

Docket Nos. STN 50-483
and STN 50-486

APR 16 1976

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TBAbernathy, TIC
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Mr. J. K. Bryan, Vice President
Union Electric Company
P. O. Box 149
St. Louis, Missouri 63166

Dear Mr. Bryan:

Construction Permits Nos. CPPR-139 and CPPR-140 are enclosed, together with a copy of a related notice which has been forwarded to the Office of the Federal Register for publication.

The construction permits authorize Union Electric Company to construct two pressurized water reactors, designated as Callaway Plant, Units 1 and 2, at the applicant's site in Callaway County, Missouri.

Sincerely,

Original signed by

D. B. Vassallo

D. B. Vassallo, Chief

Light Water Reactors Branch No. 5

Division of Project Management

Enclosures:

1. Construction Permit No. CPPR-139
2. Construction Permit No. CPPR-140
3. Federal Register Notice

OFFICE	DPM/LWR #5	DPM/LWR #5	ELD	DPM/LWR #5	
SURNAME	J Lee, pav	EALicitra	Y. J. Williams	DBVassallo	
DATE	04/13/76	04/13/76	04/14/76	04/14/76	

UNION ELECTRIC COMPANY

DOCKET NO. STM 50-483

CALLAWAY PLANT, UNIT NO. 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-139

1. The Nuclear Regulatory Commission (the Commission) having found that:

- A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
- B. The Union Electric Company (the Applicant) has described the proposed design of the Callaway Plant, Unit No. 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
- C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report.
- D. Safety features or components, if any, which require research and development have been described by the Applicant and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
- E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

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- F. The Applicant is technically qualified to design and construct the proposed facility;
- G. The Applicant is financially qualified to design and construct the proposed facility;
- H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
- I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Partial Initial Decision and the Initial Decision of the Atomic Safety and Licensing Board, dated August 8, 1975 and April 8, 1976, respectively, the Nuclear Regulatory Commission hereby issues a construction permit to the Applicant for a utilization facility designed to operate at 3411 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicant and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Callaway Plant, Unit No. 1 will be located on the Applicant's site in Callaway County, Missouri.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is June 30, 1981, and the latest date for completion is February 28, 1982.
- B. The facility shall be constructed and located at the site as described in the application, in Callaway County, Missouri, approximately 5 miles north of the Missouri River.

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- C. This construction permit authorizes the Applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.
- D. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required (10 CFR, Part 2 Section 2.104(d)), antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.
- E. This facility is subject to the following conditions for the protection of the environment:
- (1) The disposal of the sludge from the water treatment plant providing make up water in the cooling system as well as sludges from the potable water supply at the facility shall be in accordance with effluent guidance limitation documents being developed by the U. S. Environmental Protection Agency and in the same manner as approved for all other public and private water treatment plants using the Missouri River as a raw water source. Detailed plans for the potable water supply system shall be submitted to the Missouri Division of Environmental Quality, Public Water Supply Section, for review.
 - (2) Monitoring of the facility discharge shall be conducted in whatever manner is necessary to assure safety of downstream water users, including the development of procedures for monitoring of copper concentrations in the effluents from the Callaway Plant.
 - (3) The Applicant shall take the necessary mitigating actions, including those summarized in Section 4.6 of the Final Environmental Statement during construction of the facility and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.
 - (4) The Applicant shall establish a control program which shall include written procedures and instructions to control all construction activities as prescribed herein and shall provide for periodic management audits to determine the adequacy of implementation of environmental conditions. The Applicant shall maintain sufficient records to furnish evidence of compliance with all the environmental conditions herein.

