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Briefings on How To Use the Federal Register—
For information on briefings in Washington, DC, see announcement on the inside cover of this issue.

Selected Subjects

CONTINUED INSIDE

Selected Subjects

FEDERAL REGISTER Published daily, Monday through Friday, (not published on Saturdays, Sundays, or on official holidays), by the Office of the Federal Register, National Archives and Records Administration, Washington, DC 20408, under the Federal Register Act (49 Stat. 500, as amended; 44 U.S.C. Ch. 15) and the regulations of the Administrative Committee of the Federal Register (1 CFR Ch. I). Distribution is made only by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20402.

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Questions and requests for specific information may be directed to the telephone numbers listed under INFORMATION AND ASSISTANCE in the READER AIDS section of this issue.

How To Cite This Publication: Use the volume number and the page number. Example: 51 FR 12345.

THE FEDERAL REGISTER: WHAT IT IS AND HOW TO USE IT

FOR: Any person who uses the Federal Register and Code of Federal Regulations.

WHO: The Office of the Federal Register.

WHAT: Free public briefings (approximately 2 1/2 hours) to present:
1. The regulatory process, with a focus on the Federal Register system and the public's role in the development of regulations.
2. The relationship between the Federal Register and Code of Federal Regulations.
3. The important elements of typical Federal Register documents.
4. An introduction to the finding aids of the FR/CFR system.

WHY: To provide the public with access to information necessary to research Federal agency regulations which directly affect them. There will be no discussion of specific agency regulations.

WASHINGTON, DC

WHEN: January 17; at 9 am.

WHERE: Office of the Federal Register, First Floor Conference Room, 1100 L Street NW., Washington, DC.

RESERVATIONS: Howard Landon 202-523-5227 (Voice)
Melanie Williams 202-523-5229 (TDD)

FUTURE WORKSHOPS: Additional workshops are scheduled bimonthly in Washington and on an annual basis in Federal regional cities. Dates and locations will be announced later.

NOTE: There will be a sign language interpreter for hearing impaired persons at this briefing.

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Separate Parts In This Issue

Reader Aids
Additional information, including a list of public laws, telephone numbers, and finding aids, appears in the Reader Aids section at the end of this issue.

CFR PARTS AFFECTED IN THIS ISSUE

A cumulative list of the parts affected this month can be found in the Reader Aids section at the end of this issue.

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Presidential Documents

Title 3—

The President

Executive Order 12543 of January 7, 1986

Prohibiting Trade and Certain Transactions Involving Libya

By the authority vested in me as President by the Constitution and laws of the United States of America, including the International Emergency Economic Powers Act (50 U.S.C. 1701 *et seq.*), the National Emergencies Act (50 U.S.C. 1601 *et seq.*), sections 504 and 505 of the International Security and Development Cooperation Act of 1985 (Public Law 99–83), section 1114 of the Federal Aviation Act of 1958, as amended (49 U.S.C. 1514), and section 301 of title 3 of the United States Code,

I, RONALD REAGAN, President of the United States of America, find that the policies and actions of the Government of Libya constitute an unusual and extraordinary threat to the national security and foreign policy of the United States and hereby declare a national emergency to deal with that threat.

I hereby order:

Section 1. The following are prohibited, except to the extent provided in regulations which may hereafter be issued pursuant to this Order:

(a) The import into the United States of any goods or services of Libyan origin, other than publications and materials imported for news publications or news broadcast dissemination;

(b) The export to Libya of any goods, technology (including technical data or other information) or services from the United States, except publications and donations of articles intended to relieve human suffering, such as food, clothing, medicine and medical supplies intended strictly for medical purposes;

(c) Any transaction by a United States person relating to transportation to or from Libya; the provision of transportation to or from the United States by any Libyan person or any vessel or aircraft of Libyan registration; or the sale in the United States by any person holding authority under the Federal Aviation Act of any transportation by air which includes any stop in Libya;

(d) The purchase by any United States person of goods for export from Libya to any country;

(e) The performance by any United States person of any contract in support of an industrial or other commercial or governmental project in Libya;

(f) The grant or extension of credits or loans by any United States person to the Government of Libya, its instrumentalities and controlled entities;

(g) Any transaction by a United States person relating to travel by any United States citizen or permanent resident alien to Libya, or to activities by any such person within Libya, after the date of this Order, other than transactions necessary to effect such person's departure from Libya, to perform acts permitted until February 1, 1986, by Section 3 of this Order, or travel for journalistic activity by persons regularly employed in such capacity by a newsgathering organization; and

(h) Any transaction by any United States person which evades or avoids, or has the purpose of evading or avoiding, any of the prohibitions set forth in this Order.

For purposes of this Order, the term "United States person" means any United States citizen, permanent resident alien, juridical person organized under the laws of the United States or any person in the United States.

Sec. 2. In light of the prohibition in Section 1(a) of this Order, section 251 of the Trade Expansion Act of 1962, as amended (19 U.S.C. 1881), and section 126 of the Trade Act of 1974, as amended (19 U.S.C. 2136) will have no effect with respect to Libya.

Sec. 3. This Order is effective immediately, except that the prohibitions set forth in Section 1 (a), (b), (c), (d) and (e) shall apply as of 12:01 a.m. Eastern Standard Time, February 1, 1986.

Sec. 4. The Secretary of the Treasury, in consultation with the Secretary of State, is hereby authorized to take such actions, including the promulgation of rules and regulations, as may be necessary to carry out the purposes of this Order. Such actions may include prohibiting or regulating payments or transfers of any property or any transactions involving the transfer of anything of economic value by any United States person to the Government of Libya, its instrumentalities and controlled entities, or to any Libyan national or entity owned or controlled, directly or indirectly, by Libya or Libyan nationals. The Secretary may redelegate any of these functions to other officers and agencies of the Federal government. All agencies of the United States government are directed to take all appropriate measures within their authority to carry out the provisions of this Order, including the suspension or termination of licenses or other authorizations in effect as of the date of this Order.

This Order shall be transmitted to the Congress and published in the **Federal Register.**

Ronald Reagan

THE WHITE HOUSE,
January 7, 1986.

[FR Doc. 86-634
Filed 1-8-86; 10:16 am]
Billing code 3195-01-M

Editorial note: For the text of the President's message to Congress of Jan. 7, 1986, on EO 12543, see the *Weekly Compilation of Presidential Documents* (Vol. 22, No. 2).

Rules and Regulations

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DEPARTMENT OF AGRICULTURE

Federal Crop Insurance Corporation

7 CFR Part 400

[Docket No. 2953S]

General Administrative Regulations-Standards for Approval; Agency Sales and Service Agreement

AGENCY: Federal Crop Insurance Corporation, USDA.

ACTION: Final rule.

SUMMARY: The Federal Crop Insurance Corporation (FCIC) hereby revises and reissues the Standards for Approval; Agency Sales and Service Agreement as contained in 7 CFR Part 400—Subpart C. The intended effect of the final rule is to set forth requirements which must be met in order to be eligible to be a contractor under an agency Sales and Service Agreement with FCIC providing for the sales and servicing of FCIC insurance policies. These regulations require the licensing and certification of contractor's representatives who sell and service FCIC policies and modify requirements as to financial qualifications and submission of financial statements. The word "agreement" is changed to "contract" in the title and throughout this subpart. The authority for the promulgation of this rule is the Federal Crop Insurance Act, as amended.

EFFECTIVE DATE: January 8, 1986.

FOR FURTHER INFORMATION CONTACT: Peter F. Cole, Secretary, Federal Crop Insurance Corporation, U.S. Department of Agriculture, Washington, D.C. 20250, telephone (202) 447-3325.

SUPPLEMENTARY INFORMATION: This action has been reviewed under USDA procedures established by Departmental Regulation No. 1512-1. This action constitutes a review as to the need, currency, clarity, and effectiveness of these regulations under those procedures. The sunset review date established for these regulations is September 1, 1990.

Merritt W. Sprague, Manager, FCIC, (1) has determined that this action is not a major rule as defined by Executive Order No. 12291 because it will not result in: (a) an annual effect on the economy of $100 million or more; (b) major increases in costs or prices for consumers, individual industries, federal, State, or local governments, or a geographical region; or (c) significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets; and (2) certifies that this action will not increase the federal paperwork burden for individuals, small businesses, and other persons.

This action is exempt from the provisions of the Regulatory Flexibility Act; therefore, no Regulatory Flexibility Analysis was prepared.

This program is listed in the Catalog of Federal Domestic Assistance under No. 10.450.

This program is not subject to the provisions of Executive Order No. 12372 which requires intergovernmental consultation with State and local officials. See the Notice related to 7 CFR 3015, Subpart V, published at 48 FR 29115, June 24, 1983.

This action is not expected to have any significant impact on the quality of the human environment, health, and safety. Therefore, neither an Environmental Assessment nor an Environmental Impact Statement is needed.

On Friday, August 23, 1985, FCIC published a notice of proposed rulemaking (NPRM) in the Federal Register at 50 FR 34155, setting forth certain requirements which must be met in order to be eligible to be a contractor under an Agency Sales and Service Agreement with FCIC to sell and service FCIC crop insurance policies. It was proposed to require licensing and certification of contractor's sales representatives, the licensing of contractors, and obtaining of errors and omissions insurance coverage. It was also proposed to change "agreement" to "contract" in the title and throughout this subpart. The public was given 30 days in which to submit written comments on the proposed rule.

FCIC, however, withdrew that proposed rule on November 1, 1985 (50 FR 45625), and replaced it with another Notice of Proposed Rulemaking to revise and reissue the Standards for Approval—Agency Sales and Service Agreement. Under this proposal, the requirements previously proposed with respect to the licensing and certification were retained; the amount of errors and omissions insurance required was reduced; and the provisions of the current regulation with respect to financial standards and submission of financial statements were modified. The proposal to change the word "agreement" to "contract" in the title and throughout this subpart was retained. The comment period on this proposal expired on December 2, 1985.

The comments received in connection with both of the proposed regulations, plus other comments received in connection with the subject matter covered by the proposed regulations, are jointly addressed herein.

Several comments were received dealing both with the proposed rulemaking and the terms of the proposed 1986 Agency Sales and Service Contract. For the purposes of this rule, FCICI will *only* address those comments which deal with the proposals to revise and reissue the Standards for Approval—Agency Sales and Service Contract.

