

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION  
ATOMIC SAFETY AND LICENSING BOARD

*2ASPHC working copy*

#2

DOCKETED  
USNRC

In the Matter of )  
)  
ILLINOIS POWER COMPANY, ET AL. )  
)  
(Clinton Power Station Units )  
1 and 2) )  
)  
)  
)

Docket Nos. P1580-4610L  
50-4620L

*Goddard / Korman  
Olmstead  
FE*

PRAIRIE ALLIANCE REVISED PETITION FOR  
LEAVE TO INTERVENE AND REQUEST FOR HEARING

*Reply due April 29, 81*

Pursuant to 10 C.F.R. § 2.714(b) and in accordance with the Order of this Board dated March 18, 1981, Petitioners, Prairie Alliance, Inc. and certain previously named persons, acting on their own behalf and as members of the Prairie Alliance, hereby submit their Revised Petition for Leave to Intervene and Request for Hearing in this cause.

Petitioners intend to fully incorporate, as if set forth herein, all contentions listed and previously discussed at the Special Prehearing Conference held on January 29, 1981. By this document Petitioners further revise those contentions and all others contained in the PRAIRIE ALLIANCE SUPPLEMENT TO ITS PETITION FOR LEAVE TO INTERVENE AND REQUEST FOR HEARING filed on January 14, 1981.

Petitioner's contentions are as follows:

*DS03*

*#2*

(1) Clinton Power Station (CPS) should not be licensed to operate until a safe and feasible Emergency Plan (EP) has been developed which complies fully with current NRC requirements. See, 10 CFR Part 50, Appendix E, NUREGs-0696, 0654. The EP currently proposed by IP, as delineated in the FSAR, is insufficient in the following respects:

(a) IP has failed to adequately incorporate emergency planning for a plume exposure pathway emergency planning zone ("plume-EPZ") of a minimum ten mile radius from the CPS and an ingestion exposure pathway emergency planning zone ("ingestion-EPZ") of a minimum fifty mile radius from the CPS, as required by 10 CFR Part 50, App. E. This planning should include, at a minimum, consideration of the following items peculiar to the CPS site vicinity and region:

1. problems posed in effecting termination of activities at outdoor recreational facilities within the plume-EPZ and ingestion-EPZ;
2. difficulties posed by "special facilities" which, because of the nature of the populace, the number of people involved, or the means of available communication and transportation, give rise to especially acute problems in emergency response actions. Included in this category are universities and other schools, nursing homes, mental health facilities, prisons and jails, children's camps, state parks, industrial parks, and other such facilities located within the plume-EPZ and ingestion-EPZ.
3. the severe, but not uncommon, weather conditions, such as heavy snowfalls,

sleet storms, and tornadoes, which occur in the site vicinity and plume and ingestion EPZs throughout the year.

(b) IP has not demonstrated concrete coordination plans with the appropriate state and local agencies involved in emergency planning and response actions. Thus far IP has failed to effect meaningful agreements with "17 named agencies as well as others such as local hospitals and physicians" as required by the NRC staff in the CP-SER (§13.4). See, FSAR Emergency Plan, §§ 5.5.3, 5.5.4, B6, B7, B9.

(c) The EP lacks sufficient detail in the area of emergency preparedness training. For example, the plan does not state who will provide the training of local services personnel or how often that training will be provided. The same is true of training plans for accident assessment personnel and the "Emergency Response Organization." Additionally, there is no provision for emergency training of security personnel or a radiological orientation training program for local services personnel, including local news media persons, as required by 10 CFR Part 50, App. E.

(d) As required by 10 CFR Part 50, App. E, the EP fails to identify or describe the following items:

- (1) the special qualifications of non-IP employees who will be utilized in emergency training operations or recovery;
- (2) the criteria for determining the need for notification and participation of local, state, and federal agencies;

- (3) an analysis of the time required to evacuate or provide other protective measures for various sectors and distances within the plume exposure and ingestion EPZs for both transient and permanent publics;
- (4) a sufficient identification of the persons who will be responsible for making off-site dose projections;
- (5) an adequate description of how off-site dose projections will be made and how the results will be transmitted to appropriate government entities;
- (6) plans for yearly dissemination to the public within the plume exposure and ingestion EPZs of basic emergency planning information, general information as to the nature and effects of radiation, and a listing of local broadcast stations that will be used for dissemination of information during an emergency;
- (7) an identification of the appropriate State and local government officials within the EPZ which will require notification under accident conditions;
- (8) a demonstration that State and local officials have the capability to make a public notification decision promptly upon being informed of an emergency condition.

