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TITLE: PR-020 - 29FR14756 - STANDARDS FOR PROTECTION AGAINST RADIATION–LABELING OF CONTAINERS

CASE REFERENCE: PR-020

29FR14756

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TITLE 10 - ATOMIC ENERGY

CHAPTER I - ATOMIC ENERGY COMMISSION

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

Labeling of Containers

On October 29, 1964, the Commission published in the FEDERAL REGISTER (29 F.R. 14756) a proposed amendment of 10 CFR Part 20, "Standards for Protection Against Radiation," which would provide in paragraph 20.203(f) a requirement that containers in which greater than specified quantities of licensed material are stored, used or transported must, with certain exceptions, be labeled with information as to kinds and approximate activities of the contained material and dates for which activities are specified. All interested persons were invited to submit written comments and suggestions for consideration in connection with the proposed amendment within sixty days after publication of the notice in the FEDERAL REGISTER. After careful consideration of the comments and other factors involved, the Commission has adopted the rule set forth below.

The amended rule requires that containers of licensed material be labeled with the radiation caution symbol and legend. The label will identify the material in the container and provide information sufficient to permit individuals using, handling or working in the vicinity of the container to take precautions to avoid or minimize exposures to radiation or to radioactive materials.

The presently effective paragraph 20.203(f) excepts laboratory containers, such as beakers, flasks and test tubes used transiently in laboratory procedures, from the labeling requirements when the user is present. The rule set forth below extends this exception to any container attended by an individual who takes the precautions necessary to prevent the exposure of others to radiation or radioactive materials in excess of the limits established in 10 CFR Part 20. The present amendments add exceptions for containers which are accessible only to individuals authorized to handle or use them, or to work in the vicinity thereof, provided that the contents are identified to such individuals by a readily available written record, and for manufacturing or process equipment such as nuclear reactors, reactor components, piping and tanks.

The amendment to §20.203(f) set forth below provides an exception for containers in transport which are labeled in accordance with Interstate Commerce Commission, Federal Aviation Agency and Coast Guard regulations. An amendment to §20.204 provides an exception from posting requirements for radioactive material packaged and labeled in accordance with Interstate Commerce Commission, Federal Aviation Agency and Coast Guard regulations. Section 20.205 is deleted.

Pursuant to the Atomic Energy Act of 1954, as amended, and the Administrative Procedure Act of 1946, the following amendments of Title 10, Chapter I, Part 20, Code of Federal Regulations, are published as a document subject to codification, to be effective ninety days after publication in the FEDERAL REGISTER.

1. Paragraph (f) of 20.203 is amended to read as follows:

§20.203 Caution signs, labels and signals.

(f) Containers. (1) Except as provided in subparagraph (3) of this paragraph, each container of licensed material shall bear a durable, clearly visible label identifying the radioactive contents.

(2) A label required pursuant to subparagraph (1) of this paragraph shall bear the radiation caution symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL". It shall also provide sufficient information [1/] to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures.

(3) Notwithstanding the provisions of subparagraph (1) of this paragraph, labeling is not required:

(i) For containers that do not contain licensed materials in quantities greater than the applicable quantities listed in Appendix C of this part.

(ii) For containers containing only natural uranium or thorium in quantities no greater than ten times the applicable quantities listed in Appendix C of this part.

[1/] As appropriate, the information will include radiation levels, kinds of material, estimate of activity, date for which activity is estimated, mass enrichment, etc.

(iii) For containers that do not contain licensed materials in concentrations greater than the applicable concentrations listed in Column 2, Table I, Appendix B of this part.

(iv) For containers when they are attended by an individual who takes the precautions necessary to prevent the exposure of any individual to radiation or radioactive materials in excess of the limits established by the regulations in this part.

(v) For containers when they are in transport and packaged and labeled in accordance with regulations of the Interstate Commerce Commission, Federal Aviation Agency, or Coast Guard.

(vi) For containers which are accessible [1/] only to individuals authorized to handle of use them, or to work in the vicinity thereof, provided that the contents are identified to such individuals by a readily available written record.

(vii) For manufacturing or process equipment, such as nuclear reactors, reactor components, piping and tanks.

2. A new paragraph (d) is added to section 20.204 to read as follows:

§20.204 Exceptions from posting requirements.

* * * * *

(d) A room or other area is not required to be posted with a caution sign because of the presence of radioactive materials packaged

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[1/] For example, containers in locations such as water-filled canals, storage vaults, or hot cells.

and labeled in accordance with regulations of the Interstate Commerce Commission, Federal Aviation Agency, or Coast Guard.

3. §20.205 is deleted.

AUTHORITY: Sec. 161, 68 Stat. 948; 42 U.S.C. 2201.

Dated at Washington, D.C. this 26th day of July, 1966.

FOR THE ATOMIC ENERGY COMMISSION

W. B. McCool
Secretary

ATOMIC ENERGY COMMISSION

/10 CFR Part 20/

STANDARDS FOR PROTECTION AGAINST RADIATION

Labeling of Containers

The Atomic Energy Commission is considering an amendment of 10 CFR Part 20, "Standards for Protection Against Radiation", as set forth below, which would add the requirement in paragraph 20.203(f) that containers in which licensed material greater than specified quantities is used or transported be labeled with information as to the kinds and approximate activities of the contained radioactive material and, except for natural uranium or thorium, the dates for which the activities are specified. At the present time paragraph 20.203(f) requires this type of information only with respect to containers in which radioactive material is stored. The proposed amendment would delete the present requirement that the label on a storage container state quantities and dates of measurement of natural uranium or thorium.

A previously proposed amendment of 10 CFR Part 20, published in the FEDERAL REGISTER (27 F. R. 10167) on October 17, 1962, would have required labels showing kinds, amounts and dates of measurement on containers in which licensed material is used or transported, as well as on containers in which licensed material

is stored. The previously proposed amendment also would have defined "container" to include a sealed source or device, would have imposed additional labeling requirements for containers of special nuclear material for criticality control purposes, and would have reduced or dispensed with certain existing labeling requirements.