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- (5) Before engaging in a construction activity not evaluated by the Commission, the Applicant will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated in the Final Environmental Statement, the Applicant shall provide a written evaluation of such activities and obtain approval of the Director of the Division of Project Management prior to conducting such activities.
- (6) If unexpected harmful effects or evidence of serious damage are detected during facility construction, the Applicant shall provide to the staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.
- (7) The Applicant shall conduct his proposed monitoring programs, as summarized in Section 6 of the Final Environmental Statement, including the modifications defined by the staff in Subsections 6.1.1, 6.1.2 and 6.1.4.1 of the Final Environmental Statement regarding the duration of the water wells monitoring program, the extent of the radiological monitoring program and the sampling frequency of the aquatic ecology monitoring program.
- (8) The Applicant shall geologically map in detail all major excavations. The staff must be notified when the mapping is being done so that the staff can make arrangements to examine the excavations to determine if the subsurface structure correlates with the interpretations made from the nearby water well data and the onsite core borings. The Applicant shall include the resulting maps and evaluation in the Final Safety Analysis Report.
- (9) The Applicant shall conduct a program to assess the significance of Logan Creek as a fish spawning and nursery area, the extent of damage to the creek and its biota which may ensue from the construction of crossings for pipelines, and the need for protective measures to ameliorate adverse impacts. Prior to starting pipeline construction, the Applicant shall submit the impact assessment and plan for construction of the crossings to the staff for review and approval as provided in Subsections 4.3.2.1, 4.4.1 and 6.1.4 of the Final Environmental Statement.
- (10) The Applicant will use a mine for obtaining rock for concrete aggregate and backfill. If the Applicant chooses to develop a quarry instead of a mine, a revised description and impact assessment must be submitted to the staff for review and approval prior to commencement of work at the quarry.

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4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicant submits to the Commission the complete Final Safety Analysis Report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicant submits proof of financial protection and executes an indemnity agreement as required by Section 170 of the Act.
5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
Roger S. Boyd

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: April 16, 1976

	DPM/LWR #5 EAL: JLee	ELD JRutberg	ELD JHassman	DPM/LWR/AD RCDeYoung	DSSEA/AD:EP V Moore	DPM/DIR RSBoyd
OFFICE	DPM/LWR #5	ELD	ELD	DPM/LWR/AD	DSSEA/AD:EP	DPM/DIR
SURNAME	JLee: pav	JRutberg	JHassman	RCDeYoung	V Moore	RSBoyd
DATE	04/13/76	04/14/76	04/16/76	04/16/76	04/13/76	04/16/76

UNION ELECTRIC COMPANY

DOCKET NO. STN 50-486

CALLAWAY PLANT, UNIT NO. 2

CONSTRUCTION PERMIT

Construction Permit No. CPPR-140

1. The Nuclear Regulatory Commission (the Commission) having found that:

- A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
- B. The Union Electric Company (the Applicant) has described the proposed design of the Callaway Plant, Unit No. 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
- C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report.
- D. Safety features or components, if any, which require research and development have been described by the Applicant and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
- E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

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- F. The Applicant is technically qualified to design and construct the proposed facility;
 - G. The Applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Partial Initial Decision and the Initial Decision of the Atomic Safety and Licensing Board, dated August 8, 1975 and April 8, 1976, respectively, the Nuclear Regulatory Commission hereby issues a construction permit to the Applicant for a utilization facility designed to operate at 3411 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicant and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Callaway Plant, Unit No. 2 will be located on the Applicant's site in Callaway County, Missouri.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55, of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is December 31, 1982, and the latest date for completion is February 28, 1984.
 - B. The facility shall be constructed and located at the site as described in the application, in Callaway County, Missouri, approximately 5 miles north of the Missouri River.

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- C. This construction permit authorizes the Applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.
- D. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required (10 CFR, Part 2 Section 2.104(d)), antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.
- E. This facility is subject to the following conditions for the protection of the environment:
- (1) The disposal of the sludge from the water treatment plant providing make up water in the cooling system as well as sludges from the potable water supply at the facility shall be in accordance with effluent guidance limitation documents being developed by the U. S. Environmental Protection Agency and in the same manner as approved for all other public and private water treatment plants using the Missouri River as a raw water source. Detailed plans for the potable water supply system shall be submitted to the Missouri Division of Environmental Quality, Public Water Supply Section, for review.
 - (2) Monitoring of the facility discharge shall be conducted in whatever manner is necessary to assure safety of downstream water users, including the development of procedures for monitoring of copper concentrations in the effluents from the Callaway Plant.
 - (3) The Applicant shall take the necessary mitigating actions, including those summarized in Section 4.6 of the Final Environmental Statement during construction of the facility and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.
 - (4) The Applicant shall establish a control program which shall include written procedures and instructions to control all construction activities as prescribed herein and shall provide for periodic management audits to determine the adequacy of implementation of environmental conditions. The Applicant shall maintain sufficient records to furnish evidence of compliance with all the environmental conditions herein.

