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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Before the Atomic Safety and Licensing Board

In the Matter of)
)
THE CLEVELAND ELECTRIC)
ILLUMINATING COMPANY, ET AL.)
)
(Perry Nuclear Power Plant,)
Units 1 and 2))
)

Docket Nos. 50-440 OL
50-441 OL

SUNFLOWER ALLIANCE'S PARTICULARIZED OBJECTIONS TO PROPOSED EMERGENCY
PLANS IN SUPPORT OF ISSUE NO. I

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Inc.,
Intervenor

I. INTRODUCTION

By its July 26, 1984 "Memorandum and Order," the Board directed Sunflower Alliance, Inc., Intervenor herein, to:

[S]pecify in a written filing the specific inadequacies alleged to exist in the draft local and state emergency plans and . . .
[to] provide a reasoned basis for believing that the allegations concerning inadequacies are true.

Sunflower herewith submits its specific, particularized objections. By so doing, Sunflower expressly reserves the right to specify further objections concerning inadequacies in state, local, and on site emergency plans, and to object further to planning bases or other linkages between onsite and offsite plans.

II. OBJECTIONS

A. Evacuation Time Estimate Defects

By NUREG-0654, Applicant is constrained to afford opportunity to "organizations (State and local) involved in emergency response for the site" to review and comment upon Applicant's estimated time requirements for confirmation of evacuation. Id. at 61, 4-10. This procedure is apparently designed to allow "[s]pecific recommendations for actions that could be taken to significantly improve evacuation time" to be made. Id. at 4-10. Regulatory guidance imposes the additional obligation that

Where significant costs may be involved, preliminary estimates of the cost of implementing these recommendations shall be given.

Id.

Nowhere in the draft state and local organizations' plans was any note made of having afforded the latter any opportunities to comment or review, much less to propose recommendations for improvement or quantifications of the costs of those improvements. All of these problems have previously come to the notice of the NRC Staff. NUREG-0887 Supp. 4 at 13-16.

Applicant also has failed credibly to address the effects of adverse weather (i. e. a thunderstorm) on a summer Sunday evacuation. Id. "[A] northern site with a high summer tourist population should

consider rain, flooding, or fog as the adverse condition as well as snow with winter population estimates." NUREG-0654 at 4-6,7.

B. Lack of Identification of Route Impediments

Draft state and local plans neither identify, nor propose options for dealing with, potential impediments to use of evacuation routes, required by NUREG-0654 at 63. For instance, no discussion of a snow emergency appears. No discussion of the logistics of evacuating the supposed thousands of construction workers who will be laboring to complete Unit 2 at Perry appears to have been considered.^{1/} See also NUREG-0887 Supp. 4 at 13-16.

State and local governments have to maintain considerable hardware and road-clearing equipment at quite a large cost for snow removal purposes - resources which are quite strained perhaps a dozen times in any given winter in the highland "snowbelt" east of Cleveland. Were the Board to take official notice that the snow season is nearly five (5) months in length, it would be obvious that a major deficiency in perspective exists. For that matter, the plans should include consideration of low or no-power operations at PNPP through the duration of an immobilizing period of inclement weather (viz., the "Blizzard of '78").

C. Uncertain Chain of Command

In the event of a radiological emergency at PNPP, CEI staff are responsible for classifying the incident, activating the onsite emergency organization, and notifying offsite authorities. NUREG-0887 Supp. 4 at 13-2.

The State of Ohio Disaster Services Agency (DSA), Adjutant-General's office is the lead support agency to affected county governments, and it falls to DSA to notify other state officials and locally-involved entities. Id.

Ashtabula's County Commissioners will "control" actions to be taken. See State Plan, Rev. 3 at 5-31. Lake County's Commissioners did not even rate a mention as to their roles in the State Plan. Id. at 5-25. In the event of a "general emergency," where protective steps must be taken for the public within a 10-mile radius of PNPP in as little

^{1/} This may be a self-correcting mutation, however.

as 15 minutes, Ashtabula County's "Radiological Emergency Response Plan" (RERP) states that its County Commissioners will "order" shelter or even evacuation, based on advice of County staff and "recommendations" of the Governor's office. Id. at 4. See also Lake County RERP at 1. See also State Plan, Rev. 3 at 5-27, wherein the Lake County Prosecutor advises on emergency authorities and proclamations. In sum, there is no consistently-defined role in a major or minor emergency for County Commissioners, especially in conjunction with any leadership which would be forthcoming from the State.

Sadly, the plans are deficient in a major technical respect. Worse, in a major evacuation, they completely sidestep the logic and mandates of Ohio law.

NUREG-0654 obliges Applicant's plans to "contain (by reference to specific acts, codes or statutes) the legal basis for such authorities" of various component entities in emergency activities. Nowhere does any such documentation or discourse appear. Moreover, the tenor of the state and local plans ignores the overwhelming fact of Ohio law that only the Governor may declare an emergency. O.R.C. 5915.01(D) defines "emergency" as:

[A]ny period during which the president or the congress of the United States or the governor has proclaimed that an emergency exists.

(emphasis supplied)

There are legal and policy reasons for the requirement that the Governor declare an emergency. Ohio has a "good Samaritan" statute for persons assisting during a civil defense emergency, which only provides coverage and immunity from civil liability upon declaration of an emergency by the Governor. R.C. 5915.10. That section of the Ohio Revised Code states as follows:

(A) The state, any political subdivision, municipal agency, civil defense volunteer, or another state or a civil defense force thereof or of the federal government or of another country or province or subdivision thereof performing civil defense services in this state pursuant to an arrangement, agreement or compact for mutual aid and assistance, or any agency, member, agent or representative

of any of them, or any individual, partnership, corporation, association, trustee, receiver or any of the agents thereof, in good faith carrying out, complying with or attempting to comply with any law, any rule, regulation or order duly promulgated or issued pursuant to sections 5915.01 to 5915.143 inclusive, of the Revised Code, any federal law, or any arrangement, agreement or compact for mutual aid and assistance or any order issued by federal or state military authorities relating to civil defense, shall not be liable for any injury or death to persons or damage to property as the result thereof during training periods, test periods, practice periods or other civil defense operations, or false alerts, as well as during enemy attack, actual or imminent, and subsequent to the same except in cases of willful misconduct.

