UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
Hugh K. Clark, Chairman
Dr. George A. Ferguson
Dr. Oscar H. Paris

In the Matter of	
ILLINOIS POWER COMPANY, et al.	Docket Nos. 50-461 OL 50-462 OL
(Clinton Power Station, Units 1 and 2)	May 29, 1981

MEMORANDUM AND ORDER
(Admitting Petitioners, Accepting Contentions, and Ordering a Hearing)

I. SUMMARY

Illinois Power Company, et al. (IP or Applicants) filed an application with the Nuclear Regulatory Commission (Commission) for operating licenses to operate Units 1 and 2 of the Clinton Power Station.

Prairie Alliance, et al., (Prairie Alliance) filed a petition to intervene and requested a hearing. Prairie Alliance has standing to intervene and has presented a number of allowable contentions. For the reasons set forth herein, Prairie Alliance is admitted as a party to the proceeding.

Bloomington-Normal Chapter of Prairie Alliance also filed a petition to intervene. Later it withdrew its petition, having decided to collaborate with its parent organization, Prairie Alliance.

The State of Illinois (Illinois) requested permission to participate in the hearing pursuant to 10 C.F.R. § 2.715(c). Its request is granted.

A hearing will be held on Applicants' request for the said operating licenses.

II. PROCEDURAL HISTORY

A. Application for Operating Licenses

On September 29, 1980, the Commission gave notice in the Federal Register, 45 F.R. 6437-9, of the receipt of an application by Applicants for licenses to operate Units 1 and 2 of Clinton Power Station. In part, this notice provided for the filing of petitions to intervene and requests for a hearing by October 29, 1980.

B. Prairie Alliance's Petition to Intervene and Request for Hearing - Ruling on Prairie Alliance's Standing to Intervene

A petition to intervene and a request for hearing, dated October 29, 1980, was filed by Prairie Alliance on behalf of itself and its members, including Stanley Elsasser, Rebecca Elsasser, Joanne Schwart, Jean Foy, Caroline Mueller, and Allen Samelson. The Petition described Prairie Alliance as a not-for-profit organization incorporated under the laws of Illinois and concerned with nuclear power and its relationship to the community and the environment. It has approximately 350 members, most of whom live, work, and own property within 35 miles of the Clinton Power Station.

The Petition further states that Stanley Elsasser and Rebecca Elsasser reside and owr property at 817 East Main Street, Clinton, Illinois, approximately six miles west of the Clinton Power Station. It is also alleged that the health, ownership of property, work, and life-style of these persons will be affected by the licensing for operation of the Clinton Power Station.

Both the N.R.C. Staff (pp. 1-3 of brief of November 18, 1980) and Applicants (p. 2 of brief of November 10, 1980) concede that Prairie Alliance has standing to intervene. Prairie Alliance's Petition meets the criteria set forth by the Appeal Board in Virginia Electric Power Company (North Anna Nuclear Power Station, Units 1 and 2), ALAB-522, 9 NRC 54 (1979). The Board rules that Prairie Alliance has standing to intervene.

C. The Petition of the Bloomington-Normal Chapter of Prairie Alliance to Intervene and Request for Hearing - Ruling on Petitioner's Standing to Intervene

By a letter dated October 29, 1980, the Bloomington-Normal Chapter of Prairie Alliance (Petitioner) requested a hearing and petitioned for the right to intervene. In a telephone conference between the Board, the Petitioner, Prairie Alliance, the Applicant and the Staff, on December 2, 1980, this petitioner expressed an intent to consolidate its efforts with its parent, organization, Prairie Alliance. The Petitioner, as a separate entity, took no further part in this proceeding. The Board rules that this Petitioner has shown no standing

to intervene. This Petitioner is dismissed as a separate party in this proceeding.

D. The petition of Illinois to participate in this Proceeding and Request for Hearing - Ruling of Board

By pleading dated October 29, 1980, Illinois requested a hearing and sought permission to participate therein as an interested State pursuant to 10 C.F.R. § 2.715(c). The request is granted. Its participation will be governed by the provisions of 10 C.F.R. § 2.715(c).