(e) the requisite protective actions necessary to assure isolation of people from the plume and ingestion EPZs in case of an off-site or general emergency or other serious accident is not described with sufficient detail in the EP. See, FSAR Emergency Plan §5.4.3.1;

(f) IP has failed to provide adequate emergency support facilities for the CPS. The FSAR lacks documentation concerning compliance with the current regulatory requirements for the Technical Support Center, the Operational Support Center, the Emergency Operations Facility, the Safety Parameter Display System, and the Nuclear Data Link. See, NUREG-0696.

(g) The EP does not presently contain measures which assure the prevention or mitigation of the long-term effects of releases into the liquid pathway within the minimum 50 mile radius ingestion-EPZ.

(2) The CPS should not be licensed to operate until IP has demonstrated, as required by 10 C.F.R. §50.34(b), and Part 50, Appendix B, that it possesses sufficient management and technical qualifications to assure that the CPS will be (a) maintained in a safe condition while operating normally, (b) safely operated and controlled in the event of an abnormal occurrence or emergency, or (c) decommissioned in a safe manner.

Past mismanagement of the construction of Clinton Unit Unit 1 has been documented in proceedings before the Illinois Commerce Commission (ICC) and is currently the subject of a separate ICC docket. ICC Docket #80-0167. Since the start of construction on Unit 1 there have been shifts in IP organizational and personnel structure. Repeated Quality Assurance and Quality Control problems are noted in NRC Region III inspection reports. Specifically, IP's Q.A. and Q. C. program is consistently deficient in its ability to assure (1) a sufficient number of experienced personnel, (2) integrity of welding procedures, and (3) numerous other Q.A. and Q.C. functions. Additionally, IP has not provided sufficient documentation of deviations from current regulatory practice in the form of Regulatory Guides, Standard Review Plans and Branch Technical Positions. These incidents, among others, raise serious questions as to IP's management and technical capability to operate, backfit, and decommission the CPS in compliance with regulatory requirements.

So.33(f)

(3) In noncompliance with 10 CFR § ~~50.24(b)~~ and Part 50, App. C, IP has not demonstrated that it possesses or has reasonable assurance of obtaining the funds necessary to pay the estimated costs of operation, and decommissioning including required backfitting and the purchase of substitute power, for the CPS.

Since construction permit issuance, IP has placed an increasing reliance on external financing of construction of the CPS, <sup>relatively</sup> ~~mainly in the form of requests for rate relief from the~~ *in the form of bonds @ high interest rates + equity financing with high dividends.* Illinois Commerce Commission. As evidenced by the increasing number of intervening parties in those proceedings and the increased duration of those proceedings, the future of such rate relief and a favorable (to the utility) regulatory climate is by no means a ~~certainty~~

These facts call into serious question IP's capability to maintain the operation and decommissioning of the CPS in a way that provides assurance of public health and safety.

(4) Clinton Power Station should not be licensed to operate until IP has developed and demonstrated an adequate security plan which complies with 10 CFR 73.55. The FSAR does not give adequate assurance that all regulatory requirements have been or will be met prior to operation. See, e.g., FSAR Regulatory Guide 1.17, Rev. 1.

(5) IP has entirely ignored current NRC policy (45 FR 40,101; 6/13/80) for considering "the more severe kinds of very low probability accidents that are physically possible", i.e., "Class 9" accidents. Such accidents are now a salient part of the operating and regulatory experience of commercial nuclear reactors.

Since the "Lewis Report" repudiation of Wash-1400 and the accident at TMI-Unit 2, there is no theoretical or practical basis for excluding the possibility of a "Class 9" accident in the design basis of the CPS. For this reason, the CPS should not be licensed to operate until an evaluation of the present CPS design has been made in order to consider possible design changes - such as vented containment, a "core catcher", or an additional cooling system - which may be necessary to assure public health and safety in the event of a "Class 9" accident.