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- (5) Before engaging in a construction activity not evaluated by the Commission, the Applicant will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated in the Final Environmental Statement, the Applicant shall provide a written evaluation of such activities and obtain approval of the Director of the Division of Project Management prior to conducting such activities.
- (6) If unexpected harmful effects or evidence of serious damage are detected during facility construction, the Applicant shall provide to the staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.
- (7) The Applicant shall conduct his proposed monitoring programs, as summarized in Section 6 of the Final Environmental Statement, including the modifications defined by the staff in Subsections 6.1.1, 6.1.2 and 6.1.4.1 of the Final Environmental Statement regarding the duration of the water wells monitoring program, the extent of the radiological monitoring program and the sampling frequency of the aquatic ecology monitoring program.
- (8) The Applicant shall geologically map in detail all major excavations. The staff must be notified when the mapping is being done so that the staff can make arrangements to examine the excavations to determine if the subsurface structure correlates with the interpretations made from the nearby water well data and the onsite core borings. The Applicant shall include the resulting maps and evaluation in the Final Safety Analysis Report.
- (9) The Applicant shall conduct a program to assess the significance of Logan Creek as a fish spawning and nursery area, the extent of damage to the creek and its biota which may ensue from the construction of crossings for pipelines, and the need for protective measures to ameliorate adverse impacts. Prior to starting pipeline construction, the Applicant shall submit the impact assessment and plan for construction of the crossings to the staff for review and approval as provided in Subsections 4.3.2.1, 4.4.1 and 6.1.4 of the Final Environmental Statement.
- (10) The Applicant will use a mine for obtaining rock for concrete aggregate and backfill. If the Applicant chooses to develop a quarry instead of a mine, a revised description and impact assessment must be submitted to the staff for review and approval prior to commencement of work at the quarry.

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4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicant submits to the Commission the complete Final Safety Analysis Report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicant submits proof of financial protection and executes an indemnity agreement as required by Section 170 of the Act.
5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
Roger S. Boyd

Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: April 16, 1976

	DPM/LWR #5 EAL 90156 04/13/76	DPM/LWR #5 DBVassallo 04/14/76			
OFFICE >	DRM/LWR #5	ELD	ELD	DPM/AD LWRs	DSSEA/AD:EP
SURNAME >	JLeespav	JRutberg	Grassman	RCDeYoung for VM Moore	RSBoyd
DATE >	04/13/76	04/14/76	04/16/76	04/13/76	04/16/76

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. STN 50-483 AND STN 50-486

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNITS 1 AND 2

NOTICE OF ISSUANCE OF CONSTRUCTION PERMITS

Notice is hereby given that, pursuant to the Partial Initial Decision and the Initial Decision of the Atomic Safety and Licensing Board, dated August 8, 1975 and April 8, 1976, respectively, the Nuclear Regulatory Commission (the Commission) has issued Construction Permits Nos. CPPR-139 and CPPR-140 to the Union Electric Company for construction of two pressurized water nuclear reactors at the applicant's site in Callaway County, Missouri. The proposed reactors, known as the Callaway Plant, Units 1 and 2 are each designed for a rated power of 3411 megawatts thermal with a net electrical output of approximately 1120 megawatts.

The Partial Initial Decision and the Initial Decision are subject to review by an Atomic Safety and Licensing Appeal Board prior to their becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Decisions may be reviewed by the Commission.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the construction permits. The application for the construction permits complies with the standards and requirements of the Act and the Commission's rules and regulations.

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The construction permits are effective as of their date of issuance. The earliest date for the completion of Unit No. 1 is June 30, 1981 and the latest date for completion is February 28, 1982; the earliest date for completion of Unit No. 2 is December 31, 1982 and the latest date for completion is February 28, 1984. Each permit shall expire on the latest date for completion of the respective facility for which it is issued.