1. *Licensing and Certification:* One commenter stated that the licensing and certification of agents would infringe upon the rights of companies to control their business. The commenter interpreted the proposal as providing that the agent would be required to have sold prior business in order to maintain certification. Further, it was stated that prior to 1985, when FCIC had the expense of training agents, there may have been justification for this requirement but that, since 1985 when FCIC demanded companies train the agents, the reason for this requirement was removed. The regulations require that agents be certified by FCIC for each crop for which they sell or service insurance. It is the intention of FCIC to require that an agent have product knowledge of the crop being sold and serviced so that an insurance offer is thoroughly and correctly represented to an applicant. The NPRM does not

require agents to have sold previously in order to maintain certification. It requires agents to have sold previously in order to be eligible for extension until July 1, 1986, to secure a license.

The same commenter alleged that the licensing requirement does not comply with the language or the intent of the Federal Crop Insurance Act of 1980. It was further stated that for many years FCIC employed part-time salespersons and claimed exemption from state licensing requirements for these salespersons under the provisions of the McCarran-Ferguson Act, yet following the passage of the 1980 amendment to the FCIC Act, FCIC has made consistent demands for this type of licensing.

While agreeing with the commenter on the matter of the provisions of the McCarran-Ferguson Act, we point out that McCarran-Ferguson vested authority for oversight for the sale of insurance in the various state insurance commissions, except when other legislation provided otherwise. The FCIC Act is considered that type of legislation thus allowing the sale of federal crop insurance through persons not licensed by the state.

FCIC is in full compliance with the intent of Section 507(c)(3) of the FCIC Act, which states in pertinent part that the Corporation shall . . . "to the maximum extent possible . . . encourage the sale of Federal crop insurance through licensed private insurance agents and brokers and give the insured the right to renew such insurance for successive terms through such agents and brokers. . . ." The license which FCIC requires is not one to sell Federal crop insurance. FCIC requires a contractor's representative to be licensed by the state, in which the representative is selling and servicing FCIC policies, in one of the following lines: (1) Multiple peril crop insurance (that insurance sold by Multi-Peril insurance companies); (2) crop hail insurance (as sold by private crop hail insurance companies); (3) casualty insurance; (4) property insurance; or (5) liability insurance. FCIC has determined that a majority of the individual agents selling crop insurance are in fact licensed to operate as insurance salespersons, in many cases selling lines of insurance other than crop insurance.

There are other agents, who while being certified in those crops upon which they sell crop insurance, are not licensed by the state in which they do business. Several commenters pointed out the difficulties experienced by some agents in obtaining a state license for the sale of crop insurance and requested a provision to allow a reasonable period in which those agents or representatives may secure state licensing. FCIC has provided a reasonable period of time, until July 1, 1986, for such agents to obtain a state license in one of the lines identified above. Such agents must be certified by FCIC and must have sold FCIC crop insurance for the 1984 or subsequent years. This specification is to assure that such agents are currently selling crop insurance and have a productive record of sales. FCIC considered these comments and has determined that it is in compliance with the Federal Crop Insurance Act in requiring the licensing of private insurance agents. FCIC does not share the opinion that to require licensing of an agent and certification in the crop being sold and serviced in any way infringes upon the cntrol of the company over its business. In a broad sense, it helps to assure that Federal crop insurance is being sold and serviced by trained, knowledgeable, and responsible representatives.

Similarly, comments were received regarding the proposal that the Company who held an Agency Sales and Service Contract for 1985 will be allowed until July 1, 1986, to become the holder of authority to act as an insurer or to conduct business as an insurance agency in the state of domicile. The consensus of the comments was that FCIC has no need to require this evidence of the integrity of the Company. Further, FCIC under the Agency Sales and Service Agreement and attendant operational standards and financial requirements possesses the means to assure a high level of performance and integrity on the part of the Company. FCIC agrees with this and is not adopting this requirement. Contractors, signing a contract with FCIC will not be required to hold authority to act as an insurer or to conduct business as an insurance agency in the state of domicile.

2. *Errors and Omissions insurance coverage* was addressed in virtually every comment received. In the NPRM, FCIC proposed to require errors and omissions liability insurance coverage as part of the contractor's responsibilities in order to provide indemnification to FCIC in the event an error or omission by the contractor or its representatives causes a loss to FCIC under the contract. In addition, FCIC proposed to require that the errors and omissions liability insurance be issued on a claims made basis and be maintained for at least two years beyond the termination of the Agency Sales and Service Contract.

Errors amd omissions liability insurance coverage under the provisions of the 1985 Agency Sales and Service Agreement was a factor to be considered by FCIC when determining whether to grant a waiver when a Certified Public Accountant (CPA) issued an adverse or qualified opinion on the contractor's financial statement. It had been proposed by FCIC that having errors and omissions insurance coverage be a requirement of any company entering into an Agency Sales and Service Contract with FCIC in an effort to stem the losses paid by FCIC through errors by the contractor or its representatives. Through July 31, 1985, 587 claims in the total amount of $3,234,493.06 have been filed against FCIC under the provisions of the "Good Faith Reliance on Misrepresentation" section contained in each crop insurance regulation.

The amount of $860,448.03 was paid under this provision in FY 1984 alone. Although some of these claims are the result of FCIC error, the majority of these claims are the direct result of errors by the contractor or the representative. It was felt that some way must be found to reduce this outlay of funds and still maintain program credibility with the insured. For this reason the requirement for errors and omissions insurance coverage was made. Most comments claimed that errors and omissions insurance coverage was either not available, or if available, it was exorbitantly priced. This was verified by FCIC. It has been determined that the cost to the Corporation in requiring errors and omissions insurance would exceed the benefit to the Corporation, since a contractor would necessarily require that the Corporation, under their contract, cover the expense of doing business; the cost of doing business would include the purchase of errors and omissions insurance. Further, the inavailability of errors and omissions insurance in some areas at any price would either preclude the contractor in that area from participation or, if allowed to continue without such insurance, would give that contractor a disproportionate profit under the terms of the contract.

Availability of errors and omissions coverage at reasonable cost would have increased the Corporation's likelihood of recovery in these areas, at little or no increase in the contractors expense; however, the costs and availability of errors and omissions coverage as determined by the Corporation does not justify the small increase in amount of recovery that would result. Therefore, the Corporation has determined the errors and omissions insurance will not be required.

3. *CPA Audit:* The requirement of a Certified Public Accountant audit of the financial statement of the insurance company was included in the NPRM but was not an issue addressed by the commenters. FCIC determined that it may not be feasible for some companies to secure a CPA audit of their financial statements for a variety of reasons, including the cost of such an audit. If a company obtains a CPA audit for other purposes, FCIC will require it. However, if a CPA audit is not otherwise available, the financial statement of the company, indicating a positive net worth sufficient to meet its obligations, signed by the Chief Executive Officer and the Treasurer of the company, determined by FCIC to fairly represent the financial condition of the Contractor on the date of submission, will be acceptable. This modifies the proposed requirement for a CPA audit.

4. *Contract:* One commenter stated that the change from "agreement" to "contract" in the title of these Standards and throughout the document had some impact on the enforceability of the provisions; that it benefitted FCIC; and, because of this, some concealment exists. FCIC, in changing the term "agreement" to "contract" is merely conforming the title and reference within the document to that found in the Agency Sales and Service Contract itself. By definition, the word "agreement" is the act of agreeing; an arrangement between parties regarding a method of action: convenant. Under law, the term means (a) a properly executed and legally binding compact, and (b) the writing or document embodying this. The word "contract" means (a) an agreement between two parties, especially one that is written and enforceable by law, and (b) the writing or document containing such an agreement. FCIC finds no difficulty with the term "contract" and will implement this change.

In addition to the changes resulting from comments received, FCIC corrects a date appearing in paragraph (1) of § 400.33 in the NPRM. The dates read "1985 or 1985 crop year." This is corrected to read "1984 or any subsequent crop year." Further, the word "transfer" appearing in the title of § 400.31 is revised to read "administrative reassignment", and the word "transferred", appearing within that subsection, is revised to read "administratively reassigned." These revisions are made to clarify that FCIC reserves the authority to administratively reassign business in these circumstances.

Inasmuch as FCIC extended the provisions of the 1985 Agency Sales and Service Agreement through January 17, 1986, by an interim agreement with all contractors, it is necessary to publish the standards contained herein as quickly as possible. There would not be sufficient time to provide that the effective date of the rule contained herein be established 30 days after publication, therefore, good cause exists for making this rule effective in less than 30 days. Accordingly, this rule becomes effective January 8, 1986.

List of Subjects in 7 CFR Part 400

Crop insurance, Administrative practices and procedure, Agency sales and service contract; Standards for approval.

Final Rule

Accordingly, pursuant to the authority contained in the Federal Crop Insurance Act, as amended (7 U.S.C. 1501 *et seq.*), the Federal Crop Insurance Corporation hereby revises and reissues 7 CFR Part 400, Subpart C, the General Administrative Regulations; Standards for Approval—Agency Sales and Service Agreement, to read as follows:

PART 400—GENERAL ADMINISTRATIVE REGULATIONS

* * * * *

Subpart C—Standards for Approval—Agency Sales and Service Contract

Sec.

Authority: Secs. 506, 516, Pub. L. 75–430, 52 Stat. 73, 77, as amended (7 U.S.C. 1506, 1516).

Subpart C—Standards for Approval—Agency Sales and Service Contract

§ 400.27 Applicability of standards.

The Standards contained herein must be met in order for an entity to be a contractor under an Agency Sales and Service Contract (Contract).

§ 400.28 Definitions.

For the purpose of these Standards:

(a) "Agency Sales and Service Contract" means the contract between the Federal Crop Insurance Corporation (Corporation) and a private entity (Contractor) for the purpose of selling and servicing Federal Crop Insurance policies.

(b) "CPA" means a Certified Public Accountant who is licensed as such by the State in which the CPA practices.

(d) "CPA Audit" means a professional examination by a CPA of a Financial Statement on the basis of which the CPA expresses an independent professional opinion respecting the fairness of presentation of the Financial Statement.

(e) "Current Assets" means cash and other assets that are reasonably expected to be realized in cash or sold or consumed during the normal operation cycle of the business or within one year if the operation cycle is shorter than one year.

(f) "Current Liabilities" means those liabilities expected to be satisfied by either the use of assets classified as current in the same balance sheet, or the creation of other current liabilities, or those expected to be satisfied within a relatively short period of time, usually one year.

(g) "Financial Statements" means the document(s) submitted to the Corporation by a private entity which reflects the financial position, result of operations, and change in financial position of the private entity.

§ 400.29 Certification of submission.