(emphasis supplied)

In the past two years, perhaps a dozen different decisions of the Ohio Supreme Court have virtually destroyed the doctrine of "sovereign immunity" which has traditionally protected governmental units from civil liability for mistakes of its officials. However, there has not been a civil disaster the magnitude of an extraordinary nuclear occurrence to test what may remain of local government immunity under this faded doctrine and R.C. 5915.10. Under the draft plans, local officials such as Ashtabula County Commissioners might expose themselves and the numerous civil "volunteers" comprising the backbone of governmental response to the potential of civil monetary damages by "proclaiming" an emergency absent an official pronouncement from Ohio's Governor. One can imagine Ashtabula's County Commissioners "proclaiming" an emergency and ordering merely shelter, as opposed to evacuation, to avoid liability for such problems as a drunken or drugged or exhausted volunteer bus driver's antics, while all the while the Lake County Commissioners "proclaim" an evacuation and direct all emergency personnel to cut and run. Besides the enormous inconsistencies in preserving the public health and safety, Sunflower wonders if local officials really want to roll the dice of multimillion dollar liability by ordering all in the EPZ not to evacuate. What are the liabilities of a county commissioner who votes to "proclaim" an emergency in the absence of the Governor's proclamation, but instead

of ordering evacuation, orders shelter only, thereby committing hundreds or thousands in the plume exposure pathway to toxic radiation poisoning?

Complicating these issues is the official guidance for decision-making. NUREG-0654 at 1-3 states that:

Prompt notification of offsite authorities is intended to indicate within about 15 minutes for the unusual event class and sooner (consistent with the need for other emergency actions) for other classes. The time is measured from the time at which operators recognize that events have occurred which make declaration of an emergency class appropriate.

(emphasis supplied)

See also 10 CFR 50 App. E (IV)(D)(3).

Finally, all of the legal and liability considerations must be set against the unforgiving backdrop of the federal Price-Anderson Act. Under that Act, be it remembered, CEI and the remainder of the utility industry are absolutely immune from liability above \$585 million for damages accruing from an extraordinary nuclear occurrence. Ohio's public officials will have little or no recourse against Perry's owners in the event of leakage of fission matter from a ruptured containment for a penny more. The State and its counties will have to withstand challenges to the "privileged" or "immune" acts or omissions of their officials alone. In effect, the draft plans shift the liability burdens for erroneous decision-making to public officials in a manner quite reminiscent of Price-Anderson's burden-shifting of utilities' general civil liability.

The fractured and fragmented web of decision-making on emergency declarations is unworkable and illegal. Either the State must be able to commit unequivocally to declaration of an emergency within the guideline prescriptions as to time, or the offsite plans cannot be approved.

D. Protective Actions Decision-Making

At Table 6-1 in the State Plan, Rev. 3 (appearing at 6-16), the option of remaining indoors is deemed to be adequate protection of the public when shelter affords less than 5 rems of whole body

gamma dose exposure. Shelter continues to be presumed adequate when the "shelter dose" of radiation equals or exceeds 5 rems, but the "evacuation dose" equals or exceeds the "shelter dose." Only when the "shelter dose" exceeds the "evacuation dose" is evacuation indicated, so says the State Plan, Rev. 3.

These proposed action indicators are faulty in several ways. First, Table 6-1's footnote indicates that "[s]helter is to be with ventilation control," the latter term meaning that air conditioners and fans are to be turned off, doors and windows closed, and refuge sought in basements. This guidance is unhelpful and potentially disastrous if hundreds are trapped in a rest home, shopping center, or school in the plume exposure pathway, on a 95 degree August afternoon - or a 5 degree January one. Many modern buildings have unclosable ventilation required by law - another ponderance.

Furthermore, Applicant has ignored the plain intentions expressed in guidance from the U.S. Environmental Protection Agency. In its "Manual of Protective Action Guides for Nuclear Incidents," EPA 520/1-75-001 (Sept. 1975) (Rev. June 1980), the EPA has stated at Table 2.1 that whole-body exposures to airborne radioactive materials for the general public should not exceed 1-5 rems. In the footnote to the table, EPA asserts:

When ranges are shown, the lowest values should be used if there are no major local constraints in providing protection at that level, especially to sensitive populations. Local constraints may make lower values impractical to use, but in no case should the higher value be exceeded in determining the need for protective action.

Id. (emphasis supplied)

CEI and involved local and state governments have no apparent compunction about refusing to follow this authoritative guidance. It is hardly unimaginable that blind adherence to a set of standards that flies in the face of better sense and authority will compound public panic. There are no proposals in state and local plans to evaluate the relative degrees of "ventilation control" within each and every structure in the EPZ; hence there is no possibility at all that even

the best-documented analysis of plume pathway exposure will suffice to back up public officials' recommendations of shelter, because of the wide range of variability in ventilation controls.

E. Authority Lacking for School Bus Usage

Under Ohio law, it is quite clear that school buses may not be put into service as a component of any offsite evacuation procedure.