Additionally, the Clinon FSAR and ER are inadequate in that they fail to include a discussion of the following items as required by current commission policy:

(a) In-plant accident sequences that can lead to a spectrum of "releases", including sequences that can result in inadequate cooling of reactor fuel and to melting of the reactor core;

(b) the extent to which events arising from causes external to the plant are possible contributors to the risk associated with Clinton Units 1 and 2;

(c) an explanation of the detailed quantitative considerations that form the basis of the probabilistic estimates of releases;

(d) the environmental consequences, in probabilistic terms, of all releases whose probability of occurrence has been estimated;

(e) the environmental consequences, referenced in (d) above, discussed in terms of potential radiological exposures to individuals, to population groups, and to biota;

(f) the health and safety risks that may be associated with exposures to people;

(g) the socioeconomic impacts that might be associated with emergency measures during or following a severe accident;

(h) a comparison of the environmental risks of accidents with the radiological risks associated with normal and anticipated operational releases;

(i) the increased risks to the public health and safety resulting from the prevention of entry into the containment building for an extended period of time following an accident similar to that which occurred at TMI Unit-2;

(j) consideration of release of radiation into the liquid pathway beneath and into the underground aquifer.

(6) The CPS has not been designed and constructed to resolve the matter of Anticipated Transients Without Scram (ATWS) in a way that provides assurance to the public health and safety.

The recent ATWS incidents at the Dresden, Brown's Ferry, and at least four other G.E. BWRs, demonstrate that this significant safety issue is far from resolved. See, NRC Bulletin No. 80-17, including supplements, Bulletin No. 80-30.

The CPS, also a G.E. BWR, is especially vulnerable to ATWS due to the faulty welds during construction which had caused "burn through/suck back" on a number of control rod drive tubes. These defects have not been adequately analyzed or repaired. See, letter dated July 19, 1980 from L. J. Koch, IP Vice President to NRC Region III Inspection. This letter demonstrates an erroneous assumption on IP's part that the functioning capability of control rod drive tubes are ~~not~~ necessary to achieve cold shutdown of the reactor. In this light, the CPS should not be licensed to operate until IP has completed an ATWS analysis for (1) redundancy, (2) systems interaction, (3) loss-of-coolant-accident, and (4) incidents such as those experienced in other G.E. BWRs where air pressure had not been maintained to assure insertion of control rods to scram.

(7) As required by 10 CFR 50.109, the design and fabrication of the CPS control room layout and instrumentation have not been backfitted to meet current regulatory requirements. See, NUREGs 0660, 0694, 0737. Specifically,

(a) the CPS lacks sufficient instrumentation for displaying and recording the reactor pressure vessel water level, NUREG, 0660, Item No. II. K. 3.23;

(b) the CPS lacks sufficient instrumentation for detecting inadequate core cooling in case of an abnormal occurrence, NUREG 0660, Item No. II. F. 2;

(c) direct indication of safety/relief valve position should be, but is not, provided for in the CPS instrumentation, NUREG 0660, Item II. D. 3;

(d) a Safety Parameter Display System should be, but is not, provided for in the main control room, NUREG 0660, Item No. I. D. 2;

(e) the CPS lacks adequate instrumentation for monitoring accident conditions, NUREG 0660, Item No. II. F. 3;

(f) IP has not demonstrated its willingness and ability to comply with current NRC requirements for overall control Room Design standards, NUREG 0660, Item No. I. D. 4;

(g) the CPS control room design and instrumentation has not been subjected to a comparative evaluation of the interaction of human factors and efficiency of operation, NUREG 0660, Item No. I. D. 1;

(h) not all CPS control panels are completely unobstructed and accessible. It is insufficient to have certain surveillance and monitoring actions on back row panels. See, FSAR §13.5, Regulatory Guide 1.114. Moreover, there has been no documentation of the criteria used to determine which instruments should be placed on back row panels;

(i) the FSAR contains no evaluation of the CPS control room layout and instrumentation in terms of the new criteria resulting from the accident at the TMI Unit 2, NUREG 0660, Item No. I.D. 1;

(j) the FSAR contains no documentation of how CPS can or will be backfitted for the new criteria referenced above.

(8) The CPS should not be licensed to operate until there has been a comprehensive evaluation of systems interaction, including the interplay of human error and systems safety, as required by 10 C.F.R. Part 50, Appendix A, Criteria 19, 20, 22 and 29. In specific, the FSAR is inadequate in its focus on major failures within a single system. Full consideration is not, but should be, given to multiple equipment failures, minor failures, and failures of non-safety related systems that interact with safety systems.