An entity desiring to be a contractor shall submit to the Corporation its latest financial statements certified by a CPA or, if such financial statements are not available, its latest financial statements accompanied by a certification of the Chief Executive Officer and Treasurer that said statements fairly represent its financial condition on the date of submission to the Corporation. If statements certified by the Chief Executive Officer and Treasurer are submitted, CPA audited financial statements shall be submitted if they later become available.

§ 400.30 Notification of deviation from standards.

A Contractor shall advise the Corporation immediately if the Contractor deviates from the requirements of these standards. The Corporation may require the Contractor to confirm compliance with these standards during the contract year if the Corporation determines that such submission is necessary.

§ 400.31 Denial or revocation of contract and administrative reassignment of business.

Non-compliance with these standards shall be grounds for: (a) the denial of a Contract or (b) revoking an existing

Contract. In the event of revocation of the Contract, all crop insurance policies of the Corporation sold by the Contractor and all business pertaining thereto shall be administratively reassigned by or at the direction of the Corporation to another Contractor or shall revert to the Corporation in accordance with the Contract.

§ 400.32 Financial qualifications for acceptability.

The financial statements of an entity must show a positive net worth and the ability of the entity to meet current liabilities by the use of current assets in order for the entity to become or remain a Contractor.

§ 400.33 Representative licensing and certification.

A Contractor's representative who sells and services FCIC policies or represents the Contractor in sales or servicing of such policies:

(1) Must hold a current license issued by each State in which the representatives sell FCIC policies authorizing the representative to sell insurance in one of the following lines: (a) Multiple peril crop insurance; (b) crop hail insurance; (c) casualty insurance; (d) property insurance; or (e) liability insurance; *Provided,* that a representative who has sold or serviced at least one Federal Crop Insurance policy for the 1984 or subsequent crop years shall have until July 1, 1986, to become licensed and submit verification of State licensing; and

(2) Must be certified by FCIC for each crop for which the representative sells or services FCIC insurance.

§ 400.34 OMB control numbers.

OMB control numbers are contained in Subpart H of Part 400, Title 7 CFR.

Done in Washington, DC on December 4, 1985.

Merritt W. Sprague,

Manager, Federal Crop Insurance Corporation.

[FR Doc. 86-488 Filed 1-8-86; 8:45 am]

BILLING CODE 3410-09-M

FEDERAL DEPOSIT INSURANCE CORPORATION

12 CFR Part 337

Unsafe and Unsound Banking Practices

AGENCY: Federal Deposit Insurance Corporation ("FDIC").

ACTION: Final rule.

SUMMARY: The FDIC has determined that it is appropriate to extend the period of time during which certain banks with securities subsidiaries and certain banks affiliated with securities companies must comply with certain provisions of the FDIC's regulations concerning activities of subsidiaries of insured nonmember banks. Accordingly, the FDIC is amending its regulations to extend the period during which insured nonmember banks that prior to December 28, 1984 became affiliated with a securities company or prior to that date established or acquired a subsidiary that engages in securities activities must comply with the "common name or logo" and "separate office and entrance" restrictions of § 337.4. The compliance period with respect to these restrictions is extended from the current requirement of December 28, 1985 until June 30, 1986.

EFFECTIVE DATE: January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Pamela E.F. LeCren, Senior Attorney, or Gerald J. Gervino, Senior Attorney, Legal Division, (202-389-4171), 550-17th Street, NW., Washington, DC 20429.

SUPPLEMENTARY INFORMATION: On November 19, 1984, the FDIC adopted § 337.4 of its regulations (12 CFR 337.4) (49 FR 46722, November 28, 1984). The regulations require, among other things, that certain subsidiaries meet the definition of a "bona fide subsidiary" and continue to meet that definition. The regulations also impose similar requirements upon a bank affiliated with a securities company. Banks that were affiliated or that established or acquired a subsidiary engaged in securities activities prior to December 28, 1984 were required to comply with the above restrictions as soon as practicable, but not more than one year from December 28, 1984 without the FDIC's consent. Several banks have recently written the FDIC concerning their problems in complying with the "common name or logo" and "separate office and entrance" restrictions in the regulation and have requested reconsideration of those provisions and a postponement of the time to comply with them until the FDIC has completed and requested reconsideration. In order to permit the Board of Directors adequate time to consider those requests, and in order to provide additional time where compliance has been asserted to be impossible or extremely expensive, the Board has decided to amend § 337.4(h) (the "one-year compliance" provision) to extend until June 30, 1986 the period during which banks owning securities subsidiaries and banks affiliated with securities companies (and that were so affiliated prior to December 28, 1984) would have to comply with the "common name or logo" and "separate office and entrance" restrictions of § 337.4.

In accordance with 5 U.S.C. 553, the FDIC has found that prior notice and delayed effectiveness are unnecessary because the amendments delay the imposition of requirements that are already imposed by the existing rule.

Since the amendment would only provide for an extension of time for complying with certain portions of the regulation and imposes no burden upon banks, securities affiliates or the public, it is not subject to the Paperwork Reduction Act (44 U.S.C. 3501 *et. seq.*) or the Regulatory Flexibility Act (5 U.S.C. 601 *et. seq.*).

List of Subjects in 12 CFR Part 337

Bank, Banking, Securities, State nonmember banks.

In consideration of the foregoing, the FDIC hereby amends Part 337 of Title 12 of the Code of Federal Regulations as follows:

PART 337—UNSAFE AND UNSOUND BANKING PRACTICES

1. The authority citation for Part 337 continues to read as follows:

Authority: Sec. 9, 64 Stat. 881-882, 12 U.S.C. 1819; sec. 18(j)(2), 92 Stat. 3664, 12 U.S.C. 1828(j)(2); sec. 442, 92 Stat. 1469, Pub. L. 97-320.

2. Part 337 is amended by revising paragraph (h) of § 337.4 to read as follows:

§ 337.4 Securities activities of subsidiaries of insured nonmember banks: bank transactions with affiliated securities companies.

* * * * *

(h)(1) Except as provided in § 337.4(h)(2) and (3), an insured nonmember bank that prior to December 28, 1984 became affiliated with a securities company or prior to that date established or acquired a subsidiary that engages in securities activities, shall have two years from December 28, 1984 to bring itself into compliance with § 337.4 of this Part.

(2) An insured nonmember bank described in § 337.4(h)(1) shall comply with paragraphs 337.4(b)(1)(ii) (other than the requirements imposed by § 337.4 (a)(2) (ii) and (iii)), 337.4(c) (other than § 337.4(c) (1) and (5)), and § 337.4(e) as soon as practicable (but not more than one year from December 28, 1984 without the FDIC's consent).

(3) An insured nonmember bank described in § 337.4(h)(1) shall comply with the requirements imposed by

§ 337.4(a)(2) (ii) and (iii) and by § 337.4(c) (1) and (5) as soon as practicable (but not later than June 30, 1986 without the FDIC's consent).

(4) An insured nonmember bank described in § 337.4(h)(1) shall inform the regional director of the FDIC region in which the bank is located not later than 30 days after December 28, 1984 that the bank is affiliated with a company that engages in securities activities or has a subsidiary that engages in securities activities.

* * * * *

By order of the Board of Directors, this 30th day of December, 1985.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 86-367 Filed 1-7-86; 11:31 am]

BILLING CODE 6714-01-M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Food and Drug Administration

21 CFR Part 176

[Docket No. 80F-0498]

Indirect Food Additives; Paper and Paperboard Components

AGENCY: Food and Drug Administration.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the food additive regulations to provide for the safe use of styrene-butadiene copolymers containing *N*-methylolacrylamide as a component in the manufacture of paper and paperboard intended for food-contact use. This action responds in part to a petition filed by Polysar Limited.

DATES: Effective January 9, 1986, objections by February 10, 1986.

ADDRESS: Written objections to the Dockets Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: Julius Smith, Center for Food Safety and Applied Nutrition (HFF-335), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202-472-5690.

SUPPLEMENTARY INFORMATION: In a notice published in the **Federal Register** of February 3, 1981 (46 FR 10542), FDA announced that a petition (FAP 9B3443) had been filed by Polysar Limited, Sarnia, ON, Canada N7T 7M2, proposing that the food additive regulations be amended to provide for the safe use of (1) styrene-butadiene copolymers containing *N*-methylolacrylamide as a polymer component and (2) α-sulfo-*omega*-(dodecyloxy)poly(oxyethylene) ammonium salt as components in the manufacture of paper and paperboard intended for food-contact use.

This final rule provides for the safe use in the manufacture of paper and paperboard intended for food-contact use of styrene-butadiene copolymers prepared using *N*-methylolacrylamide as a minor monomer. The agency has not completed its review of the safety of the use of α-sulfo-*omega*-(dodecyloxy)poly(oxyethylene) ammonium salt in paper and paperboard. Therefore, action on this salt will be the subject of another **Federal Register** document which will be published in the future.

FDA has evaluated data in the petition and other relevant material. The agency concludes that the proposed food additive use of styreme-butadiene copolymers containing *N*-methylolacrylamide as a polymer component is safe, and that the regulations should be amended as set forth below.

In accordance with § 171.1(h) (21 CFR 171.1(h)), the petition and the documents that FDA considered and relied upon in reaching its decision to approve the petition are available for inspection at the Center for Food Safety and Applied Nutrition (address above) by appointment with the information contact person listed above. As provided in 21 CFR 171.1(h), the agency will delete from the documents any materials that are not available for public disclosure before making the documents available for inspection.

The agency has previously considered the environmental effects of this rule as announced in the Notice of Filing For FAP 9B3443 (February 3, 1981; 46 FR 10542). No new information or comments have been received that would affect the agency's previous determination that there is no significant impact on the human environment and that an environment impact statment is not required.

Any person who will be adversely affected by this regulation may at any time on or before February 10, 1986 file with the Dockets Management Branch (address above) written objections thereto. Each objection shall be separately numbered, and each numbered objection shall specify with particularly the provisions of the regulation to which objection is made and the grounds for the objection. Each numbered objection on which a hearing is requested shall specifically so state. Failure to request a hearing for any particular objection shall constitute a waiver of the right to a hearing on that objection. Each numbered objection for which a hearing is requested shall include a detailed description and analysis of the specific factual information intended to be presented in support of the objection in the event that a hearing is held. Failure to include such a description and analysis for any particular objection shall constitute a waiver of the right to a hearing on the objection. Three copies of all documents shall be submitted and shall be identified with the docket number found in brackets in the heading of this document. Any objections received in response to the regulation may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday.