Many comments were addressed to the complexity of the previously proposed amendment. To eliminate problems raised by those persons who submitted comments, the only addition to the requirements of the presently effective regulation which would be made by the present proposed amendment is the extension of the storage container labeling requirements to containers in which licensed material is used or transported. The presently effective regulation requires only the radiation caution symbol and the words "Caution - Radioactive Material" on labels of containers in which licensed material is used or transported. The additional information as to kinds, activities and dates for which the activities are specified is necessary in the interest of health and safety to provide for adequate assessment of the radiation hazard potential of contained radioactive material regardless of the function served by the container.

The proposed rule would not require that quantities and dates of measurement of natural uranium and thorium in a container be stated on the label, because of the relatively low radiation hazard associated even with large quantities of these materials.

Those labeling requirements included in the previously proposed amendment to facilitate protection against accidental criticality are not included in the present proposed amendment, since further study has shown that such requirements can be determined more appropriately on an individual basis during the Commission's prelicensing evaluation of an applicant's proposed safety controls.

The labeling requirements for sealed sources and devices in the previously proposed amendment are not included in the present proposed amendment. The minimal advantages to health and safety afforded by the inclusion of such requirements would be insufficient to compensate for the undue burden on licensees resulting from the complexity of the exceptions to the requirements and from the fact that the small sizes of many sources and devices could not accommodate the proposed label. Labeling of sealed sources and devices which is deemed necessary for protection of health and safety, and which is not required by existing regulations, would continue to be required by license conditions.

The previously proposed amendment would have excepted containers from the requirement that the radiation caution symbol be in the prescribed colors, where the colors would be destroyed by heat under normal conditions of use. Since the Commission has determined that this problem, which has occurred infrequently,

should continue to be handled on an individual basis, no such exception is included in the present proposed amendment.

Pursuant to the Atomic Energy Act of 1954, as amended, and the Administrative Procedure Act of 1946, notice is hereby given that adoption of the following amendment of 10 CFR Part 20 is contemplated. All interested persons who desire to submit written comments or suggestions for consideration in connection with the proposed amendment should send them to the Secretary, United States Atomic Energy Commission, Washington, D. C. 20545, within sixty (60) days after publication of this notice in the FEDERAL REGISTER. Comments received after that period will be considered if it is practicable to do so, but assurance of consideration cannot be given except as to comments filed within the period specified.

Paragraph (f) of § 20.203 is amended to read as follows:

(f) Containers. (1) Each container in which is transported, stored, or used a quantity of any licensed material (other than natural uranium or thorium) greater than the quantity of such material specified in Appendix C of this part shall bear a durable, clearly visible label stating the kinds of radioactive material contained and, for each kind of material, the approximate activity and the date for which the activity is specified. The label shall also bear the radiation caution symbol and the words:

CAUTION[1/]
RADIOACTIVE MATERIAL

(2) Each container in which natural uranium or thorium is transported, stored, or used in a quantity greater than ten times the quantity specified in Appendix C of this part shall bear a durable, clearly visible label stating the kinds of radioactive material contained and bearing the radiation caution symbol and the words:

CAUTION[1/]
RADIOACTIVE MATERIAL

(3) Notwithstanding the provisions of subparagraphs (1) and (2) a label shall not be required:

(i) If the concentration of the material in the container does not exceed that specified in Appendix B, Table I, Column 2, of this part, or

(ii) For laboratory containers, such as beakers, flasks and test tubes, used transiently in laboratory procedures, when the user is present.

(Sec. 161, 68 Stat. 948; 42 U.S.C. 2201)

Dated at Washington, D. C., this 15th day of October, 1964.

FOR THE ATOMIC ENERGY COMMISSION

W. B. McCool
Secretary to the Commission

1/ Or "Danger"

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

Labeling Containers

DOCKET NUMBER
PROPOSED RULE PR -20

JUL 28 1966

Honorable Chet Holifield, Chairman
Joint Committee on Atomic Energy
Congress of the United States

Dear Mr. Holifield:

Enclosed for the information of the Joint Committee is a copy of amendments to the Commission's regulation, "Standards for Protection Against Radiation," 10 CFR Part 20 to modify the labeling requirements for containers of byproduct, source and special nuclear material.

The amendment of paragraph 20.203(f) of Part 20 requires that containers holding radioactive material above specified quantities bear a durable, clearly visible label identifying the radioactive contents. Such information is presently required only with respect to containers used for storage.

The amendment to §20.203(f) differs from the proposed rule published for public comment on October 29, 1964, in the following respects. It has been modified to permit the licensee to select the appropriate information to be placed on the label concerning radiation levels, kinds of material, estimate of activity, date for which the activity is estimated, and enrichment of licensed material, as may be needed by those handling the containers to take precautions to avoid or minimize exposures to radiation or to radioactive materials. A number of additional exceptions to the labeling requirements have been included. In addition, §20.205 has been deleted, and the exceptions from labeling and posting requirements for containers in transport labeled in accordance with ICC regulations in that section have been transferred to §20.203(f) and a new §20.204(d).

The notice has been transmitted to the Office of the Federal Register and will become effective ninety days after publication.

Enclosed also is a copy of a public announcement the Commission plans to issue in the next few days.

Sincerely yours,

(signed) Harold L. Price

Harold L. Price
Director of Regulation

Enclosures:
1. Notice of Rule Making
2. Public Announcement

AEC AMENDS CONTAINER LABELING REQUIREMENTS

The Atomic Energy Commission is amending its regulations to require more information on some containers holding radioactive materials licensed by the AEC.

The amendment requires that labels on containers in which licensed radioactive material above specified quantities is stored, used or transported include the radiation caution symbol and legend and an identification of the radioactive contents. Contents will be identified, as appropriate, by a statement of radiation levels, kinds of material, amount of material, date for which the radioactivity is estimated, and enrichment or percentages of the material. Present AEC regulations require identification of contents only on containers used for storage.