The Federal Emergency Management Agency (FEMA) has previously noted this. FEMA Interim Report at 13. Sunflower is aware of the May 27, 1983 letter to the Ohio Disaster Services Agency (ODSA) from Herman L. Massie, Chief of Pupil Transportation for the state Department of Education. See FEMA Interim Report, App. B. That letter, in ipse dixit fashion, concludes that the code of state administrative regulations, the Ohio Administrative Code, authorizes the use of school buses in the event of a civil emergency. 2 OAC §3301-83-12(L). Scrutiny and analysis is nonetheless in order.

Ohio statutory law clearly and flatly prohibits the use of school buses for nonschool purposes. R.C. 3313.172 states:

The board of education of any city, exempted village, local, county, or joint vocational school district may expend district funds to obtain one or more motor vehicles, as defined in section 4501.01 of the Revised Code. Except as provided in section 3327.14 of the Revised Code any motor vehicle so obtained shall be used solely for school purposes.

(emphasis supplied)

No exception appears in the statute.

R.C. 3327.14 states, pertinently:

The board of education of any school district that owns and operates buses for transporting pupils may contract under a lease agreement with a municipal corporation or a public or nonprofit agency or organization delivering services to the aged, to make available one or more of the district's buses or other vehicles to be used for transporting persons sixty years of age or older. The board of education of any school district may also contract under a similar agreement with any group, organization or other entity engaged in adult education activities.

Again, there is no recitation of any legislated right for school buses to be utilized in a civil emergency.

The State Board of Education in 1970 promulgated 2 OAC §3301-83-12 allowing "nonroutine" use of school buses, subsection (L) of which appears as follows:

School buses may be used by Ohio governmental agencies during time of civil emergencies. Questionable use should be clarified with assistance of the department of education (Example of a civil emergency - Ohio national guard reserves require transportation to a threatened area).^{2/}

The problem is simple: assuming that on questions of substance, statutory law governs over administrative regulation, there is no proper legal fundament for the Ohio Department of Education to have short-circuited facially obvious legislative mandates. With all due respect to the Department of Education, this conflict at a minimum might benefit from input from the Department's lawyer, the Attorney-General, and not simply lay interpretations.

This is not merely a lesson in jurisprudential obscurity. R.C. 3327.14 obligates a board of education lending bus equipment to maintain liability insurance coverage in accordance with R.C. 3327.09. The latter mandates liability coverage of \$100,000 per person / \$300,000 per occurrence / \$50,000 property damage coverage / \$3,000 medical payments coverage. Besides the conflict between statutes and regulation, there is also the previously-discussed difficulty which any board of education would have in obtaining liability coverage in an amount sufficient to cover errors, omissions and negligence during a nuclear emergency. R.C. 5915.10 provides immunity from liability to persons performing during a civil defense emergency with an exception: "[E]xcept in cases of willful misconduct." R.C. 5915.10(A).

In practical terms, the boards of education in Lake, Geauga and Ashtabula counties which have been approached by CEI or respective county officials would do well to contemplate realities. Those realities are that in case of a major nuclear accident, panic will predominate;

^{2/} The regulation was doubtless established in response to the use of Ohio National Guard personnel at Kent State University, where on May 4, 1970 a chapter in American ignominy was written. At any rate, citizen evacuation by bus was evidently not contemplated at that moment.

that boards of education employees may refuse to "volunteer" to drive into or near the plume exposure pathway to evacuate citizens of any age, necessitating substitute, possibly less apt, drivers to take the wheels; and that any drivers may well take incredible chances in excessive traffic, causing uncalculable physical harm to passengers. Who wishes to be first to test a poorly-reasoned regulation "authority" in defense of multimillion dollar damage actions brought by angry plaintiffs who cannot successfully sue CEI because of the Price-Anderson Act?

Once again, the overall uncertainty of "who pays" - when the friendly utility company will not - should be an inestimably major factor in local education officials' thinking.

F. Insufficient Proofs of Volunteer Aid

10 CFR §50.47(b)(2) requires emergency plans to specify "interfaces among various onsite response activities and offsite support and response activities..." The state and local plans are deficient because they fail to fix in unequivocal fashion the availability of volunteers - medics, police auxiliary people, bus drivers, civil defense workers, etc. NUREG-0654 requires (at 41) that:

Each [emergency] organization shall identify... individuals which can be relied upon in an emergency to provide assistance. Such assistance shall be identified and supported by appropriate letters of agreement.

The plans contain no such estimates. The parties were put on notice long ago of this inadequacy by a study commissioned by the Perry Legal Defense Fund, "Status Report: Planning for an Accident at the Perry Nuclear Power Plant" (1983), provided to all through seasonable discovery update. The PLDF Status Report surveyed the circumstances of notice to emergency and volunteer personnel and lacking formal arrangements extant between public and private emergency response agencies and CEI. The study revealed considerable superficiality of knowledge of radiation hazards among this grouping of personnel, stemming possibly from the failure by Applicant to individually fix each person's volunteer status. Obviously, the institutional response organizations - fire departments, police auxiliaries, boards of education - are not in a legal or moral position to commit

individuals who would be placing their personal health on the line in the event of a general emergency. Quite arguably, individual would-be volunteers who are asked to sign their names to broad form waivers or releases from liability might determine not to volunteer so readily.

G. Failure to Stockpile KI for Public and Emergency Personnel

Glaringly omitted from the plans is any commitment to the use of potassium iodide for emergency workers and the public as a thyroid radiation blocking agent. See FEMA Interim Report, App. A, where Ohio's Director of Health rejects the idea.

10 CFR §50.47(b)(10) requires offsite plans to demonstrate:

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 local have been developed.

