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DEC 1 6 1974

Docket No. 50-331

(MUTIPLE ADDRESSES SEE ATTACHED)

Iowa Electric Light & Power Company
ATTN: Mr. Duane Arnold, President
Security Building
P. O. Box 351
Cedar Rapids, Iowa 52406

Gentlemen:

As result of the Commission's continuing efforts to simplify the licensing process, we have reviewed the manner in which special nuclear, byproduct, and source materials used in connection with the operation of nuclear power facilities are licensed. Our review disclosed that many licenses list each item separately, thereby requiring a license amendment for almost any change in licensed materials. Fewer applications for license amendments would be necessary if the licensing provisions for these materials were as set forth in the enclosed Standard License Format. Regulatory Guide 1.70.3 - "Additional Information - Radioactive Materials Safety for Nuclear Power Plants", dated February 1974 (copy enclosed) identifies the information necessary to substantiate the more generalized license provision.

Our objective is to convert existing licenses to incorporate the generalized provision so as to reduce the number of licensing actions that are required. To accomplish this, we request that you provide the information described in the following paragraph prior to or in conjunction with the next occasion you have to request amendment to this portion of your license. Experience has shown that the need to change possession limits quite often arises unexpectedly and the change is needed very quickly. To avoid the possibility of delays in such instances, you may wish to amend your license provisions separately and in advance of any specific need.

Your application should be submitted with three signed and notarized originals and thirty-seven additional copies and should include:

1. A proposed amendment to the license conditions relating to possession and use limits. A standard license format with general provisions for receipt, possession and use of byproduct, source and special nuclear materials is provided as Enclosure 1 for your information. Materials required in excess of the quantities permitted by Table 1 of Regulatory Guide 1.70.3 should be specifically identified in the license,

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DATE ➤	12/9/74	12/9/74	12/9/74	12/10/74	12/10/74	

Form AEC-318 (Rev. 9-53) AECM 0240 ☆ U. S. GOVERNMENT PRINTING OFFICE: 1974-526-166

2. Proposed technical specifications and bases for leak testing and surveillance similar to those in the sample provided as Enclosure 3; and

3. A revision to your FSAR containing the information described in Regulatory Guide 1.70.3.

Please advise us of your plans for submitting the suggested application for a license amendment.

Sincerely,

Original Signed

George Lear, Chief
Operating Reactors Branch #3
Directorate of Licensing

Enclosures:
1. Standard License Format
2. Regulatory Guide 1.70.3
3. Technical Specifications

OFFICE ➤						
SURNAME ➤						
DATE ➤						

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STANDARD LICENSE FORMAT

B. (2) Pursuant to the Act and 10 CFR Part 70, to receive, possess and 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;

(3) 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;

(4) Pursuant to the Act and 10 CFR Part 30 to receive, possess and use at any time 100 millicuries each of any byproduct material without restriction to chemical or physical form, for sample analysis or instrument calibration;

(5) Pursuant to the Act and 10 CFR Parts 40 and 70 to receive, possess and use at any time 100 milligrams each of any source or special nuclear material without restriction to chemical or physical form, for sample analysis or instrument calibration;

Technical Specification Addition

Miscellaneous Radioactive Materials Sources

Source Leakage Test

Specification

Radioactive sources shall be leak tested for contamination. The leakage test shall be capable of detecting the presence of 0.005 microcurie of radioactive material on the test sample. If the test reveals the presence of 0.005 microcurie or more of removable contamination, it shall immediately be withdrawn from use, decontaminated, and repaired, or be disposed of in accordance with Commission regulations.

Those quantities of by-product material that exceed the quantities listed in 10 CFR 30.71 Schedule B are to be leak tested in accordance with the schedule shown in Surveillance Requirements. All other sources (including alpha emitters) containing greater than 0.1 microcuries are also to be leak tested in accordance with the Surveillance Requirements.

Surveillance Requirement

Tests for leakage and/or contamination shall be performed by the licensee or by other persons specifically authorized by the Commission or an agreement State, as follows:

1. Each sealed source, except startup sources subject to core flux, containing radioactive material, other than Hydrogen 3, with a half-life greater than thirty days and in any form other than gas shall be tested for leakage and/or contamination at intervals not to exceed six months.

