

Docket No. 50-461

April 17, 1987

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Mr. Frank A. Spangenberg
Manager - Licensing and Safety
Clinton Power Station
Post Office Box 678
Mail Code V920
Clinton, Illinois 61727

Dear Mr. Spangenberg:

SUBJECT: ISSUANCE OF FACILITY OPERATING LICENSE NPF-62 CLINTON
POWER STATION, UNIT NO. 1

The U.S. Nuclear Regulatory Commission (NRC) has issued the enclosed Facility Operating License NPF-62, together with Technical Specifications and Environmental Protection Plan for the Clinton Power Station, Unit No. 1 at reactor power levels not in excess of 2894 megawatts thermal (100 percent rated power).

Also enclosed are the following documents:

A safety evaluation that resolves all the remaining licensing issues and Technical Specification changes required for issuance of the full power license (Enclosure 2);

A copy of a related notice, the original of which has been forwarded to the Office of the Federal Register for publication (Enclosure 3);

Four signed copies of Amendment No. 3 to Indemnity Agreement No. B-91 which covers the activities authorized under License No. NPF-62 (Enclosure 4); Please sign all copies and return one copy to this office; and

An assessment of the effect of license duration on matters discussed in the Final Environmental Statement for Clinton Power Station, Unit No. 1 (Enclosure 5).

Sincerely,

Gary M. Holahan
Assistant Director for Region III, V
Division of Reactor Projects III/IV/V

Enclosures:

1. Facility Operating License NPF-62
2. Safety Evaluation
3. Federal Register Notice
4. Amendment No. 3 to Indemnity Agreement No. B-91
5. Assessment of the Effect of License Duration on Matters Discussed in the FES

cc w/enclosures:
See next page

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*Previously concurred:

PD#4/LA	PD#4/PM	PD#4/D	DD/DBL	D/DBL	AD/RIII/V
*MO'Brien	*BSiegel:lb	*WButler	RHouston*	RBernero*	DRP/III/IV/V
03/02/87	03/02/87	03/03/87	03/27/87	03/31/87	GHolahan
					4/17/87

FULL POWER LICENSE FOR CLINTON POWER STATION, UNIT NO. 1

NPF-62 DATED: April 17, 1987

DISTRIBUTION *(with Tech Specs)

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Clinton Power Station
Unit 1

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
(WASHINGTON, D. C. 20555)

ILLINOIS POWER COMPANY
SOYLAND POWER COOPERATIVE, INC.
WESTERN ILLINOIS POWER COOPERATIVE, INC.
DOCKET NO. 50-461
CLINTON POWER STATION, UNIT NO. 1
FACILITY OPERATING LICENSE

License No. NPF-62

1. The Nuclear Regulatory Commission (the Commission or the NRC) has found that:
 - A. The application for license filed by Illinois Power Company* (IP), acting on behalf of itself and as agent for Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc. (licensees) complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations set forth in 10 CFR Chapter I, and all required notifications to other agencies or bodies have been duly made;
 - B. Construction of the Clinton Power Station, Unit No. 1 (the facility) has been substantially completed in conformity with Construction Permit No. CPPR-137 and the application, as amended, the provisions of the Act and the regulations of the Commission;
 - C. The facility will operate in conformity with the application, as amended, the provisions of the Act, and the regulations of the Commission (except as exempted from compliance in Section 2.D. below);
 - D. There is reasonable assurance: (i) that the activities authorized by this operating license can be conducted without endangering the health and safety of the public; and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I (except as exempted from compliance in Section 2.D. below);
 - E. Illinois Power Company is technically qualified to engage in the activities authorized by this operating license in accordance with the Commission's regulations set forth in 10 CFR Chapter I;
 - F. The licensees have satisfied the applicable provisions of 10 CFR Part 140, "Financial Protection Requirements and Indemnity Agreements," of the Commission's regulations;

*Illinois Power Company is authorized to act as agent for Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc. and has exclusive responsibility and control over the physical construction, operation and maintenance of the facility.

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- G. The issuance of this license will not be inimical to the common defense and security or to the health and safety of the public;
 - H. After weighing the environmental, economic, technical, and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of Facility Operating License No. NPF-62, subject to the conditions for protection of the environment set forth in the Environmental Protection Plan attached as Appendix B, is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied; and
 - I. The receipt, possession, and use of source, byproduct and special nuclear material as authorized by this license will be in accordance with the Commission's regulations in 10 CFR Parts 30, 40, and 70.
2. Based on the foregoing findings regarding this facility, and pursuant to approval by the Nuclear Regulatory Commission at a meeting on April 10, 1987, Facility Operating License No. NPF-62, which supersedes the license for fuel loading and low power testing, License No. NPF-55, issued on September 29, 1986, is hereby issued to Illinois Power Company, Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc. (the licensees), to read as follows:
- A. This license applies to the Clinton Power Station, Unit No. 1, a boiling water nuclear reactor and associated equipment (the facility), owned by Illinois Power Company, Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc. The facility is located in Harp Township, DeWitt County, approximately six miles east of the city of Clinton in east-central Illinois and is described in the licensees' Final Safety Analysis Report, as supplemented and amended, and in the licensees' Environmental Report-Operating License Stage, as supplemented and amended.
 - B. Subject to the conditions and requirements incorporated herein, the Commission hereby licenses:
 - (1) Illinois Power Company (IP), pursuant to Section 103 of the Act and 10 CFR Part 50, to possess, use and operate the facility at the designated location in Harp Township, DeWitt County, Illinois, in accordance with the procedures and limitations set forth in this license;
 - (2) Soyland Power Cooperative, Inc. and Western Illinois Power Cooperative, Inc., pursuant to Section 103 of the Act and 10 CFR Part 50, to possess the facility at the above designated location in accordance with the procedures and limitations set forth in this license;
 - (3) IP, pursuant to the Act and 10 CFR Part 70, to receive, possess and to use at any time special nuclear material as reactor fuel, in accordance with the limitations for storage and amounts required for reactor operation, as described in the Final Safety Analysis Report, as supplemented and amended;

- (4) IP, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use at any time any byproduct, source and special nuclear material as sealed neutron sources for reactor startup, sealed sources for reactor instrumentation and radiation monitoring equipment calibration, and as fission detectors in amounts as required;
- (5) IP, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to receive, possess, and use in amounts as required any byproduct, source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration or associated with radioactive apparatus or components; and
- (6) IP, pursuant to the Act and 10 CFR Parts 30, 40, and 70, to possess, but not separate, such byproduct and special nuclear materials as may be produced by the operation of the facility.

C. This license shall be deemed to contain and is subject to the conditions specified in the Commission's regulations set forth in 10 CFR Chapter I and is subject to all applicable provisions of the Act and to the rules, regulations and orders of the Commission now or hereafter in effect; and is subject to the additional conditions specified or incorporated below:

(1) Maximum Power Level

IP is authorized to operate the facility at reactor core power levels not in excess of 2894 megawatts thermal (100 percent rated power) in accordance with the conditions specified herein. The items identified in Attachment 1 to this license shall be completed as specified. Attachment 1 is hereby incorporated into this license.

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. IP shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

(3) Antitrust Conditions

IP shall comply with the antitrust conditions in Appendix C attached hereto, which is hereby incorporated into this license.

(4) Control System Failures (Section 7.7.3.1, SER and SSER 6)*

IP shall submit, in accordance with commitments contained in letters dated May 15, 1986 and July 16, 1986, the results of the additional evaluations of control system failures and the proposed implementation of any corrective actions that may be found necessary, for staff review four months prior to plant startup after the first refueling outage. Implementation of any corrective actions found acceptable by the staff shall be completed prior to plant startup after the first refueling outage.

(5) New Fuel Storage (Section 9.1.1, SER, SSER 6 and SSER 7)

IP shall store new fuel assemblies in accordance with the requirements specified in Attachment 2. Attachment 2 is hereby incorporated into this license.

(6) Plant Operation Experience (Section 13.1.2.1, SSER 5)

IP shall have a licensed senior operator on each shift who has had at least 6 months of hot operating experience on a large commercial BWR, including at least 6 weeks at power levels greater than 20 percent of full power, and who has had BWR startup and shutdown experience. This license condition shall be effective for a period of 1 year from fuel load or until the attainment of a nominal 100 percent power level, whichever occurs later.

(7) Emergency Planning (Section 13.3, SSER 6)

In the event the NRC staff finds that the lack of progress in completion of the procedures in the Federal Emergency Management Agency's final rule, 44 CFR Part 350, is an indication that a major substantive problem exists in achieving or maintaining an adequate state of emergency preparedness, the provisions of 10 CFR Section 50.54(s)(2) will apply.

*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed.

(8) Post-Fuel Loading Initial Test Program (Section 14, SER, SSER 5 and SSER 6)

Any changes to the initial test program described in Section 14 of the FSAR made in accordance with the provisions of 10 CFR 50.59 shall be reported in accordance with 50.59(b) within one month of such change.