List of Subjects in 21 CFR Part 176

Food additives, Food packaging.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs and redelegated to the Director of the Center for Food Safety and Applied Nutrition, Part 176 is amended as follows:

PART 176—INDIRECT FOOD ADDITIVES: PAPER AND PAPERBOARD COMPONENTS

1. The authority citation for 21 CFR Part 176 continues to read as follows:

Authority: Secs. 201(s), 409, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348); 21 CFR 5.10 and 5.61.

2. In § 176.170(b)(2) by revising the entry for "Styrene-butadiene copolymers produced by copolymerizing styrene-butadiene with one or more monomers" to read as follows:

§ 176.170 Components of paper and paperboard in contact with aqueous and fatty foods.

* * * * *

(b) * * *

(2) * * *

List of substances	Limitations
* * * * *	
Styrene-butadiene copolymers produced by copolymerizing styrene-butadiene with one or more of the monomers: acrylamide, acrylic acid, fumaric acid, 2-hydroxyethyl acrylate, itaconic acid, methacrylic acid, and *N*-methylolacrylamide (CAS Reg. No. 53504-31-7). The finished copolymers shall contain not more than 10 weight percent of total polymer units derived from acrylic acid, fumaric acid, 2-hydroxyethyl acrylate, itaconic acid, and methacrylic acid, and shall contain not more than 3 weight percent of total polymer units derived from *N*-methylolacrylamide, and shall contain not more than 2 weight percent of polymer units derived from acrylamide..	

List of substances	Limitations
* * * * *	

Dated: December 30, 1985.

Sanford A. Miller,

Director, Center for Food Safety and Applied Nutrition.

[FR Doc. 86-413 Filed 1-8-86; 8:45 am]

BILLING CODE 4160-01-M

21 CFR Part 177

[Docket No. 84F-0165]

Indirect Food Additives; Polymers

AGENCY: Food and Drug Administration.

ACTION: Final rule.

SUMMARY: The Food and Drug Administration (FDA) is amending the food additive regulations to provide for the safe use of polysulfone resins as articles or components of articles intended for single-service food-contact use. This action responds to a petition filed by Union Carbide Corp.

DATES: Effective January 9, 1986; objections by February 10, 1986.

ADDRESS: Written objections to the Dockets Management Branch (HFA-305), Food and Drug Administration, Rm. 4-62, 5600 Fishers Lane, Rockville, MD 20857.

FOR FURTHER INFORMATION CONTACT: Marvin D. Mack, Center for Food Safety and Applied Nutrition (HFF-335), Food and Drug Administration, 200 C St. SW., Washington, DC 20204, 202-472-5690.

SUPPLEMENTARY INFORMATION: In a notice published in the **Federal Register** of July 12, 1984 (49 FR 28457), FDA announced that a petition (FAP 4B3792) had been filed by Union Carbide Corp., P.O. Box 670, Bound Brook, NY 08805, proposing that the food additive regulations be amended to provide for the safe use of polysulfone resins as articles or components of articles for single-service use in contact with ready-prepared foods kept in frozen or refrigerated storage intended to be reheated in the container at time of use.

FDA has evaluated data in the petition and other relevant material. The agency concludes that the proposed use of the additive for single-service food-contact use is safe, and that Part 177 should be amended as set forth below.

FDA currently lists polysulfone resins only for repeated food contact use under § 177.2500 (21 CFR 177.2500). To avoid redundancy and to simplify the regulations pertaining to this food additive, the agency is removing § 177.2500 and incorporating the provisions of that section into new §177.1655 (21 CFR 177.1655). The new regulation will permit the use of the additive in repeated use food-contact articles and for the use requested in this petition. The new regulation is not, however, incorporating the good manufacturing practice provisions in § 177.2500(d), which require cleansing of repeated use articles containing polysulfone resins before they are used. The agency finds from its review of migration studies contained in the petition, that the estimated exposure to polysulfone resins from repeated use and single-service use food-contact articles will be extremely small, and that the level of exposure will not be significantly reduced by cleansing the articles prior to their use. The agency also finds that the extraction tests for polysulfone resins included in the regulation will provide adequate assurance that the additive is safely used in these food-contact articles. Therefore, the agency concludes that the prewash is no longer necessary.

In accordance with § 171.1(h) (21 CFR 171.1(h)), the petition and the documents that FDA considered and relied upon in reaching its decision to approve the petition are available for inspection at the Center for Food Safety and Applied Nutrition (address above) by appointment with the information contact person listed above. As provided in 21 CFR 171.1(h), the agency will delete from the documents any materials that are not available for public disclosure before making the documents available for inspection.

The agency has carefully considered the potential environmental effects of this action and has concluded that the action will not have a significant impact on human environment and that an environmental impact statement is not required. The agency's finding of no significant impact and the evidence supporting that finding may be seen in the Dockets Management Branch (address above) between 9 a.m. and 4 p.m., Monday through Friday. FDA's regulations implementing the National Environmental Policy Act (21 CFR Part 25) have been replaced by a rule published in the **Federal Register** of April 26, 1985 (50 FR 16636, effective July 25, 1985). Under the new rule, an action of this type would require an abbreviated environmental assessment under 21 CFR 25.31a(b)(1).

Any person who will be adversely affected by this regulation may at any time on or before February 10, 1986 file with the Dockets Management Branch (address above) written objections thereto. Each objection shall be separately numbered, and each numbered objection shall specify with particularity the provisions of the regulation to which objection is made and the grounds for the objection. Each numbered objection on which a hearing is requested shall specifically so state. Failure to request a hearing for any particular objection shall constitute a waiver of the right to a hearing on that objection. Each numbered objection for which a hearing is requested shall include a detailed description and analysis of the specific factual information intended to be presented in support of the objection in the event that a hearing is held. Failure to include such a description and analysis for any particular objection shall constitute a waiver of the right to a hearing on the objection. Three copies of all documents shall be submitted and shall be identified with the docket number found in brackets in the heading of this document. Any objections received in response to the regulation may be seen in the Dockets Management Branch between 9 a.m. and 4 p.m., Monday through Friday.

List of Subjects in 21 CFR Part 177

Food additives, Polymeric food packaging.

Therefore, under the Federal Food, Drug, and Cosmetic Act and under authority delegated to the Commissioner of Food and Drugs and redelegated to the Director, Center for Food Safety and Applied Nutrition, Part 177 is amended as follows:

PART 177—INDIRECT FOOD ADDITIVES: POLYMERS

1. The authority citation for 21 CFR Part 177 continues to read as follows:

Authority: Secs. 201(s), 409, 72 Stat. 1784-1788 as amended (21 U.S.C. 321(s), 348); 21 CFR 5.10 and 5.61.

2. By adding new § 177.1655 to read as follows:

§ 177.1655 Polysulfone resins.

Polysulfone resins identified in paragraph (a) of this section may be safely used as articles or components of articles intended for use in contact with food, in accordance with the following prescribed conditions:

(a) For the purpose of this section, polysulfone resins (poly(oxy-*p*-phenylenesulfonyl-*p*-phenyleneoxy-*p*-phenyleneisopropylidene-*p*-phenylene)resins) (CAS Reg. No. 25154-01-2) consist of basic resins produced when the disodium salt of 4,4'-isopropylidenediphenol is made to react with 4,4' dichlorodiphenyl sulfone in such a way that the finished resins have a minimum number average molecular

weight of 15,000, as determined by osmotic pressure in monochlorobenzene.

(b) The basic polysulfone resins identified in paragraph (a) of this section may contain optional adjuvant substances required in the production of such basic resins. The optional adjuvant substances required in the production of the basic polysulfone resins may include substances described in § 174.5(d) of this chapter and the following:

List of substances	Limitations
Dimethyl sulfoxide.	Not to exceed 50 parts per million as residual solvent in finished basic resin.
Monochlorobenzene.	Not to exceed 50 parts per million as residual solvent in finished basic resin.

(c) Polysulfone resins, when extracted at reflux temperatures for 8 hours with the solvents—distilled water, 50 percent (by volume) ethyl alcohol in distilled water, 3 percent acetic acid in distilled water, and *n*-heptane, yield total extractives in each extracting solvent not to exceed 0.0078 milligram per square centimeter (0.05 milligram per square inch) of resin surface. Note: In testing the finished polysulfone resins, use a separate resin test sample for each required extracting solvent.

(d) Polysyulfone resins intended for repeated use in contact with food may be used under conditions of use A through H in Table 2 of § 176.170(c) of this chapter. The resins intended for single-service food-contact use may be used only under condition of use H described in Table 2 of § 176.170(c) of this chapter.

§ 177.2500 [Removed]

3. By removing § 177.2500 Polysulfone resins.

Dated: December 18, 1985.

Richard J. Ronk,

Acting Director, Center for Food Safety and Applied Nutrition.

[FR Doc. 86-410 Filed 1-9-86; 8:45 am]

BILLING CODE 4160-01-M

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 1

Percentage To Be Used by Foreign Life Insurance Companies in Computing Income Tax for the Taxable Year 1984 and Estimated Tax for the Taxable Year 1985

AGENCY: Internal Revenue Service, Treasury.

ACTION: Proclamation.

SUMMARY: This proclamation announces the percentage to be used to compute the income tax liability of foreign corporations carrying on life insurance business in the United States.

EFFECTIVE DATE: March 15, 1985.

FOR FURTHER INFORMATION, CONTACT: Mr. Hudson Milner, Office of Tax Analysis, U.S. Treasury Department, Washington, DC 20220 (202-566-2705), not a toll free call.

SUPPLEMENTAL INFORMATION: This proclamation, issued each year by the Secretary of the Treasury, announces the percentage to be used to compute the income tax liability of foreign corporations carrying on life insurance business in the United States.

Proclamation

For purposes of computing the 1984 income tax of foreign corporations carrying on a life insurance business, a percentage of 15.7 shall be used in determining the "minimum figure" under Section 819. The same percentage shall be used for purposes of computing the estimated tax and the installment payments of estimated tax for the taxable year 1985. No additions to tax shall be made because of any underpayment of estimated tax for the taxable year 1985 which results solely from the use of this percentage.

This proclamation is issued without notice and public procedure because the public cannot effectively participate in the determination of the percentage. It is computed from information contained in income tax returns that are not open to the public. The proclamation was not published prior to its effective date because the percentage is computed on the basis of data which was not then available.

Ronald A. Pearlman,

Assistant Secretary (Tax Policy).

December 17, 1985.

