NRC Form 374A
(8-82)

U.S. NUCLEAR REGULATORY COMMISSION

License number
26-16293-01

Docket or Reference number
030-10748

Amendment No. 08

MATERIALS LICENSE
SUPPLEMENTARY SHEET

Veterans Administration Medical Center
600 South 70th Street
Lincoln, Nebraska 68510

In accordance with letter dated April 26, 1985, License Number 26-16293-01 is amended as follows:

Condition 16. is amended to read:

16. Except as specifically provided otherwise by this license, the licensee shall possess and use licensed material described in Items 6, 7, and 8 of this license in accordance with statements, representations, and procedures contained in applications dated March 18, 1980, and February 6, 1981; letters dated July 29, 1981, July 19, 1982, July 21, 1982, August 5, 1982, and April 26, 1985; and ALARA Program dated August 25, 1982. The Nuclear Regulatory Commission's regulations shall govern the licensee's statements in applications or letters, unless the statements are more restrictive than the regulations.

Condition 19. is added to read:

19. Notwitstanding the requirements of Condition 14., the licensee may use the Calicheck device for doing linearity tests of his dose calibrator provided he follows the procedures in the Calcorp, Inc., Manual dated March 2, 1982.

FOR THE U.S. NUCLEAR REGULATORY COMMISSION

Original Signed By
Jack E. Whitten

Date JUN 17 1985

By

Nuclear Materials Safety Section
Region IV
Arlington, Texas 76011

Official Record Copy

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Medical Center

600 South
Seventieth Street
Lincoln NE 68510

Veterans Administration

April 26, 1985

Region IV
NRC

In Reply Refer To: 597/114

RECEIVED
MAY 14 1985

Director, Nuclear Medicine (115)
Department of Medicine & Surgery
Veterans Administration Central Office
Washington, D.C. 20420

Subject: License Amendment Request
License 26-16293-01

Please amend our license as follows:

As an alternative to our present procedure, the dose calibrator can be checked for activity linearity with the use of a device called Calicheck from Calcorp. Inc. The manufacturer's instructions for use as revised on March 2, 1985, will be followed. Test results will be recorded and retained for inspection. Corrective action as stated in our license application will be followed if unacceptable linearity is demonstrated.

MAX L. LYBARGER
Medical Center Director

for
5/7/85

JAMES J. SMITH, M. D. (115)
Director, Nuclear Medicine Service
VA Central Office
Washington, D.C. 20420

FEE EXEMPT

#60636

26-162930

Medical Center

600 South
Seventieth Street
Lincoln NE 68510

Veterans Administration

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SEP 1 0 1982

NUCLEAR MEDICINE SERVICE
(115)

September 2, 1982

In Reply Refer To: 597/11D

NRC

Director, Nuclear Medicine Service (115)
Department of Medicine and Surgery
Veterans Administration Central Office
Washington, D. C. 20420

SUBJ: ALARA Program

1. We have adopted Nuclear Regulatory Commission ALARA Program per NRC Regulatory Guide 10.8.

2. We are enclosing two copies of our program for your review. If acceptable, please forward them to NRC for their approval. Thank you.

MAX L. WEINGER
Director

Enclosures 2

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SEP 1 0 1982

NUCLEAR MEDICINE SERVICE
(115)

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SEP 15 1982
U.S. NUCLEAR REGULATORY COMMISSION
Mail Section

rec. in cml
10/22/82

JAMES J. SMITH, M. D. (115)
Director, Nuclear Medicine Service
VA Central Office
Washington, D. C.

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FEE EXEMPT 12874

1466

ALARA PROGRAM

(As Low as is Reasonably Achievable)

NUCLEAR MEDICINE SERVICE

VETERANS ADMINISTRATION MEDICAL CENTER

LINCOLN, NEBRASKA

Adopted from U.S. Nuclear Regulatory Commission
Regulatory Guide 10.8--Revision 1, October 1980

