

August 26, 1986

Docket No. 50-331

Mr. Lee Liu
Chairman of the Board and
Chief Executive Officer
Iowa Electric Light and Power Company
Post Office Box 351
Cedar Rapids, Iowa 52406

Dear Mr. Liu:

The Commission has issued the enclosed Amendment No. 135 to Facility Operating License No. DPR-49 for the Duane Arnold Energy Center. This amendment consists of changes to the Technical Specifications in response to your application dated February 7, 1986.

The amendment revises the Technical Specifications to incorporate restrictions related to a radiation monitor installed in the ventilation exhaust stack of the Low-Level Radwaste Processing and Storage Facility constructed at the Duane Arnold Energy Center.

A copy of the related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commissions Bi-Weekly Federal Register Notice.

Sincerely,

Original signed by

Mohan C. Thadani, Project Manager
BWR Project Directorate #2
Division of BWR Licensing

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Enclosures:

1. Amendment No. 135 to License No. DPR-49
2. Safety Evaluation

cc w/enclosures:
See next page

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Legal objection

Mr. Lee Liu
Iowa Electric Light and Power Company

Duane Arnold Energy Center

cc:

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

IOWA ELECTRIC LIGHT AND POWER COMPANY
CENTRAL IOWA POWER COOPERATIVE
CORN BELT POWER COOPERATIVE

DOCKET NO. 50-331

DUANE ARNOLD ENERGY CENTER

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 135
License No. DPR-49

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Iowa Electric Light and Power Company, et al, dated February 7, 1986, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
 - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
 - C. There is reasonable assurance (i) that the activities authorized by this amendment 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;
 - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
 - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-49 is hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.135 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The license amendment is effective as of the date of issuance, and must be implemented in 30 days after the date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Daniel R. Muller, Director
BWR Project Directorate #2
Division of BWR Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: August 26, 1986

ATTACHMENT TO LICENSE AMENDMENT NO. 135

FACILITY OPERATING LICENSE NO. DPR-49

DOCKET NO. 50-331

Replace the following pages of the Appendix A Technical Specifications with the enclosed pages. The revised areas are indicated by marginal lines.

Pages

3.15-7a *

3.15-8a *

3.15-9

3.15-11

3.15-13

*Page added

TABLE 3.15-1, continued

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION

<u>Instrument@</u>	<u>Minimum Channels Operable</u>	<u>Applicability#</u>	<u>Function</u>	<u>Action</u>
6. LLRPSF Exhaust Vent Monitoring System (R7)				
a. Noble Gas Activity Monitor	1	*	Monitor activity concentration, alarm	33
b. Iodine Sampler Cartridge	1	*	Collect iodine sample	31
c. Particulate Sampler Filter	1	*	Collect particulate sample	31
d. Effluent Flow Measuring Device	1	*	Measure air flow	26
e. Sample Flow Measuring Device	1	*	Measure air flow	26

3.15-7a

LLRPSF = Low-Level Radwaste Processing and Storage Facility

TABLE 3.15-1
(Continued)

TABLE NOTATION

ACTION 33 With no channel OPERABLE, effluent releases via this pathway may continue provided a grab sample is taken at least once per day and is analyzed for radioactivity or principal gamma emitters within 24 hours.

TABLE 4.15-1

RADIOACTIVE GASEOUS EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>REQUIRED MODE #</u>
1. Offgas Hydrogen Monitor	D**	N.A.	Q(4)	M	**
2. Offgas Stack Monitoring System					
a. Noble Gas Activity Monitor	D*	M	R(3)	Q(2)	*
b. Iodine Sampler Cartridge	W*	N.A.	N.A.	N.A.	*
c. Particulate Sampler Filter	W*	N.A.	N.A.	N.A.	*
d. Effluent Flow Measuring Device	D*	N.A.	R	Q	*
e. Sample Flow Measuring Device	D*	N.A.	R	Q	*
3. Reactor Building Vent Monitoring System					
a. Noble Gas Activity Monitor	D*	M	R(3)	Q(2)	*
b. Iodine Sampler Cartridge	W*	N.A.	N.A.	N.A.	*
c. Particulate Sampler Filter	W*	N.A.	N.A.	N.A.	*
d. Effluent Flow Measuring Device	D*	N.A.	R	Q	*
e. Sample Flow Measuring Device	D*	N.A.	R	Q	*
4. Turbine Building Exhaust Ventilation Monitoring System					
a. Noble Gas Activity Monitor	D*	M	R(3)	Q(2)	*
b. Iodine Sampler Cartridge	W*	N.A.	N.A.	N.A.	*
c. Particulate Sampler Cartridge	W*	N.A.	N.A.	N.A.	*
d. Effluent Flow Rate Monitor	D*	N.A.	R	Q	*
e. Sample Flow Measuring Device	D*	N.A.	R	Q	*
5. LLRPSF Exhaust Ventilation Monitoring System					
a. Noble Gas Activity Monitor	D*	M	R(3)	Q(2)	*
b. Iodine Sampler Cartridge	W*	N.A.	N.A.	N.A.	*
c. Particulate Sampler Cartridge	W*	N.A.	N.A.	N.A.	*
d. Effluent Flow Rate Monitor	D*	N.A.	R	Q	*
e. Sample Flow Measuring Device	D*	N.A.	R	Q	*

