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

AD 69-1

PDR

(5)

OCT 25 1991

BPS: James Ponto
ABSNM: Homer Hupf
NABP: Beth Aylward
Bart Clark
Tim Benedict
USCEA: Michael Mosley
Janet Reuther
Andrew Williams
UNM: Dennis Eshima
UPITT: Dennis Swanson
PU: Anne Smith
APhA: Clyde Cole
Cathy Seifert
ASHP: Henry Chilton

Dear Workshop Participant:

During our workshop on August 7, 1991 on establishing an "authorized nuclear pharmacist," I promised to send you a copy of the revised strawman in late October 1991. The strawman has been revised based on our discussions at the workshop. A copy is enclosed for your information. For ease of comparison, a copy of the original strawman is also enclosed.

There are two major changes:
(1) We tried to make the three "in-lieu-of" alternatives equivalent to BPS certification, as much as possible. Each alternative would require nuclear pharmacy experience equivalent to a minimum of 4000 hours.
(2) We added training and experience criteria for nuclear pharmacists to ensure that they are qualified to supervise pharmacy technicians and to manage a nuclear pharmacy.

I look forward to the next workshop after the proposed rule has been published for public comment.

Sincerely,

John Telford

John Telford, Chief
Rulemaking Section
Regulation Development Branch
Division of Regulatory Applications
Office of Nuclear Regulatory Research

Enclosures:
Revised and original strawmen

9309200163

REVISED STRAWMAN

PREPARATION OF RADIOPHARMACEUTICALS

ISSUE

- Current regulations restrict the preparation of radiopharmaceuticals to using generators and kits by following:
  - The manufacturer's instructions.
  - An authorized user physician's directive.
- Current regulations (for hosp. & ind. pharmacies) are silent with respect to nuclear pharmacists:
  - They cannot perform their functions even if properly trained and licensed.
- ACNP-SNM petition requested that the regulations be amended.

OUTLINE OF OUR APPROACH

- Allow licensees to prepare radiopharmaceuticals (removing restriction) under certain conditions.

- Establish "authorized nuclear pharmacist" (ANP) and "nuclear pharmacist" (NP).

- Specify responsibilities of supervision for ANP and NP.

PREPARATION OF RADIOPHARMACEUTICALS

A LICENSEE MAY PREPARE RADIOPHARMACEUTICALS (IN ADDITION TO §§35.200 AND 30.34) PROVIDED THAT THEY WILL BE PREPARED:

(1) BY AN ANP, OR

(2) BY A NP FOLLOWING A RADIOPHARMACEUTICAL PROCEDURES MANUAL THAT WAS APPROVED BY THE ANP, OR

(3) By a pharmacy technician who is:

(i) Both under the direct supervision of the NP and is following the radiopharmaceutical procedures manual, or

(ii) Under the direct supervision of the ANP.

ESTABLISH ANP IN REGULATION

"AUTHORIZED NUCLEAR PHARMACIST" IS A NUCLEAR PHARMACIST WHO:

(1) IS CERTIFIED AS A NUCLEAR PHARMACY SPECIALIST BY THE BOARD OF PHARMACEUTICAL SPECIALTIES OF THE AMERICAN PHARMACEUTICAL ASSOCIATION, OR

(2) HAS A PH.D. OR M.S. DEGREE IN NUCLEAR PHARMACY AND 2000 HOURS OF PROFESSIONAL EXPERIENCE IN NUCLEAR PHARMACY PRACTICE, INCLUDING 1000 HOURS OF SYSTEMATIC INSTRUCTION, OR

(3) HAS COMPLETED A RESIDENCY OR INTERNSHIP PROGRAM IN NUCLEAR PHARMACY AND 2000 HOURS OF PROFESSIONAL EXPERIENCE IN NUCLEAR PHARMACY PRACTICE, INCLUDING 1000 HOURS OF SYSTEMATIC INSTRUCTION, OR

(4) HAS COMPLETED 4000 HOURS OF PROFESSIONAL EXPERIENCE IN NUCLEAR PHARMACY PRACTICE, INCLUDING 1000 HOURS OF SYSTEMATIC INSTRUCTION BY AN ANP.

NOTE:

1000 HOURS OF SYSTEMATIC INSTRUCTION INCLUDES:

- COMPOUNDING RADIOPHARMACEUTICALS;
- PERFORMANCE OF QC PROCEDURES;
- DISPENSING RADIOPHARMACEUTICALS;
- IMPLEMENTATION OF BASIC RADIATION PROTECTION PROCEDURES AND PRACTICES; AND

- CONSULTATION PROVIDED TO PHARMACISTS, PATIENTS, AND OTHER HEALTH PROFESSIONALS REGARDING:

  - O THE PHYSICAL AND CHEMICAL PROPERTIES OF RADIOPHARMACEUTICALS,
  - O PHARMACOKINETICS AND BIODISTRIBUTION OF RADIOPHARMACEUTICALS, AND
  - O DRUG INTERACTIONS AND OTHER FACTORS THAT ALTER PATTERNS OF DISTRIBUTION.

ANP BY EXEMPTION MAY BE ALLOWED ON A CASE-BY-CASE APPLICATION BASIS.

ESTABLISH NP IN REGULATION

"Nuclear pharmacist" is a pharmacist who has a B.S. degree in pharmacy or Pharm.D. and a state license to practice pharmacy and who:

(a)(1) Has a Ph.D. or M.S. degree in nuclear pharmacy, or

(2) Has completed a residency or internship program in nuclear pharmacy, or

(3) HAS COMPLETED 1000 HOURS OF PROFESSIONAL EXPERIENCE IN NUCLEAR PHARMACY PRACTICE, INCLUDING 250 HOURS OF SYSTEMATIC INSTRUCTION BY AN ANP ON:

- COMPOUNDING RADIOPHARMACEUTICALS;
- PERFORMANCE OF QC PROCEDURES;
- DISPENSING RADIOPHARMACEUTICALS;
- IMPLEMENTATION OF BASIC RADIATION PROTECTION PROCEDURES AND PRACTICES; AND
- CONSULTATION PROVIDED TO PHARMACISTS, PATIENTS, AND OTHER HEALTH PROFESSIONALS REGARDING:

- THE PHYSICAL AND CHEMICAL PROPERTIES OF RADIOPHARMACEUTICALS,
- PHARMACOKINETICS AND BIODISTRIBUTION OF RADIOPHARMACEUTICALS, AND
- DRUG INTERACTIONS AND OTHER FACTORS THAT ALTER PATTERNS OF DISTRIBUTION;

AND

(B) HAS COMPLETED 200 HOURS OF SYSTEMATIC INSTRUCTION IN BASIC RADIOISOTOPE HANDLING TECHNIQUES THAT INCLUDES:

- RADIATION PHYSICS AND INSTRUMENTATION.
- RADIATION PROTECTION,

- Mathematics pertaining to the use and measurement of radioactivity, and
- Radiation biology;

AND

(c) Has completed 500 hours experience in handling radioactive material that includes:

- Ordering, receiving, unpacking, and performing related radiation surveys;
- Calibrating dose calibrators, scintillation detectors, and survey meters;

- Calculating, preparing, and calibrating patient doses, including using radiation shields;
- Following internal control procedures to ensure proper labeling; and
- Practicing emergency procedures for spills, including surveys, decontamination, and wipe tests.

NP by exemption may be allowed on a case-by-case application basis.

RESPONSIBILITIES OF SUPERVISION

(A) THE ANP SHALL:

(1) INSTRUCT THE SUPERVISED INDIVIDUAL IN THE PRACTICE OF NUCLEAR PHARMACY AND THE PRINCIPLES OF RADIATION SAFETY;

(2) DEVELOP, IMPLEMENT, AND PERIODICALLY REVIEW APPROPRIATE PROCEDURES TO ENSURE THAT THE RIGHT RADIOPHARMACEUTICAL IN THE RIGHT DOSAGE FORM IS PREPARED, LABELED, AND DISPENSED CORRECTLY;

(3) REQUIRE THE SUPERVISED INDIVIDUAL TO FOLLOW THE INSTRUCTIONS OF THE ANP, AND TO COMPLY WITH APPLICABLE REGULATIONS OR LICENSE CONDITIONS OF NRC, STATE, OR OTHER FEDERAL AGENCIES;

(4) PERIODICALLY REVIEW THE SUPERVISED INDIVIDUAL'S WORK AND DOCUMENT THE REVIEW;

(5) BE RESPONSIBLE FOR THE ACTS AND OMISSIONS OF THE SUPERVISED INDIVIDUAL IN THE PRACTICE OF NUCLEAR PHARMACY;

(6) PROVIDE DIRECT SUPERVISION OF PHARMACY TECHNICIANS BY BEING IN THE PHYSICAL PRESENCE OF THE INDIVIDUAL PREPARING RADIOPHARMACEUTICALS IN ORDER TO ALLOW OBSERVATION AND DIRECT INSTRUCTION;

(7) LIMIT THE NUMBER OF INDIVIDUALS UNDER DIRECT SUPERVISION TO A MAXIMUM OF 6; AND

(8) IF AN ANP WOULD LIKE TO SUPERVISE MORE THAN ONE NUCLEAR PHARMACY, A PLAN TO ENSURE THAT THE ANP WILL PROVIDE SUFFICIENT SUPERVISION AND OVERSIGHT TO EACH PHARMACY SHALL BE SUBMITTED TO NRC FOR APPROVAL.

(B) THE NP SHALL:

(1) PROVIDE DIRECT SUPERVISION OF PHARMACY TECHNICIANS BY BEING IN THE PHYSICAL PRESENCE OF THE INDIVIDUAL PREPARING RADIOPHARMACEUTICALS IN ORDER TO ALLOW OBSERVATION AND DIRECT INSTRUCTION; AND

(2) LIMIT THE NUMBER OF INDIVIDUALS UNDER DIRECT SUPERVISION TO A MAXIMUM OF 6.

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

CHAIRMAN

February 26, 1992

JSniezek
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JGoldberg
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JGlenn
B-DHowe
CJenkins
RBernero
SBahadur, RES

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PDR

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David A. Kessler, M.D.
Commissioner
U.S. Food and Drug Administration
5600 Fishers Lane
Rockville, Maryland 20857

Dear Dr. Kessler:

I am writing to follow up on our telephone discussion on January 28, 1992, regarding the responsibilities of the FDA and NRC with respect to the regulation of radiopharmacies. More specifically, this letter provides further information regarding the regulatory issue faced by our agencies in regulating radiopharmacies, NRC's proposed strategy to resolve this issue, and the specific action NRC will take to resolve the Syncor International Corporation pharmacy-directed departure issue.

In the Commission's view, FDA has the expertise to clarify the complex interactions between FDA regulations, state boards of pharmacy, and professional groups associated with radiopharmaceutical production and use. Nevertheless, NRC finds itself in the position of having to address these issues because current NRC regulations and license conditions require compliance by NRC licensees with the Federal Food, Drug, and Cosmetic Act and adherence to FDA-approved package insert directions. Thus, NRC's regulations raise issues of the correctness of NRC's interpretation of these FDA requirements and the consistency between FDA and NRC application thereof.

NRC wants to remove itself from this position to the extent consistent with our statutory responsibility to protect the public health and safety with respect to radiological hazards. Therefore, the NRC staff is developing a rule change for Commission consideration that would eliminate NRC regulations which require NRC to interpret and enforce FDA regulations. The NRC, of course, would retain its regulations governing radiological protection of the public health and safety, including that of patients. This rule change would permit alternatives to the current requirement to follow the FDA-approved package inserts when directed by an authorized user

Originated: NMSS:D-BHowe

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physician or when prepared by an authorized nuclear pharmacist. The rule change contemplated would also replace current NRC regulations requiring explicit compliance with FDA approval mechanisms for drugs with a general statement that nothing in NRC's regulations relieves licensees from complying with other applicable Federal, state, and local requirements governing the preparation of radiopharmaceuticals.

In a related matter, Syncor International Corporation has requested amendments of all 26 of its nuclear pharmacy licenses to permit certain specific, as well as future unspecified, pharmacy-directed departures from the manufacturer's FDA-approved instructions for preparing reagent kits. NRC agreed to issue these amendments as part of a settlement of a lawsuit Syncor filed against NRC. Three licenses were amended prior to the receipt by NRC staff of a September 26, 1991 letter from Dr. Carl Peck of your agency stating that, contrary to the representation of the licensee, these deviations ". . . are not subject to any practice of pharmacy exemption recognized by the FDA." Twenty-three similar license amendment requests are still pending. The NRC intends to grant the Syncor requests for license amendments and also grant associated exemptions from NRC regulations which require pharmacies to demonstrate compliance with the Federal Food, Drug, and Cosmetic Act. NRC will also consider granting exemptions and license amendments to other licensees in the same circumstances. Granting these exemptions and license amendments would be consistent with the proposed rulemaking described above. Exemptions will be based on the NRC's determination that they are consistent with protection of the public health and safety, including patients, with respect to radiological hazards. The license amendments and exemptions will clearly state that they do not relieve the licensee from complying with other applicable Federal, state, and local requirements governing preparation of radiopharmaceuticals.

Robert M. Bernero, Director of NRC's Office of Nuclear Material Safety and Safeguards, is providing more detailed information about the NRC/FDA regulatory problem and the Syncor exemptions to your staff. He and other NRC staff members met with FDA staff on January 24, 1992, prior to our conversation, to discuss these matters and are expected to meet again soon. NRC is receptive to any comments FDA may have on the Syncor exemptions. We would appreciate receiving those comments by March 30 because NRC plans to act on the exemptions and license amendment requests shortly thereafter. NRC's staff will also forward to your staff for discussion draft changes to NRC regulatory language as they are developed.

The Commission believes that NRC's course of action will result in a net benefit for both the nuclear medicine community and the general public. I request your support in this endeavor and look forward to receiving your views on the matters raised in this letter.

Sincerely,

Ivan Selin

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service

Food and Drug Administration
Rockville MD 20857

April 14, 1992

AD69-1
PDR

Mr. Ivan Selin
Chairman
United States Nuclear Regulatory
Commission
Washington, D.C. 20555

Dear Chairman Selin:

I apologize for the delay in responding to your February 26, 1992 letter concerning the regulation of radiopharmaceutical drug products. We appreciate the efforts of you and your staff to coordinate regulatory policy with us.

Our New Drug Evaluation Staff in the Center for Drug Evaluation and Research has evaluated the issues you raise. Based on this evaluation, we agree that the actions proposed by the NRC are perfectly consistent with the interests of FDA in regulating radiopharmaceutical products and other aspects of radiopharmaceutical drug manufacturing. We believe that the amendments proposed for Syncor's licenses, as described in the appendix to your letter, noting that the NRC license does not relieve the licensee from complying with applicable FDA requirements, appropriately places the burden for enforcement of the Federal Food, Drug, and Cosmetic Act (FD&C Act) with the FDA. We interpret these amended licenses to indicate that the NRC does not object to certain pharmacy-directed deviations from approved labeling. Based on this understanding, we will work with the involved nuclear pharmacies regarding how we interpret the FD&C Act to apply to these deviations.

To assist pharmacies in general in understanding current agency policy on the applicability of certain provisions of the FD&C Act, our staff has recently prepared the enclosed Compliance Policy Guide on Pharmacy Compounding and has begun work on revising our Compliance Policy Guide for Nuclear Pharmacy to clarify ambiguities and to ensure consistency with the guide on pharmacy compounding. We will share this Nuclear Pharmacy Guide with your staff as soon as it is prepared.

You have indicated that NRC Staff is preparing a rule that will eliminate regulations requiring NRC to interpret and enforce FDA regulations. It is my understanding that our staffs have scheduled a meeting on this and will work together to develop mutually acceptable language. We are especially appreciative of your taking the initiative to involve us in the development of this rule.

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Your letter also discussed Dr. Peck's September 26, 1991, letter in which he indicated that, based on information and policy at that time, he did not conclude that Syncor was automatically entitled to a "practice of pharmacy exemption recognized by the FDA." Our recently completed policy on pharmacy compounding is, we believe, consistent with this position. We continue to believe that the optimal way to handle reformulating products in a routine and continuous fashion would be through submission and approval of appropriate data in the form of supplemental new drug applications. However, given the apparent benefits, as identified by your staff in discussions with FDA staff, of consistent preparation of diagnostic doses, reduced environmental and pharmacists' exposure to radionuclides through use of centralized radiopharmacies, and better assurance of the availability of appropriate diagnostic radiopharmaceutical dose forms, we are prepared to consider pharmacy operations, including radiopharmacy operations, that are consistent with our Compliance Policy Guide on Pharmacy Compounding as falling within the scope of the legitimate practice of pharmacy. We will be pleased to discuss this with Syncor or other NRC licensees that may wish to compound products in ways that are not explicitly described in product labeling.

Again, we appreciate the opportunity for involvement in your rulemaking and look forward to continued cooperation in coordinating our regulatory responsibilities.

Sincerely yours,

David A. Kessler, M.D.
Commissioner of Food and Drugs

Enclosure

FOOD AND DRUG ADMINISTRATION
COMPLIANCE POLICY GUIDES GUIDE 7132.16

CHAPTER 32 - DRUGS GENERAL

SUBJECT: Manufacture, Distribution, and Promotion of Adulterated, Misbranded, or Unapproved New Drugs for Human Use by State-Licensed Pharmacies

BACKGROUND

This compliance policy guide (CPG) reflects longstanding FDA policy that has been articulated in related CPGs, warning letters, and federal court decisions.

FDA recognizes that pharmacists traditionally have extemporaneously compounded and manipulated reasonable quantities of drugs upon receipt of a valid prescription for an individually identified patient from a licensed practitioner. This traditional activity is not the subject of this CPG.

With respect to such activities, it is important to note that 21 U.S.C. 360(g)(1) exempts retail pharmacies from the registration requirements that include, among other things, a mandatory biennial FDA inspection. The exemption applies to "pharmacies" that operate in accordance with state law and dispense drugs "upon prescriptions of practitioners licensed to administer such drugs to patients under the care of such practitioners in the course of their professional practice, and which do not manufacture, prepare, propagate, compound, or process drugs or devices for sale other than in the regular course of their business of dispensing or selling drugs or devices at retail" (emphasis added). See also 21 U.S.C. Sections 374(a)(2) (exempting pharmacies that meet the foregoing criteria from certain inspection provisions) and 353(b)(2) (exempting drugs dispensed by selling a valid prescription from certain misbranding provisions).

It should be noted, however, that while retail pharmacies that meet the statutory criteria are exempted from certain requirements of the Federal Food, Drug, and Cosmetic Act (Act), they are not the subject of any general exemption from the new drug, adulteration, or misbranding provisions of the Act.

FDA believes that an increasing number of establishments with retail pharmacy licenses are engaged in manufacturing, distributing, and promoting unapproved new drugs for human use in a manner that is clearly outside the bounds of traditional pharmacy practice and that constitute violations of the Act. Some "pharmacies" that have sought to find shelter under and expand the scope of the exemptions identified above, have claimed that their manufacturing, distribution, and marketing practices are only retail dispensing; however, the practices of these entities are far more consistent with those of drug manufacturers and wholesalers than with retail pharmacies. The activities of the self-styled pharmacies are consistant with the activities of manufacturers in that they direct promotional activities at licensed practitioners and patients. The promotional activities include employing detail persons and hiring marketing consultants to promote the company's specialization of compounding specific products or therapeutic classes of drugs. The firms also receive and use in large quantity bulk drug substances to manufacture unapproved drug products and to manufacture drug products in large quantity, in advance of receiving a valid prescription for the products. Moreover, the firms serve physicians and patients with whom they have no established individual or professional relationship.

When less significant violations of the Act related to a pharmacy have occurred, FDA has worked cooperatively with state regulatory agencies; generally, FDA will continue to defer such actions to state authorities. However, FDA regards the more extreme examples of the foregoing conduct as significant violations that constitute deliberate efforts to circumvent the new drug, adulteration or misbranding provisions of the Act.

There is a very real potential for causing harm to the public health when drug products are manufactured and distributed in commercial amounts without FDA's prior approval and without adequate record keeping (to retrace and recall harmful products), without labeling, or without adequate manufacturing controls to assure the safety, purity, potency, quality, and identity of the drug product. In one recent instance, an outbreak of eye infections in regional hospitals, and the loss of an eye by each of two patients, was attributed to a drug product compounded by a pharmacy.

FDA has issued warning letters to several firms that were clearly manufacturing drugs for human use under the guise of traditional pharmacy practice. For example, one establishment manufactured over 300,000 dosage units of albuterol sulfate and other inhalation therapy drugs per month for 6,000 patients, most of whom live out of state. Another firm manufactured a large quantity of a drug product at dosage levels that have not been determined by adequate and well controlled studies to be effective for the indicated use. A recent inspection of another company operating with a pharmacy license revealed that the firm had hundreds of bulk drug ingredients on hand to manufacture about 165 different products. A review of the manufacturing dates of the "compounded" drugs on hand during the inspection of this firm revealed that 37 products had been produced over a year prior to the inspection, six products had been made between six and eleven months prior to the inspection, and 111 products had no recorded manufacturing date.

The agency has initiated enforcement action when pharmacy practice extends beyond the reasonable and traditional practice of a retail pharmacy. The courts have upheld FDA's interpretation in those cases. See United States v. Sena X Eleemosynary Corp., 479 F. Supp. 970 (S.D. Fla. 1979), aff'd, [1982-1983 Transfer Binder] Food Drug Cosm. L. Rep. (CCH) para. 38,207 at 39,117 (11th Cir. 1983); Cedars M. Towers Pharmacy, Inc., v. United States, [1978-79 Transfer Binder] Food Drug Cosm. L. Rep. (CCH) para. 38,200 at 38,826 (S.D. Fla. Aug. 28, 1978). See also United States v. Algon Chemical, Inc., 879 F.2d 1154 (3d Cir. 1989), United States v. 9/1 Kg. Containers, 854 F.2d 173 (7th Cir. 1988), cert. denied, 489 U.S. 1010 (1989), and United States v. Rutherford, 442 U.S. 544 (1979), regarding limitations on sale of unapproved and otherwise unlawful products to licensed practitioners.

POLICY

FDA recognizes that a licensed pharmacist may compound drugs extemporaneously after receipt of a valid prescription for an individual patient (i.e., an oral or written order of a practitioner licensed by state law to administer or order the administration of the drug to an individual patient identified and treated by the practitioner in the course of his or her professional practice).

Pharmacies that do not otherwise engage in practices that extend beyond the limits set forth in this CPG may prepare drugs in very limited quantities before receiving a valid prescription, provided they can document a history of receiving valid prescriptions that have been generated solely within an established professional practitioner-patient-pharmacy relationship, and provided further that they maintain the prescription on file for all such products dispensed at the pharmacy as required by state law.