8-25-82
MAX L. LYBARGER (Date)
Medical Center Director

8-25-82
ROBERT J. STEIN, M.D. (Date)
Chief of Staff

8-26-82
ROBERT E. COLLINS, M.D. (Date)
Radiation Safety Committee Chairman

8-26-82
M. Z. WAZNY, M.D. (Date)
Radiation Safety Officer

1. MANAGEMENT COMMITMENT

a. We, the management of this medical center, are committed to the program described in this paper for keeping exposures (individual and collective) as low as is reasonably achievable (ALARA). In accord with this commitment, we hereby describe an administrative organization for radiation safety and will develop the necessary written policy, procedures, and instructions to foster the ALARA concept within our institution. The organization will include a Radiation Safety Committee (RSC) and a Radiation Safety Officer (RSO).

b. We will perform a formal annual review of the radiation safety program, including ALARA considerations. This will include reviews of operating procedures and past exposure records, inspections, etc., and consultations with the radiation protection staff or outside consultants.

c. Modification to operating and maintenance procedures and to equipment and facilities will be made where they will reduce exposures unless the cost, in our judgement, is considered to be unjustified. We will be able to demonstrate, if necessary, that improvements have been sought, that modifications have been considered, and that they have been implemented where reasonable. Where modifications have been recommended but not implemented, we will be prepared to describe the reasons for not implementing them.

d. In addition to maintaining doses to individuals as far below the limits as is reasonably achievable, the sum of the doses received by all exposed individuals will also be maintained at the lowest practicable level. It would not be desirable, for example, to hold the highest doses to individuals to some fraction of the applicable limit if this involved exposing additional people and significantly increasing the sum of radiation doses received by all involved individuals.

2. RADIATION SAFETY COMMITTEE (RSC)

a. Review of Proposed Users and Uses

(1) The RSC will thoroughly review the qualifications of each applicant with respect to the types and quantities of materials and uses for which he has applied to ensure that the applicant will be able to take appropriate measures to maintain exposure ALARA.

(2) When considering a new use of byproduct material, the RSC will review the efforts of the applicant to maintain exposure ALARA. The user should have systematized procedures to ensure ALARA and have incorporated the use of special equipment such as syringe shields, rubber gloves, etc., in his proposed use.

(3) The RSC will ensure that the user justifies his procedures and that dose will be ALARA (individual and collective).

b. Delegation of Authority

(1) The RSC will delegate authority to the RSO for enforcement of the ALARA concept.

(2) The RSC will support the RSO in those instances where it is necessary for the RSO to assert his/her authority. Where the RSO has been overruled, the Committee will record the basis for its action in the minutes of the Committee's quarterly meeting.

c. Review of ALARA Program

(1) The RSC will encourage all users to review current procedures and develop new procedures as appropriate to implement the ALARA concept.

(2) The RSC will perform a quarterly review of occupational radiation exposure with particular attention to instances where Investigational Levels in Table 1 below are exceeded. The principal purpose of this review is to assess trends in occupational exposure as an index of the ALARA program quality and to decide if action is warranted when Investigational Levels are exceeded (see Section 6).

(3) The RSC will evaluate our institution's overall efforts for maintaining exposures ALARA on an annual basis. This review will include the efforts of the RSO, authorized users, and workers as well as those of management.

3. RADIATION SAFETY OFFICER (RSO)

a. Annual and Quarterly Review

(1) Annual review of the radiation safety program. The RSO will perform an annual review of the radiation safety program for adherence to ALARA concepts. Reviews of specific procedures may be conducted on a more frequent basis.

(2) Quarterly review of occupational exposures. The RSO will review at least quarterly the external radiation exposures of authorized users and workers to determine that their exposures are ALARA in accordance with the provisions of Section 6 of this program.

(3) Quarterly review of records of radiation level surveys. The RSO will review radiation levels in unrestricted and restricted areas to determine that they were at ALARA levels during the previous quarter.

b. Education Responsibilities for ALARA Program

(1) The RSO will schedule briefings and educational sessions to inform workers of ALARA program efforts.

(2) The RSO will ensure that authorized users, workers, and ancillary personnel who may be exposed to radiation will be

instructed in the ALARA philosophy and informed that management, the RSC, and the RSO are committed to implementing the ALARA concept.

c. Cooperative Efforts for Development of ALARA Procedures

Radiation workers will be given opportunities to participate in formulation of the procedures that they will be required to follow.

(1) The RSO will be in close contact with all users and workers in order to develop ALARA procedures for working with radioactive materials.