E. The First Special Prehearing Conference

On January 14, 1981, Prairie Alliance, which is not represented by counsel, filed a timely supplement to its petition to intervene. The supplement proposed 42 contentions. None of the proposed contentions met the specificity requirements of 10 C.F.R. § 2.714. At the First Special Prehearing Conference held on January 29, 1981 in Urbana, Illinois, a number of the proposed contentions were discussed. The futility of discussing the remainder of the proposed contentions became apparent.

In its answer of November 18, 1980 to Prairie Alliance's petition to intervene, the Staff stated that the petitioner had identified areas of interest sufficient to meet the aspect requirements of 10 C.F.R. § 2.714. In the hope of expediting this proceeding so that the substance of Prairie Alliance's contentions might be addressed, the

Board approved a suggestion by Staff that it meet with Prairie Alliance in an attempt to explain what the Staff considered to be formal deficiencies in Prairie Alliance's proposed contentions. Counsel for the Applicants were invited to participate in such meeting but declined.

The time for filing revised contentions by Prairie Alliance was extended, to allow Prairie Alliance an opportunity to rewrite its contentions after meeting with the Staff.

E. The Second Special Prehearing Conference

Prairie Alliance filed its revised proposed contentions on March 30, 1981. Illinois' Brief of April 9, 1981 supported the revised contentions. Applicants' Brief of April 11, 1981 opposed such contentions. The Staff's Brief of April 11, 1981 objected to some of these contentions and did not object to others.

At the Second Special Prehearing Conference in Champaign, Illinois on April 14, 1981, Prairie Alliance orally presented its revised contentions one by one. Applicants, Staff, and Illinois commented on each revised contention.— Applicants also made general comments concerning the contentions. These general comments will be discussed below.

III. THE CONTENTIONS

A. Applicants Object to a Number of the Revised Proposed Contentions as Having no Basis in Fact

Applicants argued that each contention must be specific and factually supported. It is now well settled that a contention need not plead evidentiary facts. It is enough if a contention alleges its basis with reasonable specificity. Also, the merits of an issue are not to be considered at the pleading stage. See, Philadelphia Electric Company (Peach Bottom Atomic Power Station, Units 2 and 3), ALAB 216, 8 AEC 13, 20 (1974); Duke Power Company (William B. McGuire Nuclear Station, Units 1 and 2), ALAB-128, 6 AEC 399, 401 (1973); Mississippi Power and Light Company (Grand Gulf Nuclear Station, Units 1 and 2), ALAB-130, 6 AEC 423 (1973); Houston Lighting and Power Company, (Allens Creek Nuclear Generating Station, Unit 1), ALAB-590, 11 NRC 542 (1980); Commonwealth Edison Company (Bryan Nuclear Power Station, Units 1 and 2) LBP-80-30, 12 NRC 683 (1980); and other cases cited in the latter. Applicants' argument is rejected.

B. Issues Decided at the Construction Permit Stage

Applicants allege that many of the revised proposed contentions are concerned with issues decided at the construction permit stage. A detailed review of the contentions reveals that only two contentions, 6 and 17, are in this category. Contention 6 is allowed because of information not available at the Construction Permit stage.

Contention 17 is denied. Applicants' allegation does not deserve further discussion.

C. Issues not Pertinent to the Clinton Power Station

Applicants allege that several of the revised proposed contentions raise issues which could only pertain to facilities with designs radically different from the design of the Clinton Power Station. This allegation goes to the problem of proof. It is not pertinent at the pleading stage. Moreover, this general allegation is not raised with respect to any specific contention.

D. Premature Issues

Applicants object to a number of the revised proposed contentions on the ground that they are premature. It is true that a number of the contentions relate to requirements made since the FSAR was filed. Some of these contentions have been allowed. After the Staff's SER is filed, but not later than the prehearing conference, these contentions will be reconsidered. The Board has been lenient as to these contentions since it is impossible for the intervenor to be more specific at this stage of the proceeding.