If a pharmacy compounds finished drugs from bulk active ingredient materials considered to be unapproved new drug substances, as defined in 21 CFR 310.3(g), such activity must be covered by an FDA-sanctioned investigational new drug application (IND) that is in effect in accordance with 21 U.S.C. Section 355(i) and 21 CFR 312.

In certain circumstances, it may be appropriate for a pharmacist to compound a small quantity of a drug that is only slightly different than an FDA-approved drug that is commercially available. In these circumstances, patient-by-patient consultation between physician and pharmacist must result in documentation that substantiates the medical need for the particular variation of the compound.

Pharmacies may not, without losing their status as retail entities, compound, provide, and dispense drugs to third parties for resale to individual patients.

FDA will generally continue to defer to state and local officials regulation of the day-to-day practice of retail pharmacy and related activities. FDA anticipates that cooperative efforts between the states and the agency will result in coordinated investigations, referrals, and follow-up actions by the states.

FDA may, in the exercise of its enforcement discretion, initiate federal enforcement actions against entities and responsible persons when the scope and nature of a pharmacy's activity raises the kinds of concerns normally associated with a manufacturer and that results in significant violations of the new drug, adulteration, or misbranding provisions of the Act. In determining whether to initiate such an action, the agency will consider whether the pharmacy engages in any of the following acts:

1. Soliciting business (e.g., promoting, advertising, or using sales persons) to compound specific drug products, product classes, or therapeutic classes of drug products.

2. Compounding, regularly, or in inordinate amounts, drug products that are commercially available in the marketplace and that are essentially generic copies of commercially available, FDA-approved drug products.

3. Receiving, storing, or using drug substances without first obtaining written assurance from the supplier that each lot of the drug substance has been made in an FDA approved facility.

4. Receiving, storing, or using drug components not guaranteed or otherwise determined to meet official compendia requirements.

5. Using commercial scale manufacturing or testing equipment for compounding drug products.

6. Compounding inordinate amounts of drugs in anticipation of receiving prescriptions in relation to the amounts of drugs compounded after receiving valid prescriptions.

7. Offering compounded drug products at wholesale to other state licensed persons or commercial entities for resale.

8. Distributing inordinate amounts of compounded products out of state.

9. Failing to operate in conformance with applicable state law regulating the practice of pharmacy.

The foregoing list of factors is not intended to be exhaustive and other factors may be appropriate for consideration in a particular case.

FDA guidelines and other CPGs interpret or clarify agency positions concerning nuclear pharmacy, hospital pharmacy, shared service operations, mail order pharmacy, and the manipulation of approved drug products.

REGULATORY ACTION GUIDANCE

Pharmacies engaged in promotion and other activities analogous to manufacturing and distributing drugs for human use are subject to the same provisions of the Act as manufacturers. District offices are encouraged to consult with state regulatory authorities to assure coherent application of this CPG to establishments which are operating outside of the traditional practice of pharmacy.

FDA-initiated regulatory action may include issuing a warning letter, seizure, injunction, and/or prosecution. Charges may include, but need not be limited to, violations of 21 U.S.C. Sections 351(a)(2)(B), 352(a), 352(f)(1), 352(o), and 355(a) of the Act.

Issued: March 16, 1992

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

CHAIRMAN

May 1, 1992

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AD67-1
PDR

David A. Kessler, M.D.
Commissioner
U. S. Food and Drug Administration
5600 Fishers Lane
Rockville, Maryland 20857

Dear Dr. Kessler:

Thank you for your April 14, 1992 reply to Chairman Selin's letter concerning the regulation of radiopharmaceutical drug products. We are pleased that the Food and Drug Administration is willing to work with the Nuclear Regulatory Commission's licensees that wish to compound products in ways that are not explicitly described in product labeling in order to clarify the applicability of the Food, Drug, and Cosmetic Act to such activities.

On April 16, 1992, our staffs met to discuss a response to the pharmacy issues raised in the 1989 American College of Nuclear Physicians and Society of Nuclear Medicine petition for rule-making. The NRC staff believes that the discussions on the pharmacy issue and the NRC interim final rule were very productive and provided ways to address FDA's concerns.

The Commission appreciates your support and looks forward to continued cooperation and coordination between our agencies.

Sincerely,

Kenneth C. Rogers

Kenneth C. Rogers
Acting Chairman

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Proposed Rules

Federal Register
Vol. 57, No. 120
Monday, June 22, 1992

AD69-1

P.D.R

This section of the FEDERAL REGISTER contains notices to the public of the proposed issuance of rules and regulations. The purpose of these notices is to give interested persons an opportunity to participate in the rule making prior to the adoption of the final rules.

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 20, 30, 32, and 35

Workshop to Discuss Topics Related to "Pregnancy," "Radioactive Drugs," and "Patient Release Criteria"

AGENCY: Nuclear Regulatory Commission.

ACTION: Notice of meeting.

SUMMARY: The Nuclear Regulatory Commission (NRC) staff plans to convene a public workshop with representatives of Agreement States to discuss issues related to three topics. The first topic involves the proposed resolution of a petition for rulemaking submitted by the American College of Nuclear Physicians and the Society of Nuclear Medicine concerning the preparation and use of radioactive drugs containing byproduct material. The second topic involves the administration of byproduct material or radiation therefrom to patients of childbearing potential who may be pregnant or breast feeding. The third topic involves the proposed resolution of petitions for rulemaking submitted by Dr. Carol Marcus and by the American College of Nuclear Medicine concerning the criteria for release of patients from hospitals for those patients who have been administered byproduct material.

DATE: The workshop will be held on July 15 and 16, 1992, from 8:30 a.m. to 5 p.m. or later on the first day and from 8:30 a.m. to 3:45 p.m. or later on the second day.

ADDRESSES: Meeting to be held at Lenox Inn, 3387 Lenox Road, NE., Atlanta, GA 30326 (telephone 404-261-5500).

FOR FURTHER INFORMATION CONTACT: Vandy L. Miller, Office of State Programs, 3D23, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 504-2326.

SUPPLEMENTARY INFORMATION: The objective of the workshop is to conduct a roundtable discussion with representatives of Agreement States on the key issues related to three topics which are described below.

The American College of Nuclear Physicians (ACNP) and the Society of Nuclear Medicine (SNM) submitted a petition for rulemaking requesting that the NRC amend its regulations pertaining to the preparation and use of radioactive drugs containing byproduct material. Two issues of the petition (i.e., departure from manufacturer's instructions for preparing radiopharmaceuticals using nuclide generators and reagent kits, and departure from package insert instructions regarding indications and method of administration for therapeutic radiopharmaceuticals) were temporarily addressed in the interim final rule, that became effective on August 23, 1990 for 3 years. Three remaining issues are whether to allow: (1) Human research using byproduct material; (2) the use of radiolabeled biological products; and (3) compounding radioactive drugs (i.e., synthesized from reagent chemicals) by qualified nuclear pharmacists. The NRC is in the process of resolving all issues of the petition.

The NRC is considering issues related to administration of byproduct material or radiation therefrom to a patient of childbearing potential without first determining whether the patient is pregnant or breast feeding. It is a matter of record that some medical use licensees have administrated byproduct material to patients of childbearing potential who were pregnant or breast feeding without knowing the patient's pregnancy or breast feeding status. The consequences were that unintended radiation exposures were delivered to an embryo, fetus, or breast-fed infant. The NRC is considering adding two more objectives to the Quality Management Program (10 CFR 35.32) to ensure a high level of confidence that unintended radiation exposures to an embryo, fetus, or breast-fed infant will be prevented. The objective for all radiopharmaceutical administrations (i.e., diagnostic and therapeutic) would be that, "prior to each administration, patients of childbearing potential be alerted to notify the authorized user physician or technologist if they are pregnant or breast feeding." The objective for all administrations, for which a written directive is required pursuant to 10 CFR 35.32(a), would be that, "prior to administration, the authorized user physician shall come to a conclusion, through a reasoned and professional judgment on the patient's pregnancy and breast feeding status and provide that status in the written directive."

Dr. Carol Marcus submitted a petition for rulemaking requesting a modification of the public dose limits in the revised 10 CFR part 20. The concern expressed in the petition was that the revised dose limit of 100 millirem total effective dose equivalent was in conflict with the criteria in 10 CFR 35.75 for release of patients from hospitals for those patients who have been administered byproduct material. During the public comment period on the receipt of the petition by Dr. Marcus, the American College of Nuclear Medicine (ACNM) submitted a petition for rulemaking specifically related to the release criteria in 10 CFR 35.75. The ACNM petition suggested that the approach to establishing release criteria be modified to a dose based approach as outlined in Report 37 of the National Council on Radiation Protection and Measurements. The NRC staff is considering the appropriateness of addressing these two petitions simultaneously, and whether the existing approach to patient release criteria in 10 CFR 35.75 should be modified.

Conduct of the Meeting

The workshop will be co-chaired by the undersigned and Dr. John E. Glenn, Chief, Medical and Commercial Use Safety Branch, Division of Industrial and Medical Nuclear Safety, NRC. The moderator will be Mr. John L. Telford, Acting Chief, Regulation Development Branch, Division of Regulatory Applications, Office of Nuclear Regulatory Research, NRC. The workshop will be conducted in a manner that will facilitate the orderly conduct of business. The transcript of the workshop will be available for inspection, and copying for a fee, at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC 20555, on or about August 31, 1992.

The following procedures apply to public attendance at the workshop:

1. Questions or statements from attendees other than participants (i.e., participating representative of each Agreement state and participating NRC staff) will be entertained as time permits.

2. Seating for the public will be on a first-come first-served basis.

Dated at Rockville, Maryland, this 12th day of June 1992.

For the Nuclear Regulatory Commission.

Carlton Kammerer,

Director, Office of State Programs.

[FR Doc. 92-14605 Filed 6-19-92; 8:45 am]

BILLING CODE 7590-01-M

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39

[Docket No. 91-NM-251-AD]

Airworthiness Directives; Airbus Industrie Model A320 Series Airplanes

AGENCY: Federal Aviation Administration, DOT.

ACTION: Supplemental notice of proposed rulemaking; reopening of comment period.

SUMMARY: This document revises an earlier proposed airworthiness directive (AD), applicable to certain Airbus Industrie Model A320 series airplanes, that would have required inspection to detect chafing of the wire looms in the wing and the horizontal stabilizer, and repair or replacement, protection, and realignment, if necessary. That proposal was prompted by an incident in which a wire loom short circuit caused fire extinguishant to discharge and pop the circuit breaker for a brake fan. This action revises the proposed rule by revising the inspection area requirements, increasing the repetitive inspection intervals, and adding two airplanes to the applicability of the AD. The actions specified by this proposed AD are intended to prevent electrical short circuiting due to chafing of the wire loom in the wing and the horizontal stabilizer.

DATES: Comments must be received by July 13, 1992.

ADDRESSES: Submit comments in triplicate to the Federal Aviation Administration (FAA), Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 91-NM-251-AD, 1601 Lind Avenue SW., Renton, Washington 98055-4056. Comments may be inspected at this location between 9 a.m. and 3 p.m., Monday through Friday, except Federal holidays.

The service information referenced in the proposed rule may be obtained from Airbus Industrie, Airbus Support Division, Avenue Didier Daurat, 31700 Blagnac, France. This information may be examined at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington.

FOR FURTHER INFORMATION CONTACT: Mr. Greg Holt, Aerospace Engineer, Standardization Branch, ANM-113, FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, Washington 98055-4056; telephone (206) 227-2140; fax (206) 227-1320.

SUPPLEMENTARY INFORMATION:

Comments Invited

Interested persons are invited to participate in the making of the proposed rule by submitting such written data, views, or arguments as they may desire. Communications shall identify the Rules Docket number and be submitted in triplicate to the address specified above. All communications received on or before the closing date for comments, specified above, will be considered before taking action on the proposed rule. The proposals contained in this notice may be changed in light of the comments received.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the proposed rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report summarizing each FAA-public contact concerned with the substance of this proposal will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their comments submitted in response to this notice must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket Number 91-NM-251-AD." The postcard will be date stamped and returned to the commenter.

Availability of NPRMs

Any person may obtain a copy of this NPRM by submitting a request to the FAA, Transport Airplane Directorate, ANM-103, Attention: Rules Docket No. 91-NM-251-AD, 1601 Lind Avenue SW., Renton, Washington 98055-4056.

Discussion

A proposal to amend part 39 of the Federal Aviation Regulations to add an airworthiness directive (AD), applicable to certain Airbus Industrie Model A320 series airplanes, was published as a notice of proposed rulemaking (NPRM) in the Federal Register on January 10, 1992 (57 FR 1120). That NPRM would have required inspection to detect chafing of the wire looms in the wing and the horizontal stabilizer, and repair or replacement, protection, and realignment, if necessary. That NPRM was prompted by an incident in which a wire loom short circuit caused fire extinguishant to discharge and pop the circuit breaker for a brake fan. That condition, if not corrected, could result in electrical short circuiting due to chafing of the wire loom in the wing and the horizontal stabilizer.

Since the issuance of that NPRM, Airbus Industrie has issued Revision 2 to Service Bulletin A320-24-1044, dated March 3, 1992; and Revision 2 to Service Bulletin A320-24-1045, dated April 9, 1992.

Revision 2 of Airbus Service Bulletin A320-24-1044 provides clarification of the inspection areas by highlighting critical zones where wire loom chafing had occurred (wing zones 574 and 674 through panels 574 AB and 674 AB), leading to engine extinguisher bottle discharge. The FAA has revised paragraphs (a) and (b) of the NPRM accordingly.

The service bulletin revision also describes a revision to the intervals for repetitive inspections of the wire looms in the wing and horizontal stabilizer (excluding wing zones 574 and 674 through panels 574AB and 674AB) from 3,100 to 3,500 flight hours. The FAA has revised the repetitive inspection intervals required by paragraph (b) of the NPRM to coincide with this change.

The service bulletin revision provides clarification concerning the conditions that would require realignment and protection of the wire loom. The FAA has revised paragraphs (a)(2) and (b)(2) of the NPRM to include this clarification. Should an operator choose to accomplish the temporary repair required by paragraph (a)(2) or (b)(2) of the proposed AD, the operator then would be required to accomplish realignment and protection of the loom at a specified interval after performing the temporary repair. (This requirement is specified in new proposed paragraph (c).)

In addition, this service bulletin revision adds two airplanes to the effectivity. Since two additional airplanes that are subject to the unsafe condition have been identified, the FAA has revised the applicability of the NPRM to include these airplanes.

Revision 2 to Airbus Service Bulletin A320-24-1045 revises certain modification numbers, revises the effectivity, and describes alternative materials and material specifications that are available to operators.

The FAA has revised the proposal to reflect these latest revisions to the service bulletins as additional service information sources.

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

June 16, 1993

AD69-1

PDR

The Honorable Joseph I. Lieberman, Chairman
Subcommittee on Clean Air and Nuclear Regulation
Committee on Environment and Public Works
United States Senate
Washington, D. C. 20510

Dear Mr. Chairman:

In the near future the Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register the enclosed proposed rule. This proposed rule would amend the NRC's regulations in 10 CFR Parts 30, 32, and 35 to eliminate certain restrictions regarding the medical use of byproduct material.

Specifically, among other things, the proposed rule would incorporate into NRC's regulations the concept of authorized nuclear pharmacists to allow properly qualified pharmacists greater discretion to prepare radioactive drugs containing byproduct material. Also, the proposed rule would allow physician authorized users greater discretion to prepare and use radioactive drugs containing byproduct material, the use of byproduct material in research involving human subjects, and the use of radiolabeled biologics containing byproduct material.

The Commission believes that the proposed rule, if adopted, would result in a small cost reduction for medical use licensees without compromising the level of protection of public health and safety against radiological hazards.

Sincerely,

Linda Portner
for

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Federal Register Notice

cc: Senator Alan K. Simpson

9307090347

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

AD69-1

PDR

June 16, 1993

The Honorable Richard Lehman, Chairman
Subcommittee on Energy and Mineral Resources
Committee on Natural Resources
United States House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

In the near future the Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register the enclosed proposed rule. This proposed rule would amend the NRC's regulations in 10 CFR Parts 30, 32, and 35 to eliminate certain restrictions regarding the medical use of byproduct material.

Specifically, among other things, the proposed rule would incorporate into NRC's regulations the concept of authorized nuclear pharmacists to allow properly qualified pharmacists greater discretion to prepare radioactive drugs containing byproduct material. Also, the proposed rule would allow physician authorized users greater discretion to prepare and use radioactive drugs containing byproduct material, the use of byproduct material in research involving human subjects, and the use of radiolabeled biologics containing byproduct material.

The Commission believes that the proposed rule, if adopted, would result in a small cost reduction for medical use licensees without compromising the level of protection of public health and safety against radiological hazards.

Sincerely,

Linda Portner
for

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Federal Register Notice

cc: Rep. Barbara Vucanovich

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

AD67-1

PDR

June 16, 1993

The Honorable Philip Sharp, Chairman
Subcommittee on Energy and Power
Committee on Energy and Commerce
United States House of Representatives
Washington, D. C. 20515

Dear Mr. Chairman:

In the near future the Nuclear Regulatory Commission (NRC) intends to publish in the Federal Register the enclosed proposed rule. This proposed rule would amend the NRC's regulations in 10 CFR Parts 30, 32, and 35 to eliminate certain restrictions regarding the medical use of byproduct material.

Specifically, among other things, the proposed rule would incorporate into NRC's regulations the concept of authorized nuclear pharmacists to allow properly qualified pharmacists greater discretion to prepare radioactive drugs containing byproduct material. Also, the proposed rule would allow physician authorized users greater discretion to prepare and use radioactive drugs containing byproduct material, the use of byproduct material in research involving human subjects, and the use of radiolabeled biologics containing byproduct material.

The Commission believes that the proposed rule, if adopted, would result in a small cost reduction for medical use licensees without compromising the level of protection of public health and safety against radiological hazards.

Sincerely,

Linda Portner
for

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosure:
Federal Register Notice

cc: Rep. Michael Bilirakis

AD 69-1

PDR

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 30, 32, and 35

RIN 3150-AD69

Preparation, Transfer for Commercial Distribution, and Use of Byproduct Material for Medical Use

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations for the medical use of byproduct material. This action is being taken in response to a petition for rulemaking. The proposed rule is intended to provide greater flexibility by allowing properly qualified nuclear pharmacists and authorized users who are physicians greater discretion to prepare radioactive drugs containing byproduct material for medical use. The proposed rule would also allow research involving human subjects using byproduct material and the medical use of radiolabeled biologics. In addition, the proposed rule also contains other miscellaneous and conforming amendments necessary to clarify or update the current regulations.

DATES: The comment period expires October 15, 1993. Comments received after this date will be considered if it is practical to do so, but the Commission is able to assure consideration only for comments received on or before this date.

ADDRESSES: Mail written comments to the Secretary, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

Hand deliver comments to 11555 Rockville Pike, Rockville, Maryland, between 7:45 a.m., and 4:15 p.m. on Federal workdays.

Copies of the draft regulatory analysis and any public comments received on the proposed rule may be examined at: the NRC Public Document Room, 2120 L Street, NW. (Lower Level), Washington, DC.

FOR FURTHER INFORMATION CONTACT: Samuel Z. Jones or Anthony N. Tse, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, telephone (301) 492-3738 for Mr. Jones, or (301) 492-3797 for Mr. Tse.

SUPPLEMENTARY INFORMATION:

Background

The Petition for Rulemaking

In early 1989, the American College of Nuclear Physicians (ACNP) and the Society of Nuclear Medicine (SNM) approached the NRC staff with concerns that the Commission's regulations failed to accommodate the functions and responsibilities of the practice of nuclear pharmacy. At the suggestion of the NRC staff, the ACNP and SNM submitted a petition for rulemaking requesting the Commission to amend its regulations to fully recognize the role of licensed nuclear pharmacists and physicians. On September 15, 1989 (54 FR 38239), the Commission published in the Federal Register a notice of receipt of a petition for rulemaking for public comment (PRM-35-9).

During the development of the ACNP-SNM petition, one NRC staff member provided substantial assistance in the preparation of the petition, but has not participated in the NRC's resolution of the petition or in the development of this proposed rule. Another NRC staff member reviewed the petition prior to its formal submittal to the Commission and participated, to some extent, in the NRC's resolution of the petition and in the development of the proposed rule. The Commission, while aware of th[illegible]ground, considered the petition on its own merits.

The NRC reviewed the petition and identified the following issues:

A. The petitioners requested that authorized users who are physicians (physician authorized users) be given greater flexibility regarding the medical use of radiopharmaceuticals containing byproduct material. Specifically, the petitioners requested that these physicians be permitted to: (1) Use radiopharmaceuticals to treat diseases that are not listed in the U.S. Food and Drug Administration (FDA) approved package insert; (2) use methods of administration of radiopharmaceuticals for therapy that are not listed in the package insert; (3) use radiopharmaceuticals other than those for which the FDA has accepted an Investigational New Drug (IND) or an approved New Drug Application (NDA); (4) prepare radiopharmaceuticals using radionuclide generators and reagent kits in a manner other than in accordance with the manufacturer's instructions; and (5) compound radiopharmaceuticals in accordance with State law.

B. The petitioners requested that the NRC recognize the practice of nuclear pharmacy by nuclear pharmacists and the certification of nuclear pharmacists by the Board of Pharmaceutical Specialties. Specifically, the petitioners requested that nuclear pharmacists be permitted to: (1) Compound radiopharmaceuticals as described in State or FDA regulations; (2) compound radiopharmaceuticals whose manufacture and distribution are not regulated by the State or FDA; (3) prepare radiopharmaceuticals using radionuclide generators and reagent kits in a manner other than in accordance with the manufacturer's instructions; (4) produce reagent kits; and (5) distribute radiopharmaceuticals that are not regulated by the FDA.

C. Additionally, the petitioners requested that the NRC: (1) Permit categories of research using radioactive drugs that do not require an IND, such as research approved by a Radioactive Drug Research Committee (RDRC); (2) permit the use of radiolabeled biologics for which the FDA has issued a license in response to a product license application (PLA); and (3) clarify its regulations pertaining to specific licenses of broad scope.

In response to the Federal Register notice that announced the receipt of the petition, 466 comment letters were received. About 99 percent of the commenters supported and agreed with the petition. After consideration of the public comment letters and consultation with the FDA staff, the Commission

[2] Next consecutive section number.

determined that some issues should be addressed promptly.