*deletion*

(9) The economic and social effects of station (~~construction~~ and) operation have not been adequately assessed and considered by IP. Among other things, IP has not adequately assessed the following items;

(a) the economic effects of instituting adequate emergency preparedness on state and on local political agencies, including law enforcement agencies, health maintenance agencies, and those "special facilities" with particularly acute problems in emergency planning;

(b) the anticipated changes in demand on health and social services in Dewitt and surrounding counties owing to station operations;

(c) the effects on local businesses and communities of any increase or decrease in tourism and recreational activities owing to the full operation of Clinton Lake and its recreational facilities;

(d) the effects of human migration to or from the area owing to station operation;

(e) the effects of anticipate changes in economic growth patterns owing to the 2 year time lag and increased costs of station operation since the CP stage;

(f) the mental health effects of emergency preparedness on all age brackets of affected population;

(g) the psychological stress and trauma to be anticipated in the aftermath of an accident of the type which occurred at TMI

Unit 2 or any other serious accident. See, "President's Commission on the Accident of TMI Unit-2", (the Kemeny Report); NRC interim policy on "Class 9" accidents (45 FR 40,101; 6/31/80).

(10) The CPS nuclear system has not been demonstrated to meet the General Design Criteria requirements of 10 C.F.R. Part 50, Appendix A. In specific,

- (a) in noncompliance with Criterion 2,
- (1) consideration of worst case tornado phenomenon, including tornado missiles and power outages, receives only cursory treatment in the FSAR. In addition, combinations of the effects of normal and accident plant conditions with the effects of tornado phenomena receives similar treatment in the FSAR. The regular frequency of tornado phenomena in the site vicinity makes this of particular concern;
  - (2) the seismic qualification of the CPS design does not account for the worst case seismic activity now known to occur in the site region;

*50-mi radius*

*p. 3.1-3 FSAR treatment*

*p. 2.5-41, § 2.5.2.1.1, § 3.7  
What does PA think this is?  
What is to be considered as the site region?*

(b) in noncompliance with Criterion 3, the current CPS design provides inadequate fire protection in that the following items receive incomplete or cursory treatment in the FSAR:

- (1) personnel training in fire procedures;
- (2) matching of extinguishing material to type of fire and location of use, including assurance of safety of persons during use of extinguishing materials;
- (3) mitigation of fire hazardous materials used in vital plant areas outside the control room;
- (4) potential for interaction of unconnected systems-doors, stairs, ventilation ducts, piping, and other penetrations evaluated for transport of fire, hot steam or fumes and smokes;



(11) The CPS should not be licensed to operate until IP has developed and demonstrated a radiation monitoring system capable of handling the type of accident that occurred at TMI-Unit 2. In specific,

(a) multiscale instrumentation that has the capability for recording releases above design limits (i.e., "Class Eight" accidents) should be, but has not been, incorporated into the monitoring system of the CPS;

(b) The CPS outside monitoring equipment should be, but is not, located at a sufficient number of varying locations and elevations;

(c) "real-time" monitors should be used in order that accurate readings over specific time intervals can be made;

(d) releases which exceed design specifications should be, but are not, considered for all monitoring instrumentation;

(e) use of independent persons and agencies should be, but is not, planned for in monitoring radiation in major off-site population centers.

ER-CK6. §6.1.5

(12) The CPS should not be licensed to operate until IP has demonstrated its [<sup>selected</sup>willingness and] capability to comply with NRC regulatory requirements regarding detection of reactor coolant pressure boundary leaks. 10 CFR Part 50, Appendix A, Criteria 13 and 14. In specific,

- (a) sump flow monitoring calculations and indication devices are not, but should be, seismically qualified;
- (b) the transmitters of the sump flow monitoring instruments for the dry-well equipment and floor drains are not, but should be, readily accessible for operability and calibration during plant operation.

(13) The Clinton Power Station should not be licensed to operate until IP has demonstrated that radiation exposure levels will be maintained as-low-as-reasonably-achievable as required by 10 CFR 20.1. The FSAR does not adequately consider occupational radiation exposure to be expected from either the normal operation of Clinton Units 1 and 2 or that which may occur during an abnormal occurrence or serious accident. In specific,

(a) IP has not <sup>shown compliance</sup> indicated capability or willingness to comply with the requirements of 10 CFR 20.203. See, FSAR, p. 1.8-161 FSAR Regulatory Guide 8.8 (Rev. 4);

(b) IP has failed to provide assurance of the accuracy of personnel radiation monitoring instruments and laboratory radiation measuring equipment. See, FSAR, Regulatory Guide 1.68 (Rev. 2);

(c) The Area radiation monitoring equipment does not provide a reasonable assurance of accuracy in that it is only accurate within plus or minus 20%. §12.2.4 FSAR

(d) IP has failed to provide a sufficient number of continuous airborne radioactivity monitors. Additionally, the monitors provided are not sufficiently sensitive in that they require up to 10 hours to detect emissions.