Exceptions to the rule include containers that are attended by an individual who takes precautions necessary to prevent overexposure of any person to radiation; containers in transport when packaged and labeled in accordance with regulations of the Interstate Commerce Commission, Federal Aviation Agency, or Coast Guard; containers accessible only to individuals authorized to handle or use them, or to work in the vicinity of such containers, provided the contents are identified on a readily available written record; and manufacturing or process equipment such as nuclear reactors, reactor components, piping and tanks. These exceptions were provided because either the potential hazards are considered adequately controlled, sufficient information is otherwise provided, or more specific controls are provided by individual licensing actions.

The amendments to AEC regulations, 10 CFR Part 20, "Standards for Protection Against Radiation," will become effective ninety days after publication in the Federal Register on _____.

TITLE 10 - ATOMIC ENERGY

CHAPTER I - ATOMIC ENERGY COMMISSION

PART 20 - STANDARDS FOR PROTECTION AGAINST RADIATION

Labeling of Containers

On October 29, 1964, the Commission published in the FEDERAL REGISTER (29 F.R. 14756) a proposed amendment of 10 CFR Part 20, "Standards for Protection Against Radiation," which would provide in paragraph 20.203(f) a requirement that containers in which greater than specified quantities of licensed material are stored, used or transported must, with certain exceptions, be labeled with information as to kinds and approximate activities of the contained material and dates for which activities are specified. All interested persons were invited to submit written comments and suggestions for consideration in connection with the proposed amendment within sixty days after publication of the notice in the FEDERAL REGISTER. After careful consideration of the comments and other factors involved, the Commission has adopted the rule set forth below.

The amended rule requires that containers of licensed material be labeled with the radiation caution symbol and legend. The label will identify the material in the container and provide information sufficient to permit individuals using, handling or working in the vicinity of the container to take precautions to avoid or minimize exposures to radiation or to radioactive materials.

The presently effective paragraph 20.203(f) excepts laboratory containers, such as beakers, flasks and test tubes used transiently in laboratory procedures, from the labeling requirements when the user is present. The rule set forth below extends this exception to any container attended by an individual who takes the precautions necessary to prevent the exposure of others to radiation or radioactive materials in excess of the limits established in 10 CFR Part 20. The present amendments add exceptions for containers which are accessible only to individuals authorized to handle or use them, or to work in the vicinity thereof, provided that the contents are identified to such individuals by a readily available written record, and for manufacturing or process equipment such as nuclear reactors, reactor components, piping and tanks.

The amendment to §20.203(f) set forth below provides an exception for containers in transport which are labeled in accordance with Interstate Commerce Commission, Federal Aviation Agency and Coast Guard regulations. An amendment to §20.204 provides an exception from posting requirements for radioactive material packaged and labeled in accordance with Interstate Commerce Commission, Federal Aviation Agency and Coast Guard regulations. Section 20.205 is deleted.

Pursuant to the Atomic Energy Act of 1954, as amended, and the Administrative Procedure Act of 1946, the following amendments of Title 10, Chapter I, Part 20, Code of Federal Regulations, are published as a document subject to codification, to be effective ninety days after publication in the FEDERAL REGISTER.

1. Paragraph (f) of 20.203 is amended to read as follows:

§20.203 Caution signs, labels and signals.

(f) Containers. (1) Except as provided in subparagraph (3) of this paragraph, each container of licensed material shall bear a durable, clearly visible label identifying the radioactive contents.

(2) A label required pursuant to subparagraph (1) of this paragraph shall bear the radiation caution symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL". It shall also provide sufficient information [1/] to permit individuals handling or using the containers, or working in the vicinity thereof, to take precautions to avoid or minimize exposures.

(3) Notwithstanding the provisions of subparagraph (1) of this paragraph, labeling is not required:

(i) For containers that do not contain licensed materials in quantities greater than the applicable quantities listed in Appendix C of this part.

(ii) For containers containing only natural uranium or thorium in quantities no greater than ten times the applicable quantities listed in Appendix C of this part.

[1/] As appropriate, the information will include radiation levels, kinds of material, estimate of activity, date for which activity is estimated, mass enrichment, etc.

(iii) For containers that do not contain licensed materials in concentrations greater than the applicable concentrations listed in Column 2, Table I, Appendix B of this part.

(iv) For containers when they are attended by an individual who takes the precautions necessary to prevent the exposure of any individual to radiation or radioactive materials in excess of the limits established by the regulations in this part.

(v) For containers when they are in transport and packaged and labeled in accordance with regulations of the Interstate Commerce Commission, Federal Aviation Agency, or Coast Guard.

(vi) For containers which are accessible [1/] only to individuals authorized to handle of use them, or to work in the vicinity thereof, provided that the contents are identified to such individuals by a readily available written record.

(vii) For manufacturing or process equipment, such as nuclear reactors, reactor components, piping and tanks.

2. A new paragraph (d) is added to section 20.204 to read as follows:

§20.204 Exceptions from posting requirements.

* * * * *

(d) A room or other area is not required to be posted with a caution sign because of the presence of radioactive materials packaged

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[1/] For example, containers in locations such as water-filled canals, storage vaults, or hot cells.

and labeled in accordance with regulations of the Interstate Commerce Commission, Federal Aviation Agency, or Coast Guard.

3. §20.205 is deleted.

AUTHORITY: Sec. 161, 68 Stat. 948; 42 U.S.C. 2201.

Dated at Washington, D.C. this 26th day of July, 1966.

FOR THE ATOMIC ENERGY COMMISSION

W. B. McCool
Secretary

Labeling Reg.

DOCKET NUMBER
PROPOSED RULE PRM 20-263

E·R·SQUIBB & SONS 745 Fifth Avenue, New York 22, N.Y. Plaza 3-2900

MANUFACTURING CHEMISTS TO THE MEDICAL PROFESSION SINCE 1858

SQUIBB DIVISION Olin

JOHN F. BRADLEY
DIVISION COUNSEL

December 31, 1964

Secretary
U. S. Atomic Energy Commission
Washington, D. C., 20545

Dear Sir:

We are writing this in connection with the Proposed amendment of 10 CFR Part 20, "Standards for Protection Against Radiation" published in the Federal Register on October 29, 1964. The Proposed amendment would add to the present regulations the requirement that containers in which licensed material greater than specified quantities is used or transported be labeled with information as to the kinds and approximate activity of the contained radioactive material and, except for natural uranium or thorium, the dates for which the activities are specified.