(9) Emergency Response Capabilities (Generic Letter 82-33, Supplement 1 to NUREG-0737, Section 7.5.3.1, SSER 5 and SSER 8, and Section 18, SER, SSER 5 and Safety Evaluation Dated April 17, 1987)

- a. IP in accordance with the commitment contained in a letter dated December 11, 1986, shall install and have operational separate power sources for each of the fuel zone level channels as provided for in Regulatory Guide 1.97 prior to startup following the first refueling outage.
- b. IP shall submit a detailed control room design final supplemental summary report within 90 days of issuance of the full power license that completes all the remaining items identified in Section 18.3 of the Safety Evaluation dated April 17, 1987.

(10) Partial Feedwater Heating (Section 15.1, SER, SSER 5, and SSER 7)

The facility shall not be operated with reduced feedwater temperature for the purpose of extending the normal fuel cycle. After the first operating cycle, the facility shall not be operated with a feedwater heating capacity which would result in a rated thermal power feedwater temperature less than 420°F.

- D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70. These include: (a) an exemption from the requirements of 10 CFR 70.24 for the criticality alarm monitors around the fuel storage area; (b) an exemption from the requirements of Appendix A to 10 CFR Part 50, General Design Criterion 61 to permit a scheduler deferral of completion of preoperational testing of a portion of the Fuel Handling System until prior to off-loading fuel from the reactor vessel (Section 14, SSER 8); (c) an exemption from the requirement of paragraph III.D.2(b)(ii) of Appendix J, substituting the seal leakage test at Pa of paragraph III.D.2(b)(iii) for the entire airlock test at Pa of paragraph III.D.2(b)(ii) of Appendix J when no maintenance has been performed in the airlock that could affect its sealing capability (Section 6.2.6 of SSER 6); and (d) an exemption from the requirement of paragraph III.C.3 of Appendix J, exempting the measured leakage rates from the main steam isolation valves from inclusion in the combined leak rate for the local leak rate tests (Section 6.2.6 of SSER 6). The special circumstances regarding each exemption, except for item (a) above, are identified in the referenced section of the safety evaluation report and the supplements thereto.

An exemption was previously granted pursuant to 10 CFR 70.24. The exemption was granted with NRC materials license No. SNM-1886, issued November 27, 1985, and relieved IP from the requirement of having a criticality alarm system. IP is hereby exempted from the criticality alarm system provision of 10 CFR 70.24 so far as this section applies to the storage of fuel assemblies held under this license.

These exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. The exemptions in items (b), (c) and (d) above are granted pursuant to 10 CFR 50.12. With these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.

- E. IP shall fully implement and maintain in effect all provisions of the physical security, guard training and qualifications, and safeguards contingency plans previously approved by the Commission and all amendments and revisions to such plans made pursuant to the authority under 10 CFR 50.90 and 10 CFR 50.54(p). The plans, which contain safeguards information protected under 10 CFR 73.21, are entitled: "Clinton Power Station Physical Security Plan," with revisions submitted through January 17, 1986, "Clinton Power Station Guard Qualification and Training Plan," with revisions submitted through September 19, 1985; and "Clinton Power Station Safeguards Contingency Plan," with revisions submitted through September 20, 1985.
- F. IP shall implement and maintain in effect all provisions of the approved fire protection program as described in the Final Safety Analysis Report as amended, for the Clinton Power Station, Unit No. 1, and as approved in the Safety Evaluation Report (NUREG-0853) dated February 1982 and Supplement Nos. 1 thru 8 thereto subject to the following provision:
 - IP may make changes to the approved fire protection program without prior approval of the Commission only if those changes would not adversely affect the ability to achieve and maintain safe shutdown in the event of a fire.
- G. Except as otherwise provided in the Technical Specifications or Environmental Protection Plan, IP shall report any violations of the requirements contained in Section 2.C of this license in the following manner: initial notification shall be made within 24 hours to the NRC Operations Center via the Emergency Notification System with written followup within thirty days in accordance with the procedures described in 10 CFR 50.73 (b), (c), and (e).

- H. The licensees shall have and maintain financial protection of such type and in such amounts as the Commission shall require in accordance with Section 170 of the Atomic Energy Act of 1954, as amended, to cover public liability claims.
- I. This license is effective as of the date of issuance and shall expire at midnight on September 29, 2026.

FOR THE NUCLEAR REGULATORY COMMISSION

original signed by

Thomas E. Murley, Director
Office of Nuclear Reactor Regulation

Enclosures:

- 1. Attachments 1 and 2
- 2. Appendix A - Technical Specifications (NUREG-1235)
- 3. Appendix B - Environmental Protection Plan
- 4. Appendix C - Antitrust Conditions

Date of Issuance: April 17, 1987

Previously concurred*:

PD#4/LA*	PD#4/PM*	SAB/DE*	SP*	Telephone concurrence	MKarman for
MO'Brien	BSiegel:lb	WLambe	IDinitz	OGC*	OGC*
03/02/87	03/02/87	03/03/87	03/26/87	JRutberg	RPirfo
				03/03/87	03/24/87

PD#4/D*	DD/DBL*	D/BDL*	DD/NRR	D/NRR
WButler	RHouston	RBernero	JSzezek	TMurley
03/03/87	03/27/87	03/31/87	4/17/87	4/17/87

ATTACHMENT 1
TO NPF-62

Prior to achieving the milestone indicated, the following items shall be completed to the satisfaction of Region III.

1. Preoperational test PTP-FH, Fuel Handling System, shall be completed prior to off-loading irradiated fuel.
2. IP shall resolve audibility problems encountered on evacuation of personnel in high noise areas in accordance with IP letter dated July 8, 1986. A survey of high noise areas shall be completed within 30 days after achieving maximum anticipated noise level. All corrective actions required by the survey shall be completed prior to the completion of the first refueling outage. In the interim for those areas which are identified as having deficient siren audibility, temporary administrative measures will be taken to ensure that these areas are evacuated as required.

ATTACHMENT 2
TO NPF-62
NEW FUEL STORAGE

IP shall store new fuel assemblies in accordance with the following requirements.

- a. No more than three fuel assemblies shall be outside their shipping containers, storage racks, or the reactor vessel at any one time.
- b. The minimum edge-to-edge distance between the group of three fuel assemblies and all other fuel assemblies shall be 12 inches.
- c. Fuel assemblies, when stored in the New Fuel Storage Vault, shall be stored such that: no more than 12 rows of fuel assemblies shall remain uncovered during the loading or unloading of fuel assemblies; metal covers shall cover all other rows containing fuel assemblies during loading and unloading of fuel assemblies; and when loading or unloading of fuel assemblies is not in progress, metal covers shall cover all rows of fuel assemblies.
- d. Fuel assemblies shall be stored in such a manner that water would drain freely from the assemblies in the event of flooding and subsequent draining of the fuel storage area.
- e. Fuel assemblies shall be stored in the containment fuel storage pool only under water.
- f. No fuel assemblies shall be stored in the control rod racks.
- g. All fire hoses servicing the New Fuel Storage Vault shall be equipped with solid stream nozzles.

APPENDIX B

TO FACILITY LICENSE NO. NPF-62

CLINTON POWER STATION

UNIT NO. 1

ILLINOIS POWER COMPANY

DOCKET NO. 50-461

ENVIRONMENTAL PROTECTION PLAN
(NON-RADIOLOGICAL)

April 17, 1987

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CLINTON POWER STATION

UNIT NO. 1

ENVIRONMENTAL PROTECTION PLAN

(NON-RADIOLOGICAL)

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1.0 OBJECTIVES OF THE ENVIRONMENTAL PROTECTION PLAN

The Environmental Protection Plan (EPP) is to provide for protection of non-radiological environmental values during operation of the nuclear facility. The principal objectives of the EPP are as follows:

- (a) Verify that the Plant is operated in an environmentally acceptable manner, as established by the Final Environmental Statement-Operating License Stage* (FES-OL) and other NRC environmental impact assessments.
- (b) Coordinate NRC requirements and maintain consistency with other Federal, State, and local requirements for environmental protection.
- (c) Keep NRC informed of the environmental effects of facility construction and operation and of action taken to control those effects.

Environmental concerns identified in the FES-OL which relate to water quality matters are regulated by way of Illinois Power's (the licensee's) NPDES permit.

*Final Environmental Statement related to the operation of Clinton Power Station, Unit No. 1. NUREG-0854, May 1982 (FES-OL).

2.0 ENVIRONMENTAL PROTECTION ISSUES

In the FES-OL dated May 1982, the staff considered the environmental impacts associated with the operation of the Clinton Power Station. Certain environmental issues were identified which required study or license conditions to resolve environmental concerns and to assure adequate protection of the environment.

2.1 Aquatic Issues

- (a) Effluent limitations and aquatic monitoring requirements are contained in the effective NPDES permit issued by the Illinois Environmental Protection Agency (IL0036919). The NRC will rely on this agency for regulation of these matters as they involve water quality and aquatic biota.