(e) IP has not met the requirements of NUREG 0737.

(14) The CPS Emergency Core Cooling System (ECCS) has not been demonstrated to meet the requirements of 10 CFR Part 50.46 and 10 CFR Part 50, Appendix K. In specific,

(a) since the models used to predict ECCS performance have not been proven accurate, see, NUREG 0630;

(b) the CPS is subject to excessive flow blockage due to clad swelling in noncompliance with current regulatory requirements.

(c) the core spray distribution of the CPS ECCS is of unproven operating capability.

*Staff did not oppose in pleading.  
Based upon Sp. Mueller's response  
to Fritz questions, Staff would oppose 1/4  
as lacking factual basis.*

(15) The effects of the low-level radiation to be released from Clinton Units 1 and 2 have not been adequately assessed and considered in the following respects:

(a) as mandated by current commission policy (45 FR 40,101; 6/13/80), the ER does not discuss the environmental consequences of radiological exposures to individuals, population groups and biota anticipated from the full spectrum of accident sequences;

(b) routine radiation releases from the operation of Unit 1 have not been adequately considered in terms of the health effects on workers and other personnel engaged in construction of Unit 2 while Unit 1 is in operation;

(c) gaseous effluents anticipated to be released from Clinton Unit 2 are not, but should be, considered in calculations estimating populations doses; See, ER §5.2.4.4.;

(d) the methods used to calculate atmospheric effluents of routine releases are inadequate in that conservative estimates were not, but should have been, used by IP. see, FSAR, Regulatory Guide 1.111 (rev. 1; 7/77);

(e) the residual risks of low-level radiation which will result from the release of radionuclides from Clinton Units 1 and 2 have not been, but should be, adequately assessed and factored into the NEPA cost-benefit analysis for Clinton Units 1 and 2.

*see Susquehanna 9NRC291  
for similar contention*

(16) Neither IP nor the NRC staff have assured that the storage and transport of fuel and radioactive wastes to and from the CPS will adequately protect the health and safety of all affected publics. The radiological health effects of all isotopes which will be released during the fuel cycle required for Clinton Units 1 and 2 have been underestimated and misrepresented. In specific,

(a) the radiological health effects of each long-lived isotope, including those released during storage in and transportation from Clinton Units 1 and 2 should be reassessed; Susquehanna at 297-98

(b) the health effects of the long-lived isotopes referenced in (a) above have not been, but must be, factored into the cost-benefit analysis for the Clinton Power Station;

(c) the safety of the planned increase in spent fuel storage beyond that originally anticipated has not been adequately documented; See, SER Supplement No. 1 §9.1.2.;

(d) IP's failure to provide a procedure for pre-operational testing of the functional capability of the spent fuel transfer system does not provide a reasonable assurance of safety. The spent fuel transfer tube is of an unproven design for the CPS design. In the absence of additional testing, the safe operation of the spent fuel transfer system is questionable. Additionally, there is no assurance that occupational exposure to personnel will be maintained as-low-as-reasonably-achievable for the operation and maintenance of the spent fuel transfer system.

(17) The current summary cost-benefit analysis for the Clinton Units 1 and 2 is grossly inaccurate in that IP has not assessed and considered any information arising subsequent to the 1974 construction permit review for the facility. See, OL-ER, ch. 11. Full consideration of the following factors, in conjunction with a realistic estimate of plant on-line capacity, will tip the cost-benefit balance against authorization of an operating license for Clinton Unit 1 (or at least Unit 2):

(a) the change, since 1974, in actual present and projected cost of Units 1 and 2;

(b) the change, since 1974, in annual peak demand as it affects need for the power to be generated by Clinton Units 1 and 2;

(c) the full economic and health costs of radiation exposure and radiological health effects resulting from operation of Clinton Units 1 and 2 compared with that of alternative energy supplies;

(d) the full costs of decommissioning, dismantling and decontamination of the site for Clinton Units 1 and 2;

(e) an overall health-cost analysis comparing operation with no operation;

(f) the costs of retrofitting Clinton Units 1 and 2 to meet current and [projected] NRC regulatory requirements.

ref: NUREG-0660

(18) The Clinton Power Station should not be licensed to operate if environmentally superior and less costly alternative means of producing the energy to be supplied by the CPS exist. In relying on the analysis published at the 1974 construction permit stage, see, OL-ER, ch. 9. IP has not adequately considered the full range of presently available alternative energy sources. In specific, the following items have not been assessed and factored into the current alternative energy sources analysis:

- a) "the National Energy Plan", issued by the Executive Office of the President, Energy Policy and Planning, (4/29/77) mandates expanded use of coal for the generation of electricity. In addition, Illinois is a coal rich state. Thus, the recent dictates of national policy and regional economics call for an updated assessment of coal generated electricity as a more reliable alternative base load energy source for the IP service area;
- b) the full range of privately financed and government funded conservation and weatherization programs for residential and commercial buildings, including a discussion of "end use efficiencies". Since 1974, there has been a tremendous increase in these programs on the federal, state and local levels. The existence and operation of these programs call for an updated assessment of energy conservation as a partial alternative to the CPS;
- c) a power load management program which reduces peak power demands. This energy source is a more appropriate method of supplying energy for a "summer peaking" utility such as IP;
- d) the full range of environmental costs and benefits and the economic costs of the alternative energy sources listed above.

(19) There are numerous technical deficiencies in the design and operative capability of the CPS. Documentation of these deficiencies is primarily contained in three sources: (1) NUREG-0694, (2) NUREG-0606, (3) the General Electric Nuclear Reactor Study (the "Reed Report"). Those items documented in these reports which are applicable to the CPS are listed in Appendix A following this contention.

Petitioners recognize that many of these issues have been labelled "generic" by the NRC staff and are thus under consideration in rulemaking proceedings. Petitioners further recognize the stated rationale underlying this administrative practice and the effect of the practice as well-- to preclude the litigation of these issues in any one adjudicative proceeding so as to allow broader participation in the rulemaking proceedings by all interested persons.

These administrative "facts of life" ought not serve as an excuse for entirely disregarding or only superficially considering these issues, many of which have significant potential impact on public health and safety. This practice and the results of it are well documented in "The Need for Change: The Legacy of Three Mile Island, Report of the President's Commission on the Accident at Three Mile Island", (October 1979), at 52. Attempts at "fixes" after the reactor is brought up to full power pose much greater safety and financial burdens on all involved than if the issues are resolved and the reactor is backfitted prior to issuance of an operating license.

For these reasons, the CPS should not be licensed to operate until IP and the NRC staff have provided

(a) full and detailed explanation of why it is acceptable to permit the (Clinton) Units to operate in the face of the safety issues under study. That explanation should include, among other things, specification of both (1) the present status of the generic studies and (2) all the measures employed at (the CPS) to compensate for the current absence of the answers sought by those studies. Virginia Electric and Power Company, (North Anna, Units 1 and 2), ALAB-491, 8 NRC 245 (1978).

In the absence of this explanation, Petitioner can not pretend to provide more "specifity and basis" for this contention. Once the ACRS review is complete and the NRC staff has issued the OI-SER for the Clinton Units, Prairie Alliance will be in a manifestly better position to furnish further details. To require more of the public at this stage in the proceeding would be to place on the intervenor's shoulders a burden which has been expressly allocated (and more properly so) on the applicant and the NRC staff. See, e.g., Pennsylvania Power and Light Company, (Susquehanna Units 1 and 2), LBP-79-6, 9 NRC 291 at 311 (1979) As the Appeals Board held in North Anna,

(these) "unresolved" issues cannot be disregarded in individual licensing proceedings simply because they also have generic applicability; rather for an applicant to succeed, there must be some explanation why construction or operation can proceed even though an overall solution has not been found. North Anna, supra, at 248 (Emphasis supplied).

APPENDIX A: GENERIC SAFETY ISSUES  
APPLICABLE TO THE CLINTON POWER STATION

<u>TASK NO.</u>	<u>TITLE</u>
A-1	Water Hammer
A-2	Assymetric Blowdown loads on the Reactor Vessel
A-9	ATWS
A-10	BWR Nozzle Cracking
A-11	Reactor Vessel Materials Toughness
A-13	Snubbers
A-14	Flow Detection
A-15	Decontamination
A-16	Steam Effects on BWR Core Spray Distribution
A-17	Systems Interaction in Nuclear Power Plants
A-18	Pipe Rupture Design Criteria
A-21	Main Steam Line Break Inside Containment
A-23	Containment Leak Testing
A-24	Qualification of Class IE Safety Related Equipment
A-25	Non-safety Loads on Class IE Power Sources
A-27	Reload Application Guide
A-28	Increase in Spent Fuel Storage Capacity
A-29	Design Features to Control Sabotage
A-30	Adequacy of Safety-Related DC Power Supplies
A-31	RHR Shutdown Requirements
A-32	Evaluation of Overall Effects of Missiles