On August 23, 1990 (55 FR 34513), the Commission published an Interim Final Rule to allow, for a period of 3 years, the use of therapeutic radiopharmaceuticals for indications not listed in the package insert and to allow departures from the manufacturer's instructions for preparing diagnostic radiopharmaceuticals using radionuclide generators and reagent kits. In response to the Commission's request for public comments associated with the Interim Final Rule, eight comment letters were received. Seven letters supported the intent of the rule but disagreed with the recordkeeping requirements contained in the rule. One comment letter sought clarification of the rule. The Interim Final Rule permitted specific departures only at the written direction of a physician authorized user, and it does not permit pharmacy-directed departures.

On September 20, 1990, NRC received a "Petition for Reconsideration and for Stay of Action" (Petition for Reconsideration) from Syncor International Corporation (Syncor) regarding NRC's Interim Final Rule. Among other objections, the petition asserted that the rule violates the Atomic Energy Act, the Administrative Procedure Act, and NRC's implementing regulations, and that the recordkeeping requirements of the Interim Final Rule have a direct and negative impact on nuclear pharmacies.

On October 19, 1990, Syncor also filed a "Petition for Review" with the U.S. Court of Appeals for the District of Columbia Circuit (*Syncor International Corp.* v. *NRC*, NO 90–1495). The petition asked the court to review and set aside portions of the "Interim Final Rule," especially the recordkeeping requirements in 10 CFR 30.34(i)(1)(i–ii).

Also, Syncor requested that the NRC amend its nuclear pharmacy license to permit certain pharmacy-directed departures in addition to the Interim Final Rule's physician-directed departures. Syncor and the NRC staff agreed to hold the court action in abeyance for a period of several months to give the NRC an opportunity to respond to Syncor's request. After considerable interaction among the NRC, Syncor, and the FDA, the requested license amendments for pharmacy-directed departures were granted. Because of the generic interest this licensing action might have had for other commercial nuclear pharmacy licensees, the NRC, on June 26, 1991, sent each of these licensees a letter informing them of the NRC's action in issuing Syncor's amendments. Until the amendments contemplated in this proposed rulemaking are adopted through the issuance of a final rule, the NRC stands ready to consider similar license amendment requests from other commercial nuclear pharmacies.

Meanwhile, to provide relief from the recordkeeping requirements contained in the Interim Final Rule, the Commission published a final rule entitled "Departure From Manufacturer's Instructions; Elimination of Recordkeeping Requirements" (57 FR 45566; October 2, 1992). This final rule eliminated all the recordkeeping requirements. Based on the information collected under the Interim Final Rule, both the NRC and FDA staff agreed that the major trends in departures that could be identified by the recordkeeping were already discernible. Thus, additional recordkeeping was not necessary.

In a parallel effort, the NRC continued to work on the remaining issues in the ACNP-SNM petition. On August 7, 1991, the NRC conducted a public workshop in Rosemont, Illinois, to present "strawman" language on the training and experience criteria for authorized nuclear pharmacists to representatives of the following organizations: Board of Pharmaceutical Specialties, American Board of Science in Nuclear Medicine, National Association of Boards of Pharmacy, Committee on Radionuclides and Radiopharmaceuticals of the U.S. Council for Energy Awareness, American Pharmaceutical Association, American Society of Hospital Pharmacists, and three graduate schools of pharmacy. Subsequently, the NRC also discussed the proposed resolution of these issues in meetings with the FDA, the NRC's Advisory Committee on the Medical Uses of Isotopes (ACMUI), and the Agreement States. This proposed rulemaking is the evolutionary result of numerous meetings with the aforementioned groups.

The Proposed Modifications

In a policy statement published on February 9, 1979 (44 FR 8242), entitled "Regulation of the Medical Uses of Radioisotopes; Statement of General Policy," the NRC stated:

1. The NRC will continue to regulate the medical uses of radioisotopes as necessary to provide for the radiation safety of workers and the general public.

2. The NRC will regulate the radiation safety of patients where justified by the risk to patients and where voluntary standards, or compliance with these standards, are inadequate.

3. The NRC will minimize intrusion into medical judgments affecting patients and into other areas traditionally considered to be a part of the practice of medicine.

In conformance with this policy, the Commission proposes to eliminate certain restrictions in the NRC regulations on the practice of medicine and pharmacy (e.g., compounding), and provide the authority for research involving human subjects and the use of radiolabeled biologics. The Commission believes that these restrictions can be eliminated without compromising the level of protection of public health and safety against radiological hazards. The Commission recognizes that physicians have the primary responsibility for the diagnosis and treatment of their patients or human research subjects and recognizes that the nuclear pharmacists have the primary responsibility for the preparation of radioactive drugs. NRC regulations are predicated on the assumption that properly trained and adequately informed physicians and pharmacists will make decisions that are in the best interest of their patients or human research subjects. Furthermore, the pharmacological aspects of radioactive drugs, including drug safety and efficacy, are regulated by the FDA or the States.

The Commission believes that the proposed amendments would provide greater discretion for physician authorized users to use byproduct material in the practice of medicine. Also, the proposed amendments would incorporate into the regulations the concept of an authorized nuclear pharmacist to allow properly qualified pharmacists greater discretion to prepare (including compound) radioactive drugs containing byproduct material for medical use. In response to the petition for rulemaking, the Commission is proposing to:

1. Allow physician authorized users to use therapeutic radioactive drugs containing byproduct material for indications or methods of administration not listed in the FDA-approved package insert;

2. Allow physician authorized users to use radioactive drugs containing byproduct material for research involving human subjects;

3. Allow physician authorized users to use radiolabeled biologics containing byproduct material;

4. Allow medical use licensees and commercial nuclear pharmacies to depart from the manufacturer's instructions for preparing radioactive drugs using radionuclide generators and reagent kits;

5. Allow medical use licensees and commercial nuclear pharmacies to compound radioactive drugs using byproduct material;

6. Delete the existing regulations related to the nonradioactive reagent kits; and

7. Clarify regulatory requirements for specific licenses of broad scope.

Table 1 summarizes the requests made in the petition and the Commission's responses.

In addition to the proposed amendments in response to the issues raised in the petition, the Commission is proposing related or miscellaneous amendments to parts 32 and 35. In general, the objective of these proposed amendments is to clarify, update, and simplify the current regulations. Specifically, these proposed amendments include:

1. In part 32, the Commission is proposing to replace the word "radiopharmaceutical" with the term "radioactive drug" in proposed § 32.72. This change is necessary to include both radiopharmaceuticals and radiolabeled biologics in part 32.

2. In part 35, whenever applicable, the Commission is proposing to use the term "unsealed byproduct material" instead of "radiopharmaceutical" or "radioactive drug." This proposed change is intended to indicate that the Commission's regulations regarding the medical use of byproduct material are focused on radiation safety and are separate from FDA's regulations regarding radioactive drugs. However, to prevent massive changes in part 35, the word "radiopharmaceutical" will continue to be used in existing sections for which no modifications are proposed and for sections in which the only modification is to replace the word "patient" with the term "patient or human research subject." Thus, the word "radiopharmaceutical" will be used as the equivalent of "unsealed byproduct material" in these sections of the proposed rule.

3. The Commission is proposing to modify the definition of "medical use" in parts 30 and 35 by replacing the term "human beings" with the term "patients or human research subjects" to include the administration of byproduct material to an individual who is participating in a research procedure. In addition, the Commission proposes to delete the language in the definition of "medical use" that the administration of byproduct material be in the practice of medicine in accordance with a license to practice medicine. The definition of other terms in part 35 (e.g., physician) include this licensing concept.

With this proposed definition, applicable requirements in part 35, such as misadministration reporting and quality management program, would also apply to human research subjects; thus, an equivalent level of protection would be provided for both patients and human research subjects.

4. In part 32, the Commission is proposing to clarify the existing regulations regarding the labeling of syringes, vials, generators, or other containers of radioactive drugs. This proposed change is necessary to avoid confusion over the types of information to be submitted.

5. In part 32, the Commission is proposing to replace the text in § 32.72(b) because it is obsolete.

6. In discussing the proposed regulations concerning transfer of radioactive drugs, the Commission has noted later in this preamble that it is sometimes necessary to transfer a dosage of a radioactive drug on a case-by-case basis from one medical use licensee to another medical use licensee. These case-specific transfers would not be considered commercial transfers by the NRC and, therefore, would not require a part 32 license.

7. In part 35, the Commission is proposing to change the lower limit for testing dose calibrators for linearity from 0.37 Megabecquerel (10 microcuries) to 1.1 Megabecquerels (30 microcuries) for consistency with 10 CFR 35.32, "Quality Management Program."

8. In regard to the accuracy, linearity, and geometry tests of dose calibrators, the Commission is proposing to replace the requirement for the Radiation Safety Officer's (RSO) signature with the requirement for the identity of the individual actually performing these tests. This proposed change is necessary to identify the individual who actually performed these tests. Furthermore, this change would provide additional time for the RSO to devote to other radiation safety issues. However, this change would not affect the responsibilities of the RSO that are defined in existing 10 CFR 35.21.

9. The Commission is proposing to update the regulations by recognizing several certification boards in the training and experience requirements.

10. The Commission is proposing that licensees may allow authorized users and authorized nuclear pharmacists who meet certain requirements to use byproduct material without the licensee first obtaining a license amendment from the NRC. Therefore, the Commission is proposing to delete the provisions in part 35 addressing visiting authorized users.

11. The Commission is proposing to modify the requirements for recentness of training of certain authorized users.

12. The Commission is proposing to add requirements regarding the preparation of byproduct material for medical use under the supervision of a physician authorized user and to provide comparable requirements regarding the supervisory responsibilities of authorized nuclear pharmacists.

TABLE 1.—SUMMARY OF REQUESTS IN THE PETITION AND THE COMMISSION'S RESPONSES

Request	Response
Permit authorized users to use radiopharmaceuticals for therapeutic uses not covered in the package insert.	Permit physician authorized users who are qualified for therapeutic administration to use radioactive drugs for therapeutic uses not covered in the package insert.
Permit authorized users to use radioactive drugs for research involving human subjects.	Permit physician authorized users to use radioactive drugs for research, provided that human research subjects are protected.
Permit authorized users to use radiolabeled biologics	Permit physician authorized users to use radiolabeled biologics, provided that dosages of alpha- or beta-emitting radionuclides are measured.
Permit medical use licensees and pharmacies to depart from package inserts when using generators and kits.	Permit physician authorized users and authorized nuclear pharmacists who meet certain training and experience criteria to depart from package inserts when using generators and kits.
Permit medical use licensees and pharmacies to use byproduct material to compound radioactive drugs.	Permit physician authorized users and authorized nuclear pharmacists who meet certain training and experience criteria to prepare (including compound) radioactive drugs.

TABLE 1.—SUMMARY OF REQUESTS IN THE PETITION AND THE COMMISSION'S RESPONSES—Continued

Request	Response
Permit nuclear pharmacists to prepare reagent kits	Delete NRC regulations on reagent kits which do not contain byproduct material. Thus, nuclear pharmacists would be able to prepare reagent kits under applicable law.
Clarify requirements on licenses of broad scope	Clarify the requirements by adding two exemptions in part 35.

13. The responsibilities of the Radiation Safety Committee would be modified to reflect the activities which the proposed changes to part 35 would authorize.

Discussion of Proposed Regulatory Text

Section 30.4. Definitions

The definition of "medical use" would be modified to conform to the corresponding definition proposed for 10 CFR 35.2. This definition would be modified by replacing "patients" with "patients or human research subjects" to include the administration of byproduct material to an individual who is participating in a research procedure.

In addition, the modifications would delete the current statement in this definition that the byproduct material be administered in the practice of medicine in accordance with a license issued by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico. This change would be made because: (1) This aspect of the definition is included in other existing definitions in part 35 (e.g., authorized user and physician); and (2) the definition of "medical use" would include research involving human subjects.

Section 30.34 Terms and Conditions of Licenses

Section 30.34(i) provided interim relief from the restrictions that licensees follow the manufacturer's instructions when preparing radiopharmaceuticals using radionuclide generators and reagent kits. This proposed rulemaking would eliminate these restrictions. Therefore, the Commission proposes to delete § 30.34(i) in its entirety.

Section 32.72 Manufacture, Preparation, or Transfer for Commercial Distribution of Radioactive Drugs Containing Byproduct Material for Medical Use Under 10 CFR Part 35

The Commission proposes to retitle this section to more accurately reflect the operations of licensees (i.e., manufacturers and commercial nuclear pharmacies) regulated under this section.

Section 32.72(a)

This paragraph would be modified to add the word "prepare" and the phrase "transfer for commercial distribution" to more accurately reflect the operations of licensees regulated under this section.

Section 32.72(a)(1)

The proposed amendment to this paragraph is an editorial change to replace "§ 30.33 of this chapter" with "10 CFR 30.33."

Section 32.72(a)(2)

The Commission proposes to modify this paragraph to recognize radioactive drug manufacturers holding registration by the FDA, or appropriate State agencies, as well as commercial nuclear pharmacies licensed by State Boards of Pharmacy (SBPs) and nuclear pharmacies operating in Federal facilities. The intent of this paragraph is to clarify that commercial nuclear pharmacies are covered under this section.

Radioactive drugs transferred from a commercial nuclear pharmacy to another licensee in the normal course of business are considered commercial transfers by the NRC and require a part 32 license. However, the Commission recognizes that in the course of patient care or in the conduct of research procedures, it is sometimes necessary for licensees to transfer a dosage of a radioactive drug on a case-by-case basis from one medical use licensee to another medical use licensee. These case-specific transfers would not be considered commercial transfers by the NRC and, therefore, would not require a Part 32 license.

Section 32.72(a)(3)

The Commission proposes to modify this paragraph to clarify the type of information that should be submitted to the NRC. The words "packaging" and "package" in the existing § 32.72(a)(3) could be interpreted as referring only to the external transportation package (e.g., cardboard box). In the proposed § 32.72(a)(3), the words "* * * per vial, syringe, generator, or other container * * *" would be used to clearly indicate the types of information to be submitted. In addition, the phrase "group licensees" would be replaced with the phrase "medical use licensees."

Section 32.72(a)(4)

The Commission proposes to modify § 32.72(a)(4)(i) to clarify the types of information that should be contained on the label to be affixed to each container of a radioactive drug. This action is proposed to ensure that the information on the label would include information specified in existing 10 CFR 35.60(b) and 35.61(b).

Also, the Commission proposes to replace the phrase "each package" by the phrase "labels to be applied to containers of radioactive drugs, as specified in 10 CFR 35.60(b) and 35.61(b) * * *" for the same reason as for the proposed changes in § 32.72(a)(3), discussed above.

In addition, the Commission is also proposing to delete the last sentence of § 32.72(a)(4)(i) because it is obsolete.

Furthermore, "time of assay" would be added to the existing "date of assay." This information is necessary for determining the dosage, at the time of administration, for radioactive drug containing radionuclides with short half-lives.

The Commission also proposes to delete the provision in § 32.72(a)(4)(ii) that required FDA approval before combining labeling information. In addition, the remaining phrase of the existing § 32.72(a)(4)(ii) "the labels, leaflets or brochures required by this paragraph are in addition to the labeling required by the Food and Drug Administration (FDA)" would be replaced by "NRC's labeling requirements are independent of requirements of the U.S. Food and Drug Administration (FDA)." This proposed sentence would be moved to the existing § 32.72(a)(4)(i) which would be renamed § 32.72(a)(4). This proposed amendment would not preclude use of one label if it contains all the required information.

Section 32.72(b)

The Commission proposes to revise this paragraph because the existing text is obsolete.

The Commission proposes new text that would allow an "authorized

nuclear pharmacist" (or individual working under the supervision of the "authorized nuclear pharmacist") working in a commercial nuclear pharmacy to prepare (including compound) radioactive drugs. The NRC is using the phrase "prepare radioactive drugs" in a general sense to include: (1) Using radionuclide generators and nonradioactive reagent kits to produce radioactive drugs; and (2) using byproduct material and other basic ingredients to compound radioactive drugs.

Current regulations require that a part 32 licensee may not depart from manufacturer's instructions when preparing radioactive drugs unless: (1) A license amendment has been granted permitting the departure; or (2) the departure has been requested by a physician authorized user. This requirement restricts the ability of qualified nuclear pharmacists to practice their profession which could otherwise include, but for NRC restrictions, compounding radioactive drugs. The NRC believes that this restriction can be eliminated provided that the pharmacist meets the training and experience requirements in proposed 10 CFR 35.980.

The Commission is proposing to define the terms "medical use" and "authorized nuclear pharmacist" in part 32 by referencing the definition of these terms in proposed 10 CFR 35.2. The definition of "medical use" would be modified to add the term "human research subject" to include the administration of byproduct material to an individual who is participating in a research procedure. It is necessary to define an "authorized nuclear pharmacist" because the proposed amendments would provide pharmacists with the authority to possess and use byproduct material in the practice of nuclear pharmacy.

For purposes of part 32, an authorized nuclear pharmacist also includes those individuals who are currently licensed or registered by a state as a pharmacist and who are also designated, as of the effective date of the final rule, as an "authorized user" on a nuclear pharmacy license issued by the Commission under 10 CFR part 32 to work as an authorized nuclear pharmacist. The Commission believes that this limited "grandfathering" is justified because: (1) currently, these "authorized users" essentially meet the training and experience criteria for an authorized nuclear pharmacist as specified in proposed 10 CFR 35.980(b)(1); and (2) these "authorized users" are currently working in a nuclear pharmacy.

A part 32 "authorized user" who does not currently possess a valid state pharmacy licensure or registration would not be grandfathered as an authorized nuclear pharmacist because, under state law, this individual is not qualified to be a pharmacist. However, such an individual may work in a nuclear pharmacy under the supervision of an authorized nuclear pharmacist.

The Commission proposes to require licensees to submit a copy of the individual's board certification, the license, or the permit, and the state pharmacy licensure or registration to the NRC within 30 days of the date that the licensee permits the individual to work as an authorized nuclear pharmacist. This proposal would reduce the licensees' burden because such a notification would replace the currently required license amendment and the associated amendment fee which are currently necessary before a licensee may allow an authorized nuclear pharmacist to work in its facility. In addition, the proposed action would also eliminate the delay associated with the license amendment process. The NRC will review the notifications upon receipt to verify that the requirements of proposed § 32.72(b) have been met. During the review process, the NRC can consider an individual's character in addition to credentials in determining whether the individual should be approved as an authorized user or authorized nuclear pharmacist, such as verifying that the individual has not committed or caused others to commit any willful violations of the Commission's regulations. At the time of the next licensing action, the names of approved individuals would be listed on the license, without fee, as an authorized nuclear pharmacist.

Section 32.72(c)

The Commission proposes to add this paragraph to explicitly require part 32 licensees to measure and record each dosage of radioactive drugs before transferring these drugs to a medical use licensee. This proposed change is necessary so that the proposed relief to 10 CFR part 35 medical use licensees with respect to measurements can be granted. In proposed § 35.53, medical use licensees would not be required to measure unit dosages of alpha- and beta-emitting radioactive drugs obtained from part 32 licensees before administering these unit dosages to patients or human research subjects. Thus, it is necessary for the part 32 licensees to make these measurements.

Section 32.72(d)

This paragraph is necessary to remind part 32 licensees to comply with applicable FDA, other Federal, and State requirements in addition to applicable NRC requirements. Compliance with NRC requirements does not eliminate the need to comply with other lawful requirements. However, it is not the intent of the Commission to perform inspections to ensure compliance with FDA or State requirements nor to enforce those regulations.

Section 32.73 Manufacture and Distribution of Generators or Reagent Kits for Preparation of Radiopharmaceuticals Containing Byproduct Material

The Commission proposes to delete this section in its entirety. Because radionuclide generators would be included as a radioactive drug in proposed § 32.72, it is no longer necessary to include the generators in § 32.73. In addition, the Commission is proposing to discontinue regulating reagent kits because they do not contain byproduct material.

10 CFR Part 35 Medical Use of Byproduct Material

The Commission is proposing to replace the word "patient" with the term "patient or human research subject" as stated in the sections of part 35 which the Commission is proposing to amend. However, only those sections of part 35 which are otherwise being amended are included in the section-by-section "Discussion of Proposed Regulatory Text" which follows. The sections not included in that discussion are: §§ 35.2 (the definitions of *misadministration* and *written directive*), 35.32, 35.33, 35.60, 35.75, 35.310, 35.315, 35.404, 35.406, 35.410, 35.415, 35.610, and 35.615. The purpose of using the phrase "patient or human research subject" is to make it explicit that licensees must follow the requirements of part 35 whenever byproduct material or radiation therefrom is being administered either to a patient or to a human research subject. It is necessary to provide an equivalent level of protection for both patients and human research subjects.

Section 35.2 Definitions

Authorized nuclear pharmacist. The Commission proposes to add this new definition. It is necessary to define an authorized nuclear pharmacist because the proposed amendments would provide pharmacists the authority to possess and use byproduct material in the practice of nuclear pharmacy

independent of the supervision of a physician authorized user.

The definition would specify three groups of individuals that would be qualified as authorized nuclear pharmacists: (1) Individuals certified by the Board of Pharmaceutical Specialties (BPS) as a board certified nuclear pharmacist (BCNP), (2) individuals identified as authorized nuclear pharmacists on a Commission or Agreement State license, or (3) individuals identified as authorized nuclear pharmacists on a permit issued by a Commission or Agreement State specific licensee of broad scope. The individuals in the second and third groups must meet the training and experience requirements specified in the proposed § 35.980(b).

Authorized user. The Commission is proposing to modify the definition of "authorized user" to include those individuals who are: (1) board certified by at least one of the boards listed in paragraph (a) of §§ 35.910, 35.920, 35.930, 35.940, 35.950, or 35.960; (2) identified as an authorized user on a Commission or Agreement State license, or (3) identified as an authorized user on a permit issued by a Commission or Agreement State specific licensee of broad scope. The individuals in the second and third groups must meet the training and experience requirements specified in paragraphs (b) or (c) of §§ 35.910 or 35.920, or paragraph (b) of §§ 35.930, 35.940, 35.950, or 35.960.

Proposed § 35.13 would eliminate, under certain conditions, the requirement for a licensee to submit an amendment to list an authorized user on its license. Instead, proposed § 35.14 would require specific licensees of limited scope to provide a copy of the individual's board certification, the license, or the permit to the Commission within 30 days of the date that the licensee permits the individual to work as an authorized user.

However, before allowing a physician who does not have board certification (or is not listed on a license or a permit) to work as an authorized user, the specific licensee of limited scope must continue to submit a license amendment and obtain NRC approval. The NRC will review the notifications upon receipt to verify that the requirements of proposed § 32.72(b) have been met. During the review process, the NRC may consider character in addition to credentials in determining whether the individual should be approved as an authorized user or authorized nuclear pharmacist, such as to verify that the individual has not committed or caused others to commit any willful violations of the Commission's regulations.