- (b) One specific aquatic issue raised by the staff concerned the potential for the establishment of encephalitic human pathogenic thermophilic amoeba in Clinton Lake after power generation begins. The NRC will rely on the licensee to conduct monitoring in accordance with the recommendations of the Illinois Department of Public Health as stated in the FES-OL.

2.2 Terrestrial Issues

Steam fog from the station's cooling lake has the potential of reducing visibility over nearby roads and bridges. A fog monitoring program shall be initiated to determine the frequency and density of cooling lake-induced fog which could potentially cause highway safety hazards adjacent to the cooling lake. The NRC shall rely on the licensee to conduct a fog monitoring program in cooperation with the Illinois Department of Transportation and local highway safety officials as stated in the FES-OL.

2.3 Atomic Safety Licensing Board Ordered Unit 2 Issues

In the event of harmful effects or evidence of trends toward irreversible damage to the environment due to the Unit 2 excavation, the NRC will be provided with a detailed analysis of data and proposed course of action to alleviate the problem.

3.0 CONSISTENCY REQUIREMENTS

3.1 Plant Design and Operation

The licensee may make changes in plant design or operation or perform tests or experiments affecting the environment provided such changes, tests or experiments do not involve an unreviewed environmental question, and do not involve a change in the EPP.* Changes in plant design or operation and performance of tests or experiments which do not affect the environment are not subject to the requirements of this EPP. Activities governed by Section 3.3 are not subject to the requirements of this section.

Before engaging in additional construction or operational activities which may affect the environment, the licensee shall prepare and record an environmental evaluation of such activity if the activity has measurable environmental effects which are not confined to onsite areas previously disturbed during site preparation and plant construction. When the evaluation indicates that such activity involves an unreviewed environmental question, the licensee shall provide a written evaluation of such activities and obtain prior approval from the Nuclear Regulatory Commission. When such activity involves a change in the EPP, such activity and change to the EPP may be implemented only in accordance with an appropriate license amendment as set forth in Section 5.3 of this EPP.

A proposed change, test or experiment shall be deemed to involve an unreviewed environmental question if it concerns (1) a matter which may result in a significant increase in any adverse environmental impact previously evaluated in the FES-OL as modified by staff's testimony to the Atomic Safety and Licensing Board, supplements to the FES-OL, environmental impact appraisals, or in any decisions of the Atomic Safety and Licensing Board; or (2) a significant change in effluents or power level or (3) a matter not previously reviewed and

* This provision does not relieve the licensee of the requirements of 10 CFR 50.59.

evaluated in the documents specified in (1) of this Subsection, which may have a significant adverse environmental impact.

The licensee shall maintain records of changes in plant design or operation and of tests and experiments carried out pursuant to this Subsection. These records shall include a written evaluation which provide bases for the determination that the change, test or experiment does not involve an unreviewed environmental question nor constitute a decrease in the effectiveness of this EPP to meet the objectives specified in Section 1.0. The licensee shall include as part of the Annual Environmental Operating Report (per Subsection 5.4.1) brief descriptions, analyses, interpretations, and evaluations of such changes, tests and experiments.

3.2 Reporting Related to the NPDES Permits and State Certification

Modification to the NPDES permit or the State certification pursuant to Section 401 of the Clean Water Act shall be reported to the NRC within 30 days following the date the modified permit is reissued. If a permit or certification, in part or in its entirety, is appealed and stayed, the NRC shall be notified within 30 days following the date the stay is granted.

The NRC shall be notified of modifications proposed by the licensee to the effective NPDES permit by providing NRC with a copy of the proposed modification at the same time it is submitted to the permitting agency. The notification of a licensee-initiated modification shall include a copy of the requested modification submitted to the permitting agency. The licensee shall provide the NRC with a copy of its application for reissuance of the NPDES permit at the same time the application is submitted to the permitting agency.

3.3 Changes Required for Compliance with Other Environmental Regulations

Changes in plant design or operation and performance of tests or experiments required to achieve compliance with other Federal, State, or local environmental regulations are not subject to requirements of Section 3.1.

4.0 ENVIRONMENTAL CONDITIONS

4.1 Unusual or Important Environmental Events

Any occurrence of an unusual or important event that indicates or could result in significant environmental impact causally related to station operation shall be recorded and promptly reported to the NRC within 24 hours by telephone, telegraph or facsimile transmissions followed by a written report per Subsection 5.4.2. The following are examples: excessive bird impactation events, onsite plant or animal disease outbreaks, mortality or unusual occurrence of any species protected by the Endangered Species Act of 1973, significant fish kills, increase in nuisance organisms or conditions and unanticipated or emergency discharge of waste water or chemical substances.

4.2 Environmental Monitoring

Environmental monitoring programs are conducted in accordance with the guidance and controls of agencies outside the Nuclear Regulatory Commission (NRC). The NRC has recognized these agencies (Illinois Environmental Protection Agency, Illinois Department of Public Health, and Illinois Department of Transportation) as the authorities having jurisdiction in Section 2.0 of this EPP. Therefore, no specific environmental monitoring is required by the NRC under this EPP.

5.0 ADMINISTRATIVE PROCEDURES

5.1 Review and Audit

The licensee shall provide for review and audit of compliance with the EPP. The audits shall be conducted independently of the individual or groups responsible for performing the specific activity. A description of the organization structure utilized to achieve the independent review and audit function and results of the audit activities shall be maintained and made available for inspection.

5.2 Records Retention

The documentation listed below shall be made and retained in a manner convenient for review and inspection by the NRC. This documentation shall be retained as indicated below and made available to the NRC upon request.

- (a) Records of modifications to plant structures, systems, and components determined to potentially affect the continued protection of the environment (life of the plant).
- (b) Records, procedures, data, and logs relating to this EPP (5 years).
- (c) Preoperational environmental monitoring records, procedures, data and logs (5 years).
- (d) All other records and logs relative to the environmental aspects of plant operation (5 years).

5.3 Changes in Environmental Protection Plan

Requests for changes in the EPP shall include an assessment of the environmental impact of the proposed change and a supporting justification. Implementation of such changes in the EPP shall not commence prior to NRC approval of the proposed changes in the form of a licensee amendment incorporating the appropriate revision to the EPP.

5.4 Plant Reporting Requirements

5.4.1 Routine Reports

An Annual Environmental Operating Report describing implementation of this EPP for the previous year shall be submitted to the NRC prior to May 1 of each year. The initial report shall be submitted prior to May 1 of the year following issuance of the operating license. The period of the first report shall begin with the date of issuance of the operating license for Unit One.

The Annual Environmental Operating Report shall include:

- (a) A list of EPP noncompliances and the corrective actions taken to remedy them.
- (b) A list of all changes in station design or operation, tests, and experiments made in accordance with Subsection 3.1 which involved a potentially significant unreviewed environmental issue.
- (c) A list of nonroutine reports submitted in accordance with Subsection 5.4.2.
- (d) Any results and/or assessments for the environmental monitoring programs described in Subsection 2.0 of this EPP which were submitted to the respective regulatory agencies during the annual reporting period.

If harmful effects or evidence of trends towards irreversible damage to the environment are observed, the licensee shall provide a detailed analysis of the data and a proposed course of action to alleviate the problem.

In the event that some results are not available by the report due date, the report shall be submitted noting and explaining the missing results. The missing data shall be submitted as soon as possible in a supplementary report.

5.4.2 Nonroutine Reports

A written report shall be submitted to the NRC within 30 days of occurrence of a nonroutine event. The report shall (a) describe, analyze, and evaluate the event, including extent and magnitude of these impact and plant operating characteristics, (b) describe the probable cause of the event, (c) indicate the action taken to correct the reported event, (d) indicate the corrective action taken to preclude repetition of the event and to prevent similar occurrences involving similar components or systems, and (e) indicate the agencies notified and their preliminary responses.