[FR Doc. 86-490 Filed 1-8-86; 8:45 am]

BILLING CODE 4830-01-M

DEPARTMENT OF JUSTICE

28 CFR Part 16

[AAG/A Order No. 2-86]

Exemption of Records Systems Under the Privacy Act

AGENCY: Department of Justice.

ACTION: Final rule.

SUMMARY: On August 7, 1985, the Department of Justice, Antitrust Division, issued proposed regulations to amend Title 28 of the Code of Federal Regulations, § 16.88, to (1) exempt a system of records from certain provisions of the Privacy Act, (2) remove systems which are not operational, and (3) make editorial changes.

Specifically, the Antitrust Division proposed to exempt a system of records entitled "Freedom of Information/Privacy—Requester/Subject Index File (JUSTICE/ATR-008)" from subsections (c)(3), (d), (e)(4) (G) and (H), and (f) of the Privacy Act. This system is exempted to the extent that the records reflect Antitrust Division law enforcement and investigative information. The exemption is needed to protect the integrity of law enforcement prosecutions and investigations, the privacy of third parties, and the identity of confidential sources. In addition, the division proposed to remove from 28 CFR 16.88 notice of the exemption of two systems entitled, "Computerized Document Retrieval System—United States v. International Business Machines (CDRS—IBM) (JUSTICE/ATR-002)," and "Computerized Document Retrieval System—Tire Cases (CDRS—Tire Cases) (JUSTICE/ATR-003)." Although these record systems have not been operational for many years, through administrative error they were never removed from 28 CFR 16.88. Thus, the removal of these systems is an editorial/administrative correction and has no effect on the public. Finally, and also for administrative reasons having no effect on the public, the Division proposed to change the identifying number of a system of records entitled "Antitrust Caseload Evaluation System (ACES)—Monthly Report (JUSTICE/ATR-009)" to "006."

DATE: This rule will be effective January 9, 1986.

ADDRESS: J. Michael Clark, Acting Assistant Director, General Services Staff, Justice Management Division, United States Department of Justice, Room 9002, 601 D Street, NW., Washington, DC 20530.

FOR FURTHER INFORMATION CONTACT: J. Michael Clark, (202) 272-6474.

SUPPLEMENTARY INFORMATION: The notice of the proposed rule with invitation to comment was published in the **Federal Register** on August 7, 1985 (50 FR 31887). The public was given 30 days to comment; however, no comments were received.

This order relates to individuals rather than small business entities. Nevertheless, pursuant to the requirements of the Regulatory Flexibility Act, 5 U.S.C. 601-612, it is hereby stated that the order will not have "a significant economic impact on a substantial number of small entities."

List of Subjects in 28 CFR Part 16

Administrative Practice and Procedure, Courts, Freedom of Information, Privacy, and Sunshine Act.

Accordingly, pursuant to the authority vested in the Attorney General by 5 U.S.C. 552a and delegated to me by Attorney General Order 793–78, 28 CFR 16.88 is revised as set forth below.

Dated: December 10, 1985.

W. Lawrence Wallace,

Assistant Attorney General for Administration.

1. The authority for Part 16 continues to read as follows:

Authority: 28 U.S.C. 509, 510; 5 U.S.C. 301, 552, 552a; 31 U.S.C. 483a unless otherwise noted.

2. 28 CFR is amended by revising § 16.88 as follows:

§ 16.88 Exemption of Antitrust Division Systems—Limited Access.

(a) The following system of records is exempt from 5 U.S.C. 552a (c)(3), (d), (e)(4) (G) and (H), and (f):

(1) Antitrust Caseload Evaluation System (ACES)—Monthly Report (JUSTICE/ATR–006).

These exemptions apply only to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a (k)(2).

(b) Exemption from the particular subsections are justified for the following reasons:

(1) From subsection (c)(3) because information in this system is maintained in aid of ongoing antitrust enforcement investigations and proceedings. The release of the accounting of disclosures made under subsection (b) of the Act would permit the subject of an investigation of an actual or potential criminal or civil violation to determine whether he is the subject of an investigation. Disclosure of the accounting would therefore present a serious impediment to antitrust law enforcement efforts.

(2) From subsection (d) because access to the information retrievable from this system and compiled for law enforcement purposes could result in the premature disclosure of the identity of the subject of an investigation of an actual or potential criminal or civil violation and information concerning the nature of that investigation. This information could enable the subject to avoid detection or apprehension. This would present a serious impediment to effective law enforcement since the subject could hinder or prevent the successful completion of the investigation. Further, confidential business and financial information, the identities of confidential sources of information, third party privacy information, and statutorily confidential information such as grand jury information must be protected from disclosure.

(3) From subsections (e)(4)(G) and (H), and (f) because this system is exempt from the individual access provisions of subsection (d).

(c) The following system of records is exempt from 5 U.S.C. 552a (c)(3), (d), (e)(4)(G) and (H), and (f):

(1) Freedom of Information/Privacy—Requester/Subject Index File (JUSTICE/ATR–008).

These exemptions apply to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a (k)(2).

(d) Because this system contains Department of Justice civil and criminal law enforcement, investigatory records, exemptions from the particular subsections are justified for the following reasons:

(1) From subsection (c)(3) because the release of the accounting of disclosures made under subsection (b) of the Act would permit the subject of an investigation of an actual or potential criminal or civil violation to determine whether he is the subject of an investigation. Disclosure of accounting would therefore present a serious impediment to antitrust law enforcement efforts.

(2) From subsection (d) because access to information in this system could result in the premature disclosure of the identity of the subject of an investigation of an actual or potential criminal or civil violation and information concerning the nature of the investigation. This information could enable the subject to avoid detection or apprehension. This would present a serious impendiment to effective law enforcement since the subject could hinder or prevent the successful completion of the investigation. Further, confidential business and financial information, the identities of confidential sources of information, third party privacy information, and statutorily confidential information such as grand jury information must be protected from disclosure.

(3) From subsections (e)(4)(G) and (H), and (f) because this system is exempt from the individual access provisions of subsection (d).

[FR Doc. 86–430 Filed 1–8–86; 8:45 am]

BILLING CODE 4410–01–M

DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

30 CFR Part 906

Colorado Abandoned Mine Land Reclamation Plan Amendment

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM).

ACTION: Final rule.

SUMMARY: OSM is announcing the approval of a program amendment to the Colorado Abandoned Mine Land Reclamation (AMLR) Plan. Colorado's AML reclamation plan was initially published and approved on June 11, 1982 (47 CFR 25332). The amendment allows the State to include noncoal reclamation projects in AML grant applications.

Colorado submitted the proposed amendment April 29, 1985. After opportunity for public comment and review of the amendment, OSM has determined that the Colorado AMLR plan amendment meets the requirements for SMCRA and the Secretary's regulations (30 CFR Chapter VII, Subchapter R, 47 FR 28574–28604, June 30, 1982). Accordingly, OSM has approved the Amendment.

This rule is being made effective upon publication to allow the State of Colorado to expeditiously utilize the AML fund to abate AML hazards.

EFFECTIVE DATE: January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Robert Hagen, Director, Albuquerque Field Office, Office of Surface Mining Reclamation and Enforcement, 219 Central Avenue, N.W., Albuquerque, New Mexico 97102 telephone (505) 766–1492.

SUPPLEMENTARY INFORMATION:

I. Background

Title IV the Surface Mining Control and Reclamation Act of 1977 (SMCRA), Pub. L. 95–87, 30 U.S.C. 1201 *et seq.*, establishes an abandoned mine land reclamation program for the purposes of reclaiming and restoring land and water resources adversely affected by past mining. This program is funded by a reclamation fee imposed upon the production of coal. Lands and water eligible for reclamation are those that were mined or affected by mining and abandoned or left in an inadequate reclamation status prior to August 30, 1977, and for which there is no continuing reclamation responsibility under State or Federal law. Title IV provides that a State with an approved AMLR program has the responsibility

and primary authority to implement an abandoned mine land reclamation program.

The Colorado AMLR Plan was initially approved by the Director on June 11, 1982 47 FR 25332–25334, and a proposed amendment was submitted on April 29, 1985.

A State AMLR Plan can be amended under the provisions of 30 CFR 884.15. Under the provisions of 30 CFR 884.15, if the amendment or revision changes the objectives, scope, or major policies followed by the State in the conduct of its reclamation program, the Director of the Office of Surface Mining should follow the procedures set out in 30 CFR 884.14 in approving an amendment or revision of a State reclamation plan.

OSM published a notice of proposed rulemaking on the Colorado amendment and requested public comment on August 7, 1985 (50 FR 31998). The public comment period ended September 7, 1985.

II. Description of the Amendment

On April 29, 1985 Colorado amended Chapter VI of its AMLR Plan entitled "Policies and Administrative Procedures" to include 9,000 noncoal reclamation sites in addition to 900 coal sites previously identified. This amendment specifically sets out the State's intent to undertake the reclamation of sites adversely impacted by noncoal mining as part of its reclamation program approved under Title IV of SMCRA.

Under the State's AML Plan, it will consider reclaiming noncoal AML sites when they constitute a hazard to public health and safety or degrade the environment. Ordinarily, noncoal reclamation will occur only after the State has accomplished all coal related reclamation. The one exception for considering noncoal reclamation when coal related reclamation still exists is that the site poses a direct threat to the public health or safety, and the Governor specifically requests funds for such purposes.

III. OSM'S Findings

In accordance with Section 405 of SMCRA, OSM finds that Colorado has submitted an amendment to its Abandoned Mine Land Reclamation Plan and has determined, pursuant to 30 CFR 884.15, that:

1. The public has been given adequate notice and opportunity to comment, and the record does not reflect major unresolved controversies.

2. Comments of other Federal agencies have been solicited, but none were received.

3. The State has the legal authority, policies and administrative structure to carry out the amendment.

4. The amendment meets all requirements of the OSM AMLR Program provisions.

5. The State has an approved Surface Mining Regulatory Program.

6. The amendment is in compliance with all applicable State and Federal laws and regulations.

IV. Disposition of Comments

The Colorado Mining Association (CMA) commented that it was opposed to the State using abandoned mine land (AML) funds for the reclamation of sites adversely impacted by noncoal mining activities until all coal related reclamation has been accomplished. CMA cited 30 U.S.C. 1231(C), 1233, and 1237 to substantiate its opposition to Colorado reclaiming noncoal sites and requests that the application for amendment of Colorado's AMLR plan be denied. Authority for States to conduct noncoal reclamation is provided in section 409(c) of the Surface Mining Control and Reclamation Act. Furthermore the subject AML plan amendment (chapter VI, paragraph I) contains language which governs the circumstances under which Colorado will conduct noncoal reclamation. The amendment gives Colorado authority to undertake noncoal reclamation; it does not approve any such projects under the Colorado AMLR Plan. The public is invited to review and comment on all proposed projects prior to their submittal to OSM as AML grant proposals.