E. Untimeliness of Revised Proposal Contentions

Applicants argue that the revised proposed contentions were filed after the due date and hence are untimely. The Staff did not concur (Tr. 88). Under 10 C.F.R. § 2.714(a)(1), untimely contentions

will not be granted without a determination that the request should be granted based upon a balancing of five factors set forth in the regulation. Prairie Alliance was granted by the Board an opportunity to revise its contentions. It would be unconscionable to now hold that the revised contentions were late. Moreover, the earlier contentions were so broad that it would be difficult to broaden them further. Without doubt the revised contentions are more specific than the earlier ones. Applicants have not pointed out any specific revised contention which is not within the scope of the earlier contentions. The Applicants' argument is rejected.

F. Rulings on the Specific Revised Proposed Contentions

Of necessity, the proposed contentions have been drafted using information now available, including Applicants' Final Safety Analysis Report (FSAR) and Operating License Environmental Report (OL-ER). Since these documents were filed, there have been extensive changes in the requirements and regulations concerning operating licenses. These changes will be reflected in the Staff's Safety Evaluation Report (SER) now scheduled for issuance in January 1982 and in the Staff's Final Environmental Statement (FES) now scheduled for issuance in March 1982 (Tr. 111). After discovery and the availability of the SER and FES, the allowed contentions will be subject to reconsideration as to both scope and allowability.

Clarifying changes have been made by the Board in some allowed contentions. The allowed contentions have been given new numbers. As revised and renumbered, these contentions are set forth in Appendix A attached hereto.

Contention 1. This contention questions the adequacy of Applicants' emergency planning, the requisites of which were extensively amended and upgraded by the Commission effective November 3, 1980, 45 F.R. 55402 et seq., August 19, 1980. Contention 1 is admitted, except for Part (g) which is denied as too vague to meet the requirements of 10 C.F.R. § 2.714. Part (g) is denied for the additional reason that it is outside the scope of emergency planning.

Contention 2. This contention is concerned with the management and technical qualifications of Applicants. These are appropriate matters for consideration. Contention 2, as revised by the Board, is allowed.

Contention 3. This contention is concerned with the Applicants' financial qualifications. This is an appropriate area for consideration. This contention, as revised by the Board, is allowed.

Contention 4. This contention challenges the Applicants' security planning. This matter deserves consideration. The contention is allowed.

Contention 5. This contention is concerned with beyond design basis, or "Class 9", accidents. The Commission's Policy Statement of June 13, 1980, 45 F.R. 40101, requires the N.R.C. Staff, not the Applicants, to consider the environmental consequences of accidents beyond design basis in the Environmental Statement. Moreover, this contention lacks the specificity required by 10 C.F.R. § 2.714. The contention is denied without prejudice to the profer of a specific contention after Prairie Alliance has had a chance to study the Staff's FES and SER.

Contention 6. Anticipated transients without scram (ATWS) is the subject of this contention. It is alleged that faulty welds on a number of control rod drive tubes raise the likelihood that an ATWS can occur. Contention 6, as revised and renumbered by the Board, is allowed.

Contention 7. Questions as to possible deficiencies in control room design, in light of current requirements by the N.R.C., are raised by this contention. As modified and renumbered by the Board, Contention 7 is admitted.

Contention 8. This contention states that full consideration has not been given to systems interactions, specifically, multiple equipment failures, minor failures, and failures of non-safety related systems that interact with safety systems. To the extent that the contention intends to address accidents beyond design basis, it duplicates

Contention 5 and on that ground is inadmissible. Additionally, it is not allowed because bases for the contention have not been set forth with the specificity required by 10 C.F.R. § 2.714.

Contention 9. This contention, which is concerned with social, economic, and psychological effects of plant operation, is denied as not having bases set forth with the specificity required by 10 C.F.R. § 2.714. Parts (f) and (g) which relate to psychological effects, are further denied as being inappropriate for litigation. On December 5, 1980, the Commission announced that, pending a reconsideration at a later time, "requests to admit contentions based on psychological stress are effectively denied.", CLI-80-39, 12 NRC 607 (1980).