Events reportable under this subsection which also required reports to other Federal, State, or local agencies shall be reported in accordance with those reporting requirements in lieu of the requirements of this subsection. The NRC shall be provided with a copy of each report at the same time it is submitted to the other agency.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 17, 1987

APPENDIX C

ANTITRUST CONDITIONS

FACILITY OPERATING LICENSE NO. NPF-62

Illinois Power Company (IP) is subject to the following antitrust conditions:

(1) Definitions

- (1)(a) "Licensee" means IP and includes each present or future wholly-owned subsidiary of IP and any successor to it;
- (1)(b) "Neighboring electric system" means (i) a financially responsible business corporation, not-for-profit corporation, rural electric cooperative, municipal corporation organized under the laws of the State of Illinois, company, association, joint stock company, firm, partnership, or person owning or operating, or proposing bona fide and in good faith to own or operate, facilities for the generation, transmission or distribution of electricity for bulk power supply, (ii) whose facilities are or will be located in the State of Illinois, (iii) whose facilities are interconnected, or are proposed to be interconnected, for the purpose of carrying out one or more of the transactions referred to herein with facilities of the Licensee (provided that any proposed interconnection shall be lawful and feasible), and (iv) which is or will be a public utility under the laws of the State of Illinois or the Federal Power Act and is or will be providing electric service under a contract or rate schedule on file with and subject to the regulation of the Illinois Commerce Commission or the Federal Power Commission. The requirement that a neighboring electric system shall be a public utility does not apply to a rural electric cooperative or a municipal corporation but will apply to a rural electric cooperative or a municipal corporation if at a future date it is included within the definition of "public utility" under the Illinois Public Utilities Act or under a similar act. (The definition of neighboring electric system includes systems which meet the above requirements either now or in the future.);

- (1)(c) "Costs" means all operating and maintenance expenses, capital costs and a reasonable return on investment which are properly applicable to the particular transaction and the facilities involved in the transaction;
- (1)(d) "Neighboring entity" means a neighboring electric system owning or operating, or proposing bona fide and in good faith to own or operate, facilities for the generation of electricity for bulk power supply;
- (2) The broad purposes of any interchange or other arrangement for bulk power supply transactions between the Licensee and a neighboring electric system are to improve the reliability and quality of service, to avoid the duplication of facilities, and to minimize costs. Any such arrangements will involve planning by the parties and should be technically and economically feasible and practical. The arrangement should also be reciprocal as nearly as may be although it is recognized that, in any particular arrangement, the benefits may not be equal or identical for each party and that a smaller electric system may realize benefits which are greater than those realized by a larger system. No party should be obligated to enter into an arrangement if it would realize no net benefits from the arrangement, or if the arrangement would result in net burdens to the party. The policies herein expressed cannot be implemented unilaterally by the Licensee. If an arrangement between the licensee and a neighboring electric system is to be successful and is to operate in the public interest, it must be negotiated and performed in good faith and with full cooperation by the parties to it. No party should capriciously reject a proposal submitted by another party and the Licensee and neighboring electric systems should give reasonable consideration to proposals made by each other;
- (3) The Licensee will interconnect with any neighboring entity in order that the parties may seek and realize all benefits practicable to be effected through the coordination and development of their respective systems and in carrying out various interconnection services and transactions. The Licensee will assist to the fullest extent feasible any neighboring entity in the coordination of reserves through the sale and purchase of emergency energy and maintenance power upon terms that will provide for the full compensation of the Licensee's costs. No party shall be required to provide emergency energy or maintenance power if to do so will impair the supplying party's ability to render adequate and reliable service to its customers or to discharge its prior commitments, if any, to other electric systems.
- (4) The Licensee and the neighboring entity shall each provide sufficient capacity (which may include firm contracted-for-capacity) in its system to enable it to carry its planned-for-peak demand plus an adequate reserve. An adequate minimum reserve requirement shall be mutually determined from time to time as a percentage of planned-for-peak demand

(unless otherwise agreed) and shall take into account such reserve criteria as the nature of the respective systems and planned-for-peak demand required in order to assure reliability of service and an equitable sharing of reserve responsibility. Each party shall provide such amount of spinning reserve as shall avoid the imposition of an unreasonable demand on the system of the other party. However, such spinning reserve requirement shall not exceed the minimum installed reserve requirement. If over a reasonable period, a party has failed to deliver emergency energy, or if a party has appeared to make excessive calls for emergency energy, the parties shall jointly study the matter for the purpose of determining the adequacy or inadequacy of the reserve generating capacity and transmission facilities being provided to meet the requirements of the interconnected systems and of determining the manner of correcting any deficiencies;

- (5) The agreement for the interchange arrangement between the Licensee and a neighboring entity will not include restrictive provisions which would preclude a party from engaging in interconnection and coordination arrangements with others, but may include appropriate provisions to assure (i) that the Licensee receives adequate notice of such additional interconnection or coordination, (ii) that the parties will jointly consider and agree upon such measures, if any, as are reasonably necessary to protect the reliability of the interconnected systems and to prevent undue burdens from being imposed on any system, and (iii) that the Licensee will be fully compensated for its costs. Good industry practice as developed in the area from time to time (if not unreasonably restrictive) will satisfy this provision;
- (6) Interconnections will be available for a neighboring electric system on any of the Licensee's installed transmission and subtransmission facilities if the proposed interconnection is technically and economically feasible and the Licensee is fully compensated for its costs. Interconnections will not be limited to low voltages when higher voltages are available from the Licensee's installed facilities in the area where the interconnection is desired. Control and telemetering facilities shall be provided as required for the safety and reliability of the interconnected systems;
- (7) The Licensee will afford an opportunity to participate to any neighboring electric system that makes a timely request therefor in the ownership of, or purchase of unit participation power from, Clinton Power Station Unit 1, and any additional nuclear generating unit which the Licensee may construct, own, and operate and which in the application filed with the Commission, or any successor agency, is scheduled for commercial operation prior to January 1, 1989, to a reasonable extent and on reasonable terms and conditions and on a basis that will fully compensate the Licensee for its costs incurred and to be incurred and that will not adversely affect the financing of such power station. The request shall be deemed timely with respect to Clinton Power

Station Unit 1, if received by June 30, 1974, and with respect to any additional generating unit if received within a reasonable period of time from a planning and operating standpoint after the public announcement by the Licensee of the proposed installation of any such unit. As a part of any arrangement that may be reached with respect to such participation, the Licensee will interconnect with and deliver any power to which the neighboring electric system may be entitled under such arrangement at a delivery point or points on the Licensee's system on a basis that will fully compensate the Licensee for its costs;

- (8) The Licensee will sell bulk power to any neighboring electric system in accordance with rates, terms and conditions which fully compensate the Licensee for its costs, and which do not restrict use or resale except as may be necessary to protect the reliability of the Licensee's system, and as are accepted or approved by the appropriate regulatory body or bodies. The Licensee shall not be required to make any such sale if the Licensee does not have available sufficient generation to provide the requested service or if the sale would impair the Licensee's ability to render adequate and reliable service to its customers or to discharge its prior commitments, if any, to other electric systems;
- (9) The Licensee will work with neighboring electric systems to facilitate the exchange of bulk power by transmission over its transmission facilities between or among two or more neighboring electric systems and between any neighboring electric system and any other electric system engaging in bulk power supply outside the Licensee's service area between whose facilities the Licensee's transmission lines and other transmission lines would form a continuous electrical path, provided that (i) permission to utilize such other transmission lines has been obtained by the proponent of the arrangement, and (ii) the arrangements reasonably can be accommodated from a functional and technical standpoint. Such transmission shall be on terms that fully compensate the Licensee for its costs. Any neighboring electric system requesting such transmission arrangements shall give reasonable advance notice of its schedule and requirements. The Licensee shall not be required to enter into any arrangement which would impair system reliability or emergency transmission capacity, it being recognized that while some transmission facilities may be operated fully loaded, other transmission facilities may be for emergency use and operated either unloaded or partially loaded;
- (10) The Licensee shall include in its planning and construction programs sufficient transmission capacity as required for the transactions referred to in paragraph (9), provided any neighboring electric system gives the Licensee sufficient advance notice as may be necessary to accommodate its requirements from a functional and technical standpoint and that such neighboring electric system fully compensates the Licensee for its costs. The Licensee shall not be required to construct transmission facilities if it finds construction of such facilities infeasible, or if its costs in connection therewith would exceed its benefits therefrom, or if it finds such facilities would impair system reliability or emergency transmission capacity;

- (11)(a) This statement of policy is not intended to affect in any way the franchises, certificates of public convenience and necessity, or other rights of the Licensee or of any neighboring electric system to render electric service in the State of Illinois;
 - (11)(b) Nothing herein shall be construed as a waiver by the Licensee of its right to contest whether or not and the extent to which a particular factual situation may be covered by this statement of policy or preclude the Licensee from contesting an alleged act of unfair competition;
 - (11)(c) The Licensee shall recognize that the carrying out of some of the policies expressed herein in particular circumstances may not be in the mutual interest of the Licensee and a neighboring electric system. Nothing herein is intended to preclude the Licensee and a neighboring electric system from reaching an agreement which extends, varies or supplements the provisions of the foregoing paragraphs in a manner not inconsistent with the broad purposes expressed in paragraph 2 and applicable law;
 - (11)(d) The Licensee does not intend by this statement of policy to become a common carrier; and
- (12) The foregoing policies are to be implemented and applied in a manner consistent with Federal, State and local laws, regulations and orders. All rates, charges, conditions, terms and practices are and will be subject to the acceptance or approval of any regulatory agencies or courts having jurisdiction over them. To the extent that such action may at the time be required in order to effect any such changes, the Licensee and any neighboring electric system affected by any of the foregoing policies reserve the right of recourse to the appropriate forum to seek such changes therein as may at the time be appropriate in accordance with law, the public interest, or good industry practices.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING ISSUANCE OF FACILITY OPERATING LICENSE NO. NPF-62

ILLINOIS POWER COMPANY

SOYLAND POWER COOPERATIVE, INC.

WESTERN ILLINOIS POWER COOPERATIVE, INC.