E. R. Squibb and Sons Division of Olin Mathieson Chemical Corporation is now and has been engaged in the research, manufacturing and distribution of radioactive pharmaceuticals. We supply to the medical profession over fifty radioactive pharmaceuticals. In the course of servicing the medical profession and the public we fill many orders which request a variety of our radioactive pharmaceuticals and include in a single shipment several different radioactive pharmaceuticals. The regulations as proposed would require that we list each kind of radioactive material within the shipment and the approximate activity and the date for which the activity is specified for each. This would be very burdensome and would require several labels on the package. It seems to us that this multiplicity of labels would cause much confusion and would not benefit the public. The present caution label would seem to suffice.

We respectfully urge that the proposed regulation not be finally promulgated.

Respectfully yours,

John F. Bradley

John F. Bradley

JFB:go

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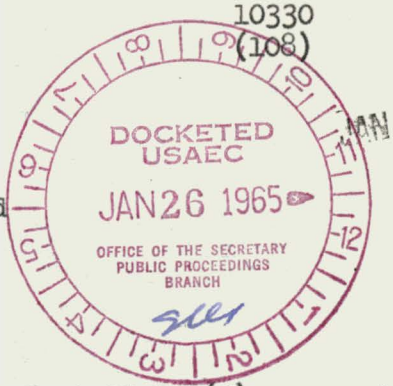
USAEC
JAN 4 1965
OFFICE OF THE SECRETARY
PUBLIC PROCEEDINGS
BRANCH

MARE ISLAND NAVAL SHIPYARD
VALLEJO, CALIFORNIA

Labeling of Containers
DOCKET NUMBER
PROPOSED RULE PR 20.203

IN REPLY REFER TO
10330
(108)



JAN -7 1965

From: Commander, Mare Island Naval Shipyard
To: Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545
Via: Chief, Bureau of Ships (Code 682)

Subj: Title 10 Code of Federal Regulations, Part 20.203(f); comment on proposed amendment to

Ref: (a) Volume 29 Federal Register, 14756, October 29, 1964

1. Reference (a) proposed amendments to Title 10 Code of Federal Regulations, Part 20, and invited comments from interested persons for consideration.

2. In many cases, radioactive material is transported, stored, or used within a series of containers. For example, a radioactive liquid may be shipped in a glass bottle inside a sealed can within a shipping crate. In some instances, there has been disagreement as to how many of the intermediate containers should be labeled. It is therefore suggested that the subject amendment include consideration of the case of multiple containment.

3. It is suggested that the following sentences be considered for inclusion in the proposed amendment:

a. The required label shall be placed on the radioactive material enclosure itself and on each surrounding container so that the presence of the radioactive material within can be readily recognized and located. In cases where it is impracticable to label the radioactive material enclosure itself because of small size, the label may be on a durable tag at least one (1) inch square, permanently attached to the enclosure, or an alternate means of labeling may be provided for by the license.

The wording in the above suggestion was taken largely from Military Specification MIL-M-19590C, "Marking of Commodities and Containers to Indicate Radioactive Material," but modified to correspond to the language of AEC regulations.

682

Edward I. Fahy

10330

EDWARD I. FAHY

650114-0766

Solvents of 4619 evaluation

DOCKET NUMBER
PROPOSED RULE PR -20.203

10330/1
Ser 682C-148

Div. of Safety Standards

22 JAN 1965

FIRST ENDORSEMENT ON NAVSHIPYD MARE ltr 10330 (108) of 7 January 1965

From: Chief, Bureau of Ships
To Chief, Isotopes Branch
Division of Materials Licensing
U.S. Atomic Energy Commission
Washington, D.C. 20545

Subj: Title 10 Code of Federal Regulations, Part 20.203(f); comment on proposed amendment to

1. Basic letter contains suggested material for inclusion in subject proposed amendment.

2. The Shipyard's comments have been reviewed and the Bureau of Ships concurs with the suggested wording. The information is comparable to that found in Military Specification MIL-M-19590C, Marking of Commodities and Containers to Indicate Radioactive Material.

R. D. CLUBB
By direction

Copy to:
CDR NAVSHIPYD, MARE
BUMED (Code 74)

DOCKETED
USAEC
JAN 26 1965
OFFICE OF THE SECRETARY
PUBLIC PROCEEDINGS
BRANCH

JAN 25 1965

GENERAL ELECTRIC COMPANY

175 CURTNER AVE., P. O. BOX 254, SAN JOSE, CALIF. 95103 . . . AREA CODE 408, TEL. 297-3000
TWX NO. 408-287-6484

ATOMIC PRODUCTS DIVISION

ATOMIC POWER EQUIPMENT DEPARTMENT

December 16, 1964

Mr. Woodford B. McCool, Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545

Subject: Proposed Amendment - 10 CFR 20 - Labeling

Dear Mr. McCool:

The Atomic Power Equipment Department of the General Electric Company has reviewed the proposed amendments of 10 CFR Part 20, Section 20.203 (f) published in the Federal Register Thursday, October 29, 1964, and the following comments are offered for your consideration.

It is our understanding that the proposed revision would extend the current labeling requirement for storage containers to all radioactive materials containers with the low concentration and laboratory exceptions of 20.203 (f) (3). This revision is cited as necessary for the assessment of the radiation hazard potential.

As previously proposed (October 17, 1962), the regulation attempted to achieve the radiation hazard potential assessment objective by excepting a considerable number of additional specific low hazard-level situations. Now however, the revision does not propose those added exceptions apparently due to their complexity. We agree with the Commission's finding in this regard. Indeed, it is our view that the overall problem of formulating labeling standards applicable to all of the many varied degrees of radiation hazard potential intrinsic in the combinations of type, quantity and physical form of radioactive materials, and the many different situations in which containers are used, is extremely complex.