Contention 10. This contention questions whether the Clinton Power Station's units meet the General Design Criteria requirements of 10 C.F.R. Part 50, Appendix A. Part (a)(2) alleges new information and Part (c) alleges changed conditions. These two parts are admitted. The remaining parts are denied as too vague to meet the requirements of 10 C.F.R § 2.714.

Contention 11. The radiation monitoring system is challenged in this contention. The contention is denied because a basis for it has not been set forth with the specificity required by 10 C.F.R. § 2.714.

Contention 12. This contention addresses reactor coolant pressure boundary leaks. As orally modified by Prairie Alliance at the prehearing conference (Tr. 166), it is admitted under a new number.

Contention 13. Concern is expressed by this contention that radiation exposure levels may be inadequately maintained. Parts (c) and (d) are admitted as revised and renumbered by the Board. The remaining parts are denied as too vague to meet the requirements of 10 C.F.R. § 2.714.

Contention 14. Questions are raised by this contention concerning the emergency core cooling system. Parts (a) and (c) are admitted as renumbered. Part (b) is denied as too vague to meet the specificity requirements of 10 C.F.R. § 2.714.

Contention 15. This contention concerns the effects of low-level radiation released in several different ways. Part (a) refers to releases caused by accident sequences. It is inadmissible because Commission policy does not require treatment in the ER of beyond design basis accidents. Part (b) relates to occupational doses and is inadmissible because the occupational doses of all workers on the site will be governed by the acceptable levels specified in 10 C.F.R. Part 20. Parts (c) and (d), which relate to atmospheric effluents, are admitted for litigation. Part (e), which is concerned with the residual risks of low-level radiation released from

Units 1 and 2 of the Clinton Station, is also admissible.*/ See, Public Service Company of Oklahoma (Black Fox Station, Units 1 and 2), CLI-80-31, 12 NRC 264 (1980).

Contention 16. This contention questions the health and safety effects of radioactivity released during the transportation of radioactive fuel and waste to and from the Clinton Station and during the fuel cycle required for Units 1 and 2. Parts (a), (b), and (c) fail to meet the specificity requirements of 10 C.F.R. § 2.714 and are inadmissible on that ground. Additionally, to the extent that they relate to the uranium fuel cycle required for the Clinton Station, they are inadmissible because they challenge 10 C.F.R. § 51.20, Table S-3. To the extent that they relate to off-site transportation of fuel, they are inadmissible as being irrelevant to this proceeding. See, Pennsylvania Power & Light Company, et al. (Susquehanna Steam Electric Station, Units 1 and 2), LBP-79-6, 9 NRC 291, 315 (1971) and cases cited therein. Part (d) relates to the transfer system for spent fuel on site; it is both relevant and specific and is admitted as renumbered.

Contention 17. The cost-benefit analysis for Units 1 and 2 is alleged to be grossly inaccurate in this contention. Parts (a), (b), and (c) relate to the construction permit stage and are therefore denied. See,

*/ Staff interpreted Part (e) as being a challenge to Table S-3 of 10 C.F.R. Part 51 and inadmissible on that ground. The contention, however, relates to releases from the reactors themselves, not the fuel cycle activities required for the reactors.

Niagra Mohawk Power Corporation (Nine Mile Point Nuclear Station, Unit 2) ALAB-264, 1 NRC 347, 357 (1975); Carolina Power and Light Company (Shearon Harris Nuclear Power Plant, Units 1, 2, 3, and 4), CLI-79-5, 9 NRC 607 (1979); and Commonwealth Edison Company (Byron Nuclear Power Station, Units 1 and 2), LBP-80-30, 12 NRC 683, 691 (1980). Parts (d), (e), and (f) are denied as too vague to meet the specificity requirements of 10 C.F.R. § 2.714.

Contention 18. This contention alleges that environmentally superior and less costly alternatives make operation of the Clinton Station unnecessary. This matter was fully explored at the construction permit stage; the contention is denied as improper for consideration at the operating license stage. See, Illinois Power Company (Clinton Power Station, Units 1 and 2), 2 NRC 579 (1975); 3 NRC 135 (1976); and 4 NRC 27 (1976).