DOCKET NO. 50-461

CLINTON POWER STATION, UNIT NO. 1

1 INTRODUCTION AND GENERAL DESCRIPTION

1.1 Introduction

The Nuclear Regulatory Commission staff (referred to as the NRC staff or staff) issued its Safety Evaluation Report (SER) (NUREG-0853) in February 1982 regarding the application by Illinois Power Company et al. (hereinafter referred to as the licensee) for a license to operate the Clinton Power Station, Unit No. 1, Docket No. 50-461. Supplement No. 1 (SSER 1) to the Clinton SER was issued in July 1982; SSER 2 was issued in May 1983; SSER 3 was issued in May 1984; SSER 4 was issued February 1985; SSER 5 was issued in January 1986; SSER 6 was issued in July 1986; SSER 7 was issued in September 1986; and SSER 8 was issued in March 1987. The purpose of the present safety evaluation is to close out all the remaining requests and commitments made by the licensee that have to be resolved before the full-power license is issued. These are:

- (1) four Technical Specifications changes requested in a March 20, 1987 submittal (Section 16)
- (2) completion of two low-power license schedular exemptions (Section 14)
- (3) modification of a low-power license condition (Section 18)

Each of the following sections or appendices of this safety evaluation is numbered the same as the section or appendix of the SER that is being updated, and the discussions are supplementary to and not in lieu of the discussion in the SER unless otherwise noted. All the outstanding and confirmatory licensing issues have been resolved and all but six license conditions have been fully resolved. These six appear as license conditions in the full-power license. Section 1 of Supplement 8 to the SER identifies the SER or SER supplement and section where the resolution for each of the above issues is discussed.

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14 INITIAL TEST PROGRAM

Preoperational Test Deferrals

In Supplement 6 to the SER the licensee's proposed deferral is addressed for various preoperational tests (with different completion schedules, each ending after issuance of the low-power license). Those preoperational tests that required schedular exemptions from Appendix A to 10 CFR Part 50 were discussed in Appendix N to Supplement 6 to the SER and appeared as schedular exemptions from Appendix A in the low-power license No. NPF-55 (Section 2D, items a-f and item i). An extension of the schedular exemption for item g (fuel handling system) was granted in Supplement 8 to the SER.

By letter dated March 3, 1987, the licensee stated that all the schedular deferrals for preoperational tests through heatup authorized in Section 2D of the low-power license No. NPF-55 have been completed in accordance with completion schedules specified in Section 2D of the low-power license. In Supplement 8 to the SER, the staff stated that since the licensee has completed these preoperational tests in accordance with the schedules specified in the low-power license, the exemptions identified in Table 14.1 are no longer required.

By letter dated March 27, 1987, the licensee stated that the two preoperational tests have been completed for which schedular exemptions authorized in Section 2D of the low-power license No. NPF-55, were to remain in effect until exceeding 5% of rated reactor power. Since the licensee has completed these preoperational tests in accordance with the schedules contained in the low-power license, the associated exemptions identified in Table 14.1 are no longer required.

Table 14.1 Completion schedules for deferred preoperational testing of systems for which schedular exemptions were authorized

Plant system	Low-power license NPF-55 exemption/SSER 6 section	Completion milestone
Turbine electrohydraulic control	2.D(a)/Appendix N, §2.1	Heatup
Traversing incore probe	2.D(b)/Appendix N, §2.2	5% power
Offgas	2.D(c)/Appendix N, §2.3	Heatup
Containment monitoring	2.D(d)/Appendix N, §2.4	Initial criticality
Leakage detection	2.D(e)/Appendix N, §2.5	Initial criticality
Fuel pool cooling and cleanup system	2.D(f)/Appendix N, §2.6	5% power
In-place filter testing of control room heating, ventilation, and air conditioning	2.D(h)/Appendix N, §2.8	Initial criticality
Heating, ventilation, and air conditioning	2.D(i)/Appendix N, §2.9	Heatup

16 TECHNICAL SPECIFICATIONS

The Technical Specifications in a license define certain features, characteristics, and conditions governing the operation of the facility that cannot be changed without prior approval of the NRC staff. The Clinton Technical Specifications are included as Appendix A to the Clinton license. The Technical Specifications contain sections covering definitions, safety limits, limiting safety system settings, limiting conditions for operation, surveillance requirements, design features, and administrative controls.

In letters dated January 8, February 4, and March 3 and 20, 1987, the licensee requested certain changes to the Technical Specifications that were issued as part of the Clinton low-power license. These changes would be incorporated into the Technical Specifications for the full-power license and would be effective upon issuance of that license. The licensee requested these changes based on experience to date, to clarify and enhance the Clinton Technical Specifications, and to provide consistency between the FSAR, the SER, and the as-built facility. In addition, the staff audited the final Clinton Technical Specifications in accordance with NRR* Office Letter No. 51, dated July 31, 1986. Several of the findings of this audit were identified in a November 20, 1986 memorandum and resulted in a number of staff-initiated changes to the Clinton Technical Specifications.

Supplement 8 to the SER contains the staff's evaluations of all the proposed changes to the Technical Specification as contained in the January 8, February 4, and March 3, 1987 submittals filed by the licensee. The remaining proposed changes to the Technical Specifications as requested in the licensee's March 20, 1987 submittal are addressed in this safety evaluation. All the licensee's requested changes, their status, and the staff-initiated audit recommendation changes are listed in Table 16.1.

*NRC's Office of Nuclear Reactor Regulation.