Extending the AEC quantity and date labeling requirement to shipping containers partially duplicates existing ICC labeling regulations. In that regard, it appears quite timely to suggest that AEC and ICC representatives collaborate to devise a common set of labels for radioactive shipping containers that will meet the mutual safety objectives of both agencies. It appears that this could be done by

adding the AEC radiation symbol to existing ICC labels or substituting that symbol for the ICC symbol and providing blank spaces for dates of measurement and similar information. That being accomplished, the shipper would be less likely to mislabel containers which would, in turn, enhance safety by making the simple way the safe way.

We do envision problems with respect to the proposed labeling of containers in use. If the proposed revision is adopted, General Electric would immediately be obliged to seek exemptions for situations such as those listed below.

1. Containers such as ball mill jars, furnace boats, etc., which in normal service are:

   (a) Used to process only uranium oxide of varying U-235 enrichments.
   (b) Alternately filled and emptied repetitively and frequently.
   (c) Subjected to mechanical, chemical, or thermal environment:

      (i) In which a surface label would interfere with the function of the container or,

      (ii) In which a surface label would be destroyed or obliterated.

2. Containers such as fuel hoppers, portable tanks, etc., which in normal service contain continually varying quantities of radioactive materials by reason of alternate filling and emptying.

3. Containers which are the cladding of reactor fuel assemblies.

4. Containers which are the receptacles of ion chambers.

5. Containers having a smaller surface area than a cylinder 1/2" in diameter and 1 1/2" high while attended by the user.

Upon more thorough analysis of all our current container usages, we would expect to find other specific situations requiring exemption.

In order to avoid the complexities outlined above, and yet meet the objectives of the proposed labeling requirements, it is suggested that uniform shipping container labeling be devised and set forth in ICC regulations only. If this can not be accomplished in a timely fashion an amendment to the currently

GENERAL ELECTRIC

effective section 20.203 (f) (4) would add the words "and transportation" after the words "used for storage".

Notwithstanding the above, it is further recommended that the currently effective section 20.203, paragraph (f) be revised to add a new subparagraph (5) to read essentially as follows:

> "(5) Where containers are to be used for purposes other than storage or transport, an applicant for a license or amendment to a license shall describe in his application proposed methods, commensurate with the radiation hazards inherent in each activity for which he seeks authorization, for additional labeling, or identifying the specific contents of such containers, or otherwise providing for assessment of the radiation hazards."

We appreciate the opportunity to review this proposed amendment and trust the above suggestions may be of mutual benefit to the Commission and to licensees.

Very truly yours,

B. D. Wilson
Administrator-Licensing

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THE PENNSYLVANIA STATE UNIVERSITY
228 ACCELERATOR BUILDING
UNIVERSITY PARK, PENNSYLVANIA, 16802

Health Physics Office

Area Code 814
865-6861

December 17, 1964

Secretary
United States Atomic Energy Commission
Washington, D. C. 20545

Dear Sir:

The following are my comments on the proposed changes to 10CFR Part 20; section 20.203 as published in 29 Federal Register, 14756, October 29, 1964.

1. I am in favor of the requirement that containers used for the transportation of radioactive materials bear a Caution Radioactive Materials label and also state the kinds and quantities of radioactive material, if known. This should include natural uranium and thorium. While it is true that the radiation hazard for natural uranium and thorium is low, the hazard in the case of a transportation accident is strongly dependent on the quantity of material, especially if fire is involved. Information about the quantity of uranium might be necessary for proper evaluation of the hazard in such an emergency.

2. The proposed regulation indicates the label should indicate the kinds of radioactive material and the quantity. In many cases the actual isotopes are not known, eg., electronic or other instruments activated during radiation damage studies, activated materials of unknown composition or with unknown impurities such as glasses and plastics and mixed fission products. Provision should be made for an acceptable label for such materials. Such a label might contain an estimate of the gross amount of radioactive material and any information known about the kinds and quantities of radioactive material constituting the major part of the activity.

3. It is not clear to me whether the label of a large container containing more than one smaller container of radioactive material must list the kinds and quantities of radioactive material, if the information is given on the labels of the smaller containers. This would be very restrictive in the case of shielded containers used for storage of, in some cases, hundreds of individual containers of radioactive material. The intent of the regulation should be made clear with respect to this point.

Thank you for the opportunity to comment on the above, and please feel free to contact me for any more information regarding the comments.

Sincerely,

Rodger W. Granlund

Rodger W. Granlund
University Health Physicist

RWG/cec

DOCKET NUMBER
PROPOSED RULE PRM-20.203
Labeling Requirements

CAROLINAS VIRGINIA NUCLEAR POWER ASSOCIATES, INC.

PARR, SOUTH CAROLINA

December 17, 1964

Mr. W. B. McCool, Secretary
U. S. Atomic Energy Commission
Washington, D. C.

Dear Sir:

The following comments are submitted for your consideration in regard to the proposed amendment of section 20.203(f) of 10CFR20, which appeared in F. R. Doc. 64-10982; Filed, October 28, 1964.

Our opinion is that this change would add the requirement that containers in which licensed material greater than specified quantities is used or transported be labeled as to the kinds and approximate activities of the contained radioactive material. Our concern is with containers in which process water is used at our reactor facility (CVTR). These range in size from 55 gallon drums to small vials holding a few milliliters. A great number of these may be in use at any given time and the number of containers and the contents of these containers may vary from day to day according to the operational status of the plant. The contained activities may be tritium, mixed fission products and corrosion products in various mixtures and at various levels of radioactivity.

We believe that a "Caution, Radioactive Material" Label with a general statement of contents and a statement of the radiation level external to the container is more than sufficient for radiation protection purposes. A detailed analysis of the radionuclides and activities involved would not afford any additional protection for personnel who use these containers. The unnecessary cost and delay that would be imposed by such a requirement would add substantial hardships on reactor operation, and could, where delays were substantial, increase rather than decrease potential hazards to personnel.

We request, therefore, that the requirement for stating the kinds of radioactive material contained and the approximate activity for each kind of material be deleted in regard to containers used for process liquids at a reactor facility.