A copy of (1) the Partial Initial Decision and the Initial Decision, dated August 8, 1975 and April 8, 1976, respectively; (2) Construction Permit No. CPFR-139 and Construction Permit No. CPFR-140; (3) the report of the Advisory Committee on Reactor Safeguards, dated September 17, 1975; (4) the Office of Nuclear Reactor Regulation's Safety Evaluation Report dated August 7, 1975, and Supplements 1 and 2, thereto, dated November 21, 1975 and January 23, 1976, respectively; (5) the Preliminary Safety Analysis Report and amendments thereto; (6) the applicant's Environmental Report dated May 1974 and supplements thereto; (7) the Draft Environmental Statement dated October 1974; and (8) the Final Environmental Statement dated March 1975, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C., at the Fulton City Library, 709 Market Street, Fulton, Missouri, and at the Olin Library of Washington University, Skinker and Lindell Boulevards, St. Louis, Missouri. A copy of the construction permits may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

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Copies of the Safety Evaluation Report and Supplements 1 and 2 thereto (Document Nos. NUREG-75/076, NUREG-75/076, Supplement No. 1, and NUREG-0021) and the Final Environmental Statement (Document No. NUREG-75/011) may be purchased, at current rates, from the National Technical Information Service, Springfield, Virginia 22161.

Dated at Bethesda, Maryland, this 16th day of April 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

Original signed by
D. B. Vassallo

D. B. Vassallo, Chief
Light Water Reactors Branch No. 5
Division of Project Management

OFFICE >	DPM:LWR #5	DPM:LWR #5	OELD <i>RV</i>	DPM:LWR #5 <i>RV</i>	
SURNAME >	JLeejcls	EAL <i>Extra</i>	<i>Drossman</i>	DEVassallo	
DATE >	4/13/76	4/13/76	4/14/76	4/14/76	



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

UNION ELECTRIC COMPANY

DOCKET NO. STN 50-483

CALLAWAY PLANT, UNIT NO. 1

CONSTRUCTION PERMIT

Construction Permit No. CPPR-139

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
 - B. The Union Electric Company (the Applicant) has described the proposed design of the Callaway Plant, Unit No. 1 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report.
 - D. Safety features or components, if any, which require research and development have been described by the Applicant and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
 - E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

- F. The Applicant is technically qualified to design and construct the proposed facility;
 - G. The Applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Partial Initial Decision and the Initial Decision of the Atomic Safety and Licensing Board, dated August 8, 1975 and April 8, 1976, respectively, the Nuclear Regulatory Commission hereby issues a construction permit to the Applicant for a utilization facility designed to operate at 3411 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicant and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Callaway Plant, Unit No. 1 will be located on the Applicant's site in Callaway County, Missouri.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is June 30, 1981, and the latest date for completion is February 28, 1982.
 - B. The facility shall be constructed and located at the site as described in the application, in Callaway County, Missouri, approximately 5 miles north of the Missouri River.

- C. This construction permit authorizes the Applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.
- D. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required (10 CFR, Part 2 Section 2.104(d)), antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.
- E. This facility is subject to the following conditions for the protection of the environment:
 - (1) The disposal of the sludge from the water treatment plant providing make up water in the cooling system as well as sludges from the potable water supply at the facility shall be in accordance with effluent guidance limitation documents being developed by the U. S. Environmental Protection Agency and in the same manner as approved for all other public and private water treatment plants using the Missouri River as a raw water source. Detailed plans for the potable water supply system shall be submitted to the Missouri Division of Environmental Quality, Public Water Supply Section, for review.
 - (2) Monitoring of the facility discharge shall be conducted in whatever manner is necessary to assure safety of downstream water users, including the development of procedures for monitoring of copper concentrations in the effluents from the Callaway Plant.
 - (3) The Applicant shall take the necessary mitigating actions, including those summarized in Section 4.6 of the Final Environmental Statement during construction of the facility and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.
 - (4) The Applicant shall establish a control program which shall include written procedures and instructions to control all construction activities as prescribed herein and shall provide for periodic management audits to determine the adequacy of implementation of environmental conditions. The Applicant shall maintain sufficient records to furnish evidence of compliance with all the environmental conditions herein.