(emphasis supplied)

The use of stable iodine as a protective action for emergency workers has been the recommendation of the U.S. Environmental Protection Agency for four (4) years. EPA Manual of Protective Action Guides, supra at 1.42. Furthermore, CEI recommends it for its own workers, in concurrence with U.S. Food and Drug Administration regulations. Finally, NUREG-0654 requires (at 63) that plans show "[p]rovisions for the use of radioprotective drugs."

State officials announced in May, 1984 that the Department of Health is forming an advisory group to research the use of KI tablets. Sunflower urges that the offsite plans will not be approvable unless KI supplies are maintained for workers and the general public.

H. Inadequate Assurances of Worker Protection

The offsite plans are inconsistent on the subject of allowing emergency workers to receive whole-body and thyroid dosages of radiation. NUREG-0654 obligates planners (at 60) to correspond Emergency Action Levels (EALs) to projected doses to the population, and its recommendations in the EPA Manual of Protective Action Guides.

The Manual sets limits for emergency workers of 25 rem whole-body and 125 rem thyroid; for workers performing lifesaving duties, 75 rem whole-body and "no limit" thyroid. Id. at 2.3 and 2.5. The EPA mitigates its "no limit" recommendation in footnote (b) to the table on p. 2.5 in the following manner:

No specific upper limit is given for thyroid exposure since in the extreme case complete thyroid loss might be an acceptable penalty for a life saved. However, this should not be necessary if respirators and/or thyroid protection for rescue personnel are available as the result of adequate planning.

The implications for the local governments' refusals to use potassium iodide are obvious as well as ominous. Additionally, Sunflower represents that at least one emergency service, Ashtabula's fire department, neither has purchased nor will it be purchasing, equipment such as respirators, because that is Ashtabula County's decision. What do other jurisdictions intend to do?

Lake County proposes the fantasy that it will not establish any decision chain authorizing any person, emergency or otherwise, to exceed 25 rems whole-body exposure. FEMA Interim Report at 15. This is inconsistent with pre-existing State commitments. Geauga County does not prescribe any decisional chain for authorizing excessive exposures of over 25 whole-body rems.

All three of the counties' plans are unacceptable in that, while each may be forced to delineate a decision-making chain to determine whether exposure limits may be exceeded, there is no relevant discussion explaining how the Ohio Department of Health, CEI Department heads, and county officials will be able to render dozens, hundreds or thousands of such decisions allowing excess exposures in the cataclysmic moments following a breach of containment or other consequential pluming radiation. In this and other respects, the critical moments after major radiation leakage are viewed by planners with severe roseate ocular distortions.

I. Slick as EALs

The PNPP Plan, Rev. 3, clearly indicates that CEI never intends to sound a general emergency which would necessitate protective actions beyond a 5-mile radius of Perry.

The plan contains a Figure 4-1, which has no page number, headed "Dose Rate at Containment Monitor." Four (4) curves appear on that graph, representing theoretical curves of gross gamma dose rate versus time. The plots concern these possible reactor statuses in the event of malfunction:

- 1) 100% coolant release with no fuel damage;
- 2) 10% gap activity release with 1% fuel inventory release;
- 3) 100% fuel damage with potential core melt.

The four curves comprise the basis for plant status protective action guides. At p. 6-11, the PNPP Plan states the following protective actions:

<u>Indication</u>	<u>Protective Actions</u>
1. Above Curve 1	- 360 degree shelter to 2 miles - Precautionary shelter 22.5 degrees on both sides of the plume center line to 5 miles
2. Above Curve 3	- 360 degree evacuation to 2 miles - 360 degree shelter between 2 and 3 miles - shelter 22.5 degrees on both sides of the plume center line between 3 and 5 miles
3. Above Curve 2	- 360 degree evacuation to 2 miles - evacuation 22.5 degrees on both sides of the plume center line between 2 and 5 miles - shelter between 2 and 3 miles in unaffected areas
4. Above Curve 1	- 360 degree evacuation to 3 miles - evacuation 22.5 degrees on both sides of the plume center line between 3 and 5 miles - shelter between 3 and 4 miles in unaffected areas

In the worst possible scenario, the 100% damage of the fuel with potential core melt -- the "China Syndrome" -- Cleveland Electric Illuminating

recommends a complete evacuation out to three miles from Perry; supplemental vector evacuations out to 5 miles; and shelter in "unaffected areas" between 3 and 4 miles from Perry.

The NRC Staff has expressed strong misgivings about CEI's cavalier approach to setting out its responses to varying levels of emergency plant malfunction. See letter of B.J. Youngblood, Chief, NRC Licensing Branch No. 1, dated January 11, 1984, with its "Comments on Perry Nuclear Power Plant Emergency Action Levels."

10 CFR §50.47(c)(2) states in part as follows:

Generally, the plume exposure pathway EPZ for nuclear power plants shall consist of an area about 10 miles (16 km) in radius and the ingestion pathway EPZ shall consist of an area about 50 miles (80 km) in radius. The exact size and configuration of the EPZs surrounding a particular nuclear power reactor shall be determined in relation to local emergency response needs and capabilities as they are affected by such conditions as demography, topography, land characteristics, access routes, and jurisdictional boundaries. The size of the EPZs also may be determined on a case-by-case basis for gas-cooled nuclear reactors and for reactors with an authorized power level less than 250 MW thermal.

(emphasis supplied)

Moreover, the standards run directly counter to the EPA's recommendations which appear in its Manual of Protective Action Guides, supra at 2.5:

When ranges are shown [of projected thyroid radiation dosage from inhalation of a passing plume], the lowest value should be used if there are no major local constraints in providing protection at that level, especially to sensitive populations.