Amendment No. 109, 135

3.15-9

TABLE 4.15-2

RADIOACTIVE GASEOUS WASTE SAMPLING AND ANALYSIS PROGRAM

Gaseous Release Type	Sampling Frequency	Minimum Analysis Frequency	Type of Activity Analysis	Lower Limit of Detection (LLD) ^a ($\mu\text{Ci/ml}$)
A. Offgas Stack, and Reactor Building Vent	M ^b Grab Sample	M ^b	Principal Gamma Emitters	1 x 10 ⁻⁴ e
	Q ^g Grab Sample	Q	H-3	1 x 10 ⁻⁶
B. Offgas Stack, Reactor Building Vent, Turbine Building Vent, and LLRPSF Vent	Continuous ^d	W ^c Charcoal Sample	I-131	1 x 10 ⁻¹²
	Continuous ^d	W ^c Particulate Sample	Principal Gamma Emitters (I-131, Others)	1 x 10 ⁻¹¹ e
	Continuous ^d	Q Composite Particulate Sample ^f	Sr-89, Sr-90	1 x 10 ⁻¹¹
			Gross Alpha	1 x 10 ⁻¹¹
C. Offgas Stack, Reactor Building Vent, Turbine Building Vent, and LLRPSF Vent	Continuous	Continuous	Radioactive Noble Gas gamma activity	1 x 10 ⁻⁶

3.15.1 and 4.15.1 BASES

1. Radioactive Gaseous Effluent Instrumentation

The radioactive gaseous effluent instrumentation is provided to monitor the release of radioactive materials in gaseous effluents and, as appropriate, to control potential releases. Instrumentation for monitoring the concentration of potentially explosive gas mixtures in the main condenser offgas treatment system is also provided. The presence of instruments for monitoring both radioactive and explosive gaseous effluents is depicted in ODAM Figure 3-1. The OPERABILITY and use of these instruments implements the requirements of 10CFR Part 50, Appendix A, General Design Criteria 60, 63, and 64.

Reactor building exhaust ventilation shaft radiation monitors initiate isolation of the reactor building normal ventilation and start standby gas treatment when a high trip point is reached.

DAEC is equipped with a radioactive gaseous effluent monitoring system which includes detectors at the offgas stack (R3), the reactor building vent (R4), the turbine building vent (R5), and the LLRPSF vent. A remote indication and control unit located near each detector displays the detector reading and, whenever the setpoint is exceeded, an indicator light. The data are also routed to a control computer and a control room display and, except for the LLRPSF vent detector, do not cause a trip to isolate the ventilated area. The LLRPSF vent detector does isolate the LLRPSF ventilation system. However, the isolation function is not required by regulation but is provided as an engineering design conservatism. In the event the control computer and/or control room display fail to function or are voluntarily taken out of service, each remote indication and control unit is designed to acquire data for up to 30 hours. It is intended that each affected remote indication and control unit display be observed at least once per 24 hours (in which case the affected channel remains OPERABLE).

If an alarm trip setpoint is exceeded at the same time the control computer and/or control room display are neither functioning nor in service, alarm annunciation will still occur in the control room. In the event the detector reading and the indication of exceeding the monitor setpoint are not provided at either the control room or the remote indication and control unit, then the affected channel is not OPERABLE and DAEC will either perform the appropriate ACTION or will provide an alternate monitoring system. This permits DAEC to retain the GE gaseous monitoring system as an alternate system for normal effluent monitoring when the Kaman system is temporarily inoperable. When used as an alternate monitoring system, the GE system is subject to the requirements stated in Specifications 3.15.1 and 4.15.1 and to LLD requirements stated in Table 4.15-2, Item C.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 135 TO FACILITY OPERATING LICENSE NO. DPR-49

IOWA ELECTRIC LIGHT AND POWER COMPANY
CENTRAL IOWA POWER COOPERATIVE
CORN BELT POWER COOPERATIVE

DUANE ARNOLD ENERGY CENTER

DOCKET NO. 50-331

1.0 INTRODUCTION

By letter dated February 7, 1986, the licensee, Iowa Electric Light and Power Company, requested an amendment to operating license No. DPR-49. The proposed Technical Specification changes would formally incorporate into Technical Specifications some normal range radiation monitors. Specifically, these monitors are located in the ventilation exhaust stack of the new Low-Level Radwaste Processing and Storage Facility (LLRPSF) at the Duane Arnold Energy Center (DAEC). The new waste storage facility was built under the provisions of 10 CFR 50.59 and guidance of Generic Letter 81-38. Although not required, the licensee has now requested that the effluent monitors for the new facility be covered by the plant Technical Specifications.

2.0 EVALUATION

The staff has evaluated the licensee's proposal to incorporate into the DAEC technical specifications the normal range radiation monitors located in the ventilation exhaust stack of the new LLRPSF. In our evaluation, we used the acceptance criteria of Section 11 of the Standard Review Plan (NUREG-0800) and the GE BWR Standard Technical Specifications as a guide.

The purpose of the LLRPSF exhaust monitors is to monitor radiation in effluents which could result from normal operations of the facility and due to anticipated accidents specified in 10 CFR 50, Appendix A, General Design Criterion 64 (GDC-64). The licensee has similar monitors located in the Reactor Building vent and Turbine Building vent. The LLRPSF monitors will be similar and will be required to have the same lower limit of detection capability for both iodine - 131 and radioactive noble gases as other vent monitors. Similar to the other vent monitors, the LLRPSF monitors' instrument alarm/trip setpoints will be determined and adjusted in accordance with the methodology and parameters in the DAEC Offsite Dose Calculation Manual. The staff, therefore, finds the incorporation of additional Technical Specifications restrictions related to LLRPSF monitors acceptable.

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3.0 ENVIRONMENTAL CONSIDERATION

This amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that this amendment involves no significant hazards consideration and there has been no public comment on such finding. Accordingly, this amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of this amendment.

4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations, and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: M. Lamastra

Dated: August 26, 1986