- (5) Before engaging in a construction activity not evaluated by the Commission, the Applicant will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated in the Final Environmental Statement, the Applicant shall provide a written evaluation of such activities and obtain approval of the Director of the Division of Project Management prior to conducting such activities.
- (6) If unexpected harmful effects or evidence of serious damage are detected during facility construction, the Applicant shall provide to the staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.
- (7) The Applicant shall conduct his proposed monitoring programs, as summarized in Section 6 of the Final Environmental Statement, including the modifications defined by the staff in Subsections 6.1.1, 6.1.2 and 6.1.4.1 of the Final Environmental Statement regarding the duration of the water wells monitoring program, the extent of the radiological monitoring program and the sampling frequency of the aquatic ecology monitoring program.
- (8) The Applicant shall geologically map in detail all major excavations. The staff must be notified when the mapping is being done so that the staff can make arrangements to examine the excavations to determine if the subsurface structure correlates with the interpretations made from the nearby water well data and the onsite core borings. The Applicant shall include the resulting maps and evaluation in the Final Safety Analysis Report.
- (9) The Applicant shall conduct a program to assess the significance of Logan Creek as a fish spawning and nursery area, the extent of damage to the creek and its biota which may ensue from the construction of crossings for pipelines, and the need for protective measures to ameliorate adverse impacts. Prior to starting pipeline construction, the Applicant shall submit the impact assessment and plan for construction of the crossings to the staff for review and approval as provided in Subsections 4.3.2.1, 4.4.1 and 6.1.4 of the Final Environmental Statement.
- (10) The Applicant will use a mine for obtaining rock for concrete aggregate and backfill. If the Applicant chooses to develop a quarry instead of a mine, a revised description and impact assessment must be submitted to the staff for review and approval prior to commencement of work at the quarry.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicant submits to the Commission the complete Final Safety Analysis Report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicant submits proof of financial protection and executes an indemnity agreement as required by Section 170 of the Act.
5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION



Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: April 16, 1976



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

UNION ELECTRIC COMPANY

DOCKET NO. STN 50-486

CALLAWAY PLANT, UNIT NO. 2

CONSTRUCTION PERMIT

Construction Permit No. CPFR-140

1. The Nuclear Regulatory Commission (the Commission) having found that:
 - A. The application for construction permit complies with the requirements of the Atomic Energy Act of 1954, as amended, and the rules and regulations of the Commission, there is reasonable assurance that the activities authorized by the permit will be conducted in compliance with the rules and regulations of the Commission, and all required notifications to other agencies or bodies have been duly made;
 - B. The Union Electric Company (the Applicant) has described the proposed design of the Callaway Plant, Unit No. 2 (the facility), including, but not limited to, the principal architectural and engineering criteria for the design and has identified the major features or components incorporated therein for the protection of the health and safety of the public;
 - C. Such further technical or design information as may be required to complete the safety analysis, and which can reasonably be left for later consideration, will be supplied in the final safety analysis report.
 - D. Safety features or components, if any, which require research and development have been described by the Applicant and the Applicant has identified, and there will be conducted, a research and development program reasonably designed to resolve any safety questions associated with such features or components;
 - E. On the basis of the foregoing, there is reasonable assurance that (i) such safety questions will be satisfactorily resolved at or before the latest date stated in the application for completion of construction of the proposed facility and (ii) taking into consideration the site criteria contained in 10 CFR Part 100, the proposed facility can be constructed and operated at the proposed location without undue risk to the health and safety of the public;

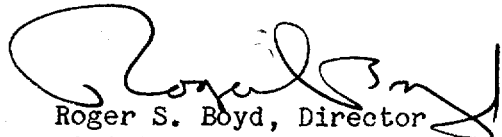
- F. The Applicant is technically qualified to design and construct the proposed facility;
 - G. The Applicant is financially qualified to design and construct the proposed facility;
 - H. The issuance of a permit for the construction of the facility will not be inimical to the common defense and security or to the health and safety of the public; and
 - I. After weighing the environmental, economic, technical and other benefits of the facility against environmental and other costs and considering available alternatives, the issuance of a construction permit subject to the conditions for protection of the environment set forth herein is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Pursuant to Section 103 of the Atomic Energy Act of 1954, as amended (the Act), and Title 10, Chapter I, Code of Federal Regulations, Part 50, "Licensing of Production and Utilization Facilities," and pursuant to the Partial Initial Decision and the Initial Decision of the Atomic Safety and Licensing Board, dated August 8, 1975 and April 8, 1976, respectively, the Nuclear Regulatory Commission hereby issues a construction permit to the Applicant for a utilization facility designed to operate at 3411 megawatts thermal as described in the application and amendments thereto (the application) filed in this matter by the Applicant and as more fully described in the evidence received at the public hearing upon that application. The facility, known as the Callaway Plant, Unit No. 2 will be located on the Applicant's site in Callaway County, Missouri.
3. This permit shall be deemed to contain and be subject to the conditions specified in Sections 50.54 and 50.55 of said regulations; is subject to all applicable provisions of the Act, and rules, regulations, and orders of the Commission now or hereafter in effect; and is subject to the conditions specified or incorporated below:
- A. The earliest date for the completion of the facility is December 31, 1982, and the latest date for completion is February 28, 1984.
 - B. The facility shall be constructed and located at the site as described in the application, in Callaway County, Missouri, approximately 5 miles north of the Missouri River.