2. The periodic leak test required does not apply to sealed sources that are stored and not being used. The sources excepted from this test shall be tested for leakage prior to any use or transfer to another user unless they have been leak tested within six months prior to the date of use or transfer. In the absence of a certificate from a transferor indicating that a test has been made within six months prior to the transfer, sealed sources shall not be put into use until tested.

Surveillance Requirement (Cont'd)

3. Startup sources shall be leak tested prior to and following any repair or maintenance and before being subjected to core flux.

Bases

Ingestion or inhalation of source material may give rise to total body or organ irradiation. This specification assures that leakage from radioactive material sources does not exceed allowable limits. In the unlikely event that those quantities of radioactive by-product materials of interest to this specification which are exempt from leakage testing are ingested or inhaled, they represent less than one maximum permissible body burden for total body irradiation. The limits for all other sources (including alpha emitters) are based upon 10 CFR 70.39(c) limits for plutonium.

Reporting Requirements

Frequency as per Regulatory Guide 1.16

Operations Summary
Results of required leak tests performed on sources if the tests reveal the presence of 0.005 microcurie or more of removable contamination

Records Retention

A complete inventory of radioactive materials in possession shall be maintained current at all times.

Records required to be maintained for five years:

1. Test results, in units of microcuries, for leak tests performed pursuant to Specification _____.
2. Record of annual physical inventory verifying accountability of sources on record.

U.S. ATOMIC ENERGY COMMISSION

REGULATORY GUIDE

DIRECTORATE OF REGULATORY STANDARDS

February 1974

REGULATORY GUIDE 1.70.3

ADDITIONAL INFORMATION RADIOACTIVE MATERIALS SAFETY FOR NUCLEAR POWER PLANTS

A. INTRODUCTION

In October 1972, the Commission issued Revision 1 of the "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants."[1] This document provides a standard format for the safety analysis reports required by the Commission's regulations and identifies the principal information needed by the Regulatory staff in order to conduct its safety evaluations.

In its review of recent applications for construction permits and operating licenses, the Regulatory staff has identified information that has often been missing from these safety analysis reports. To obtain the information needed to perform its evaluation, the staff has had to request this information by directing written questions to each applicant. The Foreword of the Standard Format states: "Any revisions of the Commission's needs for information will be conveyed to the industry and the public in various ways such as (1) amendments to the Standard Format, (2) in the Information Guide series, (3) as part of future Safety Guides, or (4) in Public Announcements." This guide identifies information related to radioactive materials safety that has often been missing from the applicant's safety analysis report at the operating license stage of review.

The Commission plans to revise the Standard Format within the next year to include this modification. In the interim, the information requested here should be included in safety analysis reports submitted for AEC review.

B. ADDITIONAL INFORMATION

The additional information requested should be incorporated into Chapter 12 of the safety analysis report as indicated below. Section 12.4 should be added as follows:

12.4 Radioactive Materials Safety (FSAR)

12.4.1 Materials Safety Programs

Describe the program which will be implemented to assure the safe storage, handling, and use of sealed and unsealed special nuclear, source, and byproduct materials. Other sections of the FSAR may be referenced to the degree they are applicable.

12.4.2 Facilities and Equipment

Describe the laboratory facilities and equipment such as hoods, gloveboxes, filters, survey and measuring instruments, and monitoring devices. Other sections of the FSAR may be referenced to the degree they are applicable.

12.4.3 Personnel and Procedures

Describe the experience and qualifications of the key personnel responsible for handling and monitoring the materials. Identify and summarize the content of the radiation safety instructions to working personnel appropriate to the operations to be covered. Other sections of the FSAR may be referenced to the degree they are applicable.

12.4.4 Required Materials

Provide a listing of isotope, quantity, form, and use for all required byproduct, source, and special nuclear materials which exceed the amounts in Table 1.

[1] The "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants" has been designated as Regulatory Guide 1.70.

Table 1

Material	Form and Use	Possession Limit
A. Any byproduct, source, and special nuclear material	As reactor fuel; as sealed neutron sources for reactor startup; as sealed sources for calibration of reactor instruments and radiation monitoring equipment; and as fission detectors	Amount required for reactor operation
B. Any byproduct material	Any form for sample analysis or instrument calibration	100 millicuries each isotope
C. Any source or special nuclear material	Any form for sample analysis or instrument calibration	100 milligrams each isotope