Sincerely,

H. T. Babb

H. T. Babb
Manager, CVNPA

LL:pf/vb

DOCKETED
USAEC
DEC 21 1964
OFFICE OF THE SECRETARY
PUBLIC PROCEEDINGS
BRANCH

NUCLEAR FUEL SERVICES, INC.
ERWIN, TENNESSEE 37650

Labeling Req. Standards for Prot. against Rad.
DOCKET NUMBER PR-20
PETITION RULE

NFS

December 18, 1964

DOCKETED USAEC DEC 24 1964 OFFICE OF THE SECRETARY PUBLIC PROCEEDINGS BRANCH

Mr. W. B. McCool, Secretary
United States Atomic Energy Commission
Washington, D. C.

SUBJECT: Comments Regarding Proposed Amendment 10-CFR Part-20 "Standards for Protection Against Radiation"

Dear Sir:

The Nuclear Fuel Services, Inc., A Subsidiary of W. R. Grace & Company wishes to offer comments as to the proposed amendment, whereby, if adopted would require, in addition, to the existing requirements, further information on the labels such as the amount of activity and date the measurement was made on each container in which is transported, stored or used a quantity of licensed material greater than specified quantities.

We feel that the inclusion of such a requirement offers minimal advantages to health and safety protection as compared to the undue burden on the licensee employing the use of gross quantities of licensed material.

It is felt that current requirements by the Interstate Commerce Commission provides sufficient information to those concerned, as to the type of radioactive material, the activity, the quantity of material represents and the number of units from each container. Where radiation levels exist so as to permit the use of a less informative label, similar information is provided on the carrier's bill of lading.

Each facility where radioactive materials are processed, stored, or used are labeled with the appropriate radiation symbols as required by current regulations. It is, therefore felt that the additional requirement would offer little or no advantages to the improvment of health and safety protection in regards to in-plant process or storage of such material.

We trust that you will find our comments reasonable and that they be considered prior to the adoption of the subject amendment.

Very truly yours,

J. E. Kirkpatrick
Supervisor, Health and Safety

JEK:eel

BOX 218 • AREA CODE 615: PHONE 742-1721

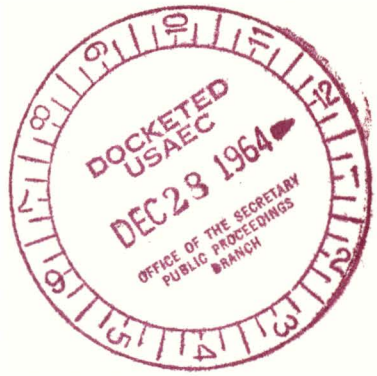
Labelling

DOCKET NUMBER
PROPOSED RULE PR 20-203

LOCKHEED AIRCRAFT CORPORATION

GEORGIA DIVISION LOCKHEED MARIETTA, GEORGIA

LOCKHEED NUCLEAR PRODUCTS



December 22, 1964

Mr. W. B. McCool, Secretary
United States Atomic Energy Commission
Washington, D. C., 20545

Dear Mr. McCool:

Reference is made to the proposed amendment to 10 CFR, Part 20, Paragraph 20.203(f), which was published for comment in the Federal Register dated 29 October 1964. This proposed amendment has obvious advantages for identifying radioactive material which may have been intentionally made a part of various and sundry devices. There are cases, however, in which the proposed amendment would work a definite hardship on various licensees. As an example, Lockheed is participating in various radiation effects experiments in which operating electronic devices and other equipment are exposed to the radiation environment from a nuclear reactor. These devices, some of which contain quite a few elements, become activated to a varying degree. In a number of cases, the elemental constituents of many of the devices have not been determined because the device itself or some component within the device has been proprietary to a customer or has not been amenable to analysis. In such cases, when the systems or devices have been put into storage (or into other use following activation), it has been feasible to identify the activity level of only the major radioactive isotope, and to note that the device may also contain lesser quantities of other byproduct material between atomic numbers 3 and 83.

Accordingly, Lockheed would like to recommend that the proposed amendment to 10 CFR, Part 20, Paragraph 20.203 (f) should exempt reactor-activated components, items, and systems which are activated for experimental purposes and not solely for the production of byproduct material. Lockheed further suggests that labelling of containers for transport, storage, and use of the exempted materials should identify the estimated activity level of only the major radioactive isotope, and should note that the container may also contain lesser quantities of other byproduct material between atomic numbers 3 and 83.

Very truly yours,

LOCKHEED-GEORGIA COMPANY

J. C. Flack

J. C. Flack
Nuclear Products Manager

JCF:MAD:ba

Labelling

DOCKET NUMBER
PROPOSED RULE PR 20-203

Industrial Nucleonics CORPORATION
650 Ackerman Road
Columbus 2, Ohio
AMherst 7-6351

December 24, 1964

Secretary
U. S. Atomic Energy Commission
Washington, D.C. 20545

Dear Sir:

Please find below our comments regarding the proposed change to Paragraph (f) of 10CFR20.203 as published in the Federal Register dated October 29, 1964.

The intent of the change was expressed in the preamble as adding "the requirement in Paragraph 20.203(f) that containers in which licensed material greater than specified quantities is used or transported be labeled with information as to the kinds and approximate activities of the contained radioactive material, and, - - - - - the dates for which the activities are specified. At the present time Paragraph 20.203(f) requires this type of information only with respect to containers in which radioactive material is stored".

It has been Industrial Nucleonics's policy to provide the information which is presently required for storage containers only, on gauging devices which may be considered "in use." The proposed change poses no problem in that respect, however, a serious question presents itself when considering the transportation of radioactive sources that are contained in ICC shipping containers. There is no requirement in the ICC regulations similar to this proposal. Is it the intent of the proposed change to impose such a requirement in addition to the requirements of the ICC Rules, or will manufacturers and distributors be required to provide this information on permanent labels affixed to ICC shipping containers only while they are awaiting either transportation or unloading? This also means that permanent labels will have to be removed and replaced for each change in the radioactive sources being transported, which will certainly cause a hardship for the shipper.