Medical use. The Commission is proposing to modify the definition of "medical use" by replacing the term "human beings" with the term "patients or human research subjects" to include the administration of byproduct material to an individual who is participating in a research procedure.

Currently, the NRC allows by license condition specific medical use licensees of broad scope to perform research involving human subjects using byproduct material. Because part 35 is silent on research involving human subjects using byproduct material, part 35 specific medical use licensees of limited scope may only conduct such research if the NRC grants a license amendment to do so. The effects of the current regulatory framework are to inhibit or delay research activities by specific medical use licensees of limited scope.

Medical research involving human subjects not using radioactive material is currently conducted by large medical institutions and community hospitals through, for example, their participation in regional and national research programs. Such research may lead to a better understanding of diseases, improved diagnostic and therapeutic methods, new or better drug products or medical devices, or essential basic scientific information.

Current regulations require all medical institutions to have a Radiation Safety Committee whose responsibilities include oversight of all uses of licensed material. Other part 35 licensees are required to have a Radiation Safety Officer who has such responsibility. The Commission believes that restrictions on research can be reduced provided there are certain additional protections of human subjects as described in proposed § 35.6.

The proposed provisions include requiring a licensee who conducts research involving human subjects to: (a) Possess a part 35 license authorizing medical use, (b) implement the Federal Policy for the Protection of Human Subjects or comply with specific NRC licensing requirements, and (c) have a physician authorized user who will supervise the administration of the byproduct material.

The Commission believes that information gathered through research, although it may not benefit the individual subject of the research, has the potential to benefit the society at large. Therefore, given adequate protection of the rights and radiological safety of human research subjects, it is appropriate to permit this activity.

Furthermore, under the proposed definition of "medical use," the applicable provisions of part 35, such as requirements related to misadministrations and the quality management program, also apply to a human research subject. Thus, an equivalent level of protection would be provided for both patients and human research subjects.

The Commission is also proposing to delete the current statement in this definition that the byproduct material be administered in the practice of medicine in accordance with a license issued by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico. This change is being made because this aspect of the definition is included in other existing definitions in part 35 (e.g., authorized user and physician).

Pharmacist. The Commission is proposing to add this new term to define a pharmacist in part 35 to complement another new definition "authorized nuclear pharmacist."

Section 35.6 Provisions for Research Involving Human Subjects

The Commission is proposing to add this section to address the protection of the rights of human subjects who would be involved in research using byproduct material. The Commission believes that most research involving human subjects using byproduct material is currently conducted, funded, supported, or regulated by another federal agency which has implemented the Federal Policy for the Protection of Human Subjects[1] (56 FR 28002; June 18, 1991). Therefore, the rights of human subjects involved in such research activities would be protected by the other federal agency funding the research under the provisions of the Federal Policy. The Federal Policy has been implemented by 15 Federal departments or agencies (not including NRC) and includes provisions, among others, for obtaining Institutional Review Board (IRB) review and approval of the research activities and informed consent from the human subjects. The NRC understands that compliance with the Federal Policy by institutions conducting research involving human subjects is achieved through the use of letters of assurance of compliance and certain reporting requirements.

This section proposes to allow the licensees covered by the Federal Policy as adopted by another Federal agency to conduct human research without prior NRC approval. If a licensee's activities

[1] For a copy of the Federal Policy for the Protection of Human Subjects contact: Office for Protection from Research Risks, National Institute of Health, Building 31, room 5B59, Bethesda, MD 20892, telephone (301) 496-7005.

are not funded by another Federal agency which has adopted the Federal Policy, the licensee would need to apply for and obtain approval of a specific amendment to its NRC license prior to conducting research involving human subjects using byproduct material. During the review of the license amendment application, the NRC would ensure that the proposed research would receive approval of the IRB and obtain the human subject's informed consent. The Commission is soliciting public comment on the number and type of research activities which would not be funded by another Federal agency which has adopted the Federal Policy and, thus under the proposed rule, would require a license amendment.

The focus of NRC inspections would be to confirm that both types of licensees have obtained prior IRB review and approval of the research activities and informed consent of the human subjects.

The Commission is soliciting public comment on whether it should broaden or narrow its focus to require compliance with all or none of the provisions of the Federal Policy or equivalent license conditions. In making comments, consideration should be given to the fact that all the radiation safety provisions of 10 CFR part 35 are proposed to be made applicable to research involving human subjects.

Section 35.7 FDA, Other Federal, and State Requirements

This section is necessary to remind medical use licensees to comply with applicable FDA, other Federal, and State requirements. However, it is not the intent of the Commission to perform inspections to ensure compliance with FDA or State requirements nor to enforce those regulations.

Section 35.11 License Required

The Commission is proposing to add paragraph (c), in parallel with the existing paragraph (b), to this section. The new paragraph (c) would permit an individual to prepare unsealed byproduct material for medical use under the supervision of an authorized nuclear pharmacist or authorized user who is a physician. Also, the existing paragraph (a) would be revised by replacing the phrase "paragraph (b)" with "paragraphs (b) or (c)."

Section 35.12 Application for License, Amendment, or Renewal

The Commission is proposing to add paragraph (e) to this section. This paragraph would remind part 35 medical use licensees that they may apply for a Type A specific license of broad scope under 10 CFR part 33.

Section 35.13 License Amendments

The Commission proposes to modify paragraph (b) of this section to delete the term "visiting authorized user." Instead, under the proposed provisions, the licensees could allow, without a license amendment, an individual to work as an authorized user provided that the individual is: (1) Certified by a board listed in subpart J, (2) identified as an authorized user on a Commission or Agreement State license, or (3) identified as an authorized user on a permit issued by a Commission or Agreement State specific licensee of broad scope. However, the licensee would be required to provide a copy of an individual's board certification, the license, or the permit to the Commission within 30 days of the date that the licensee permits the individual to work as an authorized user (See proposed § 35.14).

The Commission also proposes to add an exception for authorized nuclear pharmacists to this section like the exception for authorized users.

Section 35.14 Notification

In addition to the existing notification requirement, the Commission proposes to amend this section to require specific licensees of limited scope to submit a copy of an individual's board certification, the license, or the permit as discussed in § 35.13. This proposal would reduce licensees' burden because this notification would replace the currently required license amendment and the associated amendment fee which are currently necessary before a specific licensee of limited scope may allow an authorized user to work in its facility. In addition, the proposed action would also eliminate the delay associated with the license amendment process. The NRC will review the notifications upon receipt to verify that the requirements of this section have been met. In addition, the NRC would verify at that time that this individual has not committed or caused another individual to commit any willful violations of the Commission's regulations. At the time of the next licensing action, the name of this individual would be listed on the license, without fee, as an authorized user. The Commission also proposes to apply this section to authorized nuclear pharmacists in the same manner as for authorized users.

Section 35.15 Exemptions Regarding Type A Specific Licenses of Broad Scope

The Commission is proposing to clarify requirements on Type A specific licenses of broad scope by adding the proposed exemptions. This proposed section would specify that an application for and receipt of a license amendment would not be necessary for the following actions: (1) Permit a new authorized user or authorized nuclear pharmacist to work under the license; and (2) permit a change of the area of use of byproduct material within the address identified in the license. Also, specific licensees of broad scope would be exempt from certain notification requirements specified in proposed § 35.14.

These changes are being made to ensure that the proposed rule conforms with the current practice regarding Type A specific licensees of broad scope. Under current practice, the other prescriptive and performance requirements of Part 35 apply to Type A specific licensees of broad scope. Because a Part 33 specific licensee of broad scope is required to establish more complete administrative procedures and controls to ensure radiation safety than a Part 35 licensee, the exemptions would not reduce protection of public health and safety.

Section 35.22 Radiation Safety Committee

The Commission is proposing to amend paragraph (b)(2) to apply this section to authorized nuclear pharmacists in the same manner as for authorized users.

The Commission also proposes to require the Radiation Safety Committee to review an individual's certification, license, or permit, and determine, based on the proposed § 35.13(b)(1) through (b)(4), whether to allow the individual to work as an authorized user or authorized nuclear pharmacist without submitting a license amendment for NRC approval.

Section 35.25 Supervision

Existing paragraph (b) would be redesignated as paragraph (c).

The Commission is proposing to add a new paragraph (b) to address the supervisory responsibilities of the licensee, the authorized nuclear pharmacist, and the physician authorized user who prepare unsealed byproduct material for medical use. Specifically, under the proposed paragraph, an authorized nuclear pharmacist or a physician authorized user would be able to permit

individuals to prepare unsealed byproduct material for medical use, provided that the individuals are adequately supervised. This section describes the level of supervision that an authorized nuclear pharmacist or a physician authorized user would be required to provide to individuals who are preparing unsealed byproduct material for medical use under their supervision.

Section 35.27 Visiting Authorized User

The Commission is proposing to delete this section which permits a visiting authorized user to work for a period of 60 days each year without a license amendment. Under proposed § 35.13(b), the concept of a visiting authorized user would no longer be necessary. Any individual who meets § 35.13(b)(1) through (b)(4) would be permitted to work in a licensee's facility either temporarily or permanently. However, under proposed § 35.14, the licensee would be required to provide a copy of the individual's board certification, the license, or the permit to the NRC.

Section 35.49 Supplier for Sealed Sources or Devices for Medical Use

The Commission is proposing to modify this section as follows:

The title of this section would be modified to indicate that this section would only apply to sealed sources or devices for medical Use

The Commission is proposing to delete the reference to §§ 32.72 and 32.73 in the proposed § 35.49(a) because, under the proposed rule, the requirements applicable to unsealed byproduct material for medical use would be incorporated into the proposed §§ 35.100, 35.200, and 35.300. Furthermore, the proposed rule would allow medical use licensees to prepare (including compound) radioactive drugs. Therefore, limiting suppliers of radioactive drugs to manufacturers or commercial nuclear pharmacies would no longer be necessary. However, the requirements applicable to sealed sources or devices as specified in § 32.74 would remain in the proposed § 35.49(a).

In addition, the Commission is proposing to delete existing § 35.49(b). Under the proposed rule, all the requirements applicable to reagent kits would be deleted because the reagent kits do not contain byproduct material. Therefore, this paragraph would no longer be necessary. The existing § 35.49(c) would be redesignated as § 35.49(b).

Section 35.50 Possession, Use, Calibration, and Checks of Dose Calibrators

The Commission is proposing the following modifications to this section.

(1) In paragraph (a), the phrase "photon-emitting" would be inserted to clarify that this section is applicable only to photon-emitting radionuclides. This modification would avoid confusion between this section and proposed § 35.52 pertaining to instruments to measure dosages of alpha- or beta-emitting radionuclides.

(2) The Commission is proposing to use the term "radionuclides" instead of the term "radiopharmaceuticals." The new term is broader and would include radiolabeled biologics as well as radiopharmaceuticals.

(3) In paragraph (b)(3) regarding the linearity test of the dose calibrator, the lower limit for the test would be changed from 0.37 megabecquerel (10 microcuries) to 1.1 megabecquerel (30 microcuries). This modification is necessary for consistency with the requirements of the Quality Management Program (§ 35.32) and proposed § 35.53(c)(3).

(4) In paragraphs (e)(2) through (e)(4) regarding records on the accuracy, linearity, and geometry tests of dose calibrators, the Commission is proposing to require the identity of the individual actually performing these tests rather than the Radiation Safety Officer's (RSO) signature. This proposed change is necessary to identify the individual who actually performed these tests. Furthermore, this change would provide additional time for the RSO to devote to other radiation safety issues.

Section 35.52 Possession, Use, Calibration, and Checks of Instrumentation to Measure Dosages of Alpha- and Beta-Emitting Radionuclides

The Commission is proposing to require medical use licensees to possess and use instrumentation to measure alpha- or beta-emitting radionuclides. New radiolabeled biologics are being developed which have potential benefits for diagnosis and treatment in medicine. Some of these biologics may contain alpha- or beta-emitting radionuclides that do not emit photons of sufficient energy or frequency to be detected or quantified in a dose calibrator. Thus, this section is proposed so that medical use licensees would be able to determine that the correct dosages will be administered to patients or human research subjects.

The measurement requirements of this section would not apply to unit dosages obtained from a manufacturer or a commercial nuclear pharmacy for the following reasons: (1) The instrumentation for measuring activity of alpha- or beta-emitters is expensive and not commonly available in a medical use licensee's facility; (2) the frequency of using alpha- or beta-emitters for most medical use licensees is very low; and (3) the manufacturer or the commercial nuclear pharmacy would be required, pursuant to proposed § 32.72(c), to measure each dosage of a radioactive drug prior to transfer for commercial distribution.

Section 35.53 Measurement of Dosages of Unsealed Byproduct Material for Medical Use

The Commission is proposing to modify this section as follows:

(1) In the title, the term "radiopharmaceutical dosages" would be replaced by the phrase "dosages of unsealed byproduct material for medical use." This is proposed to avoid the connotation that the Commission is regulating drug safety and efficacy. The word "unsealed" is proposed to emphasize that this section applies only to unsealed byproduct material for medical use. This section does not apply to sealed sources such as teletherapy or brachytherapy sources.

(2) Existing paragraphs (a) and (b) have been combined as proposed paragraph (a). However, the measurement requirements are the same.

(3) The new text of paragraph (b) would require medical use licensees to measure dosages of alpha- or beta-emitting radionuclides, except for unit dosages obtained from a manufacturer or a commercial nuclear pharmacy. Medical use licensees would be required to measure dosages that will be administered to patients or human research subjects.

The measurement requirements of this section would not apply to unit dosages of alpha- or beta-emitting radionuclides because the manufacturer or the commercial nuclear pharmacy must measure the dosage before distributing it to a medical use licensee. Also, the proposed rule would allow a licensee to use the combination of several measurements and calculations to determine the dosage because it may not be possible to measure alpha- or beta-emitting radionuclides by a single measurement.

(4) In paragraph (c), 0.37 megabecquerel (10 microcuries) would be changed to 1.1 megabecquerels (30 microcuries). This modification is necessary for consistency with the requirements of the Quality

Management Program (§ 35.32). Also, because the radiological risk associated with a dosage of 1.1 megabecquerels (30 microcuries) is small, it is unnecessary to require more than just recording that the dosage is less than 1.1 megabecquerels (30 microcuries).

Section 35.100 Use of Unsealed Byproduct Material for Uptake, Dilution, and Excretion

The current § 35.100 requires medical use licensees to use only byproduct material in a radiopharmaceutical for uptake, dilution and excretion for which the FDA has accepted a "Notice of Claimed Investigational Exemption for a New Drug" (IND) or approved a New Drug Application (NDA). The effect of this restriction is to prohibit a licensee from using other types of radioactive drugs such as those approved by a Radioactive Drug Research Committee (RDRC), unless a license amendment is received authorizing their use.

The Commission believes that these restrictions can be eased without compromising the level of protection of public health and safety against radiological hazards because of certain conditions which must be met (discussed below). In addition, the Commission recognizes that physicians have the primary responsibility for the diagnosis and treatment of their patients or human research subjects. Commission regulations are predicated on the assumption that properly trained and adequately informed physicians will make decisions that are in the best interest of their patients or human research subjects. Furthermore, the pharmacological aspects of radioactive drugs, including drug safety and efficacy, are regulated by the FDA.

Detailed discussions of proposed changes are presented below.

The Commission is proposing to use the term "unsealed byproduct material" instead of the term "radiopharmaceutical" in this proposed section. This is proposed to avoid the connotation that the Commission is regulating drug safety and efficacy. The word "unsealed" is proposed to emphasize that this section applies only to unsealed byproduct material for medical use and does not apply to sealed sources such as teletherapy or brachytherapy sources.

This proposed modification would provide medical use licensees with the maximum flexibility to use any byproduct material for medical use provided that the material is: (1) Obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72; or (2) prepared by an authorized nuclear pharmacist, a physician authorized user who meets the training requirements specified in § 35.920, or an individual under supervision of either, as specified in proposed § 35.25.

In addition, the Commission is proposing to modify this section as follows:

(1) The phrase "unsealed byproduct material prepared for medical use" would be used. This phrase includes "IND" and "NDA," as specified in the existing § 35.100, and other radioactive drugs containing byproduct material that are not specified in the existing § 35.100.

(2) The supplier or preparer of unsealed byproduct material for medical use would be specified under this section. A licensee may obtain byproduct material from a manufacturer or a commercial nuclear pharmacy.

(3) This proposed section would allow licensees to use unsealed byproduct material to prepare (including compound) radioactive drugs by physician authorized users who meet § 35.920, authorized nuclear pharmacists, or individuals under their supervision. The NRC is using the phrase "prepare radioactive drugs" in a general sense to include: (a) using radionuclide generators and nonradioactive reagent kits to produce radioactive drugs and (b) using byproduct material and other basic ingredients to compound radioactive drugs.

(4) This proposed section would require a physician authorized user who wants to prepare radioactive drugs to meet the requirements specified in existing § 35.920. Training and experience requirements specified in existing §§ 35.910 and 35.930, although adequate to administer byproduct material, would not be sufficient for preparing radioactive drugs. Similar training and experience requirements for authorized nuclear pharmacists are proposed in § 35.980.

(5) This proposed section would also allow an individual under the supervision of a physician authorized user or an authorized nuclear pharmacist to use byproduct material to prepare (including compound) radioactive drugs. A part 35 medical use licensee operating a nuclear pharmacy to prepare radioactive drugs for use within the licensee's facility would not be required to obtain a part 32 license, unless the nuclear pharmacy transfers radioactive drugs for commercial distribution. The proposed rule language in § 35.25 would require the supervising physician authorized user or authorized nuclear pharmacist to instruct the individual on radiation safety principles and procedures and would require the individual to follow the procedures.

(6) The Commission recognizes that, in the course of patient care or in the conduct of research procedures, it is sometimes necessary to transfer a dosage of a radioactive drug, on a case-by-case basis, from one medical use licensee to another medical use licensee. These case-specific transfers would not be considered commercial transfers by the NRC and, therefore, would not require a part 32 license. Licensees should be aware that other than infrequent transfers may require a license for commercial transfer of byproduct material.

Section 35.200 Use of Unsealed Byproduct Material for Imaging and Localization Studies

Paragraph (a) of the current § 35.200 restricts medical use licensees to use byproduct material in a radiopharmaceutical for which the FDA has accepted an IND or approved an NDA. The effect of this restriction is to prohibit a licensee from using other types of radioactive drugs such as those approved by a Radioactive Drug Research Committee (RDRC), unless a license amendment is received that authorizes such use. Furthermore, paragraphs (b) and (c) of the current section require licensees to follow the manufacturer's instructions for eluting radionuclide generators and preparing reagent kits unless a departure is directed by a physician authorized user.

The Commission believes that these restrictions can be eased without compromising the level of protection of public health and safety against radiological hazards because of certain conditions which must be met (discussed below). In addition, the Commission recognizes that physicians have the primary responsibility for the diagnosis and treatment of their patients or human research subjects and recognizes that the nuclear pharmacists have the primary responsibility for the preparation of radioactive drugs. Commission regulations are predicated on the assumption that properly trained and adequately informed physicians and pharmacists will make decisions that are in the best interest of their patients or human research subjects. Furthermore, the pharmacological aspects of radioactive drugs, including drug safety and efficacy, are regulated by the FDA.

Detailed discussions of proposed changes are presented below.

(1) The Commission is proposing to use the term "unsealed byproduct material" instead of the term "radiopharmaceutical" in this proposed

section to avoid the connotation that the Commission is regulating drug safety and efficacy. Also, this phrase includes "IND" and "NDA," as specified in the existing § 35.200, and other radioactive drugs containing byproduct material that are not specified in the existing § 35.200.

(2) This proposed modification would provide medical use licensees with the maximum flexibility to use any byproduct material for medical use provided that the material is: (a) obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or (b) prepared by an authorized nuclear pharmacist, a physician authorized user who meets the training requirements specified in § 35.920, or an individual under supervision of either, as specified in proposed § 35.25.

(3) The supplier or preparer of unsealed byproduct material for medical use would be specified under this section. A licensee may obtain byproduct material from a manufacturer or a commercial nuclear pharmacy.

(4) This proposed section would allow licensees to use unsealed byproduct material to prepare (including compound) radioactive drugs by physician authorized users who meet § 35.920, authorized nuclear pharmacists, or individuals under their supervision. The NRC is using the phrase "prepare radioactive drugs" in a general sense to include: (a) using radionuclide generators and nonradioactive reagent kits to produce radioactive drugs; and (b) using byproduct material and other basic ingredients to compound radioactive drugs.

(5) This proposed section would also allow an individual under the supervision of a physician authorized user or an authorized nuclear pharmacist to use byproduct material to prepare (including compound) radioactive drugs. The proposed rule language in § 35.25 would require the supervising physician authorized user or authorized nuclear pharmacist to instruct the individual on radiation safety principles and procedures and would require the individual to follow the procedures.

(6) The Commission recognizes that, in the course of patient care or in the conduct of research procedures, it is sometimes necessary to transfer a dosage of a radioactive drug, on a case-by-case basis, from one medical use licensee to another medical use licensee. These case-specific transfers would not be considered commercial transfers by the NRC and, therefore, would not require a part 32 license.

Section 35.300 Use of Unsealed Byproduct Material for Therapeutic Administration

Paragraph (a) of the current § 35.300 restricts medical use licensees to use byproduct material in a radiopharmaceutical for which the FDA has accepted an IND or approved an NDA. Also, this paragraph requires licensees to comply with the package insert instructions regarding indications and method of administration unless a departure is directed by a physician authorized user.

While recognizing that therapeutic dosages result in greater radiation exposure, the Commission believes that these restrictions can be eased without compromising the level of protection of public health and safety against radiological hazards because of certain conditions which must be met (discussed below). In addition, the Commission recognizes that physicians have the primary responsibility for the diagnosis and treatment of their patients or human research subjects. Commission regulations are predicated on the assumption that properly trained and adequately informed physicians will make decisions that are in the best interest of their patients or human research subjects. Furthermore, the pharmacological aspects of radioactive drugs, including drug safety and efficacy, are regulated by the FDA.

Detailed discussions of proposed changes are presented below.

(1) The Commission is proposing to use the term "unsealed byproduct material" instead of the term "radiopharmaceutical" in this proposed section to avoid the connotation that the Commission is regulating drug safety and efficacy. Also, this phrase includes "IND" and "NDA," as specified in the existing § 35.300, and other radioactive drugs containing byproduct material that are not specified in the existing § 35.300.

(2) This proposed modification would provide medical use licensees with the maximum flexibility to use any byproduct material for medical use provided that the material is: (a) obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or (b) prepared by an authorized nuclear pharmacist, a physician authorized user who meets the training requirements specified in § 35.920, or an individual under supervision of either, as specified in proposed § 35.25.