There is no justification contained in CMA's comments to deny Colorado's AMLR plan amendment.

No other comments were received.

V. Additional Findings

The Office of Surface Mining has examined this rulemaking under Section 1(b) of Executive Order No. 12291 (February 17, 1981) and has determined that, based on available quantitative data, it does not constitute a major rule. The reasons underlying this determination are as follows:

1. Approval will not have an effect on costs or prices for consumers, individual industries, Federal, State, or local government agencies or geographic regions; and

2. Approval will not have adverse effects on competition, employment, productivity, innovation or on the ability of United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

This rulemaking has been examined pursuant to the Regulatory Flexibility Act, 5 U.S.C. 601 *et seq.*, and the Office of Surface Mining has determined that the rule will not have significant economic effects on a substantial number of small entities. The reason for this determination is that approval will not have demographic effects, direct costs, information collection and recordkeeping requirements, indirect costs, nonquantifiable costs, competitive effects, enforcement costs or aggregate effects on small entities.

Further, the Office of Surface Mining has determined that the Colorado AML Plan amendment does not have a significant effect on the quality of the human environment because the decision relates only to the policies, procedures and organization of the State's Abandoned Mine Land Reclamation Program. Therefore, under the Department of the Interior Manual DM 5162.3(A)(1), the decision on the Colorado AML Plan amendment is categorically excluded from the National Environmental Policy Act requirements.

As a result, no environmental assessment (EA) nor environmental impact statement (EIS) has been prepared on this action. It should be noted that a programmatic EIS was prepared by OSM in conjunction with the implementation of Title IV. Moreover, an EA or an EIS will be prepared for the approval of grants for the abandoned mine land reclamation projects under 30 CFR Part 886.

Lists of Subjects in 30 CFR Part 906

Abandoned mine land reclamation, Coal mining, Intergovernmental regulations, Noncoal Reclamation, Surface mining, Underground mining.

Dated: January 2, 1986.

James W. Workman,

Deputy Director, Office of Surface Mining.

PART 906—COLORADO

30 CFR Part 906 is amended as follows:

1. The authority citation for Part 906 is revised to read as follows:

Authority: Pub. L. 95–87, Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.).

2. 30 CFR 906.20 is revised to read as follows:

§ 906.20 Approval of Colorado Abandoned Mine Land Reclamation Plan Amendment.

The Colorado Abandoned Mine Plan, as approved on June 11, 1982, is amended on January 9, 1986. Copies of the approved program, as amended, are available at: State of Colorado, Department of Natural Resources, 423

Centennial Building, 1313 Sherman Street, Denver, Colorado 80203; Office of Surface Mining, Albuquerque Field Office, 219 Central Avenue, NW., Albuquerque, New Mexico 97102 and Office of Surface Mining, Administrative Record, Room 5315, 1100 "L" Street, NW., Washington, DC 20240

[FR Doc. 86-465 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-05-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 117

[CGD7 85-46]

Drawbridge Operation Regulations; Atlantic Intracoastal Waterway, SC

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: At the request of the South Carolina Department of Highways and Public Transportation the Coast Guard is changing the regulations governing the Wappoo Creek bridge, mile 470.8 at Charleston, by permitting the number of openings to be limited during certain periods. This change is being made because vehicular traffic yet still provide for the reasonable needs of navigation.

EFFECTIVE DATE: These regulations become effective on February 10, 1986.

FOR FURTHER INFORMATION CONTACT: Mr. Walt Paskowsky, (305) 536-4103.

SUPPLEMENTARY INFORMATION: On October 10, 1985 the Coast Guard published (50 FR 41366) a proposal to revise these regulations. The proposed regulations were also published in a public notice issued by Commander, Seventh Coast Guard District on October 22, 1985. In each notice interested persons were given until November 25, 1985 to submit comments.

Drafting Information

The drafters of these regulations are Mr. Walt Paskowsky, Bridge Administration Specialist, project officer, and Lieutenant Commander Ken Gray, project attorney.

Discussion of Comments

Four letters were received in response to the proposal. The City of Charleston supplied three separate comments. One comment supported the proposal but misinterpreted it as proposing already existing weekday "rush hour" restrictions. The other two comments advocated more restrictive regulations not justified by the data. The fourth comment, from the local chamber of commerce, supported the proposal.

Economic Assessment and Certification

These regulations are considered to be non-major under Executive Order 12291 on Federal Regulation and nonsignificant under the Department of Transportation regulatory policies and procedures (44 FR 11034; February 26, 1979).

The economic impact of these regulations is expected to be so minimal that a full regulatory evaluation is unnecessary. We conclude this because the regulations exempt tugs with tows. Since the economic impact of these regulations is expected to be minimal, the Coast Guard certifies that they will not a have a significant economic impact on a substantial number of small entities.

List of Subjects in 33 CFR Part 117

Bridges.

Regulations

In consideration of the foregoing, Part 117 of Title 33, Code of Federal Regulations is amended as follows:

PART 117—DRAWBRIDGE OPERATION REGULATIONS

1. The authority citation for Part 117 continues to read as follows:

Authority: 33 U.S.C. 499; 49 CFR 1.46 and 33 CFR 1.05-1(g).

2. Section 117.911(d) is revised to read as follows:

§ 117.911 Atlantic Intracoastal Waterway, Little River to Savannah River.

* * * * *

(d) *SR 171/700 bridge across Wappoo Creek, Mile 470.8 at Charleston.* The draw shall open on signal except that the draw need not open from 6:30 a.m. to 9 a.m. and from 4 p.m. to 6 p.m. Monday through Friday except federal holidays. On Saturdays, Sundays, and federal holidays from 2 p.m. to 6 p.m. the draw need open only on the hour and half-hour. In April, May, October, and November, Monday through Friday except federal holidays from 9 a.m. to 4 p.m. the draw need open only on the hour, 20 minutes past the hour, and 40 minutes past the hour.

* * * * *

Dated: December 24, 1985.

R.P. Cueroni,

Rear Admiral, U.S. Coast Guard, Commander, Seventh Coast Guard District.

[FR Doc. 86-470 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-14-M

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[A-1-FRL-2933-1]

Approval and Promulgation of Implementation Plans; New Hampshire

Correction

In FR Doc. 85-29659 beginning on page 51250 in the issue of Monday, December 16, 1985, on page 51250, second column, in the summary, sixteenth line, the FR citation is corrected to read "(49 FR 38104)".

BILLING CODE 1505-01-M

40 CFR Part 81

[A-4-FRL-2951-6; MS-010]

Designation of Areas for Air Quality Planning Purposes; Mississippi: Redefinition of TSP and SO_2 Attainment Areas

AGENCY: Environmental Protection Agency.

ACTION: Final rule.

SUMMARY: EPA today is changing the description of particulate matter and sulfur dioxide attainment areas in Mississippi at the request of the Mississippi Bureau of Pollution Control. This change, according to the State, will make it easier to track increment consumption in connection with the prevention of significant deterioration of air quality.

DATES: This action will be effective on March 10, 1986 unless notice is received within 30 days that adverse or critical comments will be submitted.

ADDRESSES: Copies of the materials submitted by Mississippi may be examined during normal business hours at the following locations:

Environmental Protection Agency, Region IV, Air Programs Branch, 345 Courtland Street, NE., Atlanta, Georgia 30365

Bureau of Pollution Control, Mississippi Department of Natural Resources, Post Office Box 10385, Jackson, Mississippi 39209

FOR FURTHER INFORMATION CONTACT: Al Yeast, EPA Region IV Air Programs Branch, at the Atlanta Address above, telephone (404) 881-2864 or FTS 257-2864.

SUPPLEMENTARY INFORMATION: On July 2, 1985, the Mississippi Bureau of Pollution Control asked that the designation of particulate and sulfur

dioxide attainment areas in 40 CFR 81.325 be changed from "Rest of State" to a listing of individual counties. This change, according to the State, will make it easier to track increment consumption in connection with the prevention of significant deterioration of air quality. EPA finds this request to be consistent with the provisions of section 107 of the Clean Air Act, and it is granted herewith.

The public should be advised that this action will be effective 60 days from the date of this Federal Register notice. However, if notice is received within 30 days that someone wishes to submit adverse or critical comments, this action will be withdrawn and two subsequent notices will be published before the effective date. One notice will withdraw the final action and another will begin a new rulemaking by announcing a proposal of the action and establishing a comment period.

Under section 307(b)(1) of the Act, petitions for judicial review of this action must be filed in the United States Court of Appeals for the appropriate circuit by March 10, 1986. This action may not be challenged later in proceedings to enforce its requirements. (See 307(b)(2).)

Under 5 U.S.C. 605(b), I certify that this redesignation does not have a significant economic impact on a substantial number of small entities. (See 46 FR 8709.)

The Office of Management and Budget (OMB) has exempted this rule from the requirements of section 3 of Executive Order 12291.

List of Subjects in 40 CFR Part 81

Air pollution control, National parks, Wilderness areas.

Dated: December 27, 1985.

Lee M. Thomas,

Administrator.

PART 81—[AMENDED]

Part 81 of Chapter 1, Title 40, Code of Federal Regulations, is amended as follows:

1. The authority citation for Part 81 continues to read as follows:

Authority: 42 U.S.C. 7401–7642.

2. In § 81.325 the attainment status designation tables for TSP and SO_2 are revised to read as follows:

§ 81.325 Mississippi.