It is our suggestion that the proposed change be clarified so that there is no conflict, directly or indirectly, with other regulations.

Very truly yours,

E. R. Ferraro

E. R. Ferraro, Manager
Government Regulations

ERF:vkm

labelling.

DOCKET NUMBER
PROPOSED RULE PR 20.203

Westinghouse Electric Corporation

3 Gateway Center
Box 2278, Pittsburgh, Pa. 15230

December 23, 1964

Secretary
U. S. Atomic Energy Commission
Washington, D. C., 20545

Subject: Proposed Amendment of 10 CFR 20.203

Dear Sir:

The amendment of 10 CFR 20.203 as proposed in the Federal Register, October 29, 1964, pages 14753-4, is a significant improvement over the previous proposal (27 F.R. 10167, Oct. 17, 1962). The intent of the current proposal is very good; however, this proposal cannot be considered to be entirely satisfactory because there are so many situations where compliance with it would be impractical, unnecessary and almost impossible.

The difficulty of attempting to prepare a simple regulation to cover such a complex matter as proper labeling of containers of radioactive materials (or the materials themselves) is fully appreciated. It would seem, however, that this could be accomplished by stating first the basic criteria or the desired objectives, with subsequent provisions for exceptions. As suggested in previous correspondence, the concept of appropriate identification, where necessary for protection of personnel, may be useful. It might also be practical to establish different labeling requirements for those containers within a "Radiation Area," "High Radiation Area" or "Airborne Radioactivity Area" and those that are either located outside of or transferred from such areas.

The following comments are listed to indicate either suggested changes or problems which require further evaluation:

1. Depleted uranium should be included along with natural uranium in sub-paragraph (f) (2).

2. It should be permissible to state the quantity of radioactive material in units other than "activity." For example, it would seem desirable to specify the quantity of enriched uranium in grams or kilograms. It might also be desirable to permit other designations such as mr/hr.

3. To avoid the implication that each "kind" of material might be interpreted to require the identification of each isotope, the following wording starting in the eighth line of sub-paragraph (f) (1) is suggested:

> stating the kind of radioactive material, its approximate activity and the date for which the activity is specified.

4. An exemption should be provided for containers used in manufacturing or processing operations where it is impractical to label them--such as boats heated to a high temperature in a furnace.

5. There are a number of containers in which the quantity and identity of the radioactive material is uncertain and changing such as liquid and solid waste collection containers. Perhaps only the symbol and precautionary wording should be required.

6. The words "when the user is present" should be deleted from (f) (3) (ii).

7. Recognition should be given to the desirability of removing radioactive material labels from containers when they do not actually contain any radioactive material. If this desirable practice is followed, the repeated additions and removals of materials from a group of storage containers would necessitate repeated changing of the labels. If in a well controlled area, such changing would not serve a useful purpose and it would be difficult to enforce. This suggests that an appropriate sign at the entrance to such an area would be more desirable. An example of such an area is a fuel storage vault in a fuel manufacturing plant.

8. Provision should be made to exempt containers from the labeling requirements when they are used inside of hot cells.

9. Containers mounted in underwater shielding facilities should not require labeling.

It is realized that each licensee may request exemptions under the provisions of Part 20.501. It would seem desirable, however, to minimize the need for such requests by avoiding requirements in the regulation which do not have general applicability.

I would be glad to discuss these comments with you in more detail if you so desire.

Very truly yours,

E C Barnes

E. C. Barnes, Director
Radiation Protection

(3 copies transmitted)

HEALTH PHYSICS SOCIETY

COMMITTEE CORRESPONDENCE

December 23, 1964

Secretary
United States Atomic Energy Commission
Washington, D.C. 20545

Gentlemen:

The Committee on Radiation Regulation of the Health Physics Society has carefully reviewed the proposed amendments to 10 CFR 20, paragraph 20.203, f, as published in the Federal Register, October 29, 1964.

The proposed amendments would represent an improvement in labelling requirements for containers in which licensed material is transported or stored. However, we believe that the particular means by which use containers are properly identified for radiation protection purposes is too much a function of the operations and procedures concerned in the use situation for regulations to specify the labelling methods to be followed. The proposed requirements for labelling of use containers are too restrictive in this respect for licensed materials other than natural uranium or thorium. It is recommended, therefore, that the proposed paragraph 20.203, f, be changed along the lines indicated in the following suggested alternate paragraph.

(f) Containers. (1) All labels and caution signs required by this paragraph shall bear the radiation caution symbol and the words:

Caution[1]
Radioactive Material

(2) Each container in which is transported or stored a quantity of any licensed material (other than natural uranium or thorium) greater than the quantity of such material specified in Appendix C of this part shall bear a durable, clearly visible label stating the kinds of radioactive material contained and, for each kind of material, the approximate activity and date for which the activity is specified.

(3) Containers in which is used a quantity of any licensed material (other than natural uranium or thorium) greater than the quantity of such material specified by Appendix C of this part shall be identified, either individually or by clearly defined group, by a durable, clearly visible label or caution sign and in such a manner that the kinds of radioactive materials contained, and for each kind of material, the approximate activity and date for which the activity is specified, can be easily and quickly determined.

(4) Each container in which natural uranium or thorium is transported, stored or used in a quantity greater than ten times the quantity specified in Appendix C of this part shall bear a durable, clearly visible label stating the kinds of radioactive material contained.

(5) Notwithstanding the provisions of subparagraphs 2, 3 and 4 a label or caution sign shall not be required:

(i) If the concentration of the material in the container does not exceed that specified in Appendix B, Table I, Column 2, of this part, or

(ii) For laboratory containers, such as beakers, flasks and test tubes, used transiently in laboratory procedures, when the user is present.

In support of this recommendation, examples of two use situations in which the proposed labelling requirements would be unnecessarily and undesirably restrictive are outlined below.