Table 16.1 Technical Specification changes

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>January 8, 1987</u>		
TS 3/4.3.1, Table 4.3.1.1-1, pp. 3/4 3-8, -9, -10	Change frequency of surveillance requirements for some of the reactor protection system instrumentation.	Unacceptable. See SSER 8, Appendix Q, TS 3/4.3.1, pp. 3/4 3-8, -9, -10.
TS 3/4.3.2, Table 3.3.2-1, p. 3/4 3-13 and Table 3.3.2-1, p. 3/4 3-18	Add a note to identify operability relief for the containment high-pressure trip function for containment isolation when associated valves are sealed closed.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.2, pp. 3/4 3-13, -18.
TS 3/4.3.2, Table 3.3.2-1 p. 3/4 3-19	Modify Action statements 21, 25, and 29 to provide clarification.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.2, p. 3/4 3-19.
51 TS 3/4.3.7, Table 3.3.7.1-1, pp. 3/4 3-71, -72	Permit a channel of the main control room air intake radiation monitor to be placed in inoperable status during required surveillance without placing the tripped system in the tripped condition, provided there is at least one other operable channel.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.7, pp. 3/4 3-71, -72
TS 3/4.6.4, p. 3/4 6-29	[Action statement for primary containment isolation valves should address valves which have dual functions and the effects of their inoperability on their other safety function.]†	The BWR licensing staff agrees with the audit findings and a footnote has been added to this specification identifying the problem.
TS 3/4.6.4, Table 3.6.4-1, p. 3/4 6-38	Update the TS to satisfy the commitment of TMI Item II.E.4.2 as described in Appendix D of the FSAR.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.4, p. 3/4 6-38.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>January 8, 1987 (Continued)</u>		
TS 3/4.6.4, Table 3.6.4-1, p. 3/4 6-44	Delete valve 1E12-F351 from the table.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.4, p. 3/4 6-44.
TS 3/4.6.4, Table 3.6.4-1, pp. 3/4 6-51, -52	Delete valves 1B21-F098A, B, C, D from the table.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.4, pp. 3/4 6-51, -52.
TS 3/4.6.4, Table 3.6.4-1, pp. 3/4 6-56, -60	Delete valves 1IA128A, B from the table.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.4, pp. 3/4 6-56, -60.
TS 3/4.6.4, Table 3.6.4-1, p. 3/4 6-59	Add a note (c) to valve 1CM053 to be consistent with FSAR.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.4, p. 3/4 6-59.
TS 3/4.6.4, Table 3.6.4-1, p. 3/4 6-61	Delete words in note (g) and insert revised note wording to satisfy TMI Item II.E.4.2 requirements.	Acceptable. SSER 8, See Appendix Q, TS 3/4.6.4, p. 3/4 6-61.
TS Bases B 3/4.6.4, p. B 3/4 6-7	Revise the Bases to clarify that TMI Item II.E.4.2 is satisfied for containment integrity.	Acceptable. See SSER 8, Appendix Q, TS Bases B 3/4.6.4, p. B 3/4 6-7.
TS 3/4.7.6, p. 3/4 7-17	[An inconsistency exists between the applicability and Action statement.]†	The staff agrees with the audit findings. See SSER 8, Appendix Q, TS 3/4.7.6, p. 3/4 7-17.
TS 3/4.8.4, Table 3.8.4.1-1, pp. 3/4 8-27 through 43	Delete from table columns entitled: "Circuit Breaker Trip," "Penetration Cable Size," and "Cable Number."	Acceptable. These columns are purely informational and do not contain any safety requirements related to the TS.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>January 8, 1987 (Continued)</u>		
TS 3/4.8.4, Table 3.8.4.2-1, p. 3/4 8-52	Add valves 1W0551A, B and 1W0552A, B to the table of motor-operated valves that have thermal overload protection devices.	Acceptable. This is in accordance with Position C.1 of RG 1.106 "Thermal Overload Protection for Electric Motors on MOVs."
TS 3/4.9.12, p.3/4 9-19, -20	Extend the surveillance times to determine the operability of the inclined fuel transfer system (IFTS) after system is determined operable.	See staff evaluation under March 3, 1987 submittal, TS change 3/4.9.12, (pp. 3/4 9-19, -20.
TS 6.1.2, p. 6-1	Change the appropriate level of management to the Vice President-Nuclear for issuance of the endorsement letter describing the control room command function.	Acceptable. See SSER 8, Appendix Q, TS 6.1.2, p. 6-1.
TS 6.2.1, Figure 6.2.1-1, p. 6-3	Change the organizational chart to reflect current organization.	Acceptable. See SSER 8, Appendix Q, TS 6.2.1, p. 6-3.
TS 6.4.1, p. 6-7	Revise training requirements for the unit staff.	Unacceptable. See SSER 8, Appendix Q, TS 6.4.1, p. 6-7.
TS 6.5.1.2, p. 6-7	Change the membership of Facility Review Group.	Acceptable. See SSER 8, Appendix Q, TS 6.5.1.2, p. 6-7.
<u>February 4, 1987</u>		
TS 1.28, Table 1.2, p. 1-11	Delete word "recoupled" and insert word "moved." Additional justification provided in March 3, 1987 submittal.	Acceptable. See SSER 8, Appendix Q, TS 1.28, p 1-11.
TS 3/4.2.3, Figure 3.2.3-2, p. 3/4 2-9	Replace current figure, which was incorrectly drafted, with new figure.	Acceptable. This is an editorial change and has been incorporated into the TS.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>February 4, 1987 (Continued)</u>		
TS 3/4.3.6, Table 4.3.6-1, p. 3/4 3-68	Change the surveillance frequencies for channel functional tests for some control rod block instrumentation.	Unacceptable. See SSER 8, Appendix Q, TS 3/4.3.6, p. 3/4 3-68.
TS 3/4.3.7, Table 3.3.7.12-1, pp. 3/4 3-102, -104	Substitute Action statement 121 for 126 for items 2.a and 2.b. Delete Action 126.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.7, pp. 3/4 3-102, -104.
TS 3/4.3.9, Table 3.3.9-2, p. 3/4 3-113	Change the trip setpoint and allowable value for the high containment pressure trip setpoints.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.9, p. 3/4 3-113.
TS 3/4.3.10, p. 3/4 3-115	Change the note to permit self-test system to be taken out of automatic mode of operation for up to 4 hours to perform surveillance testing, preventive or corrective maintenance.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.10, p. 3/4 3-115.
TS 3/4.4.1, SR 4.4.1.1,†† p. 3/4 4-2	Correct a typographical error.	Acceptable. Change is editorial and has been incorporated into the TS.
TS 3/4.4.4, SR 4.4.4.c,†† p. 3/4 4-15	Delete the number of days the continuous recording conductivity monitor may be inoperable before obtaining in-line conductivity measurements.	Acceptable. See SSER 8, Appendix Q, TS 3/4.4.4, p. 3/4 4-15.
TS 3/4.6.2, SR 4.6.2.2,†† p. 3/4 6-15	Change to permit the drywell bypass leakage rate test to be performed during each refueling outage.	Acceptable. See March 3, 1987 submittal, TS 3/4.6.2, p. 3/4 6-15.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>February 4, 1987 (Continued)</u>		
TS 3/4.6.3, SR 4.6.3.1.c.3,†† p. 3/4 6-25	Correct a typographical error.	Acceptable. Change is editorial and has been incorporated into the TS.
TS 3/4.6.4, Table 3.6.4-4, pp. 3/4 6-32, -33	Add a note related to B and R isolation signals for valves 1E51-F031 and 1E51-F064.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.4, pp. 3/4 6-32, -33.
TS 3/4.6.4, Table 3.6.4-1, p. 3/4 6-51	Correct a typographical error.	Acceptable. Change is editorial and has been incorporated into the TS.
TS 3/4.8.4, Table 3.8.4.2-1, p. 3/4 8-49	Add valve 1E51-C002E to table of motor-operated valves with thermal overload protection.	Acceptable. See SSER 8, Appendix Q, TS 3/4.8.4, p. 3/4 8-49.
TS 3/4.9.12, pp. 3/4 9-19, -20	Change the appropriate note to state that two components of the inclined fuel transfer system need not be operable until prior to off-loading irradiated fuel.	See staff evaluation under March 3, 1987 submittal. TS 3/4.9.12, pp. 3/4 9-19, -20.
TS 3/4.4.3, p. B 3/4 4-3	Withdrawn	
TS 5.1.1 and 5.1.3, Figures 5.1.1-1 and 5.1.3-1, pp. 5-2, -4	Change unrestricted area boundary as shown in figures.	Acceptable. See SSER 8, Appendix Q, TS 5.1.1 and 5.1.3, pp. 5-2, -4.
TS 6.2.2, Figure 6.2.1-1, p. 6-4	Change the "Director" Plant Operations to "Assistant Manager" Plant Operations and correct typographical error.	Acceptable. See SSER 8, Appendix Q, TS 6.2.2, p. 6-4.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>February 4, 1987 (Continued)</u>		
TS 6.2.3.4, p. 6-6	Correct a typographical error.	Acceptable. Change is editorial and has been incorporated into the TS.
TS 6.7.1.d, p. 6-14	Require safety limit violation report to be provided to all parties within 30 days of violation.	Acceptable. See SSER 8, Appendix Q, TS 6.7.1.d, p. 6-14.
TS 6.12, p. 6-23	Incorporated portions of TS 6.12.2 and TS 6.12.3 inadvertently left out upon issuance of low-power license into these TS sections.	Acceptable. See SSER 8, Appendix Q, TS 6.12, p. 6-23.
<u>March 3, 1987</u>		
TS 3/4.3.2, Table 3.3.2-2, p. 3/4 3-23	Withdrawn.	
TS 3/4.3.3, Table 3.3.3-2, pp. 3/4 3-39, -40	Change the trip setpoint and allowable value for the low-pressure systems injection valve permissives. Additional justification provided in March 20, 1987 submittal.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.3, pp. 3/4 3-39, -40.
TS 3/4.3.7, LCO 3.3.7.12,†† Table 3.3.7.12-1, pp. 3/4 3-102, -103, -104	Add a note to table applicable to minimum number of operable channels to enable channels to be placed in an inoperable status for up to 1 hour to perform surveillance of this TS and TS 3/4.11.2.1.	Acceptable. See SSER 8, Appendix Q, TS 3/4.3.7, pp. 3/4 3-102, -103, -104.
TS 3/4.4.3, SR 4.4.3.2.1.a,†† p. 3/4 4-11	Delete surveillance requirement related to monitoring drywell atmospheric particulate and gaseous radioactivity once per 12 hours.	Unacceptable. Change to TS proposed is inadequate to support requested change.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>March 3, 1987 (Continued)</u>		
TS 3/4.6.1, SR 4.6.1.4.c.2,†† p. 3/4 6-7	Change the surveillance requirements of the MSIV leakage control system blowers.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.1, p. 3/4 6-7.
TS 3/4.6.2, SR 4.6.2.2,†† p. 3/4 6-15	Change to permit the drywell bypass leakage rate test to be performed during each re fueling outage. Amends the February 4, 1987 submittal.	Acceptable. See SSER 8, Appendix Q, TS 3/4.6.2, p. 3/4 6-15.
TS 3/4.9.12, pp. 3/4 9-19, -20	Additional changes related to inclined fuel transfer system (IFTS) TS were provided to supplement January 8, 1987 submittal. These changes ensure that sufficient precautions are taken to prevent personnel from entering areas adjacent to where irradiated fuel is being handled by the IFTS.	Acceptable. See SSER 8, Appendix Q, TS 3/4.9.12, pp. 3/4 9-19, -20.
TS Bases 3/4.4.3, p. B 3/4 4-3	Update Bases to be consistent with a revision to the FSAR. (Related to revision on TS 3/4.4.3, SR 4.4.3.2.1.a, p. 3/4 4-11 of March 3, 1987 submittal.)	Unacceptable. Change to TS proposed is inadequate to support requested change.
<u>March 20, 1987</u>		
TS 3/4.3.3, Table 3.3.3-2 pp. 3/4 3-39, -40	Clarification of same TS change request contained in the March 3, 1987 submittal.	See TS 3/4.3.3, pp. 3/4 3-39, -40, under March 3, 1987 submittal.
TS 3/4.3.7, p. 3/4.3-92 and TS Bases 3/4.3.7.8, p. B 3/4 3-7 and TS 3/4.7.2, p. 3/4 7-5	Modify appropriate TS to account for an alternative method for use and storage of chlorine gas on site in individual containers having an inventory capacity of \leq 150 pounds.	Acceptable. See Appendix Q,** TS 3/4.3.7, p 3/4 3-92.