Contention 19. This contention is a list of generic issues. The Staff's SER is scheduled to be filed in January 1982. The SER must, and will, address generic issues in detail, including the nexus of such issues to the Clinton Station. If, after receipt of the SER, Prairie Alliance wishes to raise one or more generic issues, revised contentions having the required specificity can be filed at that time. As the contention now stands, it is denied as being too vague to meet the requirements of 10 C.F.R. § 2.714.

ORDER

For the foregoing reasons and based upon a consideration of the entire record in this matter, it is this 29th day of May, 1981

ORDERED

1. That Prairie Alliance is admitted as a party to this proceeding;

2. That the revised contentions of Prairie Alliance set forth in Appendix A hereof are accepted for litigation, and all other contentions are denied;

3. That Bloomington-Normal Chapter of Prairie Alliance is denied admission as a separate party to this proceeding;

4. That the State of Illinois is permitted to participate in this proceeding as an interested State pursuant to 10 C.F.R. § 2.715(c);

5. That a hearing shall be held on Applicants' request for licenses to operate Units 1 and 2 of the Clinton Station;

6. That discovery on the accepted contentions shall begin forthwith and proceed on the following schedule: First round discovery requests

must be filed not later than June 26, 1981; Responses to such requests must be made not later than July 27, 1981, or 4 weeks after receipt of discovery requests, whichever is the earlier date; Guidance as to the timing of further discovery will be given by the Board as needed;

7. That, pursuant to the provisions of 10 C.F.R. § 2.740(e)(3), responses to requests for discovery shall be supplemented as information becomes available to render the responses current and accurate.

Judge George A. Ferguson concurs in, and participated in the drafting of, this Memorandum and Order. He was prevented from signing it because of attendance at another proceeding.

THE ATOMIC SAFETY AND
LICENSING BOARD

Hugh K. Clark, Chairman
ADMINISTRATIVE JUDGE

Oscar H. Paris, Member
ADMINISTRATIVE JUDGE

APPENDIX A

There follows the list of contentions which are accepted for litigation in this proceeding.

1. Clinton Power Station (CPS) should not be licensed to operate until a safe and feasible emergency plan has been developed which complies fully with current NRC requirements. See 10 CFR Part 50, Appendix E, NUREGs-0696 and -0654. The emergency plan currently proposed by Illinois Power Company (IP) as delineated in the Final Safety Analysis Report (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, Appendix 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) IPC 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 Construction Permit Safety Evaluation Report, Section 13.4. See FSAR Emergency Plan, Sections 5.5.3, 5.5.4, B6, B7, and B9.

(c) The emergency plan 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, Appendix E.

(d) As required by 10 CFR Part 50, Appendix E, the emergency plan 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 participatiion 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 other serious accident is not described with sufficient detail in the Emergency Plan. See FSAR Emergency Plan, Section 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.

2. The CPS should not be licensed to operate until IP has demonstrated, as required by 10 CFR 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, or (b) safely operated and controlled in the event of an abnormal occurrence or emergency, or (c) permanently shut down and maintained in a safe condition.

Repeated Quality Assurance and Quality Control problems are noted in NRC Region III Inspection Reports. Specifically, IP's Quality Assurance and Quality Control 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 Quality Assurance and Quality

Control functions. These incidents, among others, raise serious questions as to IP's management and technical capabilities to operate, backfit, and permanently shut down the CPS in compliance with regulatory requirements.

3. In noncompliance with 10 CFR 50.33(f) and Part 50, Appendix C, IP has not demonstrated that it possesses or has reasonable assurance of obtaining the funds necessary to pay the estimated costs of operation, plus the estimated cost of permanently shutting the facility down and maintaining it in a safe condition.

Since Construction Permit issuance, IP has placed an increasing reliance on external financing of construction of the CPS, mainly in the form of bonds carrying high interest rates and common stock for which relatively high dividends must be paid. These facts call into serious question IP's capability to maintain the operation and permanent shut-down of the CPS in a way that provides assurance of public health and safety.