Worse still, Cleveland Electric Illuminating ignores the rather blunt guidance found at NUREG-0654, App. 1, 1-17, "Example Initiating Conditions; General Emergency," where drastic actions are to be taken when EPA protective action guideline levels as measured at the PNPP site boundary are "exceeded by a factor of 10 of projected to continue for 10 hours." The same section advises further:

For core melt sequences where significant releases from containment are not yet taking place and containment failure leading to a direct atmospheric release is likely in the sequence but not imminent and large amounts of fission products in addition to noble gases are in the containment atmosphere,

consider precautionary evacuation to 5 miles and 10 mile downwind evacuation (45° to 90° sector).

Id.

Mere staff skepticism over CEI's poorly-conceptualized emergency action levels is not an adequate remedy here. On March 10, 1982, D.R. Davidson, CEI's Vice-President, System Engineering and Construction, wrote to the NRC's Robert L. Tedesco:

As you are aware, emergency planning activities are a burden on both the utility and local community in terms of both financial and human resources. If the basic emergency planning zone were reduced by NRC from ten to five miles, for example, the planning area would be reduced by a factor of four. In our specific case, a five mile planning zone would encompass only one county instead of three and contain significantly fewer people.

Effective planning and development of a prompt notification system depends upon an accurate estimate of exactly where the public-at-risk resides. Thus, NRC should direct prompt attention to the task of reevaluating the basic emergency planning assumptions to assure that the scope of emergency planning efforts is accurately defined.

The Staff promptly scotched that suggestion in an April 13, 1982 letter from A. Schwencer to Vice-President Davidson, noting that the underlying source terms were considered now to be "conservative." Nevertheless, Applicant is now trying unilaterally to get away with that which the Nuclear Regulatory Commission has forbidden, simply by postulating no plant accident scenarios which might require evacuation beyond a 5-mile radius of Perry Nuclear Power Plant.

The Atomic Safety and Licensing Board in its July 26, 1984 "Memorandum and Order" to Sunflower to particularize its emergency planning objections, churlishly chided this Intervenor in the following way:

It does not do for intervenors to argue that the emergency plans are not finished. Yes, there are additional steps being taken to modify and further improve those plans. However, the plans have reached a mature stage of development and it is time for intervenors to state their objections so that

meritorious objections may be met. This is not a game. If there are problems intervenors know of, those problems should be remedied. It is not appropriate to lie in wait, stalking the plan like prey in the jungle.

Id. at 3-4.

Unfortunately, it is Applicant, not Sunflower, which is approaching emergency preparations as a game. The core assumption -- perhaps CEI's assumptions about the PNPP core is more accurate -- that no credible accident scenario will necessitate evacuation beyond 5 miles is counter to the regulations, the philosophy, and the rational basis underlying the entire offsite planning process. The State of Ohio and the three affected counties evidently have adopted these fallacious fundamentals lock, stock and syndrome, which of necessity corrupts and casts doubt over every assumption concerning protective actions contained in the plans.

Sunflower submits that it is far more appropriate to "lie in wait" than to wait and lie.

J. The EALs are Incomplete

Table 4-1 of the PNPP Plan, Rev. 3, describes various malfunction status scenarios at Perry, with detailed tell tale signs of operation or failures of operation which would dictate the type of emergency actions to be taken. Besides the earlier points raised, the EALs themselves are not technically complete.

Time and again as one reads Table 4-1, one sees critical measurements or standards left incomplete, marked "later." The Atomic Safety and Licensing Board has ordered Sunflower to go forward based upon plans which, albeit constantly evolving, are at this juncture rather prehensile, respecting the means by which Applicant proposes to initiate emergency responses.

Perhaps Applicant can supply the missing criteria so that this proceeding might go forward based upon due and proper notice, a long-recognized prerequisite for litigation outside of administrative cases.

K. Implementation of Staff Recommendations on EALs

The Staff provided comments to Applicant by letter dated January 11, 1984 concerning the emergency action levels. (Letter from

B.J. Youngblood to Murray R. Edelman of CEI). Sunflower incorporates each of the Staff's criticisms of the EALs and realleges them herein by reference as particularized objections.

L. Radius of the EPZ

The emergency planning 'zone (EPZ) to which evacuation responses must be directed must have a ten (10) mile radius, a fact quite well established. Why, then, does the Final Environmental Statement (FES) propose a radius of effectively fifteen (15) miles?

At F-2 of the RES (NUREG-0884), the Staff discussion of evacuation modeling for Perry states:

The evacuation distance is selected to be 15 miles (which is 5 miles more than the 10-mile plume exposure pathway EPZ radius). After reaching the end of the travel distance the evacuee is assumed to receive no further radiation exposure.

The inescapable assumption implicit in this statement is that one might sustain radiation exposures within a 15, not 10-mile radius before reaching safety.

Sunflower demands that the EPZ radius be increased to 15 miles or more to conform to this ominous assumption in the Final EIS.

M. Independent Monitoring

Lake County proposes to install and operate an independent alert monitoring system comprised of stations throughout the County with radiation detectors, high-volume air samplers, and meteorological monitors. Data from this equipment is to be telemetered to a central location, with money for its purchase to come from CEI. "(Second Set) Responses to Interrogatories Filed by Sunflower Alliance, etc." No. 32, (11/8/82).

Sunflower wishes to know to what location this data is to be telemetered; how it is to be digested; and what use is to be made of it. These questions are not readily answered by existing draft plans. In fact, there are no listed functional purposes for installation or use of the equipment, other than its obvious public relations utility.

Sunflower applauds the proposed installations, especially since NUREG-0654 appears to require the use of independent data sources,

and that state and local organizations have equipment and expertise to rapidly assess "actual or potential magnitude and locations of any radiological hazards." Id. at 54, 58. Why is there not comparable equipment afforded Geauga and Ashtabula counties at Applicant's expense? For that matter, why should not CEI be directed to install monitoring equipment and related coordination throughout the area within a 50 mile radius of PNPP?