TSP

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Adams County.				X
Alcorn County.				X
Amite County.				X
Attala County.				X
Benton County.				X
Bolivar County.				X
Calhoun County.				X
Carroll County.				X
Chickasaw County.				X
Choctaw County.				X
Clairborne County.				X
Clarke County.				X
Clay County.				X
Coahoma County.				X
Copiah County.				X
Covington County.				X
DeSoto County.				X
Forrest County.				X
Franklin County.				X
George County.				X
Greene County.				X
Grenada County.				X
Hancock County.				X
Harrison County.				X
Hinds County.				X
Holmes County.				X
Humphreys County.				X
Issaquena County.				X
Ittawamba County.				X
Jackson County.				X
Jasper County.				X
Jefferson County.				X
Jefferson Davis County.				X
Jones County.				X
Kemper County.				X
Lafayette County.				X
Lamar County.				X
Lauderdale County.				X
Lawerence County.				X
Leake County.				X
Lee County.				X
Leflore County.				X

TSP—Continued

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Lincoln County.				X
Lowndes County.				X
Madison County.				X
Marion County.				X
Marshall County.				X
Monroe County.				X
Montgomery County.				X
Neshoba County.				X
Newton County.				X
Noxubee County.				X
Oktibbeha County.				X
Panola County.				X
Pearl River County.				X
Perry County.				X
Pike County.				X
Pontotoc County.				X
Prentiss County.				X
Quitman County.				X
Rankin County.				X
Scott County.				X
Sharkey County.				X
Simpson County.				X
Smith County.				X
Stone County.				X
Sunflower County.				X
Tallahatchie County.				X
Tate County.				X
Tippah County.				X
Tishomingo County.				X
Tunica County.				X
Union County.				X
Walthall County.				X
Warren County.				X
Washington County.				X
Wayne County.				X
Webster County.				X
Wilkinson County.				X
Winston County.				X
Yalobusha County.				X
Yazoo County.				X

SO_2

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Adams County.				X
Alcorn County.				X
Amite County.				X
Attala County.				X
Benton County.				X
Bolivar County.				X
Calhoun County.				X
Carroll County.				X
Chickasaw County.				X
Choctaw County.				X
Claiborne County.				X
Clarke County.				X
Clay County.				X
Coahoma County.				X
Copiah County.				X
Covington County.				X
DeSoto County.				X
Forrest County.				X
Franklin County.				X
George County.				X
Greene County.				X
Grenada County.				X
Hancock County.				X
Harrison County.				X
Hinds County.				X
Holmes County.				X
Humphreys County.				X
Issaquena County.				X
Itawamba County.				X
Jackson County.				X
Jasper County.				X
Jefferson County.				X
Jefferson Davis County.				X
Jones County.				X
Kemper County.				X
Lafayette County.				X
Lamar County.				X
Lauderdale County.				X
Lawrence County.				X
Leake County.				X
Lee County				X
Leflore County.				X
Lincoln County.				X
Lowndes County.				X

SO_2—Continued

Designated area	Does not meet primary standards	Does not meet secondary standards	Cannot be classified	Better than national standards
Madison County.				X
Marion County.				X
Marshall County.				X
Monroe County.				X
Montgomery County.				X
Neshoba County.				X
Newton County.				X
Noxubee County.				X
Oktibbeha County.				X
Panola County.				X
Pearl River County.				X
Perry County.				X
Pike County.				X
Pontotoc County.				X
Prentiss County.				X
Quitman County.				X
Rankin County.				X
Scott County.				X
Sharkey County.				X
Simpson County.				X
Smith County.				X
Stone County.				X
Sunflower County.				X
Tallahatchie County.				X
Tate County.				X
Tippah County.				X
Tishomingo County.				X
Tunica County.				X
Union County.				X
Walthall County.				X
Warren County.				X
Washington County.				X
Wayne County.				X
Webster County.				X
Wilkinson County.				X
Winston County.				X
Yalobusha County.				X
Yazoo County.				X

* * * * *

[FR Doc. 86-460 Filed 1-8-86; 8:45 am]

BILLING CODE 6560-50-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

46 CFR Parts 169, 170, 171, and 173

[CGD 83-005]

Sailing School Vessel Regulations

AGENCY: Coast Guard, DOT.

ACTION: Final rule.

SUMMARY: The Coast Guard is establishing a new set of inspection regulations for sailing school vessels, as mandated by the Sailing School Vessel Act of 1982, Pub. L. 97-322. Current Coast Guard regulations do not consider the special characteristics, operating methods, and service of these vessels. These regulations establish minimum inspection standards necessary for the safe operation of sailing school vessels. Previously uninspected vessels that qualify under these standards may be able to carry more persons than currently allowed.

EFFECTIVE DATE: These regulations become effective on January 9, 1986. The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Lieutenant John Astley (202-426-4431).

SUPPLEMENTARY INFORMATION: On 24 December 1984, the Coast Guard published a notice of proposed rulemaking (49 FR 49974) concerning these regulations. Interested parties were given until February 22, 1985 to submit comments. Seventeen letters were received.

Drafting Information

The principal drafters of this notice are LT John Astley, Office of Merchant Marine Safety and CDR R. Zabel, Office of Chief Counsel.

Discussion of Comments and Changes Made

General Comments

1. One general comment voiced by several commenters was that certain regulations are in excess of that required by Subchapter "T" (small passenger vessel regulations). In each instance the commenter recommended that the requirement reflect the wording found in Subchapter "T." In general this recommendation has not been adopted. The proposed regulations were specifically written for sailing school vessels and not for small passenger vessels. They are different types of vessels, each operating under different parameters which necessitate different safety requirements. In a few sections

where it appeared that a proposed requirement was excessive for a small sailing school vessel, the regulation has been modified. For this reason the following sections have been modified § 169.317, § 169.320, § 169.564(a)(3), § 169.613, § 169.615.

2. One commenter recommended that a public hearing be held to discuss the preamble and various substantive issues including manning, natural ventilation, subdivision and stability so as to avoid controversy and discussion at a later date. The Coast Guard has evaluated the merits of this proposal and determined that a public hearing is not warranted. It would delay the implementation of the regulations and cause unnecessary hardship on vessel owners, who are anxious to commence operations. Also, the majority of problem areas have been corrected in the final rule. If substantial problems still exist after implementation of the final rules, the Coast Guard will consider further rulemaking to deal with the problem.

3. Two commenters recommended that each sailing school vessel be required to carry a device which emits underwater warning signals. This device warns submarines that a sailing vessel is nearby. This recommendation has not been adopted. The Coast Guard is not aware of any reported instance of a submarine colliding with a sailing vessel because of the absence of engine and propeller noise. The cost of such a requirement can not be justified.

4. One commenter recommended that each person on board be required to demonstrate his or her ability to stay afloat. This recommendation has not been adopted. The lifesaving apparatus required to be on board is sufficient to ensure the safety of all persons in the event of an emergency. There is no demonstrated need to preclude nonswimmers from sailing on these vessels.

5. One commenter suggested prohibiting the use of alcoholic beverages aboard sailing school vessels. This recommendation has not been adopted. The issue is beyond the scope of the Notice of Proposed Rulemaking and cannot be addressed at this time. Although sailing school vessels have only recently been established as a separate category, sail vessels carrying passengers have been operating for years. There is no evidence that they have encountered more problems associated with the consumption of alcoholic beverages than any other category of vessel. No other vessels operate under a government regulation prohibiting the consumption of alcoholic beverages; however, the Coast Guard may take action against any licensed officer or documented crew member who is found to be incapable of performing his or her duties due to intoxication. In addition, the Coast Guard is conducting an extensive educational campaign concerning the hazards of mixing alcohol and boating and has initiated a separate rulemaking project to establish standards for defining intoxication.

6. One commenter recommended that a special provision be added to the regulations which authorizes the Officer in Charge, Marine Inspection (OCMI) to certificate replicas of historic vessels, even if they do not comply with all the regulations. This proposal has not been accepted. The sailing school vessel regulations are the minimum standards necessary for the safe operation of a sailing school vessel. To incorporate a provision as recommended would be condoning operations which may pose an unacceptable risk. Historic vessels were not necessarily safe vessels.

7. One commenter suggested that each lifeboat, liferaft, personal flotation device, and lifering buoy have an emergency position indicating radio beacon (EPIRB) attached. This recommendation has not been adopted. The regulations prescribe that each vessel, except those operating on protected waters, carry at least two EPIRBs, and this is comparable to existing EPIRB requirements for other inspected vessels.

8. One commenter recommended that all training vessels carry TINKER liferafts. This recommendation is not adopted. Any liferaft that is approved under Subpart 160.051 of Title 46, Code of Federal Regulations, and meets the requirements of § 169.513 of this chapter is acceptable.

9. The Coast Guard contemplated regulating the age and physical qualifications of sailing school students. The idea was addressed in the notice of proposed rulemaking preamble and open for public comment. Four of the five letters received, that addressed this issue, stated that these areas were outside of the Coast Guard's purview and best regulated by industry. The Coast Guard partially concurs. Although the agency has authority to regulate these areas, they are best governed by the individual program. Therefore, specific standards have not been developed. Each sailing school vessel operator will be allowed to decide what, it any, age and physical qualifications are necessary for the particular program. Section 169.205(a)(3) has been added to require that information concerning age and physical qualifications for students and instructors and the program's student-instructor ratio be submitted to the Coast Guard when an institution applies for certification as a sailing school vessel. The Coast Guard will use the information to determine the proper manning for the vessel's intended operation.

10. The Coast Guard was also contemplating requiring that each sailing school student sign a notification form acknowledging that he or she understands the specialized nature of the vessel and the applicable safety standards. Four commenters opposed the idea stating that this was outside the Coast Guard's jurisdiction. This is not true. In fact, the Sailing School Vessel Act of 1982, Pub. L. 97-322, dictates that each operator provide this information. However, requiring that this notification be in written form and signed by each student may be excessive. The desired effect of such a regulation can be obtained simply through statements in promotional literature and verbal notification. This is adequately covered by § 169.857. Therefore, a signed notification form has not been prescribed.

11. *Licensing/Manning*—One commenter stated that many of the smaller sailing school vessels are ketches and yawls. On these vessels the second mast is used for balancing purposes. It was recommended that the requirement for an additional seaman for such a mast be deleted. The Coast Guard concurs with this if the local OCMI believes that a ketch or yawl can be operated safely with a smaller crew. The recommended scales published in the NPRM are just that, recommended, and the local OCMI may deviate from them if he or she believes it is appropriate.

One commenter stated there is a shortage of sailing masters and mates and recommended requiring ocean operators in lieu of masters and mates on sailing school vessels in 100 to 200 gross ton category. This recommendation has not been adopted. Persons operating vessels of this size need to have more experience and be knowledgeable in areas beyond that required of an ocean operator. The ocean operator license is designed for people operating vessels of less than 100 gross tons.

Coast Guard statistics show that there are over 1,000 ocean operators in the United States. It is believed that these individuals can fairly easily upgrade their present licenses to master or mate sail or auxiliary sail. Part 10 ot Title 46, Code of Federal Regulations lays out the following time requirements for upgrading ocean operator licenses to master or mate:

Section	Ocean operator service [1]	Licenses	Tonnage
10.05-3	2 years	Master Oceans	300 gross tons.
10.05-7	2 years	Master Oceans	Dependent on experience.
10.05-5(a)(9)	1 year	Master Coastwise	300 gross tons.
10.05-28(a)(4)	1 year	Mate	Route and tonnage dependent on experience.
10.05-36(b)	No additional time	Mate	Route and tonnage dependent on experience.