A-34 Instruments for Monitoring Radiation and Process Variables During Accidents

A-35 Adequacy of Offsite Power Loads

A-36 Control of Heavy Loads near Spent Fuel

A-37 Turbine Missiles

A-38 Tornado Missiles

A-39 Determination of Safety Relief Valve (SRV) Pool Dynamic

A-40 Seismic Design Criteria - Short Term

A-41 Seismic Design Criteria - Long Term

B-1 Environmental Technical Specifications

B-2 Forecasting Electricity Demand

B-3 Event Categorization

B-4 ECCS Reliability

B-5 Ductility of Two-Way Slabs and Shells and Buckling Behavior of Steel Containments

B-6 Loads, Load Combinations, Stress Limits

B-8 Locking Out of ECCS Power Operated Valves

B-9 Electrical Cable Penetrations of Containment

B-10 Behavior of BWR Mark III Containment

B-11 Subcommittee Standard Problems

B-12 Containment Cooling Requirements (Non-LOCA)

B-13 Marviken Test Data Evaluation

B-14 Study of Hydrogen Mixing Capability in Containment Post-LOCA

B-15 CONTEMPT Computer Code Maintenance

- B-16 Protection Against Postulated Pinping Failures in Fluid Systems Outside Containment
- B-17 Criteria for Safety-Related Operator Actions
- B-19 Thermal-Hydraulic Stability
- B-20 Standard Problem Analysis
- B-21 Core Physics
- B-22 LWR Fuel
- B-24 Seismic Qualification of Electrical and Mechanical Equipment
- B-25 Piping Benchmark Problems
- B-26 Structural Integrity of Containment Penetrations
- B-27 Implementation and Use of Subsection NF
- B-28 Radionuclide/Sediment Transport Program
- B-29 Effectiveness of Ultimate Heat Sinks
- B-30 Design Basis Floods and Probability
- B-31 Dam Failure Model
- B-32 Ice Effects on Safety-Related Water Supplies
- B-33 Dose Assessment Methodology
- B-34 Occupational Radiation Exposure Reduction
- B-35 Confirmation of Appendix I Models for "Calculation of Release of Radioactive Materials in Gaseous and Liquid Effluents from Light-Water-Cooled Power Reactors"
- B-36 Develop Design, Testing and Maintenance Criteria for Atmosphere Cleanup System Air Filtration and Absorption Units for Engineered Safety Feature Systems and for Normal Ventilation Systems
- B-37 Chemical Discharges to Receiving Waters

B-38                    Reconnaissance Level Investigations

B-39                    Transmission Lines

B-40                    Effects of Power Plant Entrainment on Plankton

B-41                    Impacts on Fisheries

B-42                    Socioeconomic Environmental Impacts

B-43                    Value of Aerial Photographs for Site Evaluation

B-44                    Forecasts of Generating Costs of Coal and Nuclear  
Plants

B-45                    Need for Power - Energy Conservation

B-46                    Costs of Alternatives in Environmental Design

B-47                    Inservice Inspection of Supports Class 1, 2, 3 and  
MC Components

B-48                    BWR Control Rod Drive Mechanical Failures

B-49                    Inservice Inspection Criteria and Corrosion  
Prevention Criteria for Containments

B-50                    Post-Operating Basis Earthquake Inspection

B-51                    Assessment of Elastic Analysis Techniques for  
Equipment and Components

B-52                    Fuel Assembly Seismic and LOCA Responses

B-53                    Load Break Switch

B-56                    Diesel Reliability

B-57                    Station Blackout

B-58                    Passive Mechanical Failures

B-59                    N-1 Loop Operation in BWRs and PWRs

B-60                    Loose Parts Monitoring Systems

B-61                    Analytically Derived Allowable ECCS Equipment  
Outage Periods