On July 18, 1984, the trustees of Jefferson Township, Ashtabula County, Ohio, formally filed with the NRC their resolution to:

[R]equest and support the installation and maintenance of independent monitoring facilities and procedures at and around the Perry Nuclear Power facility.

Noting Jefferson Township's location within about 20 miles of PNPP, it is obvious that if CEI is not willing to make uniform an independent means of monitoring and measuring radiation emissions near PNPP, then it will be forced upon Applicant.

N. Ingestion Pathway Monitoring

The plan enumerates steps that the State of Ohio is to take to monitor and implement protective measures throughout the ingestion pathway. Among them, the Ohio Department of Health (ODH) is to provide technical input in these respects, including the measurement, via radiochemistry analyses, of gamma ray emitting nuclides and alpha and beta emitting nuclides which may be present in soil, vegetation and other solid or particulate substances.

A major obstacle to ODH's execution of its responsibilities in this vital capacity is that the Department does not have the equipment capability to perform radioactivity analyses upon "hot" samples — those exceeding threshold limit values established by the National Committee on Radiation Protection. In an October 24, 1980 letter to the State Adjutant General's office Charles Croft, Chief of the Division of Public Health Laboratories of ODH, noted that all samples selected for testing must be "prescreened" in the field, and that ODH does not have container equipment with lead linings for ship-

ment, robot arm machinery for handling, ect., to handle or even read excessively "hot" samples.

An ingestion pathway could encompass literally hundreds of square miles of agricultural countryside, with crops, livestock, groundwater, farm equipment, trees, stored crops, seed, and such all in need sampling and monitoring. It is fatuous to assume that the State can perform this very critical function, absent hard and extensive evidence of new equipment and personnel resources. The State clearly does not comply with the criteria in NUREG-0654 at 64 pertinent to protection of the public from contaminated foodstuffs.

O. Evacuated Area Re-Entry

The PNPP emergency plan does not adequately set forth plans and procedures for reentry and recovery of property within the 10 and 50-mile zones, nor does it set forth means by which protective measures are to be relaxed, all in violation of NUREG-0654 at 70.

P. Hospitals

Hospital designations and medically-related decontamination procedures are incomplete or absent from draft plans. For instance, while Ashtabula County's Radiological Emergency Response Plan makes reference to the use of Ashtabula General Hospital to receive patients evacuated from hospitals within the 10-mile EPZ, there are no studies of potential patient populations documenting anticipated uses of the Hospital. Further, there is not a complete inventorying of available resources for decontamination of personnel or patients at hospitals outside the 10-mile EPZ; nor of personnel with skills in treating radiation injuries on each shift; nor is there any overview of what medical personnel might be available for other, not-primarily-radiological, injuries: looters/police/National Guard shooting victims; fire victims; vehicular accident victims; exhaustion, stroke or heart attack victims, etc. Performing double duties for evacuated hospitals means double duties in all other medical aspects of hospital services.

What procedures and resources are available to minimize and record radiological contamination of vital medical personnel? Are operating rooms to be lead-lined? Will surgical gloves, masks, aprons, respirators be radiation-resistant? What becomes of contaminated

hospital materials, such as food trays, robes, sheets, medical supplies and uniforms, mattresses, pillows, etc.? How will radiation-sensitive measuring and body-function maintenance equipment be protected? From whence will replacement supplies, food, equipment, personnel, etc. come?

Q. Fallacious Transportation Assumptions

In Appendix 3 of the PNPP plan, at Table A3-7, the implicit planning assumption is that school bus drivers would be able to make a single evacuation run to a reception center, and then would reenter the 10-mile radius EPZ for further services. This assumption shows little comprehension of rural and small-town busing practice. Many children walk to school; many ride with parents; and the buses themselves frequently make two or more trips to and from schools. The assumption fails if more than a single trip occurs, with a consequent doubling of the needed time, merely to accomplish a primary evacuation measure. A total of 21,393 children would presumably be evacuated. At the assumed basis of 40 students per bus, 535 buses would be needed to effectuate a single-run evacuation of school children. This far exceeds the inventory of operating equipment which is extant in EPZ schools. Perhaps an equally great error is to assume that 535 volunteer drivers will reenter the EPZ after making that single run. Where is the documentation of volunteer availability?

Prevailing school policies will allow a parent to pick up a child at school during an emergency if a release form is signed (might there be some liability considerations after all?). Foreseeably thousands of near-panicked parents will converge on schools both within and without the 10-mile radius from PNPP (it would be naive to assume otherwise), jamming traffic arteries and bottlenecking already-chastastic schoolyards. The existing plans neither envision nor remedy the great potential for redundant bedlam of this sort.

R. Insufficient Background Data

Background radiation readings must be taken before PNPP becomes operational of the entire 50-mile EPZ. Radiation meters only measure "relative contamination" - meaning that after an accidental release, radiation on an individual will be indicated by equipment only in comparison with a then-elevated background count. Under such circumstances, the reading on the person will be "lowballed" or understated, when by comparing it with pre-Perry background levels, that reading might otherwise be severely high.

The plans do not contain the necessary baseline data to have a systematic set of pre-Perry levels. It is obviously of great importance that readings be taken and logged now of virtually every inhabitable space within the 50-mile zone.

Utility companies have frequently claimed that the amount of radiation emitted from a nuclear facility during normal operations is equivalent to a stroll through the mostly-granite Grand Central Station in New York City. To plan for the time when that claim may not be true, and to conform with NUREG-0654 at 67, it is imperative that this data be obtained, because an accident scenario will not give the opportunity to Applicant to learn the levels at which people must be decontaminated.