- C. This construction permit authorizes the Applicant to construct the facility described in the application and the hearing record, in accordance with the principal architectural and engineering criteria and environmental protection commitments set forth therein.
- D. In view of the fact that the Attorney General has not recommended an antitrust hearing in this matter, that no antitrust issues have been raised by another in a manner according with the Commission's Rules of Practice, and that no finding has been made that an antitrust hearing is otherwise required (10 CFR, Part 2 Section 2.104(d)), antitrust review of the application for this construction permit under Section 105c of the Atomic Energy Act of 1954, as amended, has been completed and a hearing thereon determined to be unnecessary.
- E. This facility is subject to the following conditions for the protection of the environment:
 - (1) The disposal of the sludge from the water treatment plant providing make up water in the cooling system as well as sludges from the potable water supply at the facility shall be in accordance with effluent guidance limitation documents being developed by the U. S. Environmental Protection Agency and in the same manner as approved for all other public and private water treatment plants using the Missouri River as a raw water source. Detailed plans for the potable water supply system shall be submitted to the Missouri Division of Environmental Quality, Public Water Supply Section, for review.
 - (2) Monitoring of the facility discharge shall be conducted in whatever manner is necessary to assure safety of downstream water users, including the development of procedures for monitoring of copper concentrations in the effluents from the Callaway Plant.
 - (3) The Applicant shall take the necessary mitigating actions, including those summarized in Section 4.6 of the Final Environmental Statement during construction of the facility and associated transmission lines to avoid unnecessary adverse environmental impacts from construction activities.
 - (4) The Applicant shall establish a control program which shall include written procedures and instructions to control all construction activities as prescribed herein and shall provide for periodic management audits to determine the adequacy of implementation of environmental conditions. The Applicant shall maintain sufficient records to furnish evidence of compliance with all the environmental conditions herein.

- (5) Before engaging in a construction activity not evaluated by the Commission, the Applicant will prepare and record an environmental evaluation of such activity. When the evaluation indicates that such activity may result in a significant adverse environmental impact that was not evaluated, or that is significantly greater than that evaluated in the Final Environmental Statement, the Applicant shall provide a written evaluation of such activities and obtain approval of the Director of the Division of Project Management prior to conducting such activities.
- (6) If unexpected harmful effects or evidence of serious damage are detected during facility construction, the Applicant shall provide to the staff an acceptable analysis of the problem and a plan of action to eliminate or significantly reduce the harmful effects or damage.
- (7) The Applicant shall conduct his proposed monitoring programs, as summarized in Section 6 of the Final Environmental Statement, including the modifications defined by the staff in Subsections 6.1.1, 6.1.2 and 6.1.4.1 of the Final Environmental Statement regarding the duration of the water wells monitoring program, the extent of the radiological monitoring program and the sampling frequency of the aquatic ecology monitoring program.
- (8) The Applicant shall geologically map in detail all major excavations. The staff must be notified when the mapping is being done so that the staff can make arrangements to examine the excavations to determine if the subsurface structure correlates with the interpretations made from the nearby water well data and the onsite core borings. The Applicant shall include the resulting maps and evaluation in the Final Safety Analysis Report.
- (9) The Applicant shall conduct a program to assess the significance of Logan Creek as a fish spawning and nursery area, the extent of damage to the creek and its biota which may ensue from the construction of crossings for pipelines, and the need for protective measures to ameliorate adverse impacts. Prior to starting pipeline construction, the Applicant shall submit the impact assessment and plan for construction of the crossings to the staff for review and approval as provided in Subsections 4.3.2.1, 4.4.1 and 6.1.4 of the Final Environmental Statement.
- (10) The Applicant will use a mine for obtaining rock for concrete aggregate and backfill. If the Applicant chooses to develop a quarry instead of a mine, a revised description and impact assessment must be submitted to the staff for review and approval prior to commencement of work at the quarry.