(3) The supplier or preparer of unsealed byproduct material for medical use would be specified under this section. A licensee may obtain byproduct material from a manufacturer or a commercial nuclear pharmacy.

(4) This proposed section would allow licensees to use unsealed byproduct material to prepare (including compound) radioactive drugs by physician authorized users who meet § 35.920, authorized nuclear pharmacists, or individuals under their supervision.

(5) This proposed section would also allow an individual under the supervision of a physician authorized user or an authorized nuclear pharmacist to use byproduct material to prepare (including compound) radioactive drugs. The proposed rule language in § 35.25 would require the supervising physician authorized user or authorized nuclear pharmacist to instruct the individual on radiation safety principles and procedures and would require the individual to follow the procedures.

(6) The Commission recognizes that, in the course of patient care or in the conduct of research procedures, it is sometimes necessary to transfer a dosage of a radioactive drug, on a case-by-case basis, from one medical use licensee to another medical use licensee. These case-specific transfers would not be considered commercial transfers by the NRC and, therefore, would not require a part 32 license.

Section 35.900 Radiation Safety Officer

The Commission is proposing to modify this section to recognize the certification in nuclear medicine by the Royal College of Physicians and Surgeons of Canada and in radiation oncology physics by the American Board of Medical Physics.

Section 35.910 Training for Uptake, Dilution, and Excretion Studies

The Commission is proposing, as recommended by the ACMUI, to modify this section to recognize the certification in nuclear medicine by the Royal College of Physicians and Surgeons of Canada.

Section 35.920 Training for Imaging and Localization Studies

The Commission is proposing, as recommended by the ACMUI, to modify this section to recognize the certification in nuclear medicine by the Royal College of Physicians and Surgeons of Canada.

Section 35.930 Training for Therapeutic Use of Unsealed Byproduct Material

The Commission is proposing to amend § 35.930(a)(2) to recognize the

certification in radiation oncology by the American Board of Radiology (ABR). In 1987, the ABR renamed "therapeutic radiology" as "radiation oncology" but the criteria for certification remain the same. Therefore, it is necessary to recognize both certifications.

Section 35.940 Training for Use of Brachytherapy Sources

The Commission is proposing to amend § 35.940(a)(1) to recognize the certification in radiation oncology by the American Board of Radiology (ABR).

Section 35.950 Training for Use of Sealed Sources for Diagnosis

The Commission is proposing to amend § 35.950(a)(1) to recognize the certification in radiation oncology by the American Board of Radiology (ABR) and the certification in nuclear medicine by the Royal College of Physicians and Surgeons of Canada.

Section 35.960 Training for Teletherapy

The Commission is proposing to amend § 35.960(a)(1) to recognize the certification in radiation oncology by the American Board of Radiology (ABR).

Section 35.961 Training for Teletherapy Physicist

The Commission is proposing to modify this section to recognize the certification in radiation oncology physics by the American Board of Medical Physics.

Section 35.972 Recentness of Training

Existing § 35.972 required that an individual's training must have been acquired within the last 5 years. The Board of Pharmaceutical Specialties (BPS) recertifies board certified nuclear pharmacists (BCNP) every 7 years. Based on BPS's 11 years experience with recertification, the Commission is proposing to replace 5 years with 7 years. This action is necessary to achieve consistency for recentness of training requirements among authorized users, Radiation Safety Officers, teletherapy physicists, and authorized nuclear pharmacists. The Commission is requesting public comment on which period (either 5 or 7 years) is more appropriate and the basis for any recommendation.

Section 35.980 Training for Authorized Nuclear Pharmacist

The Commission is proposing to add a new section that would contain specific training requirements for an authorized nuclear pharmacist. This action is necessary because an authorized nuclear pharmacist may be responsible for handling, preparing, and distributing radioactive drugs to multiple medical institutions. Thus, authorized nuclear pharmacists potentially impact the radiological safety of patients or human research subjects at many medical institutions. The effect of these training requirements will provide sufficient assurance that individuals satisfying these training criteria will safely prepare and distribute radioactive drugs.

In this section, the Commission is proposing two methods for an individual to qualify as an authorized nuclear pharmacist:

(1) In paragraph (a), the Commission is proposing to recognize certification by the Board of Pharmaceutical Specialties as a nuclear pharmacist as satisfying the training requirements.

(2) In paragraph (b), in lieu of board certification, an alternative method to qualify for an authorized nuclear pharmacist is proposed. A candidate would be required to: (i) Complete 700 hours in a structured educational program consisting of both didactic training and supervised experience in a nuclear pharmacy, and (ii) obtain a written certification from a preceptor that the candidate has achieved a level of competency sufficient to independently operate a nuclear pharmacy.

Implementation Plan and Agreement State Compatibility

The effective date of this amendment would be 6 months after the publication of the final amendment in the **Federal Register**.

On July 15 and 16, 1992, the NRC held a workshop with representatives of 23 Agreement States to discuss the draft rule language for the proposed rulemaking. The Agreement State participants expressed a clear consensus that this proposed rulemaking be either not an item of compatibility or the lowest level of compatibility possible.

However, because this amendment has safety significance for Agreement State licensees as well as NRC licensees, this proposed amendment would be an item of compatibility for the Agreement States. All definitions contained in §§ 30.4 and 35.2 would be Division 1 items of compatibility. The definitions contained in this rulemaking must be the same for all NRC and Agreement State licensees so that consistency will be maintained.

Additionally, the Commission believes that §§ 32.72, 35.6, 35.22(b)(2), 35.25, 35.50, 35.52, 35.53, 35.920, 35.972 and 35.980 should be Division 2 items of compatibility, because these requirements are necessary to ensure adequate protection of the public health and safety. For example, §§ 35.920 and 35.980 provide the radiation safety training and experience criteria for authorized users and authorized nuclear pharmacists that are important prerequisites for ensuring that byproduct material is handled safely. It should be noted that changing § 35.920 to a Division 2 item of compatibility would impact those authorized users who want to compound radioactive drugs as well as those authorized users who only want to perform imaging procedures currently allowed under § 35.200. The Agreement States would be allowed to establish requirements that are more stringent than NRC's requirements, but not less stringent.

It would be appropriate for Agreement States to adopt the remaining sections of part 35 in this proposed rulemaking, but it is not necessary to require any degree of uniformity between NRC and the States. Therefore, a Division 3 item of compatibility would be appropriate for such sections.

The Commission is currently reevaluating its practices concerning the implementation of the provision in the Atomic Energy Act which provides that the Agreement States' regulatory programs are to be compatible with NRC's. This reevaluation will include early and significant involvement of the Agreement States. At the conclusion of this effort, the Commission will implement generic guidance on the application of compatibility.

For comparison, the existing compatibility levels are as follows: definitions in § 30.4 are Division 1 items of compatibility; § 32.72 is a Division 2 item of compatibility; the definitions associated with the quality management rule and misadministrations in § 35.2 are Division 1 items of compatibility; §§ 35.32 and 35.33 are Division 2 items of compatibility; § 35.8 is a Division 4 item of compatibility; and all other sections of part 35 are Division 3 items of compatibility.

The NRC expects Agreement States to adopt rules required to maintain compatibility within three years after NRC's rules become effective. Some Agreement States, faced with administrative and resource constraints, may find the three year goal difficult to attain and may prefer that NRC extend flexibility in such cases to allow the States to implement the requirements through license conditions. The NRC requests public comment on permitting Agreement States flexibility in this regard, and if permitted, under what conditions.

Finding of No Significant Environmental Impact: Availability

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in subpart A of 10 CFR part 51, that the proposed amendments, if adopted, would not be a major Federal action significantly affecting the quality of the human environment, and therefore an environmental impact statement is not required. The proposed amendments would provide greater flexibility for physician authorized users to use byproduct material in the practice of medicine. The proposed amendments would also incorporate into the regulations the concept of authorized nuclear pharmacists to permit properly qualified pharmacists to prepare radioactive drugs containing byproduct material in the practice of pharmacy.

The proposed amendments would allow physician authorized users greater discretion to prepare and use radioactive drugs containing byproduct material. The proposed amendments would also allow authorized nuclear pharmacists greater discretion to prepare radioactive drugs containing byproduct material. It is expected that there will be no increase in radiation exposure to the public or to the environment beyond the exposures currently resulting from delivering the byproduct material or radiation from byproduct material to patients or human research subjects. The draft environmental assessment and finding of no significant impact on which this determination is based is available for inspection at the NRC Public Document Room, 2120 L Street NW. (Lower Level), Washington, DC. Single copies of the draft environmental assessment and the finding of no significant impact are available from Samuel Z. Jones or Anthony N. Tse (see FOR FURTHER INFORMATION CONTACT heading).

Paperwork Reduction Act Statement

This proposed rule amends information collection requirements that are subject to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq). This rule has been submitted to the Office of Management and Budget for review and approval of the paperwork requirements.

The reduction in public burden for this collection of information is estimated to be a savings of 420 hours per year for 300 NRC licensees, or an average 1.4 hours per year per licensee, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to the Information and Records Management Branch (MNBB–7714), U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB–3019 (3150–0001, -0010, and -0120), Office of Management and Budget, Washington, DC 20503.

Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the benefits and impacts considered by the Commission. The draft regulatory analysis is available for inspection at the NRC Public Document Room at 2120 L Street NW. (Lower Level), Washington, DC. Single copies of the draft analysis are available from Samuel Z. Jones or Anthony N. Tse (see FOR FURTHER INFORMATION CONTACT heading).

The Commission requests public comments on the draft regulatory analysis. Comments on the draft regulatory analysis may be submitted to the NRC as indicated under the ADDRESSES heading.

Regulatory Flexibility Certification

As required by the Regulatory Flexibility Act of 1980, 5 U.S.C. 605(b), the Commission certifies that, if adopted, this proposed rule would not have a significant economic impact on a substantial number of small entities. This proposed rule would affect medical use licensees including some private practice physicians. Some of these licensees would be considered small entities under the NRC's size standards (56 FR 56672; November 6, 1991). The proposed amendments would provide greater discretion for physician authorized users to use byproduct material in the practice of medicine. The proposed amendments would also incorporate into the regulations the concept of authorized nuclear pharmacists to allow properly qualified pharmacists greater discretion to prepare (including compound) radioactive drugs containing byproduct material for medical use. This rulemaking, if adopted, would reduce regulatory burdens on medical use licensees, including small entities.

Any small entity subject to this regulation who determines that, because of its size, it is likely to bear a disproportionate adverse economic impact should notify the Commission by a letter that indicates the following:

(a) The licensee's size and how the proposed regulation would result in a significant economic burden or whether the resources necessary to implement this amendment could be more effectively used in other ways to optimize the safety of patients or human research subjects, as compared to the economic burden on a larger licensee;

(b) How the proposed regulation could be modified to take into account the licensee's differing needs or capabilities;

(c) The benefits that would accrue, or the detriments that would be avoided, if the proposed regulation were modified as suggested by the licensee;

(d) How the proposed regulation, as modified, could more closely equalize the impact of NRC regulations or create more equal access to the benefits of Federal programs as opposed to providing special advantages to any individual or group;

(e) How the proposed regulation, as modified, would still adequately protect the public health and safety.

Backfit Analysis

The Commission has determined that the backfit rule, 10 CFR 50.109, does not apply to this proposed amendment because this amendment does not involve any provisions which would impose backfits as defined in 10 CFR 50.109(a)(1). Therefore, a backfit analysis is not required for this proposed amendment.

List of Subjects

10 CFR Part 30

Byproduct material, Criminal penalty, Government contracts, Intergovernmental relations, Isotopes, Nuclear materials, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 32

Byproduct material, Labeling, Nuclear materials, Criminal penalty, Radiation protection, Reporting and recordkeeping requirements.

10 CFR Part 35

Byproduct material, Criminal penalty, Drugs, Health facilities, Health professions, Incorporation by reference, Medical devices, Nuclear materials, Occupational safety and health, Radiation protection, Reporting and recordkeeping requirements.

For the reasons set out in the preamble and under the authority of the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974, as amended, and 5 U.S.C. 553, the

Commission is proposing to adopt the following amendments to 10 CFR parts 30, 32, and 35.

PART 30—RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

1. The authority citation for part 30 continues to read as follows:

Authority: Secs. 81, 82, 161, 182, 183, 186, 68 Stat. 935, 948, 953, 954, 955, as amended, sec. 234, 83 Stat. 444, as amended (42 U.S.C. 2111, 2112, 2201, 2232, 2233, 2236, 2282); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5846).

Section 30.7 also issued under Pub. L. 95–601, sec. 10, 92 Stat. 2951 (42 U.S.C. 5851). Section 30.34(b) also issued under sec. 184, 68 Stat. 954, as amended (42 U.S.C. 2234). Section 30.61 also issued under sec. 187, 68 Stat. 955 (42 U.S.C. 2237).

2. In § 30.4, the definition of *medical use* is revised to read as follows:

§ 30.4 Definitions.

* * * * *

Medical use means the intentional internal or external administration of byproduct material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

* * * * *

3. In § 30.8, paragraphs (b) and (c) are revised to read as follows:

§ 30.8 Information collection requirements: OMB approval.

* * * * *

(b) The approved information collection requirements contained in this part appear in §§ 30.9, 30.11, 30.15, 30.19, 30.20, 30.32, 30.34, 30.35, 30.36, 30.37, 30.38, 30.41, 30.50, 30.51, 30.55, and Appendix A.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In §§ 30.32, 30.37, and 30.38, NRC Form 313 is approved under control number 3150–0120.

(2) In § 30.36, NRC Form 314 is approved under control number 3150–0028.

§ 30.34 [Amended]

4. Section 30.34 is amended by removing paragraph (i).

PART 32—SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

5. The authority citation for part 32 continues to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

6. In § 32.8, paragraphs (b) and (c) are revised to read as follows:

§ 32.8 Information collection requirements: OMB approval.

* * * * *

(b) The approved information collection requirements contained in this part appear in §§ 32.12, 32.14, 32.15, 32.16, 32.17, 32.18, 32.19, 32.20, 32.22, 32.25, 32.26, 32.29, 32.51, 32.51a, 32.52, 32.53, 32.54, 32.56, 32.57, 32.58, 32.61, 32.70, 32.71, 32.72, and 32.74.

(c) This part contains information collection requirements in addition to those approved under the control number specified in paragraph (a) of this section. These information collection requirements and the control numbers under which they are approved are as follows:

(1) In § 32.11, NRC Form 313 is approved under control number 3150–0120.

(2) [Reserved]

7. Section 32.72 is revised to read as follows:

§ 32.72 Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under part 35.

(a) An application for a specific license to manufacture, prepare, or transfer for commercial distribution radioactive drugs containing byproduct material for use by persons authorized pursuant to part 35 of this chapter will be approved if:

(1) The applicant satisfies the general requirements specified in 10 CFR 30.33;

(2) The applicant submits evidence that the applicant is at least one of the following:

(i) Registered or licensed with the U.S. Food and Drug Administration (FDA) as a drug manufacturer;

(ii) Registered or licensed with a state agency as a drug manufacturer;

(iii) Licensed as a pharmacy by a State Board of Pharmacy; or

(iv) Operating as a nuclear pharmacy within a Federal medical institution.

(3) The applicant submits information on the radionuclide; the chemical and physical form; the maximum activity per vial, syringe, generator, or other container of the radioactive drug; and the shielding provided by the packaging to show it is appropriate for the safe handling and storage of the radioactive drugs by medical use licensees; and

(4) A label is affixed to each container of a radioactive drug to be transferred for commercial distribution. The label must include the name of the radioactive drug or its abbreviation, quantity of radioactivity, and date and time of assay. In addition, the label for the syringe or syringe radiation shield must also contain the clinical procedure to be performed or the patient's or the human research subject's name. Furthermore, the label, or the leaflet or brochure that accompanies the radioactive drug must contain a statement that the U.S. Nuclear Regulatory Commission has approved distribution of the byproduct material to persons licensed to use byproduct material pursuant to 10 CFR 35.100, 35.200, or 35.300, as appropriate, and to persons who hold an equivalent license issued by an Agreement State. The label, or the leaflet or brochure must also note that other regulatory approvals may be required. NRC's labeling requirements are independent of requirements of the U.S. Food and Drug Administration (FDA).

(b) (1) A licensee described by paragraph (a)(2)(iii) or (iv) of this section may prepare radioactive drugs for medical use, as defined in 10 CFR 35.2, provided that the radioactive drug is prepared by either an authorized nuclear pharmacist, as defined in 10 CFR 35.2, or an individual under the supervision of an authorized nuclear pharmacist as specified in 10 CFR 35.25.

(2) In addition, for purposes of this section, an *authorized nuclear pharmacist* is a pharmacist who is currently licensed or registered by a state to practice pharmacy and designated, as of the effective date of the final rule, as an "authorized user" on a nuclear pharmacy license issued by the Commission under this part.

(3) A licensee shall provide to the Commission a copy of the individual's board certification, the license, or the permit, and the state pharmacy licensure or registration, respectively, for each individual within 30 days of the date that the licensee permits, pursuant to this section, the individual to work as an authorized nuclear pharmacist.

(c) A licensee shall possess and use instrumentation to measure the radioactivity of radioactive drugs. The licensee shall have procedures for use of the instrumentation. The licensee shall measure, by direct measurement or by combination of measurements and calculations, the amount of radioactivity

in dosages of alpha-, beta-, or photon-emitting radioactive drugs prior to transfer for commercial distribution. In addition, the licensee shall:

(1) Perform tests before initial use, periodically, and following repair, on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument; and make adjustments when necessary; and

(2) Check each instrument for constancy and proper operation at the beginning of each day of use.

(d) Nothing in this section relieves the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs.

§ 32.73 [Removed]

8. Section 32.73 is removed.

PART 35—MEDICAL USE OF BYPRODUCT MATERIAL

9. The authority citation for part 35 continues to read as follows:

Authority: Secs. 81, 161, 182, 183, 68 Stat. 935, 948, 953, 954, as amended (42 U.S.C. 2111, 2201, 2232, 2233); sec. 201, 88 Stat. 1242, as amended (42 U.S.C. 5841).

10. In § 35.2, the definitions of *authorized nuclear pharmacist* and *pharmacist* are added and the definitions of *authorized user, medical use*, paragraphs (1)(i), (2)(i), (3)(i), (4)(i), (5)(i), (6)(i), and (6)(ii) of the definition of *misadministration;* and the introductory sentence of the definition of *written directive* are revised to read as follows:

§ 35.2 Definitions.

* * * * *

Authorized nuclear pharmacist means a pharmacist who is:

(1) Currently board certified as a nuclear pharmacist by the Board of Pharmaceutical Specialties;

(2) Identified as an authorized nuclear pharmacist on a Commission or Agreement State license that authorizes the use of byproduct material in the practice of nuclear pharmacy; or

(3) Identified as an authorized nuclear pharmacist on a permit issued by a Commission or Agreement State specific licensee of broad scope that is authorized to permit the use of byproduct material in the practice of nuclear pharmacy.

Authorized user means a physician, dentist, or podiatrist who is:

(1) Board certified by at least one of the boards listed in paragraph (a) of §§ 35.910, 35.920, 35.930, 35.940, 35.950, or 35.960;

(2) Identified as an authorized user on a Commission or Agreement State license that authorizes the medical use of byproduct material; or

(3) Identified as an authorized user on a permit issued by a Commission or Agreement State specific licensee of broad scope that is authorized to permit the medical use of byproduct material.

* * * * *

Medical use means the intentional internal or external administration of byproduct material or the radiation therefrom to patients or human research subjects under the supervision of an authorized user.

* * * * *

Misadministration means the administration of:

(1) * * *

(i) Involving the wrong patient or human research subject, or wrong radiopharmaceutical; or

* * * * *

(2) * * *

(i) Involving the wrong patient or human research subject, wrong radiopharmaceutical, or wrong route of administration, or

* * * * *

(3) * * *

(i) Involving the wrong patient or human research subject, or wrong treatment site; or

* * * * *

(4) * * *

(i) Involving the wrong patient or human research subject, wrong mode of treatment, or wrong treatment site;

* * * * *

(5) * * *

(i) Involving the wrong patient or human research subject, wrong radioisotope, or wrong treatment site (excluding, for permanent implants, seeds that were implanted in the correct site but migrated outside the treatment site);

* * * * *

(6) * * *

(i) Involving the wrong patient or human research subject, wrong radiopharmaceutical, wrong route of administration, or when the administered dosage differs from the prescribed dosage; and

(ii) When the dose to the patient or human research subject exceeds 5 rems effective dose equivalent or 50 rems dose equivalent to any individual organ.

* * * * *

Pharmacist means an individual licensed by a State or Territory of the United States, the District of Columbia, or the Commonwealth of Puerto Rico to practice pharmacy.

* * * * *

Written directive means an order in writing for a specific patient or human research subject, dated and signed by an authorized user prior to the administration of a radiopharmaceutical or radiation, except as specified in paragraph (6) of this definition, containing the following information:

* * * * *

11. Section 35.6 is added to read as follows:

§ 35.6 Provisions for research involving human subjects.

A licensee may conduct research involving human subjects using byproduct material provided that the research is conducted, funded, supported, or regulated by another Federal Agency which has implemented the Federal Policy for the Protection of Human Subjects. Otherwise, a licensee shall apply for and receive approval of a specific amendment to its NRC license before conducting such research. Both types of licensees shall, at a minimum, obtain informed consent from the human subjects and obtain prior review and approval of the research activities by an "Institutional Review Board."

12. Section 35.7 is added to read as follows:

§ 35.7 FDA, other Federal, and State requirements.

Nothing in this part relieves the licensee from complying with applicable FDA, other Federal, and State requirements governing radioactive drugs or devices.

§ 35.8 [Amended]

13. In § 35.8, paragraph (b) is revised to read as follows:

* * * * *

(b) The approved information collection requirements contained in this part appear in §§ 35.6, 35.12, 35.13, 35.14, 35.21, 35.22, 35.23, 35.29, 35.31, 35.50, 35.51, 35.52, 35.53, 35.59, 35.60, 35.61, 35.70, 35.80, 35.92, 35.204, 35.205, 35.310, 35.315, 35.404, 35.406, 35.410, 35.415, 35.606, 35.615, 35.630, 35.632, 35.634, 35.636, 35.641, 35.643, 35.645, 35.647, and 35.980.

* * * * *

14. In § 35.11, paragraph (a) is revised and paragraph (c) is added to read as follows:

§ 35.11 License required.

(a) A person shall not manufacture, produce, acquire, receive, possess, use, or transfer byproduct material for medical use except in accordance with a specific license issued by the Commission or an Agreement State, or as allowed in paragraphs (b) or (c) of this section.