S. Unavailable Extension Agent

The Ashtabula County Radiological Emergency Response Plan (RERP) requires that county's Cooperative Extension Service agent to advise on food and livestock protection. However, in reality that person has received no equipment or training, and internal Service regulations require him to take whatever steps are needed for him to secure himself and his family in time of accident. This conflict must be formally and clearly resolved.

T. Shelter and Loading Buses

The EPA Protective Action Guides document states at 1.38 as follows:

Generally, shelter provided by dwellings with windows and doors closed and ventilation turned

off would provide good protection from inhalation of gases and vapors for a short time (i.e., one hour or less) but would be generally ineffective after about two hours due to natural ventilation of the shelter.

Sunflower objects to mere shelter precautions for any sustained release of any magnitude for the reason that in relatively still meteorological conditions, it simply is unrealistic to expect a plume of hundreds or thousands of meters' length to "blow over" in an hour or less. The situation is worse still if the emissions in any one direction would be continuous for many hours, of course.

What if the authorities at first recommend shelter, but shortly afterward move to a full-scale evacuation? The PNPP plan at 5.5 indicates that school children could be loaded onto buses within the 30 to 90 minute range after the word is given. Apart from the fact that no motor vehicle will afford even the shelter capabilities of a house, it is evident that the plans effectively could cause school children to evacuate outside under or into a plume.

The plans do not adequately address the problems which might befall the populations without individual transportation who are caught by the changing of gears from less severe to more severe protective actions.

U. Disposing of Contaminated Personal Property

The proposed reception centers for the public do not appear from draft plans to have any means or facilities for quarantining or isolating personal property found to be excessively contaminated. The range of property includes vehicles as well as smaller items. What, for instance, is done with dozens of buses and other vehicles once evacuation is completed, if they are found to be severely contaminated?

V. Monitoring Contaminated Consumables

There is little more than a lip service description of the role of the State and county public health departments in monitoring the agricultural food chain. If a PNPP accident were to occur during a period of significant harvest, how would officials ensure that all contaminated farm products were intercepted? No crop insurance would exist to indemnify farmers from radiation losses. It would

not be difficult to envision desperate farmers, particularly at the far ranges of the ingestion exposure pathway, rushing in a day or so after the accident, specifically to harvest and sell their crops quickly, just to avoid public health scrutiny. To a desperate small business person in these circumstances, the threat of sanctions after the fact may not deter such actions. Once again, the existence of the Price-Anderson Act may actually motivate private actions out of economic considerations which are against the public interest.

The PNPP plan neither offers guidance, nor clearly specifies the numbers of personnel and equipment nor the types of steps to cut off this problem.

W. Phantom Reimbursements

The state plan at I-4 indicates that relevant state and local officials will maintain accounting records of public funds expended in a PNPP emergency for purposes of seeking reimbursement.

From whom reimbursement is to be obtained is not clear. Is it CEI? FEMA? Congress?

Either this plan component must be clarified or be discarded because of the vicious falsehood it represents. The federal Price-Anderson Act limits a nuclear utility to a ceiling of liability, beyond which the only recourse for damages is the U.S. Congress, from which supplemental appropriations need be sought. The public sector has no particular priority, in terms of claims for reimbursement it might press, over other claimants. Either the plans must reflect fully the means by which recoupment is to occur, if at all, including a sensible discussion of Price-Anderson, or this section must be discarded. Any and all agreements with CEI for reimbursement must also be included. It is absurd to use the emergency plans as a public relations document to give the public assurances that the economic aspects of implementation will not be burdensome to taxpayers.

X. Source Term

No part of the plans can be approved until the internal NRC re-evaluation of so-called "source terms" is completed. The very

basis for the plans is shaky at present, and revisions to source terms could mean speculations of greater radiation dangers to the populace around Perry than presently pertain. Therefore, until the revisions occur to this fundamental assumption, Sunflower urges that no plan approval is substantively possible, nor practically meaningful.

Y. Incoherent Ambulance Usage

Lake County proposes to use ambulance services to move persons with health limitations who cannot be moved by bus. Lake County proposes to draw upon ambulances from Ashtabula and Geauga counties to accomplish this end in the event of emergency. This underscores the possibilities of conflicting responses at the county level.

Z. Bus Driver Protection

Proposed arrangements for measuring radiation exposures of bus drivers are fairly limited to use of dosimeters, which only will generally indicate how much exposure has occurred, after the fact. Dosimeters do not indicate differing exposures to different parts of the body, and are not protective in the way that respirators, goggles and other protective equipment would be. Inasmuch as in-bus and out-of-bus exposure potentials are pretty close to equivalence, protective gear is a must for bus drivers, who are expected to play a crucial and dangerous role in evacuation.

AA. Sunflower's "Status Report"

Sunflower Alliance hereby incorporates by reference and realleges herein all objections to state and local emergency plans which appear in the "Status Report: Planning for an Accident at the Perry Nuclear Power Plant," Perry Legal Defense Fund (1983).

BB. FEMA's Interim Report

Sunflower Alliance hereby incorporates by reference and realleges herein each and every "planning deficiency" set forth in the March 1, 1984 "Interim Report on Offsite Radiological Emergency Planning for the Perry Nuclear Power Station," Federal Emergency

Management Agency, as particularized objections in this proceeding.

CC. The SER

Sunflower Alliance hereby incorporates by reference and realleges herein each and every "resolution item" set forth by the NRC staff in the "Safety Evaluation Report," NUREG-0887, Supp. 4 (February, 1984), at 13-1 through 13-22 inclusive as its particularized objections in this proceeding.