See footnotes at end of table.

Table 16.1 (Continued)

Date of IP letter request and TS section	Licensee change request description*	Staff evaluation
<u>March 20, 1987 (Continued)</u>		
TS 3/4.6.1., SR 4.6.1.7,†† p. 3/4 6-11	Add a note regarding the instrument locations and the number of instruments to be used to determine primary containment average air temperature.	Acceptable. See Appendix Q,** TS 3/4.6.1, p. 3/4 6-11/ TS 3/4.6.2, p. 3/4 6-20.
TS 3/4.6.2, SR 4.6.2.6,†† p. 3/4 6-20	Add notes regarding the instrument locations and the number of instruments to be used to determine drywell average air temperature.	Acceptable. See Appendix Q,** TS 3/4.6.1, p. 3/4 6-11/ TS 3/4.6.2, p. 3/4 6-20.
TS 3/4.8.2, SR 4.8.2.1.d.2.a†† pp. 3/4 8-13, -14	Revise the load profile for the Division I, II, and III batteries due to installation of a prelubrication system on the diesel engines.	Acceptable. See Appendix Q,** pp. 3/4 8-13, -14.

*For a more complete description, see the referenced letter.

**See Appendix Q in this safety evaluation.

†Bracketed material [] is a staff audit recommendation.

††SR = Surveillance Requirement; LCO = Limiting Condition for Operation.

18 CONTROL ROOM DESIGN REVIEW

18.3 Conclusions

In Supplement No. 5 to the SER (SSER 5) the staff identified certain items of the detailed control room design review (DCRDR) that remain to be completed or verified and that are to be addressed in a supplemental summary report. The submittal of this summary report which addresses of all these items was made a license condition of the Clinton low-power facility operating license No. NPF-55 (license condition 2.C(11)c). By letter dated March 28, 1987, the licensee submitted the final summary report which addressed all the items in SSER 5. Although all the items were addressed in this submittal, not all the items were fully resolved. Table 18.1 provides the status of all the DCRDR open items identified in SSER 5. Since all the items have not been fully resolved, the low-power license condition will be continued and modified to require completion of the remaining items within 90 days of issuance of the full-power license. The full-power license condition will read as follows:

The licensee shall submit a detailed control room design final supplemental summary report within 90 days of issuance of the full-power license that completes all the remaining items identified in this safety evaluation.

The staff will review the information provided in the supplemental summary report dated March 28, 1987 when the final supplemental summary report is submitted and will provide a safety evaluation. Region III will verify the implementation of any modifications required after the staff has completed its review.

Dated: April 17, 1987

Table 18.1 Status of DCRDR open items

Item	Status*
(1) Evaluation of communications from the remote shutdown panel to other local control stations that would be manned when shutdown could not be accomplished from the control room.	Completed
(2) Reassessment and resolution of the human engineering discrepancy (HED) addressing the potential for accidental actuation of controls located along the front edges of the benchboards.	Completed
(3) Confirmation that annunciators with faded or dirty tiles, or that used poor letter styles have been corrected. Provision of a description of how corrections were accomplished.	Partially completed
(4) Verification of the following system and function task analysis activities:	
(a) All tasks needed to identify emergency operating procedure (EOP) entry and exit conditions have been included in the task analysis.	Partially completed
(b) All EOP steps have been included in the task analysis.	Partially completed
(c) Cathode-ray tube (CRT) displays used as primary operator information sources have been reviewed for suitability.	Partially completed
(d) Assessment of display instrument accuracy has taken into account the accuracies of all components of the instrumentation loop under the plant conditions implied by the need to perform the EOP.	Partially completed
(e) Display instruments provide direct indication where needed for operator feedback.	Partially completed
(f) Instrumentation specified to be used under station black-out conditions has been identified and assessed for suitability.	Completed
(g) Assessment of the suitability of instrumentation range has taken into account the overall instrument loop.	Partially completed
(h) Feedback characteristics for control room instruments were identified and instruments were surveyed for these features.	Partially completed
(5) Description of the administrative control procedures applicable to control room operations.	Completed
(6) Reconfirmation and formalization of the DCRDR verification processes.	Completed

Table 18.1 (Continued)

Item	Status*
(7) Confirmation of completion of corrective action for those HEDs where application of the design improvement has been postponed until completion of control room construction.	Partially completed
(8) Resolution of the readability problem with recorders using non-glare glass.	Partially completed
(9) Description of the applicant's conventions for meter banding, and verification that meter color banding is consistent with this convention.	Partially completed
(10) Confirmation that annunciator controls have been arranged in a consistent manner.	Partially completed
(11) Completion of those environmental survey items to be conducted after completion of control room construction.	Partially completed

*Status based on licensee's March 28, 1987 submittal. Staff's acceptability pending staff review.

APPENDIX A

CONTINUATION OF CHRONOLOGY

March 27, 1987

Letter from licensee stating that deferred testing of pre-operational tests scheduled for the 5% power milestone have been completed.

March 28, 1987

Letter from licensee submitting detailed control room design review supplemental summary report.

APPENDIX D
NRC STAFF CONTRIBUTORS

<u>Name</u>	<u>Title</u>	<u>Branch</u>
B. Siegel	Sr. Project Manager	BWR Project Directorate #4 (BWR Lic.)
W. Meinke	Nuclear Engineer	Plant Systems (BWR Lic.)
C. Schulten	Reactor Systems Engineer	Facilities Operations (BWR Lic.)
N. K. Trehan	Electrical Engineer	Electrical, Instrumentation, and Control Systems (BWR Lic.)

APPENDIX F

ERRATA TO CLINTON POWER STATION SAFETY EVALUATION REPORT

SSER 8

Appendix Q, page 2, Section TS 3/4.3.3;
pages 3/4 3-39, -40

Change \geq 478 psig to \leq 478 psig

Page 7-1, Section 7.5.3.1, line 22

Change 1987 to 1984

APPENDIX Q

STAFF SAFETY EVALUATIONS FOR THE TECHNICAL SPECIFICATION CHANGES PROPOSED BY THE LICENSEE AND THE STAFF FOR THE CLINTON FULL-POWER OPERATING LICENSE

By letter dated March 20, 1987, the licensee proposed changes to the Clinton Technical Specifications (TS). The changes were requested for issuance with the Clinton full-power operating license. The staff evaluations of the proposed changes are given below.

TS 3/4.8.2; pages 3/4 8-13, -14

The licensee requested a revision to TS 4.8.2.1.d.2, "Electric Power System DC Sources," for the addition of the dc-powered prelubrication pump motor to each of the diesel generators. Based on the as-built configuration, the licensee determined that each battery is capable of supplying the added small loads and the total load is well within its capacity.

The staff has evaluated the proposed Technical Specification change as described in the licensee's submittal and concluded that the dc batteries are adequately sized to supply the additional loads of the dc-powered prelubrication pump motor load for each of the diesel generators. This change is, therefore, acceptable.

TS 3/4.6.1; page 3/4 6-11/TS 3/4.6.2; page 3/4 6-20

This requested change would add a note to define the requirements for the minimum number and location of readings for "arithmetical average" and provide for continued plant operation with flexibility in performance of instrument maintenance that may render an individual instrument inoperable. Unlike a number of other instrumentation Technical Specifications, the present specification contains no minimum-channel-operable concept to provide relief for temporary loss of an instrument for maintenance or testing. The proposed note would still provide for at least one instrument reading in each quadrant, and is consistent with the intent of the BWR Standard Technical Specifications, NUREG-0123, Revision 4 (Draft BWR/6). Therefore, this change is acceptable.

TS 3/4.3.7, page 3/4 3-92

The requested changes would provide for alternate methods for the use and storage of chlorine gas on site. The present Technical Specifications address the chlorine hazard as it is documented in the FSAR. Specifically, the major contributor to the chlorine hazard is the onsite storage of chlorine in individual containers having an inventory of greater than 150 pounds. The staff review of offsite hazards for Clinton had indicated that there were no significant offsite sources of chlorine. The licensee plans to reduce the use of gaseous chlorine on site

in treatment of water systems. In line with these plans, the licensee proposes to take advantage of an alternative position in Regulatory Guide 1.95 that allows manual isolation capability of the control room HVAC system if chlorine is stored in containers with an individual inventory of less than 150 pounds and at a distance from the control room of more than 100 meters. The licensee's proposed changes would only require automatic isolation of the control room HVAC when onsite chlorine is stored in containers with a capacity greater than 150 pounds or at distances less than 100 meters from the nearest control room intake. Therefore, the change is within the guidelines of Regulatory Guide 1.95. Furthermore, since there are no offsite chlorine sources near Clinton, the staff finds that the proposed changes are acceptable.