(2) The RSO will establish procedures for receiving and evaluating the suggestions of individual workers for improving health physics practices and encourage the use of those procedures.

d. Reviewing Instances of Deviation from Good ALARA Practices

The RSO will investigate all known instances of deviation from good ALARA practices and, if possible, determine the causes. When the cause is known, the RSO will require changes in the program to maintain exposures ALARA.

4. AUTHORIZED USERS

a. New Procedures Involving Potential Radiation Exposures

(1) The authorized user will consult with, and receive the approval of, the RSO and/or RSC during the planning stage before using radioactive materials for a new procedure.

(2) The authorized user will evaluate all procedures before using radioactive materials to ensure that exposures will be kept ALARA. This may be enhanced through the application of trial runs.

b. Responsibility of Authorized User to Persons Under His/Her Supervision

(1) The authorized user will explain the ALARA concept and his/her commitment to maintain exposures ALARA to all persons under his/her supervision.

(2) The authorized user will ensure that persons under his/her supervision who are subject to occupational radiation exposure are trained and educated in good health physics practices and in maintaining exposures ALARA.

5. PERSONS WHO RECEIVE OCCUPATIONAL RADIATION EXPOSURE

a. The worker will be instructed in the ALARA concept and its relationship to working procedures and work conditions.

b. The worker will know what recourses are available if he/she feels that ALARA is not being promoted on the job.

6. ESTABLISHMENT OF INVESTIGATIONAL LEVELS IN ORDER TO MONITOR INDIVIDUAL OCCUPATIONAL EXTERNAL RADIATION EXPOSURES

This institution hereby establishes Investigational Levels for occupational external radiation exposure which, when exceeded, will initiate review or investigation by the RSC and/or the RSO. The Investigational Levels that we have adopted are listed in Table 1. These levels apply to the exposure of individual workers.

Table 1

	Investigational Levels (mrems/calendar quarter)	
	Level I	Level II
Whole body; head and trunk; active blood-forming organs; lens of eyes; gonads	125	375
Hands and forearms; feet and ankles	1875	5625
Skin of whole body*	750	2250

*Not normally applicable to nuclear medicine operations except those using significant quantities of beta-emitting isotopes.

The Radiation Safety Officer will review and record on Form NRC-5, "Current Occupational External Radiation Exposures," or an equivalent form (e.g., dosimeter processor's report), results of personnel monitoring not less than once in any calendar quarter as required by § 20.401 of 10 CFR Part 20. The following actions will be taken at the Investigational Levels as stated in Table 1:

a. Quarterly exposure of individuals to less than Investigational Level I.

Except when deemed appropriate by the RSO, no further action will be taken in those cases where an individual's exposure is less than Table 1 values for the Investigational Level I.

b. Personnel exposures equal to or greater than Investigational Level I, but less than Investigational Level II.

The RSO will review the exposure of each individual whose quarterly exposures equal or exceed Investigational Level I and will report the results of the reviews at the first RSC meeting following the quarter when the exposure was recorded. If the exposure does not equal or exceed Investigational Level II, no action related specifically to the exposure is required unless deemed appropriate by the Committee. The Committee will, however, consider each such exposure in comparison with those of others performing similar tasks as an index of ALARA program quality and will record the review in the Committee minutes.

c. Exposure equal to or greater than Investigational Level II.

The RSO will investigate in a timely manner the cause(s) of all personnel exposures equaling or exceeding Investigational Level II and, if warranted, will take action. A report of the investigation, actions taken, if any, and a copy of the individual's Form NRC-5 or its equivalent will be presented to the RSC at the first RSC meeting following completion of the investigation. The details of these reports will be recorded in the RSC minutes. Committee minutes will be sent to the management of this institution for review. The minutes, containing details of the investigation, will be made available to NRC inspectors for review at the time of the next inspection.

d. Reestablishment of an individual occupational worker's Investigational Level II to a level above that listed in Table I.

In cases where a worker's or a group of workers' exposures need to exceed Investigational Level II, a new, higher Investigational Level II may be established on the basis that it is consistent with good ALARA practices for that individual or group. Justification for a new Investigational Level II will be documented.

The RSC will review the justification for, and approve all revisions of Investigational Level II. In such cases, when the exposure equals or exceeds the newly established Investigational Level II, those actions listed in paragraph 6.c above will be followed.