* * * * *

(c) An individual may prepare unsealed byproduct material for medical use in accordance with the regulations in this chapter under the supervision of an authorized nuclear pharmacist or authorized user as provided in § 35.25, unless prohibited by license condition.

15. In § 35.12, paragraph (e) is added to read as follows:

§ 35.12 Application for license, amendment, or renewal.

* * * * *

(e) An applicant that satisfies the requirements specified in 10 CFR 33.13 may apply for a Type A specific license of broad scope.

16. In § 35.13, paragraph (b) is revised to read as follows:

§ 35.13 License amendments.

* * * * *

(b) Before it permits anyone to work as an authorized user or authorized nuclear pharmacist under the license, except an individual who is:

(1) An authorized user certified by the organizations specified in paragraph (a) of §§ 35.910, 35.920, 35.930, 35.940, 35.950, or 35.960;

(2) An authorized nuclear pharmacist certified by the organization specified in paragraph (a) of § 35.980;

(3) Identified as an authorized user or an authorized nuclear pharmacist on a Commission or Agreement State license that authorizes the use of byproduct material in medical use or in the practice of nuclear pharmacy, respectively; or

(4) Identified as an authorized user or an authorized nuclear pharmacist on a permit issued by a Commission or Agreement State specific licensee of broad scope that is authorized to permit the use of byproduct material in medical use or in the practice of nuclear pharmacy, respectively.

* * * * *

17. Section 35.14 is revised to read as follows:

§ 35.14 Notifications.

(a) A licensee shall provide to the Commission a copy of the board certification, the license, or the permit for each individual within 30 days of the date that the licensee permits the individual to work as an authorized user or an authorized nuclear pharmacist pursuant to § 35.13(b)(1) through (b)(4).

(b) A licensee shall notify the Commission by letter within 30 days when:

(1) An authorized user, an authorized nuclear pharmacist, Radiation Safety Officer, or teletherapy physicist permanently discontinues performance of duties under the license or has a name change; or

(2) The licensee's mailing address changes.

(c) The licensee shall mail the documents required in this section to the appropriate address identified in § 30.6 of this chapter.

18. Section 35.15 is added to read as follows:

§ 35.15 Exemptions regarding Type A specific licenses of broad scope.

A licensee possessing a Type A specific license of broad scope for medical use is exempt from the following:

(a) The provisions of § 35.13(b);

(b) The provisions of § 35.13(e) regarding additions to or changes in the areas of use only at the addresses specified in the license;

(c) The provisions of § 35.14(a); and

(d) The provisions of § 35.14(b)(1) for an authorized user or an authorized nuclear pharmacist.

19. In § 35.22, paragraph (b)(2) is revised to read as follows:

§ 35.22 Radiation Safety Committee.

* * * * *

(b) * * *

(2)(i) Review, on the basis of safety and with regard to the training and experience standards in subpart J of this part, and approve or disapprove any individual who is to be listed as an authorized user, an authorized nuclear pharmacist, the Radiation Safety Officer, or a teletherapy physicist before submitting a license application or request for amendment or renewal; or

(ii) Review, pursuant to § 35.13(b)(1) through (b)(4), on the basis of the board certification, the license, or the permit identifying an individual, and approve or disapprove any individual prior to allowing that individual to work as an authorized user or authorized nuclear pharmacist;

* * * * *

20. In § 35.25, paragraph (b) is redesignated as paragraph (c) and a new paragraph (b) is added to read as follows.

§ 35.25 Supervision.

* * * * *

(b) A licensee that permits the preparation of byproduct material for medical use by an individual under the supervision of an authorized nuclear pharmacist or physician who is an authorized user, as allowed by § 35.11(c), shall require the supervising authorized nuclear pharmacist or physician who is an authorized user to:

(1) Instruct the supervised individual in the preparation of byproduct material for medical use and the principles of and procedures for radiation safety and in the licensee's written quality management program, as appropriate to that individual's use of byproduct material;

(2) Require the supervised individual to follow the instructions given pursuant to paragraph (b)(1) of this section and to comply with the regulations of this chapter and license conditions; and

(3) Periodically review the work of the supervised individual as it pertains to preparing byproduct material for medical use and the records kept to reflect that work.

* * * * *

§ 35.27 [Removed]

21. Section 35.27 is removed.

22. In § 35.32, paragraphs (a)(2) and (b)(1)(i) are revised to read as follows:

§ 35.32 Quality management program.

(a) * * *

(2) That, prior to each administration, the patient's or human research subject's identity is verified by more than one method as the individual named in the written directive;

* * * * *

(b) * * *

(1) * * *

(i) A representative sample of patient and human research subject administrations,

* * * * *

23. In § 35.33, paragraphs (a)(2), (a)(3), (a)(4), (b), and (c) are revised to read as follows:

§ 35.33 Notifications, reports, and records of misadministrations.

(a) * * *

(2) The licensee shall submit a written report to the appropriate NRC Regional Office listed in 10 CFR 30.6 within 15 days after discovery of the misadministration. The written report must include the licensee's name; the prescribing physician's name; a brief description of the event; why the event occurred; the effect on the patient of the human research subject; what improvements are needed to prevent recurrence; actions taken to prevent recurrence; whether the licensee notified the patient or the human research subject (or either individual's responsible relative or guardian), and if not, why not, and if the patient or the human research subject (or either individual's responsible relative or guardian) was notified, what information was provided to that individual. The report must not include the patient's or the human research subject's name or other information that could lead to identification of the patient or the human research subject.

(3) The licensee shall notify both the referring physician and the patient or the human research subject (or the patient's or the human research subject's responsible relative or guardian), of the misadministration no later than 24 hours after its discovery, unless the referring physician personally informs the licensee either that he will inform the patient or the human research subject (or either individual's responsible relative or guardian) or that, based on medical judgment, telling the patient or the human research subject (or either individual's responsible relative or guardian) would be harmful to the patient or the human research subject. The licensee is not required to notify the patient or the human research subject (or either individual's responsible relative or guardian) without first consulting the referring physician. If the referring physician or the patient or the human research subject (or the patient's or the human research subject's responsible relative or guardian) cannot be reached within 24 hours, the licensee shall notify the patient or the human research subject (or either individual's responsible relative or guardian) as soon as possible thereafter. The licensee may not delay any appropriate medical care for the patient or the human research subject, including any necessary remedial care as a result of the misadministration, because of any delay in notification.

(4) If the patient or the human research subject (or either individual's responsible relative or guardian) was notified, the licensee shall also furnish, within 15 days after discovery of the misadministration, a written report to the patient or the human research subject (or either individual's responsible relative or guardian) by sending either:

(i) A copy of the report that was submitted to the NRC; or

(ii) A brief description of both the event and the consequences as they may affect the patient or the human research subject, provided a statement is included that the report submitted to the NRC can be obtained from the licensee.

(b) Each licensee shall retain a record of each misadministration for five years. The record must contain the names of all individuals involved (including the prescribing physician, allied health personnel, the patient or the human research subject, and the patient's or human research subject's referring physician), the patient's or the human research subject's social security number or identification number if one has been assigned, a brief description of the misadministration, why it occurred, the effect on the patient or the human research subject, what improvements are needed to prevent recurrence, and the actions taken to prevent recurrence.

(c) Aside from the notification requirement, nothing in this section affects any rights or duties of licensees and physicians in relation to each other, patients or human research subjects (or either individual's responsible relative or guardian).

24. Section 35.49 is revised to read as follows:

§ 35.49 Suppliers for sealed sources or devices for medical use.

A licensee may use for medical use only:

(a) Sealed sources or devices manufactured, labeled, packaged, and distributed in accordance with a license issued pursuant to 10 CFR part 30 and § 32.74 or the equivalent regulations of an Agreement State; or

(b) Teletherapy sources manufactured and distributed in accordance with a license issued pursuant to 10 CFR part 30 or the equivalent regulations of an Agreement State.

25. In § 35.50, paragraphs (a), (b)(3), and (e)(2) through (e)(4) are revised to read as follows:

§ 35.50 Possession, use, calibration, and check of dose calibrators.

(a) A licensee shall possess and use a dose calibrator to measure the activity of dosages of photon-emitting radionuclides prior to administration to each patient or human research subject.

(b) * * *

(3) Test each dose calibrator for linearity upon installation and at least quarterly thereafter over the range of its use between the highest dosage that will be administered to a patient or human research subject and 1.1 megabecquerels (30 microcuries); and

* * * * *

(e) * * *

(2) For paragraph (b)(2) of this section, the model and serial number of the dose calibrator, the model and serial number of each source used, the identity of the radionuclide contained in the source and its activity, the date of the test, the results of the test, and the identity of the individual performing the test.

(3) For paragraph (b)(3) of this section, the model and serial number of the dose calibrator, the calculated activities, the measured activities, the date of the test, and the identity of the individual performing the test.

(4) For paragraph (b)(4) of this section, the model and serial number of the dose calibrator, the configuration of the source measured, the activity measured for each volume measured, the date of the test, and the identity of the individual performing the test.

26. Section 35.52 is added to read as follows:

§ 35.52 Possession, use, calibration, and check of instruments to measure dosages of alpha- or beta-emitting radionuclides.

(a) This section does not apply to unit dosages of alpha- or beta-emitting radionuclides that are obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or equivalent Agreement State requirements.

(b) For other than unit dosages obtained pursuant to paragraph (a) of this section, a licensee shall possess and use instrumentation to measure the radioactivity of alpha- or beta-emitting radionuclides. The licensee shall have procedures for use of the instrumentation. The licensee shall measure, by direct measurement or by combination of measurements and calculations, the amount of radioactivity in dosages of alpha- or beta-emitting radionuclides prior to administration to each patient or human research subject. In addition, the licensee shall:

(1) Perform tests before initial use, periodically, and following repair, on each instrument for accuracy, linearity, and geometry dependence, as appropriate for the use of the instrument; and make adjustments when necessary; and

(2) Check each instrument for constancy and proper operation at the beginning of each day of use.

27. In § 35.53, the section heading and paragraphs (a), (b), (c)(2), and (c)(3) are revised as follows:

§ 35.53 Measurement of dosages of unsealed byproduct material for medical use.

* * * * *

(a) Measure the activity of each dosage of a photon-emitting radionuclide prior to medical use.

(b) Measure, by direct measurement or by combination of measurements and calculations, the activity of each dosage of an alpha- or beta-emitting radionuclide prior to medical use, except for unit dosages obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or equivalent Agreement State requirements;

(c) * * *

(2) Patient's or human research subject's name, and identification number if one has been assigned;

(3) Prescribed dosage and activity of the dosage at the time of measurement, or a notation that the total activity is less than 1.1 megabecquerels (30 microcuries);

* * * * *

28. In § 35.60, paragraphs (b) and (c) are revised to read as follows:

§ 35.60 Syringe shields and labels.

* * * * *

(b) To identify its contents, a licensee shall conspicuously label each syringe, or syringe radiation shield that contains a syringe with a radiopharmaceutical. The label must show the radiopharmaceutical name or its abbreviation, the clinical procedure to be performed, or the patient's or the human research subject's name.

(c) A licensee shall require each individual who prepares a radiopharmaceutical kit to use a syringe radiation shield when preparing the kit and shall require each individual to use a syringe radiation shield when administering a radiopharmaceutical by injection unless the use of the shield is contraindicated for that patient or human research subject.

29. Section 35.75 is revised to read as follows:

§ 35.75 Release of patients or human research subjects containing radiopharmaceuticals or permanent implants.

(a) A licensee may not authorize release from confinement for medical care any patient or human research subject administered a radiopharmaceutical until either:

(1) The measured dose rate from the patient or the human research subject is less than 5 millirems per hour at a distance of one meter; or

(2) The activity in the patient or the human research subject is less than 30 millicuries.

(b) A licensee may not authorize release from confinement for medical care of any patient or human research subject administered a permanent implant until the measured dose rate from the patient or the human research subject is less than 5 millirems per hour at a distance of one meter.

30. Section 35.100 is revised to read as follows:

§ 35.100 Use of unsealed byproduct material for uptake, dilution, and excretion studies.

A licensee may use for uptake, dilution, or excretion studies any unsealed byproduct material prepared for medical use that is either:

(a) Obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or equivalent Agreement State requirements; or

(b) Prepared by an authorized nuclear pharmacist, a physician who is an authorized user and who meets the requirements specified in § 35.920, or an individual under the supervision of either as specified in § 35.25.

31. Section 35.200 is revised to read as follows:

§ 35.200 Use of unsealed byproduct material for imaging and localization studies.

A licensee may use for imaging and localization studies any unsealed byproduct material prepared for medical use that is either:

(a) Obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or equivalent Agreement State requirements; or

(b) Prepared by an authorized nuclear pharmacist, a physician who is an authorized user and who meets the requirements specified in § 35.920, or an individual under the supervision of either as specified in § 35.25.

32. Section 35.300 is revised to read as follows:

§ 35.300 Use of unsealed byproduct material for therapeutic administration.

A licensee may use for therapeutic administration any unsealed byproduct material prepared for medical use that is either:

(a) Obtained from a manufacturer or preparer licensed pursuant to 10 CFR 32.72 or equivalent Agreement State requirements; or

(b) Prepared by an authorized nuclear pharmacist, a physician who is an authorized user and who meets the requirements specified in § 35.920, or an individual under the supervision of either as specified in § 35.25.

33. In § 35.310, the introductory text of paragraph (a), and paragraphs (a)(1) and (a)(5) are revised to read as follows:

§ 35.310 Safety instruction.

(a) A licensee shall provide radiation safety instruction for all personnel caring for the patient or the human research subject receiving radiopharmaceutical therapy and hospitalized for compliance with § 35.75 of this chapter. To satisfy this requirement, the instruction must describe the licensee's procedures for:

(1) Patient or human research subject control;

* * * * *

(5) Notification of the Radiation Safety Officer in case of the patient's or the human research subject's death or medical emergency.

* * * * *

34. In § 35.315, the introductory text of paragraph (a), and paragraphs (a)(2), (a)(3), (a)(5), (a)(6), (a)(7), and (b) are revised to read as follows:

§ 35.315 Safety precautions.

(a) For each patient or human research subject receiving radiopharmaceutical therapy and hospitalized for compliance with § 35.75 of this chapter, a licensee shall:

* * * * *

(2) Post the patient's or the human research subject's door with a "Radioactive Materials" sign and note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or the human research subject's room;

(3) Authorize visits by individuals under age 18 only on a case-by-case basis with the approval of the authorized user after consultation with the Radiation Safety Officer;

* * * * *

(5) Either monitor material and items removed from the patient's or the human research subject's room to determine that their radioactivity cannot be distinguished from the natural background radiation level with a radiation detection survey instrument set on its most sensitive scale and with no interposed shielding, or handle them as radioactive waste.

(6) Provide the patient or the human research subject with radiation safety guidance that will help to keep radiation dose to household members and the public as low as reasonably achievable before authorizing release of the patient or the human research subject.

(7) Survey the patient's or the human research subject's room and private sanitary facility for removable contamination with a radiation detection survey instrument before assigning another patient or human research subject to the room. The room must not be reassigned until removable contamination is less than 200 disintegrations per minute per 100 square centimeters; and

* * * * *

(b) A licensee shall notify the Radiation Safety Officer immediately if the patient or the human research subject dies or has a medical emergency.

35. Section 35.404 is revised to read as follows:

§ 35.404 Release of patients or human research subjects treated with temporary implants.

(a) Immediately after removing the last temporary implant source from a patient or a human research subject, the licensee shall make a radiation survey of the patient or the human research subject with a radiation detection survey instrument to confirm that all sources have been removed. The

licensee may not release from confinement for medical care a patient or a human research subject treated by temporary implant until all sources have been removed.

(b) A licensee shall retain a record of patient or human research subject surveys for three years. Each record must include the date of the survey, the name of the patient or the human research subject, the dose rate from the patient or the human research subject expressed as millirem per hour and measured at one meter from the patient or the human research subject, the survey instrument used, and the initials of the individual who made the survey.

36. In § 35.406, paragraphs (a), (b), and (c) are revised to read as follows:

§ 35.406 Brachytherapy sources inv

(a) Promptly after removing the: from a patient or a human research subject, a licensee shall return brachytherapy sources to the storage area, and count the number returned to ensure that all sources taken from the storage area have been returned.

(b) A licensee shall make a record of brachytherapy source use which must include:

(1) The names of the individuals permitted to handle the sources;

(2) The number and activity of sources removed from storage, the patient's or the human research subject's name and room number, the time and date they were removed from storage, the number and activity of the sources in storage after the removal, and the initials of the individual who removed the sources from storage;

(3) The number and activity of sources returned to storage, the patient's or the human research subject's name and room number, the time and date they were returned to storage, the number and activity of sources in storage after the return, and the initials of the individual who returned the sources to storage.

(c) Immediately after implanting sources in a patient or a human research subject the licensee shall make a radiation survey of the patient or the human research subject and the area of use to confirm that no sources have been misplaced. The licensee shall make a record of each survey.

* * * * *

37. In 35.410, the introductory text of paragraph (a), and paragraphs (a)(3) and (a)(5) are revised to read as follows:

§ 35.410 Safety instruction.

(a) The licensee shall provide radiation safety instruction to all personnel caring for the patient or the human research subject undergoing implant therapy. To satisfy this requirement, the instruction must describe:

* * * * *

(3) Procedures for patient or human research subject control;

* * * * *

(5) Procedures for notification of the Radiation Safety Officer if the patient or the human research subject dies or has a medical emergency.

* * * * *

38. In § 35.415, the introductory text of paragraph (a), and paragraphs (a)(1), (a)(2), (a)(3), (a)(5) and (b) are revised to read as follows:

§ 35.415 Safety precautions.

(a) For each patient or human research subject receiving implant therapy, a licensee shall:

(1) Not quarter the patient or the human research subject in the same room with an individual who is not receiving radiation therapy unless the licensee can demonstrate compliance with the requirements of § 20.105(b) or, for licensees implementing the provisions of §§ 20.1001 through 20.2401, § 20.1301(a) of this chapter at a distance of one meter from the implant;

(2) Post the patient's or human research subject's door with a "Radioactive Materials" sign and note on the door or in the patient's or human research subject's chart where and how long visitors may stay in the patient's or human research subject's room;

(3) Authorize visits by individuals under age 18 only on a case-by-case basis with the approval of the authorized user after consultstion with the Radiation Safety Officer; and

* * * * *

(5) Provide the patient or the human research subject with radiation safety guidance that will help to keep radiation dose to household members and the public as low as reasonably achievable before releasing the individual if the individual was administered a permanent implant.

(b) A licensee shall notify the Radiation Safety Officer immediately if the patient or the human research subject dies or has a medical emergency.

39. In § 35.610, paragraph (a)(1) is revised to read as follows:

§ 35.610 Safety instruction.

(a) * * *

(1) The procedure to be followed to ensure that only the patient or the human research subject is in the treatment room before turning the primary beam of radiation on to begin a treatment or after a door interlock interruption;

* * * * *

40. In § 35.615, paragraphs (d)(3) and (e) are revised to read as follows:

§ 35.615 Safety precautions.

* * * * *

(d) * * *

(3) A radiation monitor must be checked with a dedicated check source for proper operation each day before the teletherapy unit is used for treatment of patients or human research subjects.

* * * * *

(e) A licensee shall construct or equip each teletherapy room to permit continuous observation of the patient or the human research subject from the teletherapy unit console during irradiation.

41. In § 35.900, paragraphs (a)(6) and (a)(7) are added to read as follows:

§ 35.900 Radiation Safety Officer.

* * * * *

(a) * * *

(6) American Board of Medical Physics in radiation oncology physics; or

(7) Royal College of Physicians and Surgeons of Canada in Nuclear Medicine; or

* * * * *

42. In § 35.910, paragraph (a)(4) is added and paragraphs (b)(2)(i), (b)(2)(iii), and (b)(2)(v) are revised to read as follows:

§ 35.910 Training for uptake, dilution, and excretion studies.

* * * * *

(a) * * *

(4) Nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or

(b) * * *

(2) * * *

(i) Examining patients or human research subjects and reviewing their case histories to determine their suitability for radioisotope diagnosis, limitations, or contraindications;

* * * * *

(iii) Administering dosages to patients or human research subjects and using syringe radiation shields;

* * * * *

(v) Patient or human research subject followup; or

* * * * *

43. In § 35.920, paragraph (a)(4) is added and paragraphs (b)(2)(iii), (b)(3)(i), (b)(3)(iii), and (b)(3)(v) are revised to read as follows:

§ 35.920 Training for imaging and localization studies.

* * * * *

(a) * * *

(4) Nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or

(b) * * *

(2) * * *

(iii) Calculating and safely preparing patient or human research subject dosages;

* * * * *

(3) * * *

(i) Examining patients or human research subjects and reviewing their case histories to determine their suitability for radioisotope diagnosis, limitations, or contraindications;

* * * * *

(iii) Administering dosages to patients or human research subjects and using syringe radiation shields;

* * * * *

(v) Patient or human research subject followup; or

* * * * *

44. In § 35.930, the section heading and paragraph (a)(2) are revised to read as follows:

§ 35.930 Training for therapeutic use of unsealed byproduct material.

* * * * *

(a) * * *

(2) The American Board of Radiology in radiology, therapeutic radiology, or radiation oncology; or

* * * * *

45. In § 35.940, paragraph (a)(1) is revised to read as follows:

§ 35.940 Training for use of brachytherapy sources.

* * * * *

(a) * * *

(1) Radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology;

* * * * *

46. In § 35.950, paragraph (a)(1) is revised and (a)(4) is added to read as follows:

§ 35.950 Training for use of sealed sources for diagnosis.

* * * * *

(a) * * *

(1) Radiology, diagnostic radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology;

* * * * *

(4) Nuclear medicine by the Royal College of Physicians and Surgeons of Canada; or

* * * * *

47. In § 35.960, paragraphs (a)(1) and (b)(3)(iii) are revised to read as follows:

§ 35.960 Training for teletherapy.

* * * * *

(a) * * *

(1) Radiology, therapeutic radiology, or radiation oncology by the American Board of Radiology;

(b) * * *

(3) * * *

(iii) Calculating the teletherapy doses and collaborating with the authorized user in the review of patients' or human research subjects' progress and consideration of the need to modify originally prescribed doses as warranted by patients' or human research subjects' reaction to radiation; and

* * * * *

48. In § 35.961, paragraph (b) is redesignated as paragraph (c) and a new paragraph (b) is added to read as follows:

§ 35.961 Training for teletherapy physicist.

* * * * *

(b) Is certified by the American Board of Medical Physics in radiation oncology physics; or

* * * * *

49. Section 35.972 is revised to read as follows:

§ 35.972 Recentness of training.

The training and experience specified in this subpart must have been obtained within the seven years preceding the date of application or the individual must have had related continuing education and experience since the required training and experience was completed.

