (b).

(b) The Plan provision for testing of communications is inadequate, in that the guidance of NUREG-0654 Criterion N. 2. (a) requires quarterly testing of communications with States within the ingestion pathway, whereas § 8.1.2.5 of the Plan does not provide for such testing;

(c) The Plan fails to comply with NUREG-0654, Criteria N. 2. c., p. 72, in that the guidance requires the conduct of an annual medical emergency drill including ambulance service whereas § 8.1.2.3 does not specify ambulance participation;

(d) The Plans fail to demonstrate that either the Applicant or the Commonwealth of Pennsylvania will conduct semi-

annual health physics drills which involve response to and analyses of, simulated elevated airborne and liquid samples and direct radiation measurements in the environment, as required by NUREG-0654, Criteria N. 2. (e) (1), p. 73;

(e) The Plans fail to demonstrate that the Applicant will annually include in the health physics drills required analysis of implant liquid samples with actual elevated radiation levels including use of the post accident sampling system, as required by NUREG-0654, Criteria N. 2. (e) (2), p. 73;

(f) Inasmuch as no exercise scenarios have been submitted by either the Applicant, or state or local emergency response organizations, the Plans fail to demonstrate that such scenarios comply with the requirements of NUREG-0654, Criteria N.3., p. 73-74;

(g) The Plan's provisions for maintaining emergency preparedness fail to provide that the drills required by NUREG-0654, Criteria N. 2. (a) through (e) will be held in addition to an annual exercise, as the guidance requires, but instead provides that "scenarios may be developed in such a manner as to accomplish more than one periodic requirement" (Plan § 8.1.1);

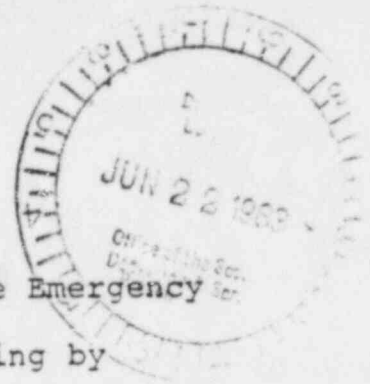
(h) The Plan's provisions for annual exercises fail to set forth whether the local emergency response organizations will be required to be activated, thus constituting an actual

exercise of the integrated emergency response capability, or whether the local emergency response organizations will merely be notified by the Applicant, thus constituting only a test of the communications system. This violates the guidance of NUREG-0654, Criterion N. 1. (b), which requires that an exercise "shall include mobilization of . . . local personnel and resources adequate to verify the capability to respond to an accident scenario requiring response."

BASIS

10 CFR § 50.47 (b) (14); Part 50, Appendix E; NUREG-0654, Criteria N. 1,2,3; LNGSEP §§ 8.1.2.2.; 8.1.2.3.; 8.1.2.5.

CERTIFICATE OF SERVICE



I hereby certify that the foregoing On-site Emergency Planning Contentions were served upon the following by first-class mail, postage prepaid, with service by Express Mail to those on the service list beside whose names appears an asterisk (*):

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