4. The CPS 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 FSAR, p. 1.8-25, Regulatory Guide 1.17, Revision 1.

5. The CPS is especially vulnerable to anticipated transients without scram(ATWS) due to the faulty welds during construction which have caused "burn through/such back" on a number of control rod drive tubes. These defects have not been adequately analyzed or repaired. 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 GE boiling water reactors

6 (PA #7). The design and fabrication of the CPS control room layout and instrumentation have not been modified to meet current regulatory requirements in NUREGs-0660, -0694, -0737. Specifically:

(a) The CPS lacks sufficient instrumentation for displaying and recording the reactor pressure vessel water level.

(b) The CPS lacks sufficient instrumentation for detecting inadequate core coooling in case of an abnormal occurrence.

(c) Direct indication of safety relief valve position should be, but is not, provided for in the CPS instrumentation.

(d) A Safety Parameter Display System should be, but is not, provided for in the main control room.

(e) The CPS lacks adequate instrumentation for monitoring accident conditions.

(f) IP has not demonstrated its ability to comply with current NRC requirements for overall control-room design standards.

(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.

(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. 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 TMI Unit 2.

(j) The FSAR contains no documentation of how the power station can or will be modified to meet the new criteria imposed following the TMI accident.

7 (PA #10). The CPS nuclear system has not been demonstrated to meet the General Design Criteria requirments of 10 CFR Part 50, Appendix A. Specifically,

(a) In noncompliance with Criterion 2, the seismic qualification of the CPS design does not account for the worst case seismic activity now know to occur in the site region;

(b) In noncompliance with Criterion 4, the CPS containment is not, but should be, hardened to account for the impact of existing, and possibly increased, civilian aircraft traffic in the site vicinity; only one of four federal vector pathways near the site has been considered by IP in calculating the probability of aircraft impact of the CPS containment.

8 (PA # 12). The CPS should not be licensed to operate until Applicants have demonstrated the capability to comply with NRC regulatory requirements (10 CFR Part 50, Appendix A) regarding detection of reactor coolant pressure boundary leaks. Specifically,

(a) In noncompliance with Criterion 13, sump flow monitoring calculations and indication devices are not, but should be, seismically qualified;

(b) In noncompliance with Criterion 14, the transmitters of sump flow monitoring instruments for drywell equipment and floor drains are not, but should be, readily accessible for operability and calibration during plant operation.

9 (PA #13). The CPS should not be licensed to operate until Applicants have demonstrated that radiation exposure levels will be maintained as-low-as-reasonably-achievable as required in 10 CFR 20.1. The FSAR does not adequately consider occupational radiation exposure to be expected from either the normal operation of CPS Units 1 and 2 or that which may occur during an abnormal occurrence or serious accident. Specifically,

(a) Applicants have failed to provide a sufficient number of monitors to continuously measure airborne radioactivity; additionally, the monitors provided are not sufficiently sensitive in that they require up to 10 hours to detect emmissions;

(b) The area radiation monitoring equipment does not provide a reasonable assurance of accuracy in that it is only accurate within plus or minus 20%.

10 (PA # 14). The CPS Emergency Core Cooling System (ECCS) has not been demonstrated to meet the requirements of 10 CFR Part 60.46 and 10 CFR Part 50, Appendix K. Specifically,

(a) In noncompliance with 10 CFR Part 50.46, the core spray distribution of CPS's ECCS is of unproven operating capability;

(b) In noncompliance with 10 Part 50, Appendix K, the models used to predict ECCS performance of the CPS have not been proven accurate.

11 (PA# 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) gaseous effluents anticipated to be released from Clinton Unit 2 are not, but should be, considered in calculations estimating population doses;

(b) 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;

(c) 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.

12 (PA #1C). Applicants have failed to provide a procedure for preoperational testing of the functional capability of the spent fuel transfer system which provides a reasonable assurance of safety. The spent fuel transfer tube is of 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.