4. This permit is subject to the limitation that a license authorizing operation of the facility will not be issued by the Commission unless (a) the Applicant submits to the Commission the complete Final Safety Analysis Report, portions of which may be submitted and evaluated from time to time; (b) the Commission finds that the final design provides reasonable assurance that the health and safety of the public will not be endangered by the operation of the facility in accordance with procedures approved by it in connection with the issuance of said license; (c) the Commission finds that operation of the facility will be in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements were satisfied; and (d) the Applicant submits proof of financial protection and executes an indemnity agreement as required by Section 170 of the Act.
5. This permit is effective as of its date of issuance and shall expire on the latest completion date indicated in paragraph 3.A above.

FOR THE NUCLEAR REGULATORY COMMISSION



Roger S. Boyd, Director
Division of Project Management
Office of Nuclear Reactor Regulation

Date of Issuance: April 16, 1976

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. STN 50-483 AND STN 50-486

UNION ELECTRIC COMPANY

CALLAWAY PLANT, UNITS 1 AND 2

NOTICE OF ISSUANCE OF CONSTRUCTION PERMITS

Notice is hereby given that, pursuant to the Partial Initial Decision and the Initial Decision of the Atomic Safety and Licensing Board, dated August 8, 1975 and April 8, 1976, respectively, the Nuclear Regulatory Commission (the Commission) has issued Construction Permits Nos. CPPR-139 and CPPR-140 to the Union Electric Company for construction of two pressurized water nuclear reactors at the applicant's site in Callaway County, Missouri. The proposed reactors, known as the Callaway Plant, Units 1 and 2 are each designed for a rated power of 3411 megawatts thermal with a net electrical output of approximately 1120 megawatts.

The Partial Initial Decision and the Initial Decision are subject to review by an Atomic Safety and Licensing Appeal Board prior to their becoming final. Any decision or action taken by an Atomic Safety and Licensing Appeal Board in connection with the Decisions may be reviewed by the Commission.

The Commission has made appropriate findings as required by the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the construction permits. The application for the construction permits complies with the standards and requirements of the Act and the Commission's rules and regulations.

The construction permits are effective as of their date of issuance. The earliest date for the completion of Unit No. 1 is June 30, 1981 and the latest date for completion is February 28, 1982; the earliest date for completion of Unit No. 2 is December 31, 1982 and the latest date for completion is February 28, 1984. Each permit shall expire on the latest date for completion of the respective facility for which it is issued.

A copy of (1) the Partial Initial Decision and the Initial Decision, dated August 8, 1975 and April 8, 1976, respectively; (2) Construction Permit No. CPPR-139 and Construction Permit No. CPPR-140; (3) the report of the Advisory Committee on Reactor Safeguards, dated September 17, 1975; (4) the Office of Nuclear Reactor Regulation's Safety Evaluation Report dated August 7, 1975, and Supplements 1 and 2, thereto, dated November 21, 1975 and January 23, 1976, respectively; (5) the Preliminary Safety Analysis Report and amendments thereto; (6) the applicant's Environmental Report dated May 1974 and supplements thereto; (7) the Draft Environmental Statement dated October 1974; and (8) the Final Environmental Statement dated March 1975, are available for public inspection at the Commission's Public Document Room at 1717 H Street, N. W., Washington, D. C., at the Fulton City Library, 709 Market Street, Fulton, Missouri, and at the Olin Library of Washington University, Skinker and Lindell Boulevards, St. Louis, Missouri. A copy of the construction permits may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Project Management.

Copies of the Safety Evaluation Report and Supplements 1 and 2 thereto (Document Nos. NUREG-75/076, NUREG-75/076, Supplement No. 1, and NUREG-0021) and the Final Environmental Statement (Document No. NUREG-75/011) may be purchased, at current rates, from the National Technical Information Service, Springfield, Virginia 22161.

Dated at Bethesda, Maryland, this day of April 1976.

FOR THE NUCLEAR REGULATORY COMMISSION

D. B. Vassallo, Chief
Light Water Reactors Branch No. 5
Division of Project Management