U. S. NUCLEAR REGULATORY COMMISSIONILLINOIS POWER COMPANYSOYLAND POWER COOPERATIVE, INC.,ANDWESTERN ILLINOIS POWER COOPERATIVE, INC.CLINTON NUCLEAR POWER STATION, UNIT NO. 1DOCKET NO. 50-461NOTICE OF ISSUANCE OF FACILITY OPERATING LICENSE

Notice is hereby given that the U.S. Nuclear Regulatory Commission (the Commission or NRC), has issued Facility Operating License No. NPF-62 to the licensees which authorizes operation of the Clinton Nuclear Power Station, Unit No. 1 (the facility), at reactor core power levels not in excess of 2894 megawatts thermal (100 percent rated power) in accordance with the provisions of the License, the Technical Specifications and the Environmental Protection Plan.

On September 29, 1986 the Commission issued Facility Operating License No. NPF-55 to the licensees which authorized operation of Clinton Nuclear Power Station, Unit No. 1, to five percent power (144.7 megawatts thermal).

License No. NPF-62 supersedes NPF-55.

The Clinton Nuclear Power Station, Unit No. 1 is a boiling water nuclear reactor located in Harp Township, DeWitt County, approximately six miles east of the city of Clinton in east-central Illinois. The license is effective as of the date of issuance.

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The application for the license complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made appropriate findings as required by the Act and the Commission's regulations in 10 CFR Chapter I which are set forth in the License. Prior public notice of the overall action involving the proposed issuance of an operating license was published in the Federal Register on September 29, 1980 (45 FR 64307). The power level authorized by this license and conditions contained herein are encompassed by that prior notice.

The Commission has determined that the issuance of this license will not result in any environmental impacts other than those evaluated in the Final Environmental Statement since the activity authorized by the license is encompassed by the overall action evaluated in the Final Environmental Statement.

Pursuant to 10 CFR 51.32, the Commission has determined that the issuance of exemptions included in this license will have no significant impact on the environment. These determinations were published in the Federal Register on February 18, 1986 (51 FR 5816), July 11, 1986 (51 FR 25274) and December 23, 1986 (51 FR 45972).

For further details with respect to this action, see (1) Facility Operating License No. NPF-62, with Technical Specifications (NUREG-1235) and the Environmental Protection Plan; (2) the report of the Advisory Committee on Reactor Safeguards, dated March 9, 1982; (3) the Commission's Safety Evaluation Report, dated February 1982 (NUREG-0853), and Supplements 1 through 8; (4) the Final Safety Analysis Report and Amendments thereto; (5) the Environmental Report and supplements thereto; and (6) the Final Environmental Statement dated May 1982 (NUREG-0854).

These items are available for inspection at the Commission's Public Document Room located at 1717 H Street, N.W., Washington, DC 20555 and in the Vespasian Warner Public Library, 120 West Johnson Street, Clinton, Illinois 61727. A copy of Facility Operating License NPF-62 may be obtained upon request addressed to the U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Director, Division of Reactor Projects III/IV/V. Copies of the Safety Evaluation Report and Supplements 1 through 8 (NUREG-0853) and the Final Environmental Statement (NUREG-0854) may be purchased at current rates from the National Technical Information Service, Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161, or may be ordered by calling (202) 275-2060 or by writing to the Superintendent of Documents, U.S. Government Printing Office, P.O. Box 37082, Washington, DC 20013-7082. All orders should clearly identify the NRC publication number and the requestor's GPO deposit account, or VISA or Mastercard number and expiration date.

Dated at Bethesda, Maryland this 17th day of April 1987.

FOR THE NUCLEAR REGULATORY COMMISSION



Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects III/IV/V



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 17, 1987

Docket No. 50-461

AMENDMENT TO INDEMNITY AGREEMENT NO. B-91
AMENDMENT NO. 3

Effective April 17, 1987, Indemnity Agreement No. B-91, between Illinois Power Company, Western Illinois Power Cooperative, Inc., Soyland Power Cooperative, Inc. and the Nuclear Regulatory Commission, dated August 7, 1985, as amended, is hereby further amended as follows:

Item 3 of the Attachment to the indemnity agreement is deleted in its entirety and the following substituted therefore:

Item 3-License number or numbers

- SNM-1886 (From 12:01 a.m., August 7, 1985, to 12 midnight, September 28, 1986, inclusive)
- NPF-55 (From 12:01 a.m., September 29, 1986, to 12 midnight, April 16, 1987 inclusive)
- NPF-62 (From 12:01 a.m., April 17, 1987)

FOR THE U.S. NUCLEAR REGULATORY COMMISSION



Jesse L. Funches, Chief
Policy Development and
Technical Support Branch
Office of Nuclear Reactor Regulation

Accepted _____

Accepted _____

By _____
ILLINOIS POWER COMPANY

By _____
WESTERN ILLINOIS POWER
COOPERATIVE, INC.

Accepted _____

By _____
SOYLAND POWER COOPERATIVE, INC.



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

April 17, 1987

ASSESSMENT OF THE EFFECT ON LICENSE DURATION ON MATTERS DISCUSSED
IN THE FINAL ENVIRONMENTAL STATEMENT FOR THE CLINTON POWER STATION
UNIT NO. 1 (DATED JANUARY 1986)

INTRODUCTION

The Final Environmental Statement (FES) for the operation of the Clinton Power Station, Unit No. 1 was published in May 1982. It has been past practice to issue operating licenses for a period of 40 years from the date of the construction permit. For Clinton, the CP was issued in February 1976, thus, approximately 30 years of operating life would be available.

By letter dated September 18, 1985, Illinois Power Company (IP) requested that the operating license for Clinton Power Station, Unit No. 1 have a duration of 40 years from the date of issuance.

DISCUSSION

The NRC staff has reviewed the Clinton FES to determine which aspects considered in the FES are affected by the duration of the operating license. In general, the FES assesses various impacts associated with operation of the facility in terms of annual energy production benefits. Thus, the overall assessment and conclusions would not be dependent on specific operating life. There are, however, three areas in the FES for which a specific operating life was assumed:

1. Radiological assessments are based on a 15-year plant midlife.
2. Uranium fuel cycle impacts are based on one initial core load and 29 annual refuelings.
3. Uranium availability is evaluated through 30 years of operation.

EVALUATION

The NRC staff's appraisal of the significance of the use of 40 years of operation rather than 30 as it affects these three areas is presented in the following discussions:

Radiological Impact on Normal Operation - The NRC staff has calculated dose commitments to the human population residing around nuclear power reactors to assess the impact on people from radioactive material released from these reactors. The annual dose commitment is that dose that results from a one year intake of radioactive materials and would be received over a period of 50 years following intake. However, for the majority of radionuclides considered in this analysis, the total dose from a one year intake occurs during the year of intake.

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To perform the dose assessment the NRC staff assumes environmental conditions that would exist at the midpoint of plant life. This assumption accounts for the effect of the buildup of deposited radionuclides in the soil in succeeding years of operations. For Clinton Power Station a 15 year period was chosen for radiological environmental assessment purposes as the midpoint of plant operation and was used for the calculations in the Clinton Unit 1 FES. For a 40 year license the 20 year period should be chosen for the assessment.

The NRC staff has evaluated the IP request for a 40 year license and finds that increasing the buildup period from 15 to 20 years will increase the annual dose commitment by less than 10%. This increase is due primarily to ingestion of the longer-lived radionuclides deposited in the environment. Table C.4. of the FES indicates that the dose commitment to the thyroid, the most critical organ, via the ingestion pathway is about 4 mrem for each year of plant operation. The 10 CFR Part 50, Appendix I design objective is 15 mrem maximum. Thus an increase of as much as 10% in the most critical pathway (to about 5 mrems) remains below the regulatory guidelines.

Uranium Fuel Cycle Impact - The impacts of the uranium fuel cycle were based on 30 years of operation of a model LWR. The fuel requirements for the model LWR were assumed to be one initial core load and 29 annual refuelings of approximately 1/3 core change for each refueling for an equivalent of 10.7 full core loads over 30 years (0.36 core per year average). The fuel requirement of the model LWR over a 40 year operating life is 1 initial core load and 39 annual refuelings for an equivalent of 14 full loads over 40 years (0.35 core per year average). Thus the average annual fuel requirement for a 40 year license is slightly lower when compared to the annual fuel requirement for a 30 year license. The new result would be a small reduction in the annual fuel requirement for the model LWR. This small reduction would not lead to changes in the impacts of the uranium fuel cycle.

Uranium Resources - A 33% increase in the Clinton Unit 1 operating life (to 40 years) would still be within the projected uranium resources since the cancellation of many reactors will result in an off-setting reduction in demand. Furthermore, the increase in operating life assumption to 40 years will reduce the need for replacement generating capacity, including nuclear, at the end of the 30 years.

CONCLUSION

The NRC staff has evaluated the environmental impact of these areas which are dependent on a specific operating life for Clinton Power Station Unit 1 and concluded, based on the reasons discussed above, that the impacts associated with a 40 year operating license duration are not significantly different from those associated with a 30 year operating license duration and are not significantly different from those assessed in the Clinton FES.