1. Stock containers from which frequent withdrawals are made: The proposed requirements would not seem to permit the practice of labelling the container as to kind of radioactive material and with a code number referring to a log sheet from which the contents at any given time can be quickly and simply determined. Such a procedure is excellent practice and the log sheet a necessity in maintaining records required by other sections of the AEC regulations. In a well run laboratory, relabelling following each withdrawal would be unnecessary; in a poorly run laboratory, labelling is but part of a larger problem. Where larger amounts of γ emitting radionuclides are involved, unnecessary relabelling may result in increased personnel exposure to radiation.

2. Laboratory procedures that continue over a number of days: In such situations, particular use vessels and amounts contained may change quite frequently. Operations will be suspended and the laboratory closed overnight, or on non-work days. In such instances the labelling of individual containers being used in the procedure may be impractical or constitute a very real inconvenience. Identifying the containers for protection purposes may best be done collectively by identifying the area, such as a fume hood, tray, cabinet, or bench region, where the concerned containers are present.

We appreciate the continuing opportunity to comment on proposed regulations and amendments.

Sincerely yours,

John W Thomas

John W. Thomas, Chairman
Committee on Radiation Regulation

JWT:jc

DOCKET NUMBER
PROPOSED RULE PR 20.203
Labeling Requirements

State of California

OFFICE OF ATOMIC ENERGY DEVELOPMENT AND RADIATION PROTECTION

GOVERNOR'S OFFICE
SACRAMENTO 14

EDMUND G. BROWN
GOVERNOR

GENE A. BLANC
~~ALEXANDER GRENDON~~
COORDINATOR

November 27, 1964

The Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545

Dear Mr. Secretary:

Please refer to the October 29, 1964, Federal Register notice which specifies a change in 10 CFR, Part 20, Section 20.203, paragraph (f).

This change in the container labeling requirement is both reasonable and desirable. It in fact follows the existing general practice of many licensed users of radioactive material. We therefore urge its adoption as published.

Please consider these comments as reflecting the considered judgment of the pertinent California agencies.

Sincerely

Gene A. Blanc

Gene A. Blanc
Coordinator

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OFFICE OF THE SECRETARY
PUBLIC PROCEEDINGS
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State of California
OFFICE OF ATOMIC ENERGY DEVELOPMENT
AND RADIATION PROTECTION
STATE CAPITOL
SACRAMENTO 95814

SACRAMENTO, CALIF.
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1964
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The Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545

Wells 1-3500
Twx No. Hkvl 2358

SYLVANIA

SYLVANIA ELECTRIC PRODUCTS INC. *Subsidiary of* GENERAL TELEPHONE & ELECTRONICS CORPORATION

Sylcor Division
Cantiague Road
Hicksville, N.Y.

December 7, 1964

Secretary
U. S. Atomic Energy Commission
Washington, D. C. 20545

Gentlemen:

We have reviewed the proposed amendment to 10 CFR Part 2 "Standards for Protection Against Radiation" which appeared as Docket No. 64-10982 in the October 29, 1964 issue of the Federal Register. It is our belief that the proposed amendment should not be effected in its present form since it will not materially affect safety in the handling of enriched or depleted uranium.

This amendment requires that all containers with radioactive material are to be identified with a label which states the kind of radioactive material, and the approximate activity and the date for which the activity is specified. This is in addition to the present requirement of a label bearing the radiation symbol and the words "Caution Radioactive Material".

There are exceptions to this rule and they apply to:

1. Natural uranium and thorium - due to their low radiation hazard.

2. Laboratory containers such as beakers, flasks etc., when the user is present.

3. If the amount of radioactive material does not exceed limits in a specific table. For uranium-235 this limit is equal to 0.65 grams.

The reason stated for this proposed amendment is that it is necessary to have the additional information for adequate assessment of the radiation hazard potential.

As indicated above, natural uranium and thorium because of their low radiation hazard, are exempt. Depleted uranium (U-238) and enriched uranium (U-235) are not exempt. From a technical viewpoint, both depleted and enriched uranium should be exempt for the same reason that natural uranium and thorium are exempted. Depleted uranium has a lower radiation hazard potential than either natural uranium or thorium. The specific activity of enriched uranium is roughly in the same order of magnitude with natural uranium and thorium. It has one of the lowest radiation hazard potentials. When the nuclear safety

controls that are used for enriched uranium are considered in the evaluation of the radiation hazard potential, it will be found that it is actually lower for enriched uranium than for any other radioactive material. In production operations only small quantities of enriched uranium are handled at any one time because of criticality controls. Because of this, those persons handling enriched uranium have considerably lower radiation exposures than those handling natural uranium or thorium.

To require compliance with this proposed amendment for processors of enriched uranium would impose an unwarranted hardship and result in unnecessary increased costs.

With the above in view, it is our recommendation that both depleted uranium (U-238) and enriched uranium (U-235) be added to the exemptions. We sincerely hope that you will consider our requests in the light in which they are presented.

Yours very truly,

SYLCOR DIVISION
SYLVANIA ELECTRIC PRODUCTS INC.

Henry E. Grieb

Henry E. Grieb for
W. R. Mandaro
Plant Manager

HEG:dw

UNITED STATES
ATOMIC ENERGY COMMISSION
WASHINGTON, D.C. 20545

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DOCKET NUMBER PROPOSED RULE PR 20. 203 ~~208~~

JAN 28 1965

Mare Island Naval
Shipyard Ref: 10330 (108)
Chief, Bureau of Ships
Ref: 10330/1 Ser 682C-148

To: Edward J. Fahy
Commander, Mare Island Naval Shipyard
Vallejo, California

Via: Chief, Bureau of Ships (Code 682)

Dear Sir:

Thank you for your letter dated January 7, 1965 commenting on the proposed amendment to 10 CFR 20 to modify labeling requirements for containers of licensed material.

In the course of our further work on the proposed regulation, we will give careful consideration to the views expressed in your letter.

Sincerely yours,

Original signed by
Forrest Western

Forrest Western, Director
Division of Safety Standards

DOCKETED
USAEC
JAN 28 1965
OFFICE OF THE SECRETARY
PUBLIC PROCEEDINGS
BRANCH