50. Section 35.980 is added to subpart J to read as follows:

§ 35.980 Training for an authorized nuclear pharmacist.

The licensee shall require the authorized nuclear pharmacist to be a pharmacist who:

(a) Has current board certification as a nuclear pharmacist by the Board of Pharmaceutical Specialties, or

(b)(1) Has completed 700 hours in a structured educational program consisting of both:

(i) Didactic training in the following areas:

(A) Radiation physics and instrumentation;

(B) Radiation protection;

(C) Mathematics pertaining to the use and measurement of radioactivity;

(D) Chemistry of byproduct material for medical use; and

(E) Radiation biology; and

(ii) Supervised experience in a nuclear pharmacy involving the following:

(A) Shipping, receiving, and performing related radiation surveys;

(B) Using and performing checks for proper operation of dose calibrators, survey meters, and, if appropriate, instruments used to measure alpha- or beta-emitting radionuclides;

(C) Calculating, assaying, and safely preparing dosages for patients or human research subjects;

(D) Using administrative controls to avoid mistakes in the administration of byproduct material;

(E) Using procedures to prevent or minimize contamination and using proper decontamination procedures; and

(2) Has obtained written certification, signed by a preceptor authorized nuclear pharmacist, that the above training has been satisfactorily completed and that the individual has achieved a level of competency sufficient to independently operate a nuclear pharmacy.

Dated at Rockville, Maryland, this 10th day of June, 1993.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

[FR Doc. 93-14152 Filed 6-16-93; 8:45 am]

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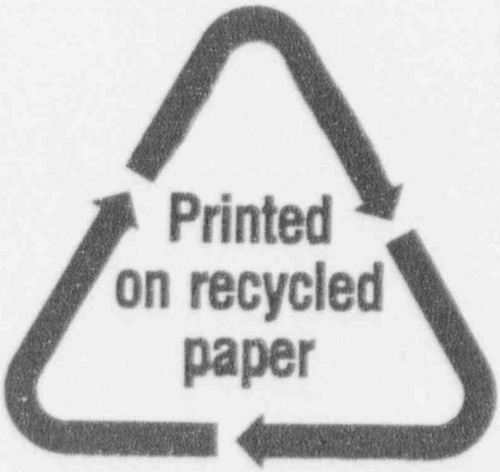

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Draft Regulatory Analysis
For Proposed Rulemaking Entitled
"Preparation, Transfer for Commercial Distribution,
and Use of Byproduct Material for Medical Use"
10 CFR Parts 30, 32, and 35

1. Background

1.1 Statement of the Problem

A petition for rulemaking (PRM-35-9) concerning the medical use of byproduct material was submitted jointly by the American College of Nuclear Physicians (ACNP) and the Society of Nuclear Medicine (SNM). The petition requested that the NRC amend its regulations to fully recognize the role of licensed nuclear pharmacists and physicians. The petition addressed issues related to the preparation and use of radioactive drugs containing byproduct material for diagnostic, therapeutic, or research purposes. In addition, certain portions of the existing regulations in Parts 32 and 35 need to be updated, clarified, or simplified. This proposed rulemaking has been prepared in response to the petition and to provide miscellaneous amendments to update or clarify the existing regulations.

1.2 NRC's Policy Statement on the Medical Use of Radioisotopes

In a policy statement published on February 9, 1979 (44 FR 8242), entitled "Regulation of the Medical Uses of Radioisotopes; Statement of General Policy," the NRC stated:

1. The NRC will continue to regulate the medical uses of radioisotopes as necessary to provide for the radiation safety of workers and the general public.

2. The NRC will regulate the radiation safety of patients where justified by the risk to patients and where voluntary standards, or compliance with these standards, are inadequate.

3. The NRC will minimize intrusion into medical judgments affecting patients and into other areas traditionally considered to be a part of the practice of medicine.

In conformance with this policy, the Commission proposes to eliminate certain restrictions in the NRC regulations regarding the preparation and use of byproduct material for medical use. In addition, the Commission proposes to provide the authority to licensees to conduct research involving human subjects and to use radiolabeled biologics. The Commission believes that these restrictions can be eliminated without compromising the level of protection of public health and safety against radiological hazards. The Commission recognizes that physicians have the primary responsibility for the diagnosis and treatment of their patients and recognizes that the nuclear pharmacists have the primary responsibility for the preparation of radioactive drugs. NRC regulations are predicated on the assumption that properly trained and adequately informed physicians and pharmacists will make decisions that are in the best interest of their patients. Furthermore, the pharmacological aspects of radioactive drugs, including drug safety and efficacy, are regulated by the U.S. Food and Drug Administration (FDA).

1.3 Earlier NRC Actions

Following receipt of the petition, the NRC, in consultation with the FDA, determined that some issues of the petition should be addressed promptly. On August 23, 1990 (55 FR 34513), the Commission published an Interim Final Rule to allow, for a period of 3 years, the use of therapeutic radiopharmaceuticals for indications not listed in the package insert and to allow departures from the manufacturer's instructions for preparing diagnostic radiopharmaceuticals using radionuclide generators and reagent kits, provided that certain recordkeeping requirements were met. Based on the records collected from the affected licensees, both the NRC and FDA staff agreed that the major trends in departures that may be identified by the recordkeeping are already discernible and collecting additional data is unnecessary. On October 2, 1992 (57 FR 45566), the NRC published a rule eliminating the recordkeeping requirements.

In a parallel effort, the NRC continued to work on the remaining issues in the petition. On August 7, 1991, the NRC conducted a workshop in Rosemont, Illinois, presenting strawman language on the training and experience criteria for authorized nuclear pharmacists to representatives of the following organizations: Board of Pharmaceutical Specialties, American Board of Science in Nuclear Medicine, National Association of Boards of Pharmacy, Committee on Radionuclides and Radiopharmaceuticals of the U.S. Council for Energy Awareness, American Pharmaceutical Association, American Society of Hospital Pharmacists, and three graduate schools of pharmacy. Subsequently, the NRC also discussed the proposed resolution of these issues in meetings with the FDA, the NRC's Advisory Committee on the Medical Uses of Isotopes (ACMUI), and the Agreement States. This proposed rulemaking is the evolutionary result of numerous meetings with the aforementioned groups.

2. Objectives

The objective of this proposed rulemaking is to grant the petition and to eliminate certain restrictions in NRC's regulations regarding the medical use of byproduct material without compromising the level of protection of public health and safety against radiological hazards.

Specifically, among other things, the proposed rule would incorporate into NRC's regulations the concept of authorized nuclear pharmacists to allow properly qualified pharmacists greater discretion to prepare (including compound) radioactive drugs containing byproduct material. Also, the proposed rule would allow physician authorized users greater discretion to prepare and use radioactive drugs containing byproduct material, the use of byproduct material in research involving human subjects, and the use of radiolabeled biologics containing byproduct material.

In addition, the proposed rule also contains other miscellaneous and conforming amendments necessary to update or clarify the current regulations.

3. ALTERNATIVES

Two alternatives have been considered for the petition: maintain the status quo or grant the petition.

The first alternative would continue to restrict physicians and pharmacists in the medical use of byproduct material. This alternative would continue to require NRC medical use licensees to meet the current prescriptive regulations which restrict the activities of nuclear physicians in the preparation and use of radioactive drugs. In addition, this alternative would continue to restrict the activities of nuclear pharmacists in the preparation of radioactive drugs. Therefore, this alternative was not further considered.

The second alternative, promulgation of a proposed rule to grant the petition, would provide greater flexibility for physician authorized users to use byproduct material in the practice of medicine. The proposed amendments would also incorporate into the regulations the concept of authorized nuclear pharmacists to allow properly qualified pharmacists to prepare (including compound) radioactive drugs containing byproduct material. The Commission believes that granting this petition would eliminate certain restrictions regarding the medical use of byproduct material without compromising the level of protection of public health and safety against radiological hazards.

4. Brief Descriptions of the Proposed Amendments

In response to the petition for rulemaking, the Commission is proposing to:

1. Allow physician authorized users to use therapeutic radioactive drugs containing byproduct material for indications or methods of administration not listed in the FDA-approved package insert;

2. Allow physician authorized users to use radioactive drugs containing byproduct material for research involving human subjects;

3. Allow physician authorized users to use radiolabeled biologics containing byproduct material;

4. Allow medical use licensees and commercial nuclear pharmacies to depart from the manufacturer's instructions for preparing radioactive drugs using radionuclide generators and reagent kits;

5. Allow medical use licensees and commercial nuclear pharmacies to compound radioactive drugs using byproduct material;

6. Delete the existing regulations related to the nonradioactive reagent kits; and

7. Clarify regulatory requirements for specific licenses of broad scope.

Table 1 summarizes the requests made in the petition and the Commission's responses.

In addition to the proposed amendments in response to the issues raised in the petition, the Commission is proposing related or miscellaneous amendments to Parts 32 and 35. In general, the objective of these proposed amendments is to clarify, update, and simplify the current regulations. Specifically, these proposed amendments include:

1. In Part 32, the Commission is proposing to replace the word "radiopharmaceutical" with the term "radioactive drug" in proposed § 32.72. This change is necessary to include both radiopharmaceuticals and radiolabeled biologics in Part 32.

2. In Part 35, whenever applicable, the Commission is proposing to use the terms "unsealed byproduct material for medical use" or "radioactive drug" instead of "radiopharmaceutical." This proposed change is intended to indicate that the Commission's regulations regarding the medical use of byproduct material are focused on radiation safety and are separate from FDA's regulations regarding radiopharmaceuticals. However, to prevent massive changes in Part 35, the word "radiopharmaceutical" will continue to be used in the sections for which modifications are not proposed. Thus, the word "radiopharmaceutical" would be equivalent to "unsealed byproduct material for medical use" or "radioactive drug" in the sections that are not modified by this proposed rule.

3. The Commission is proposing to modify the definition of "medical use" in Parts 30 and 35 by replacing the term "human beings" with the term "patients or human research subjects" to include the administration of byproduct material to an individual who is participating in a research procedure. In addition, the Commission proposes to delete the language in the definition of "medical use" that the administration of byproduct material be

Table 1

Summary of Requests in the Petition and the Commission's Responses

Request	Response
Permit authorized users to use radiopharmaceuticals for therapeutic uses not covered in the package insert.	Permit physician authorized users who are qualified for therapeutic administration to use radioactive drugs for therapeutic uses not covered in the package insert.
Permit authorized users to use radioactive drugs for research involving human subjects.	Permit physician authorized users to use radioactive drugs for research provided that human research subjects are protected.
Permit authorized users to use radiolabeled biologics.	Permit physician authorized users to use radiolabeled biologics provided that dosages of alpha- or beta-emitting radionuclides are measured.
Permit medical use licensees and pharmacies to depart from package inserts when using generators and kits.	Permit physician authorized users and authorized nuclear pharmacists who meet certain training and experience criteria to depart from package inserts when using generators and kits.
Permit medical use licensees and pharmacies to use byproduct material to compound radioactive drugs.	Permit physician authorized users and authorized nuclear pharmacists who meet certain training and experience criteria to prepare (including compound) radioactive drugs.
Permit nuclear pharmacists to prepare reagent kits.	Delete NRC regulations on reagent kits which do not contain byproduct material. Thus, nuclear pharmacists would be able to prepare reagent kits under applicable law.
Clarify requirements on licenses of broad scope.	Clarify the requirements by adding two exemptions in Part 35.

in the practice of medicine in accordance with a license to practice medicine. The definition of other terms in Part 35 (e.g., physician) include this licensing concept.

With this proposed definition, applicable requirements in Part 35, such as misadministration reporting and quality management program, would also apply to human research subjects; thus, an equivalent level of protection would be provided for both patients and human research subjects.

4. In Part 32, the Commission is proposing to clarify the existing regulations regarding the labeling of syringes, vials, generators, or other containers of radioactive drugs. This proposed change is necessary to avoid confusion over the types of information to be submitted.

5. In Part 32, the Commission is proposing to delete the text in 32.72(b) because it is out of date.

6. In discussing the proposed regulations concerning transfer of radioactive drugs, the Commission has noted later in this preamble that it is sometimes necessary to transfer a dosage of a radioactive drug on a case-by-case basis from one medical use licensee to another medical use licensee. These case-specific transfers would not be considered commercial transfers by the NRC and, therefore, would not require a Part 32 license.

7. In Part 35, the Commission is proposing to change the lower limit for testing dose calibrators for linearity from 0.37 Megabecquerel (10 microcuries) to 1.1 Megabecquerels (30 microcuries) for consistency with 10 CFR 35.32, "Quality Management Program."

8. In regard to the accuracy, linearity, and geometry tests of dose calibrators, the Commission is proposing to replace the requirement for the Radiation Safety Officer's (RSO) signature with the requirement for the identity of the individual actually performing these tests. This proposed change is necessary to identify the individual who actually performed these tests. Furthermore, this change would provide additional time for the RSO to devote to other radiation safety issues. However, this change would not affect the responsibilities of the RSO that are defined in existing 10 CFR 35.21.

9. The Commission is proposing to update the regulations by recognizing several certification boards in the training and experience requirements.

10. The Commission is proposing that licensees may allow authorized users and authorized nuclear pharmacists who meet certain requirements to use byproduct material without the licensee first obtaining a license amendment from the NRC. Therefore, the Commission is proposing to delete the provisions in Part 35 addressing visiting authorized users.

11. The Commission is proposing to modify the requirements for recentness of training of certain authorized users.

12. The Commission is proposing to add requirements regarding the preparation of byproduct material for medical use under the supervision of a physician authorized user and to provide comparable requirements regarding the supervisory responsibilities of authorized nuclear pharmacists.

13. The responsibilities of the Radiation Safety Committee would be modified to reflect the activities which the proposed changes to Part 35 would authorize.

5. ESTIMATION OF COST IMPACT

5.1 GENERAL DISCUSSION

The NRC has about 2,000 medical use licensees (licensed under Part 35) and about 50 licensees who manufacture or prepare radioactive drugs (licensed under Part 32). Agreement States have approximately twice the NRC's licensees mentioned above. It is expected that the requirements proposed in this rulemaking would be a matter of compatibility for the Agreement States: all proposed definitions contained in §§ 30.4 and 35.2 would be Division 1 items of compatibility; proposed sections 32.72, 35.6, 35.22(b)(2), 35.25, 35.50, 35.52, 35.53, 35.920, 35.972 and 35.980 would be Division 2 items of compatibility; and the remaining proposed sections in Part 35 would be Division 3 items of compatibility.

The cost estimates shown below are for affected NRC licensees only. Therefore, the total cost impacts (i.e., for NRC and Agreement State licensees) associated with this proposed rule would be approximately 3 times the cost to the affected NRC licensees.

The cost estimates are based on the following:

o	Fee per license amendment	$460
o	Unit labor costs (unloaded)	
	For licensee staff - Physician*	$85/hour
	- Scientific staff* (e.g. nuclear pharmacists)	$50/hour
	- Technical staff* (e.g. medical technologists)	$30/hour
	- Clerical staff	$15/hour
	For NRC (and Agreement State) staff*	$50/hour

* Includes prorated amounts for clerical staff.

5.2 IMPACTS TO AFFECTED NRC LICENSEES

Each section of the proposed rule has been evaluated in terms of the cost impact (i.e., increase, decrease, or no change as compared to the cost under existing situations) to affected licensees. In calculating the cost impacts, the cost savings are expressed as positive (+) values and the cost increases as negative (-) values. The cost impact of each proposed section is discussed below except for those sections that obviously have no cost impacts. Table 2 is a summary of the impact to affected licensees for each proposed section.

5.2.1 PART 30 - RULES OF GENERAL APPLICABILITY TO DOMESTIC LICENSING OF BYPRODUCT MATERIAL

§ 30.34 Terms and conditions of licenses.

The proposed amendment would delete paragraph § 30.34(i) in its entirety. Under the existing paragraph, licensees are permitted to depart from FDA-approved package inserts. Under the proposed rule, this permission would be moved to Part 32 for commercial nuclear pharmacies and to Part 35 for medical use licensees. Therefore, there would be no cost impact associated with this proposed amendment.

Table 2

Summary of Impacts to NRC Licensees

Proposed Section No.	No. of Amend, permission, or Record, etc./yr	Hours	$/hr	Fee	Impact/yr Savings: + Costs: -
Part 30					
30.4	No cost (See footnote 1)				
30.34(i)	No cost (See 5.2.1 of this analysis)				
Part 32					
32.72(a)	No cost (See footnote 2)				
32.72(b)	20 license amendments eliminated	4 hours	$50	$460	+ $13,200
	50 license amendments eliminated	2 hours	$50	$460	+ $28,000
	50 notifications required	1/2 hour	$30	----	- $750
32.72(c)	No cost (See 5.2.1 of this analysis)				
32.72(d)	No cost (See footnote 3)				
[32.73]	1 license application eliminated	32 hours	$50	$3,600	+ $5,200
32.74	No cost (See footnote 3)				

Table 2 (Continued)

Summary of Impacts to NRC Licensees

Proposed Section No.	No. of Amend, permission, or Record, etc./yr	Hours	$/hr	Fee	Impact/yr Savings: + Costs: -
Part 35					
35.2	No cost (See footnote 1)				
35.6	2 license amendments required	8 hours	$85	$460	- $2,280
35.7	No cost (See footnote 3)				
35.8	No cost (See footnote 2)				
35.11	No cost (See footnote 3)				
35.12	No cost (See footnote 3)				
35.13	200 license amendments eliminated	2 hours	$50	$460	+ $112,000
	10 license amendments required	2 hours	$50	$460	- $5,600
35.14	220 notifications required	1/2 hour	$30	----	- $3,300
35.15	No cost (See footnote 2)				
35.22(b)(2)	No cost (See footnote 2)				
35.2	No cost (See footnote 2)				
[35.27]	100 records eliminated	1/6 hour	$15	----	+ $250
35.49	No cost (See footnote 4)				

Table 2 (Continued)

Summary of Impacts to NRC Licensees

Proposed Section No.	No. of Amend, permission, or Record, etc./yr	Hours	$/hr	Fee	Impact/yr Savings: + Costs: -
35.50	No cost (See footnote 3)				
35.52	No cost (See 5.2.3 of this analysis)				
35.53	No cost (See footnote 2)				
35.100 to 35.300	20 license amendments eliminated	2 hours	$50	$460	+ $11,200
35.610 to 35.972	No cost (See footnote 2)				
35.980	20 certifications required	1 hour	$50	----	- $1,000
Subtotal				Savings	+ $169,350
				Costs	- $ 12,930
Savings (for NRC licensees)					+ $156,920
Total Savings (for NRC and Agreement State licensees)					+ $470,760

Footnotes:

1. This is a definition, thus no cost impact.

2. This is a clarification or update which would not substantively change the current practice.

3. This is to provide a reminder to licensees, to grandfather an existing situation, or to conform with changes made in other sections or chapters.

4. These requirements or a portion of the existing requirements are moved to other sections.

5.2.2 PART 32 - SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL

§ 32.72 Manufacture, preparation, or transfer for commercial distribution of radioactive drugs containing byproduct material for medical use under Part 35.

§ 32.72(b)

(1) Proposed § 32.72(b) would allow commercial nuclear pharmacies to depart from FDA-approved package inserts and to compound radioactive drugs, without obtaining a license amendment from the NRC. Therefore, a cost saving is expected due to the elimination of these license amendments.

Assuming 20 amendments requesting departures or compounding would be eliminated per year and 4 hours of scientific staff's time would be avoided for preparing an application for a license amendment, the cost saving is estimated to be:

20 amend/yr x (4 hrs/amend x $50/hr + $460 fee/amend) = + $13,200/yr.

(2) This proposed paragraph would allow commercial nuclear pharmacies to permit an individual to work as an authorized nuclear pharmacist, without obtaining a license amendment from the NRC, if the individual is: (1) certified by the Board of Pharmaceutical Specialties; (2) listed on a Commission or an Agreement State license; or (3) listed on a permit issued by a specific licensee of broad scope as an authorized nuclear pharmacist. This proposed provision would eliminate a current licensing requirement that requires a licensee to obtain a license amendment from the NRC before permitting an "authorized user" to work.

Assuming 50 amendments requesting to add the names of the "authorized users" would be eliminated per year and 2 hours of scientific staff's time would be avoided for preparing an application for amendment, the cost saving is estimated to be:

50 amend/yr x (2 hr/amend x $50/hr + $460 fee/amend) = + $28,000/yr.

(3) This proposed paragraph would require licensees to provide to the NRC a copy of the individual's board certification, the license, or the permit, and the state pharmacy licensure or registration, respectively, for

each individual within 30 days of the date that the licensee permits, pursuant to this section, the individual to work as an authorized nuclear pharmacist. Therefore, a cost increase is expected due to this proposed notification requirement.

Assuming 50 notifications would be required per year and 1/2 hour of technical staff's time would be needed for preparing a notification, the cost increase is estimated to be:
50 notifications/yr x 1/2 hr/notification x $30/hr = - $750/yr.

§ 32.72(c)

This paragraph is proposed to clarify that Part 32 licensees measure and record dosages of radioactive drugs, including those containing alpha- or beta-emitting radionuclides, before transferring these drugs to a medical use licensee. Currently, these licensees already possess measurement instrumentation, perform the measurements, and record the dosages to provide information required under existing § 32.72(a)(4)(i). Therefore, there would be no cost impact associated with this proposed amendment.

§ 32.73 Manufacture and distribution of generators or reagent kits for preparation of radiopharmaceuticals containing byproduct material.

The section would be deleted in its entirety. This section requires that a licensee shall obtain a specific license from the NRC before the licensee may manufacture or distribute radionuclide generators containing byproduct material or reagent kits. Under the proposed rule, the existing requirements related to radionuclide generators would be moved to the proposed § 32.72. However, the existing requirements related to these reagent kits would be deleted because they do not contain byproduct material. Therefore, a cost saving is expected because the proposed elimination of the application for a license to manufacture or distribute these reagent kits.

The fee for NRC's review of an application to manufacture and distribute a new type of reagent kit is $3,600 per application. Assuming 1 application would be eliminated per year and 32 hours scientific staff's time would be

avoided by the licensee to prepare the application, the cost saving would be:
1 application/yr x (32 hrs/appl x $50/hr + $3,600 fee/appl) = + $5,200/yr.

5.2.3 PART 35 - MEDICAL USE OF BYPRODUCT MATERIAL

§ 35.6 Provisions for research involving human subjects.

This proposed section would allow licensees to conduct research using byproduct material involving human subjects provided that the research is conducted, funded, supported, or regulated by another Federal Agency which has implemented the Federal Policy for the Protection of Human Subjects. Otherwise, a licensee shall apply for and receive approval of a specific amendment to its NRC license before conducting such research. Thus, a cost increase is expected. However, the NRC believes that most human research involving byproduct material is currently conducted, funded, supported, or regulated by another Federal agency.