- B-62 Re-Examination of Technical Bases for Establishing SLs, LSSs, and Reactor Protection System Trip Functions
- B-63 Isolation of Low Pressure Systems Connected to the Reactor Coolant Pressure Boundary
- B-64 Decommissioning of Reactors
- B-65 Iodine Spiking
- B-66 Control Room Infiltration Measurements
- B-67 Effluent and Process Monitoring Instrumentation
- B-68 Pump Overspeed During a LOCA
- B-69 ECCS Leakage Ex-Containment
- B-72 Health Effects and Life-Shortening from Uranium and Coal Fuel Cycles
- B-73 Monitoring and Excessive Vibration Inside the Reactor Pressure Vessel
- C-1 Assurance of Continuous Long-Term Integrity of Seals on Instrumentation and Electrical Equipment
- C-2 Study of Containment Depressurization by Inadvertent Spray Operation to Determine Adequacy of Containment External Design Pressure
- C-3 Insulation Usage Within Containment
- C-4 Statistical Methods for ECCS Analysis
- C-5 Decay Heat Update
- C-6 LOCA Heat Sources
- C-8 Main Steam Line Leakage Control Systems
- C-9 RHR Heat Exchanger Tub Failures
- C-10 Effective Operation of Containment Sprays in a LOCA

C-11                    Assessment of Failure and Reliability of Pumps and  
                         Valves

C-13                    Non-Random Failures

C-14                    Storm Surge Model for Coastal Sites

C-15                    NUREG Report for Liquid Tank Failure Analysis

C-16                    Assessment of Agricultural Land in Relation to  
                         Power Plant Siting and Cooling System Selection

C-17                    Interim Acceptance Criteria for Solidification  
                         Agents for Radioactive Solid Wastes

D-1                     Advisability of a Seismic Scram

D-2                    Emergency Core Cooling System Capability for  
                         Future Plants

D-3                     Control Rod Drop Accident

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of )  
ILLINOIS POWER COMPANY, ET AL. )  
(Clinton Power Station Units )  
1 and 2) )  
)  
)  
)  
)

DOCKETED  
USNRC  
Docket Nos. 62-50460-12:20  
50-4620L  
DEC 29 1981

REGISTRY SERVICE  
BRANCH

NOTICE

TO: Hugh K. Clark, Esq.  
P.O. Box 127A  
Kennedyville, Maryland 21645

Dr. George A. Ferguson  
School of Engineering  
Howard University  
2300 Sixth Street, N.W.  
Washington, D.C. 20059

Dr. Oscar H. Paris  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Peter V. Fazio, Jr., Esq.  
Schiff, Hardin and White  
7200 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606

Philip L. Willman, Esq.  
Susan Sekuler, Esq.  
Assistant Attorneys General  
Environmental Control Division  
188 West Randolph St., Suite 2315  
Chicago, Illinois 60601

Reed Neuman, Esq.  
Assistant Attorney General  
500 South Second Street  
Springfield, Illinois 62701

Counsel for NRC Staff  
Office of the Executive Legal  
Director  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

PLEASE TAKE NOTICE that I have filed with the Secretary  
of the U.S. Nuclear Regulatory Commission PRAIRIE ALLIANCE REVISED  
PETITION FOR LEAVE TO INTERVENE AND REQUEST FOR HEARING.

  
Allen Samelson  
Representative for Prairie Alliance  
P.O. Box 2424  
Station A  
Champaign, Illinois 61820

DATE: March 30, 1981

CERTIFICATE OF SERVICE

I hereby certify that on this day I served the PRAIRIE ALLIANCE REVISED PETITION TO INTERVENE AND REQUEST FOR HEARING upon each person designated below by deposit in the United States Mail, First Class postage prepaid.

Hugh K. Clark, Esq.  
P.O. Box 127A  
Kennedyville, Maryland 21645

Dr. George A. Ferguson  
School of Engineering  
Howard University  
2300 Sixth Street, N.W.  
Washington, D.C. 20059

Dr. Oscar H. Paris  
Atomic Safety & Licensing Board  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

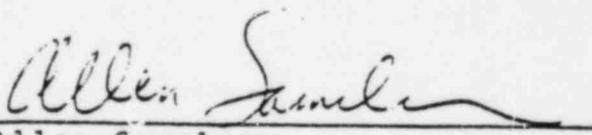
Peter V. Fazio, Jr., Esq.  
Schiff, Hardin and White  
7200 Sears Tower  
233 South Wacker Drive  
Chicago, Illinois 60606

Philip L. Willman, Esq.  
Susan Sekuler, Esq.  
Assistant Attorneys General  
Environmental Control Division  
188 West Randolph St., Suite 2315  
Chicago, Illinois 60601

Reed Neuman, Esq.  
Assistant Attorney General  
500 South Second Street  
Springfield, Illinois 62701

Counsel for NRC Staff  
Office of the Executive Legal  
Director  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dated this 30<sup>th</sup> day of March, 1981.

  
Allen Samelson  
Representative for Prairie Alliance  
P.O. Box 2424  
Station A  
Champaign, Illinois 61820