DD. Location of the EOF

Sunflower objects to the location of the emergency operations facility (EOF), presently located at the PNPP site. This location is contrary to the recommendations contained in NUREG-0814 and NUREG-0696. Input which state and local officials might have had into the decision is unclear, also. In essence, CEI would be asking decision-making officials to come to the nuisance in the event of a severe accident. Besides personally jeopardizing them, it would have the effect of removing decisional authorities from Ashtabula and Geauga Counties, and might further have the effect of rendering decisions in those counties much more difficult.

EE. Reception Center Locations

Sunflower objects to locating the reception centers within 20 miles of PNPP. Many are downwind under normal meteorological conditions, and at least one expert on radiological dispersion (Jan Beyea, who participated in the Indian Point evacuation planning case) believes that prompt fatalities might occur as far away from a leaking plant as 20 or more miles. The undecided source terms and the design and possible accident sequences of the Perry plant suggest strongly that a greater

evacuation radius is needed.

FF. Remote-Control Sirens

NUREG-0654 requires (at 45) that CEI install and maintain sirens, yet it is the responsibility of state and local governments to activate such a system. Sunflower objects to the setup as described in relevant plans unless it is delineated how Federal Communications Commission approvals will or have been granted for the radio-activation system. It would appear that CEI must be the licensee, and thereby must actually put into motion the activation of the sirens.

GG. Persons Without Technology

Nowhere in documentary justification for the various media-notification steps is there any discussion of a potentially sizeable population which may not utilize radios or televisions. As CEI well knows by now, there is a rather large Amish population in northeastern Ohio, many of whom adhere to traditional religious beliefs rejecting much twentieth-century technology. There must be documentation of the dimension of this population group, together with alternate means of notification, before any approval of offsite plans might ensue.

HH. Evacuees Not Going to Centers

Had CEI bothered to analyze the reactions of evacuees in comparable evacuation scenarios, it might find that a majority, or at least a significant minority, of people go to friends' and relatives' homes during a crisis, not to evacuation centers. How will these people be identified and checked and if need be, decontaminated? The plans do not address this potential in any noteworthy way.

II. Evacuation Center Resources

Other than identifying the centers, data on available resources there is nil. It is not covered in the plans that food, drugs, beds, protective gears, potassium iodide, and numerous other things such as

as telephones would be available. There is no documentation of the potential lengths of stays which might be necessitated by a severe accident. There is no mention of the need for psychological services to assist those who cannot accept the possible facts that they may never be able to return to homes, pets, etc., or might not be able to cope with the loss of friends or relatives to a nuclear accident.

JJ. Emergency System Equipment

None of the plans address the availability of electrical power, or alternate energy for generation of electricity, to compensate for the loss of power from PNPP that would accompany an accident. Specifically, can Applicant or state and local governments categorically state that there will be sufficient supplies and availability of energy to operate sirens, emergency-set traffic lights, independent radiation monitoring equipment, gasoline pumps, and the like? The plans offer no guidance.

KK. Returning to the EPZ

Other than general references to cordoning off all or parts of the EPZ, the plans do not tell how persons re-entering the EPZ will be handled if an accident is in progress. It is not too hard to envision worried parents (particularly single parents) who work outside the EPZ racing belatedly back into it to get school children, retrieve pets or valuables, feed livestock, etc. The issues of securing the cordoned area while allowing access to bona fide residents is difficult to manage. In conjunction with the issue would be the question of how to limit radiation exposures to people venturing back into the zone, as well as documenting and measuring exposures when they once again depart.

LL. The Plans Will Not Work

The Commission is bound by 10 CFR §50.47(a)(1) to find that there is "reasonable assurance that adequate protective measures can and will be taken" in the event of nuclear emergency at Perry. None of the plans have been subjected, to anything but, at best, tabletop drills. There has been no full-scale drill of any sort, and none is contemplated for some months. Even after a full-scale drill occurs, experience at other plants indicates that much reworking and fine-tuning will be necessary.

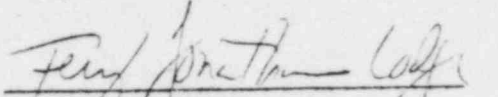
Sunflower objects to the plans as being unworkable because they have not been submitted to these myriad acid tests which implementation would impose.

Conclusion

Applicant must carry the burden of proof in demonstrating that the offsite emergency plans comply with NRC guidance and regulations, even though Applicant may not primarily responsible for carrying out the operations described in the plans. Consumers Power Company (Big Rock Point) LBP-82-77, 16 NRC 1096 (1982). As the foregoing discussion indicates, there are many considerations which have not been addressed by existing draft plans, or which have not been resolved within the context of existing plans. Sunflower Alliance urges the Board to waylay action on emergency preparations as a contention until such time as each of these deficiencies can be rectified. Alternatively, Sunflower prays the Board to dismiss the application for an operating license for Perry Units 1 and 2, for the reason that emergency plans are serious and critically insufficient.

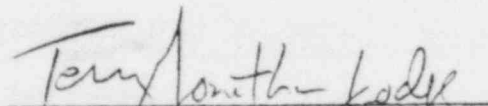
Inescapably, the PNPP plans are far from having reached what this Board characterizes as a "mature state of development." Perry emergency preparations have to be stalked like "prey in the jungle," for the precise reason that they are very, very primitive, indeed.

Respectfully,


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CERTIFICATION

I hereby certify that a copy of the foregoing "Particularized Objections to Proposed Emergency Plans in Support of Issue No. 1" was sent by me this 21st day of August, 1984 via regular U.S. Mail, postage prepaid, to each of the persons or parties appearing on the attached "Service List."


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