Assuming 2 license amendments would be needed per year and 8 hours of physician's time would be needed to prepare an application for amendment, the cost increase would be:
2 amend/yr x (8 hr/amend x $85/hr + $460 fee/amend) = - $2,280/yr.

§ 35.13 License amendments

(1) Proposed paragraph (b) of this section would allow medical use licenses to allow an individual to work as an authorized user, without submitting a license amendment to the NRC, if the physician authorized user is: (a) certified by the appropriate certification boards; (b) listed on a Commission or Agreement State license; or (c) listed on a permit of a Commission or Agreement State specific licensee of broad scope. Under current regulations, a license amendment must be obtained before the individual may work as an authorized user (except for a visiting authorized user). Thus, a cost saving is expected due to the elimination of these license amendments.

Assuming 200 license amendments would be eliminated per year and 2 hours of scientific staff's time would be avoided for preparing an application for amendment, the cost saving would be:

200 amend/yr x (2 hr/amend x $50/hr + $460 fee/amend) = + $112,000/yr.

(2) This proposed paragraph would permit medical use licenses to allow an individual to work as an authorized nuclear pharmacist, without submitting a license amendment to the NRC, if the authorized nuclear pharmacist is: (a) certified by the certification board; (b) listed on a Commission or Agreement State license; or (c) listed on a permit of a Commission or Agreement State specific licensee of broad scope.

However, if the individual does not meet the criteria stated above, a license amendment must be obtained by the licensee before the individual can work as an authorized nuclear pharmacist. Thus, a cost increase is expected due to the proposed requirement for these license amendments.

Assuming 10 license amendments would be required per year and 2 hours of scientific staff's time would be needed for preparing an application for amendment, the cost increase would be:

10 amend/yr x (2 hr/amend x $50/hr + $460 fee/amend) = - $5,600/yr

§ 35.14 Notifications.

In addition to the existing notification requirement, the NRC proposes to amend this section to require specific licensees of limited scope to submit a copy of an individual's board certification, the license, or the permit as discussed in § 35.13. Thus, a cost increase is expected.

Assuming 220 notifications would be needed (200 notifications for authorized users and 20 notifications for authorized nuclear pharmacists) and 1/2 hour of technical staff's time would be needed for preparing each notification, the cost increase would be:

220 notification/yr x 1/2 hr/notification x $30/hr = - $3,300/yr.

§ 35.27 Visiting authorized user.

The NRC is proposing to delete this section because, under the proposed rule, the concept of a visiting authorized user would no longer be necessary. Since a recordkeeping requirement in the existing section would also be eliminated, a cost saving is expected.

Assuming 100 records per year would be eliminated and 10 minutes of clerical staff's time would be avoided for each record, the cost saving would be:

100 records/yr x 1/6 hr x $15/hr = + $250/yr.

§ 35.52 Possession, use, calibration, and check of instruments to measure dosages of alpha- or beta-emitting radioactive drugs.

This paragraph is new and would require Part 35 licensees to possess instrumentation to measure the radioactivity of alpha- or beta-emitting radioactive drugs, except for unit doses obtained from manufacturers or commercial nuclear pharmacies. Most alpha- or beta-emitting radionuclides are used in radiolabeled biologics which are still under new drug investigation.

Under current practice, licensees preparing radiolabeled biologics containing alpha- or beta-emitters in their own facilities or purchase qualities of these radiolabeled biologics from manufacturers or commercial nuclear pharmacies other than unit doses already have instrumentations to measure the doses. In addition, licensees who purchase only unit doses would be exempt from this section. Therefore, no cost impact is expected.

§ 35.100 Use of unsealed byproduct material for uptake, dilution, and excretion studies.

§ 35.200 Use of unsealed byproduct material for imaging and localization studies.

§ 35.300 Use of unsealed byproduct material for therapeutic administration.

The proposed amendments in these three sections would allow medical use licensees to compound radioactive drugs using byproduct material without obtaining specific license amendments. Therefore, a cost saving is expected. Departures from FDA-approved package inserts and manufacturers' instructions are already permitted under the Interim Final Rule.

Assuming 20 amendments per year would be eliminated and 2 hours of scientific staff's time would be avoided to prepare each application, the cost savings would be:

20 amend/yr x (2 hr/amend x $50/hr + $460 fee/amend) = + $11,200/yr.

§ 35.980 Training for an authorized nuclear pharmacist.

This proposed section would require authorized nuclear pharmacists to meet the training and experience criteria. Because the criteria proposed in this section are nearly identical to those in the current licensing guidance, there would be no cost impact to implement this section, with an exception of requiring a written certification from preceptors. Thus, a cost increase is expected.

Assuming 20 certifications would be written per year and 1 hour of scientific staff's time would be needed to complete each certification, the cost increase would be:
20 certification/yr x 1 hr/certification x $50/hr = - $1,000/yr.

Total impacts to affected NRC licensees

The cost impact to affected NRC licensees is estimated to be a saving of $156,920 per year (See Table 2).

5.3 IMPACTS TO AFFECTED AGREEMENT STATES LICENSEES

Since Agreement States have approximately twice the NRC's licensees, the impacts for Agreement State licensees associated with this proposed rule would be approximately twice the impact to the affected NRC licensees. Therefore, the savings for Agreement State licensees would be:
2 x $156,920/yr = + $313,840/yr.

5.4 TOTAL IMPACT TO AFFECTED LICENSEES

The impact to both the NRC licensees and Agreement State licensees would be a savings of
$156,920/yr + $313,840/yr = $470,760/yr.

5.4 COST IMPACT TO NRC

The predominant factor affecting the NRC's operating costs as a result of this proposed action is the decreased number of license amendments which will no longer need to be processed by the NRC. However, this impact is already addressed in the cost impact to the licensees and is included as the change in fees charged to the licensees.

5.5 IMPACT TO AGREEMENT STATES

Since the requirements proposed in this rulemaking would be expected to be a matter of compatibility for the Agreement States, each Agreement State would be required to adopt certain sections of the proposed rule. The impact to the Agreement States would be associated with the adoption of certain sections of the proposed rule into their State regulations.

The impact for each Agreement State may be estimated as follows:

o	Draft a proposed rule	40 hours
o	Review by an Advisory Committee	8 hours
o	Send the proposed rule to NRC for review	4 hours
o	Prepare a final rule	20 hours
	Impact for an Agreement State	72 hours

Since there are 29 Agreement States, the total impact to the Agreement States to incorporate certain sections of the proposed rule is estimated to be:

29 Agreement State x 72 hrs/Agreement State x $50/hr = - $104,400.

6. BENEFITS

This proposed rule would benefit the public by permitting medical use licensees to increase the scope of the applications of radioactive drugs and to increase efficiencies in the preparation and use of radioactive drugs. Specifically, this proposed rule would provide physician authorized users greater flexibility in the medical use of byproduct material. Similarly, the proposed rule would permit qualified nuclear pharmacists to use byproduct

material to prepare radioactive drugs. Even though the proposed rule would eliminate certain restrictions related to the medical use of by byproduct material, the NRC believes that additional safeguards against radiological hazards are included in the proposed rule that will continue to ensure adequate protection of public health and safety.

7. DECISION RATIONALE

Based on the above analysis, NRC believes that the proposed rule, if adopted, would provide physician authorized users with greater flexibility to use and would allow authorized nuclear pharmacists to prepare radioactive drugs containing byproduct material. The NRC believes that additional safeguards against radiological hazards are included in the proposed amendments that will continue to ensure adequate protection of public health and safety. Therefore, the NRC is publishing the proposed rule for public comments.

AD 69-1

PDR

DRAFT ENVIRONMENTAL ASSESSMENT FOR PROPOSED AMENDMENTS TO 10 CFR PARTS 30, 32, AND 35, "PREPARATION, TRANSFER FOR COMMERCIAL DISTRIBUTION, AND USE OF BYPRODUCT MATERIAL FOR MEDICAL USE"; FINDING OF NO SIGNIFICANT IMPACT

1. Introduction

The Nuclear Regulatory Commission (NRC) is proposing to amend its regulations for the medical use of byproduct material. This action is necessary to respond to a petition for rulemaking and to fully recognize the role of licensed nuclear pharmacists and physicians. The petition for rulemaking (PRM-35-9) was submitted by the American College of Nuclear Physicians and the Society of Nuclear Medicine. The proposed rule is intended to provide greater flexibility for authorized user physicians to prepare and use radioactive drugs containing byproduct material. The proposed rule would also incorporate into the regulation the concept of authorized nuclear pharmacists to allow properly qualified pharmacists greater discretion to prepare radioactive drugs containing byproduct material.

The major features of the proposed amendments include: (1) allowing medical use licensees to depart from the U.S. Food and Drug Administration (FDA) approved package insert instructions regarding the preparation and use of radioactive drugs; (2) creating the concept of an "authorized nuclear pharmacist" and specifying training and experience requirements; (3) allowing authorized nuclear pharmacists and physician authorized users to use byproduct material to prepare radioactive drugs; (4) allowing the use of byproduct material in research involving human subjects; and (5) allowing the use of radiolabeled biologics.

2. Need for the Amendment: Rejection of the No Action Alternative

The proposed amendments have been developed to grant the petition for rulemaking. The Commission recognizes that physicians have the primary responsibility for the diagnosis and treatment of their patients, and recognizes that the nuclear pharmacists have the primary responsibility for the preparation of radioactive drugs. The Commission's regulations are

predicated on the assumption that properly trained and adequately informed physicians and pharmacists will make decisions that are in the best interest of their patients. Furthermore, the pharmacological aspects of radioactive drugs, including drug safety and efficacy, are regulated by the FDA. Therefore, the proposed amendments would allow physician authorized users greater discretion in the medical use of byproduct material, and allow authorized user physicians and authorized nuclear pharmacists greater discretion to prepare radioactive drugs containing byproduct material.

This no-action alternative is not favored because the Commission's regulations are more restrictive than FDA and State pharmacy regulations. Moreover, the current regulatory philosophy of linking NRC regulations (e.g., 10 CFR 35.200) to FDA approval of package inserts to ensure the radiation safety of radioactive drugs does not allow NRC licensees sufficient flexibility to use or prepare radioactive drugs. The Commission believes that greater flexibility can be provided while continuing adequate protection of public health and safety.

3. Impact on the Public and the Environment

The proposed amendments would have no significant impact on the public and the environment. The additional research activities allowed by the proposed amendments are expected to be small in comparison to the current total activities involving radioactive drugs containing byproduct material. Therefore, the proposed amendments would not cause a significant increase in the total activity. Furthermore, allowing compounding could reduce radiation exposures to workers. For example, allowing the use of specific additives could decrease the volatility of certain radioactive drugs, thus, reducing the concentration of radionuclides in air. In other cases, exposures may increase if a licensee markedly increases the amount of compounding, however, such a scenario is extremely unlikely and the workers are protected under the provisions contained in 10 CFR Part 20. Therefore, it is expected that there would be no increase in radiation exposure to the public, health care workers, or the environment, beyond the exposures currently resulting from the preparation and administration of radioactive drugs containing byproduct

material. Thus, there would be no discernible impact on the public or the environment resulting from the proposed amendments.

4. List of Agencies and Persons Consulted and Identification of Sources Used

The NRC held public meetings concerning the preparation and use of radioactive drugs containing byproduct material. Appropriate suggestions from the meetings have been incorporated in the proposed amendments. The following table lists the date, location, and the groups represented at each meeting.

Public Meetings Held

Date	Location	Groups Represented
08/07/91	Rosemont, IL	Board of Pharmaceutical Specialties American Board of Science in Nuclear Medicine National Association of Boards of Pharmacy Committee on Radionuclides and Radiopharmaceuticals of the U.S. Council for Energy Awareness American Pharmaceutical Association American Society of Hospital Pharmacists Purdue University-School of Pharmacy and Pharmacal Sciences University of New Mexico-College of Pharmacy University of Pittsburgh-School of Pharmacy
07/15/92 07/16/92	Atlanta, GA	Agreement States: AL, AR, AZ, CA, CO, FL, GA, IL, KS, KY, LA, MD, NC, ND, NE, NH, NV, NY (including NY city), OR, SC, TX, UT, WA.
11/07/91 05/08/92 10/23/92	Reston, VA Reston, VA Rockville, MD	Advisory Committee on the Medical Uses of Isotopes

5. Finding of No Significant Impact

The Commission has determined under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in Subpart A of 10 CFR Part 51, that the proposed amendments, if adopted, would not be a major Federal action significantly affecting the quality of the human environment, and therefore an environmental impact statement is not required. The proposed amendments would relax certain requirements and eliminate specific restrictions associated with the medical use of byproduct material. The Commission believes these proposed amendments would provide greater flexibility in the medical use of byproduct material while continuing to adequately protect public health and safety. It is expected that this proposed rule, if adopted, would not cause any significant increase in radiation exposure to the public or radiation release to the environment beyond the exposures or releases currently resulting from the medical use of byproduct material.

cc: Ise
Jones
File ( )

dm

UNITED STATES
NUCLEAR REGULATORY COMMISSION
Office of Public Affairs
Washington, D.C. 20555

No. 93-80
Tel. 301-504-2240

FOR IMMEDIATE RELEASE
(Thursday, June 17, 1993)

AD69-1

P.D.R

NRC PROPOSES CHANGES TO INCREASE FLEXIBILITY IN MEDICAL USES OF NUCLEAR MATERIAL

The Nuclear Regulatory Commission is considering changing its regulations for the medical use of nuclear material to provide greater flexibility for authorized user physicians and qualified pharmacists.

The proposed changes are responsive to a petition for rulemaking submitted to the NRC by the American College of Nuclear Physicians and the Society of Nuclear Medicine. Notice of receipt of the petition and opportunity for public comment was published in the Federal Register on September 15, 1989.

The Commission has already addressed some issues raised in the ACNP-SNM petition by publishing, on August 23, 1990, an interim rule that allows, for a period of three years, specific departures from the package inserts under the direction of a physician authorized user.

Previously, NRC regulations restricted medical use licensees to using or preparing certain radioactive drugs in accordance with the Food and Drug Administration (FDA) approved package inserts, although FDA generally does not require physicians or pharmacists to follow these inserts.

In addition, current NRC regulations do not specifically allow medical use licensees to use byproduct material in research involving human subjects, in radiolabeled biologics (blood and other body materials to which radioactive material has been added) and in preparing radioactive drugs.

In response to the petition, the Commission is proposing to amend its regulations to

(1) Allow departures from FDA-approved package inserts regarding the preparation and use of radioactive drugs by deleting the remaining restrictions of the interim rule published on August 23, 1990;

(2) Include the concept of an "authorized nuclear pharmacist" and specify training and experience requirements;

(3) Allow physician authorized users and authorized nuclear pharmacists to use byproduct material to prepare radioactive drugs;

(4) Allow the use of byproduct material in research involving human subjects; and

(5) Allow the use of radiolabeled biologics containing byproduct material.

The proposed changes also include miscellaneous changes to clarify, update and simplify the current regulations, such as accepting certification in nuclear medicine by the Royal College of Physicians and Surgeons of Canada.

The Commission does not believe that these proposed changes will result in any significant increase in radiation exposure to the public or the environment beyond the exposures currently resulting from medical uses of nuclear material.

Interested persons are invited to submit written comments on the proposed regulations by October 15. The comments should be addressed to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch.

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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

US NRC-RES
DIV REGULATORY APPLICATION
DEPUTY DIVISION DIRECTOR
NL/S-007
WASHINGTON DC 20555

NOTICE OF OFFICE OF MANAGEMENT AND BUDGET ACTION

AD 69-1

PDR

TO: BRENDA JO SHELTON (MNBB-7714)
NRC CLEARANCE OFFICER
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
Nuclear Regulatory Commission

ACTION DATE
08/18/93

ON 07/16/93, YOU REQUESTED APPROVAL OF THE FOLLOWING INFORMATION COLLECTION:
TITLE: SPECIFIC DOMESTIC LICENSES TO MANUFACTURE OR TRANSFER CERTAIN ITEMS CONTAINING BYPRODUCT MATERIAL -- 10 CFR PART 32
AGENCY FORM NOS.:

IN ACCORDANCE WITH THE PAPERWORK REDUCTION ACT, WE HAVE TAKEN THE FOLLOWING ACTION ON THIS INFORMATION COLLECTION:

APPROVED FOR USE THROUGH 05/31/96. OMB NO. 3150-0001.
THE OFFICE OF MANAGEMENT AND BUDGET CONTROL NUMBER MUST BE DISPLAYED IN ACCORDANCE WITH 5 CFR 1320. UNLESS OTHERWISE PROVIDED IN "REMARKS," EXPIRATION DATES MUST ALSO BE DISPLAYED AS REQUIRED BY 5 CFR 1320.

EFFECT ON BURDEN:	RESPONSES	REPORTING HOURS
PREVIOUS STATUS	0	0
NEW STATUS	5,360	24,240
DIFFERENCE	5,360	24,240
EXPLANATION OF DIFFERENCE:		
ADJUSTMENTS		
CORRECTION-ERROR	0	0
CORRECTION-REESTIMATE	0	0
CHANGE IN USE	0	0
PROGRAM CHANGES		
INCREASE	5,360	24,240
DECREASE	0	0

REMARKS:

OMB NO. 3150-0001

ABSTRACT:
RADIOACTIVE MATEIALS, RADIATION SAFETY, BYPRODUCT MATERIAL, NUCLEAR MEDICINE
THE PROPOSED RULE WILL ALLOW PROPERLY QUALIFIED NUCLEAR PHARMACISTS AND AUTHORIZED USERS GREATER DISCRETION IN PREPARING RADIOACTIVE DRUGS WITHOUT SUBMITTING AN APPLICATION.

ALLOWANCE LETTER: NO FUNCTION:
ON PLAN: NO EXCEED BUDGET: NO 3504(H): NPRM
NO. OF FORMS: 1 USE: PUBLIC REQUEST: REINST
RESPONDENTS: 249 RESPONSES: 5,360 HOURS: 1240
AFFECTED PUBLIC: STATE/LCL GOV & BUS/INST & NON-PROFIT INST
SMALL BUSINESS: YES ACTIVITY TYPE:
PURPOSE: REG/COMP
FREQUENCY: OCCAS & QTLY & ANNL & OTHER
COLLECTION METHOD: MAIL S/A
RETENTION: COLLECTION AGENT: RCDKPNG RQT CONFIDENTIALITY: NO
COMPULSORY STATUS: MANDATORY
FEDERAL COST: PUBLIC COST:
REVIEWER: Ron Minsk

ACTION	AUTHORIZING OFFICIAL	TITLE: DEPUTY ADMINISTRATOR	DATE
APPROVED BY:	/S/JAMES B. MACRAE FOR	OFFICE OF INFORMATION	08/18/93
		AND REGULATORY AFFAIRS	

IMPORTANT: BECAUSE THIS INFORMATION COLLECTION HAS BEEN APPROVED, PLEASE SEND TO THE O.M.B. AS SOON AS AVAILABLE: ONE COPY OF THE FINAL PRINTED (OR OTHERWISE REPRODUCED) REPORT FORM, OR REPORTING OR RECORDKEEPING REQUIREMENT, TRANSMITTAL LETTER, INSTRUCTIONS, AND ANY DOCUMENT BEING SENT TO EACH RESPONDENT.

NOTICE OF OFFICE OF MANAGEMENT AND BUDGET ACTION

AD69-1

PDR

TO: BRENDA JO SHELTON (MNBB-7714)
NRC CLEARANCE OFFICER
U.S. NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555
Nuclear Regulatory Commission

ACTION DATE
08/18/93

ON 06/07/93, YOU REQUESTED APPROVAL OF THE FOLLOWING INFORMATION COLLECTION:
TITLE: MEDICAL USE OF BYPRODUCT MATERIAL -- 10 CFR PART 35
AGENCY FORM NOS.:

IN ACCORDANCE WITH THE PAPERWORK REDUCTION ACT, WE HAVE TAKEN THE FOLLOWING ACTION ON THIS INFORMATION COLLECTION:

APPROVED FOR USE THROUGH 08/31/96. OMB NO. 3150-0010.
THE OFFICE OF MANAGEMENT AND BUDGET CONTROL NUMBER MUST BE DISPLAYED IN ACCORDANCE WITH 5 CFR 1320. UNLESS OTHERWISE PROVIDED IN "REMARKS," EXPIRATION DATES MUST ALSO BE DISPLAYED AS REQUIRED BY 5 CFR 1320.

EFFECT ON BURDEN:	RESPONSES	REPORTING HOURS
PREVIOUS STATUS	8,422,955	18,788
NEW STATUS	8,422,955	302,944
DIFFERENCE	0	284,156
		330,201
EXPLANATION OF DIFFERENCE:		
ADJUSTMENTS		
CORRECTION-ERROR	0	0
CORRECTION-REESTIMATE	0	284,156
CHANGE IN USE	0	0
PROGRAM CHANGES		
INCREASE	0	0
DECREASE	0	0

REMARKS:

OMB NO. 3150-0010

ABSTRACT:
'RADIATION SAFETY, RADIOACTIVE DRUGS, NUCLEAR MEDICINE, BYPRODUCT MATERIAL'
THE PROPOSED RULE WILL ALLOW PROPERLY QUALIFIED NUCLEAR PHARMACISTS AND AUTHORIZES USERS GREATER DISCRETION IN PREPARING RADIOACTIVE DRUGS WITHOUT SUBMITTING AN APPLICATION.

ALLOWANCE LETTER: NO FUNCTION:
ON PLAN: NO EXCEED BUDGET: NO 3504(H): NPRM
NO. OF FORMS: 1 USE: PUBLIC REQUEST: REVISION
RESPONDENTS: 2,400 RESPONSES: 8,422,955 HOURS: 302,944
AFFECTED PUBLIC: STATE/LCL GOV & BUS/INST & NON-PROFIT INST
SMALL BUSINESS: YES ACTIVITY TYPE:
PURPOSE: REG/COMP
FREQUENCY: OCCAS & OTHER
COLLECTION METHOD: RKP RQT
RETENTION: 5 YRS COLLECTION AGENT: RCDKPNG RQT CONFIDENTIALITY: NO
COMPULSORY STATUS: MANDATORY
FEDERAL COST: $1,120 PUBLIC COST:
REVIEWER: Ron Minsk

ACTION	AUTHORIZING OFFICIAL	TITLE: DEPUTY ADMINISTRATOR	DATE
APPROVED BY:	/S/JAMES B. MACRAE FOR	OFFICE OF INFORMATION AND REGULATORY AFFAIRS	08/18/93

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