[1] The service requirement includes a minimum of 6 months' experience on sail or auxiliary sail vessels.

One commenter stated that the Coast Guard's system of examination does not test for qualities which are of paramount importance on a sail vessel and recommended that the test be revised to emphasize sailing skills, lines, rigging, and weather. The Coast Guard partially concurs with this recommendation. An effort is being made to upgrade the sailing addendum for licenses and a new test is being devised for Able Seaman-Sail. These areas are under development, and anyone interested in providing information should contact Commandant (G-MVP). Even though there is room for improvement, the Coast Guard believes that the present examinations cover the minimum skills and knowledge necessary to safely operate a vessel.

One commenter suggested that the geographic limitation of 100 miles offshore for an ocean operator license be deleted to allow these individuals to go anywhere in the world. This recommendation has not been adopted. It is paramount that individuals operating vessels on extended offshore voyages have advanced experience and knowledge over that required of an ocean operator. The Coast Guard is willing to extend the limitation for a particular route depending on an individual's qualifications and if a need can be demonstrated. An examination covering certain subjects of importance for extended offshore service will be required in order to obtain this route endorsement. Each request will be handled on a case by case basis.

As stated in the Notice of Proposed Rulemaking, policy guidance for manning is found in the Coast Guard's Marine Safety Manual (MSM) Volume III. In determining the appropriate manning for a particular vessel the OCMI will consider the following guidance:

Interim Manning Guidance

Sailing school vessels must operate with properly licensed and certificated individuals as required by the statutes and regulations. These individuals provide the necessary base of experience to fulfill leadership roles during emergencies and to otherwise assure the vessel's safe handling.

In determining the manning needed to safely operate the vessel the Officer in Charge, Marine Inspection (OCMI), shall take into consideration the vessel's route and specific characteristics, including the number of masts, type of sails and number of persons needed for evolutions. Vessels equipped with more than one mast must carry a seaman (able seaman [AB] or deckhand as appropriate) for each mast and an additional AB for each square rigged mast. On ketches and yawls where the second mast is used for balancing purposes, the OCMI may waive the additional seaman, if it is believed that vessel can be operated safely with a smaller crew.

The maximum number of people needed in the deck crew will be figured on the above formula or that required by watchkeeping requirements, whichever is greater. On vessels 100 gross tons and above, except those navigating exclusively on rivers or lakes (except the Great Lakes), the unlicensed crew must hold merchant mariner's documents and at least 65% must be ABs. If propelling machinery is installed aboard seagoing sailing school vessels of 300 gross tons or more, a licensed engineer must be carried. On ocean or coastwise vessels of 100 gross tons or more, the three watch standard applies. Examples of what is envisioned for the various sizes of vessels are as follows:

MANNING EXAMPLES

Gross Tonnage	Protected Waters	Partially Protected & Exposed Waters
Less than 100 GT (single mast fore and after rig)	a) 1-Operator, 1-Deckhand* b) 2-Operators, 2-Deckhands	a) 1-Ocean Operator, 1-Deckhand* b) 2-Ocean Operators, 2-Deckhands
100 GT to less than 200 GT (two masted fore and after rig)	a) 1-Master, 2-AB's* b) 1-Master, 1-Mate, 2-AB's	1-Master, 2-Mates, 2-AB's, 1-O.S. (1 mate for vessels on voyages less than 24 hours)
200 GT to less than 300 GT (two masted, one with a square sail)	1-Master, 1-Mate, 2-AB's (mate counted towards total deck force required)	1-Master, 2-Mates, 2-AB's, 1-O.S. (mates counted towards total deck force required)
300 GT to 500 GT (three masted fore and aft with engine)	1-Master, 1-Mate, 3-AB's	1-Master, 2-Mates, 3-AB's, 1-Engineer
300 GT to 500 GT (three masted, square rig)	1-Master, 1-Mate, 5-AB's counted towards total deck force required)	1-Master, 2-Mates, 4-AB's (mates counted towards total deck force required)

*a) When away from a shoreside dock, or having sailing school students on board, or both, for not more than 12 hours in any 24-hours period.

b) When away from a shoreside dock, or having sailing school students on board, or both, for 12 or more hours in any 24-hour period.

Comment Concerning Specific Sections

Section 169.103(b)(5) This paragraph has been added to the final rule in order to clarify the situation where a vessel operates part of the time as a sailing school vessel and part of the time as a certificated passenger vessel. The sailing school vessel regulations are not applicable when a vessel is operating under a current valid certificate of inspection issued in accordance with the requirements of Subchapter "T" or "H."

Section 169.107 and 170.055(s) Definition of "Existing Vessel"—Four commenters stated that the proposed definition was unduly restrictive. It was stated that by insisting upon the target dates contained in the proposed regulations many existing vessels would be precluded from certification in contravention of the legislative intent. The biggest problem preventing certification is insufficient time. Normally, non-profit organizations are not set up in a manner which allows quick decisions, particularly when finances are involved. Also, obtaining tax-exempt status under section 501(c)(3) of the IRS Code can be a lengthy process. The Coast Guard recognizes these constraints and the definition has been amended in the final rules. For the purpose of these regulations, "existing vessel" is a sailing vessel whose keel was laid prior to January 9, 1986, which applies for certification as a sailing school vessel prior to January 9, 1987, and whose initial inspection for certification is completed prior to January 11, 1988. This affords vessel owners time to consider the issue, establish a program, raise funds, obtain an IRS determination, and undergo inspection for certification.

The definition of a "new vessel" remains unchanged. For consistency, the definition for "new vessel" and "existing vessel" have been added to the section where all definitions governing this part are contained, § 169.107.

Section 169.107(h) One commenter pointed out that there was a conflict between the definition of an instructor and the wording in the preamble regarding manning. The definition contained in this section is correct and follows the definition contained in the law. An instructor can not serve as an officer, operator, or member of the crew required by regulation to be aboard the vessel.

Section 169.107(t) Pub. L. 98–577 necessitates a change to the definition of sailing instruction. The new wording found in the final rule reflects the language found in the law.

Section 169.112 This section has been added to the final rule in order to grant the Officer in Charge, Marine Inspection (CMI), greater flexibility in applying the regulations. This is necessary due to the unique construction and operating characteristics of sailing school vessels, particularly existing vessels. This section will allow OCMI's to realistically appraise the specifics of a given situation and determine if an adequate level of safety can be provided by an alternative means. It is intended that the section will allow OCMIs to address the unique, one-time cases that surface whenever new regulations are promulgated.

Section 169.121 One commenter wanted to add a paragraph to this section, which stated that the regulations for sailing school vessels superceded the loadline regulations. This is not possible. The Coast Guard does not have authority to amend the extent that the Loadline Act applies to sailing school vessels. In addition, loadline regulations are not seen by the Coast Guard as interfering with sailing school vessels.

Section 169.205(a)(4) One commenter recommended that this section requiring proof of nonprofit, tax-exempt status not be a condition for having a vessel certificated as a sailing school vessel. This comment has not been adopted. The regulations only apply when a qualified organization owns or demise charters, and operates a sailing school vessel. The nonprofit, tax-exempt organization status is required by statute. The Coast Guard will only inspect under these regulations sailing vessels operated by these institutions.

Section 169.213 One commenter recommends deleting this section providing for a permit to carry excursion parties, because it would allow sailing school vessels to carry persons other than those engaged in sail training. This comment has not been adopted, however the regulation has been modified to emphasize the intent of the section. Sailing school vessels are only authorized to carry sailing school students, sailing school instructors and guests. This section is intended to cover special situations where a sailing school vessel operator wants to carry additional persons or operate on an extended route on a one time basis. The permit acts as a temporary supplement to the vessel's Certificate of Inspection; it is not a means for circumventing inspection requirements. The applicable stability, lifesaving, and fire standards are not waived or relaxed.

Prior to issuing an excursion permit the OCMI will ensure that the vessel meets all applicable regulations and that a bona fide sailing instruction program is being conducted. It is not intended that this section will allow an operator to conduct a frivolous, cursory or unprofessional program even for a day.

Section 169.229(a)(1) Two commenters recommended extending the drydocking interval to 30 months to be consistent with a recently published Coast Guard rule. Another commenter recommended extending the interval to 36 months to be consistent with Subchapter "T" regulations. These recommendations have not been adopted. The maximum drydock interval for vessels operating in salt water is 24 months. This is currently the maximum interval for all Coast Guard certificated vessels, not just sailing school vessels. In a separate rulemaking project the Coast Guard is reexamining drydocking intervals for all vessels with a view toward standardizing requirements with those utilized by classification societies and the International Maritime Organization.

Section 169.305(a)(13) This section has been revised. In the final rule the regulation has been broken into two separate items, §§ 169.305(a)(13) and (a)(14). This was done in order to more fully explain what needs to be detailed in the required plans.

Section 169.305(c) Two commenters suggested expanding the scope of this paragraph to allow the OCMI to waive the submission of plans for an existing vessel which has a record of safe operation. This recommendation has been adopted. The final rule has been modified to allow the OCMI to waive submission of some of the required structural plans for existing vessels having a history of at least 5 years of safe operation.

Section 169.313(i)(3) Two commenters stated that the requirements for a vertical ladder rung to be at least 7 inches from the nearest object in the back is excessive. They recommended a minimum distance of three inches. This recommendation has been adopted.

Section 169.309 This section has been modified in the final rule. Two new paragraphs, which delineate the requirements for masts, spars, running rigging, etc., have been added. The paragraphs were added to explain what constitutes structural adequacy with regard to masting and rigging.

Section 169.315(c) Three commenters stated that this requirement setting minimum natural ventilation capacity was excessive. One recommendation was to change the formula to read: "V/A where V is the total area of the vents in square inches and A is the product in square feet of the vessel's design

waterline length times its maximum beam. A ratio of less than 1.4 is unacceptable." The recommended formula determines a value for the entire vessel rather than for each compartment as provided for in the proposal. This recommendation has been adopted, and the regulations have been amended accordingly. The formula is only used to determine the minimum capacity of a natural ventilation system. The system must still provide adequate ventilation to all compartments. Adoption of the recommended formula will reduce the number of openings in the hull and allow for increased design flexibility.

Section 169.317(d) One commenter suggested that "separate" berths not be required, as many vessels have double bunks which are suitable for more than one person. Although the regulations have not been modified, the recommendation is not categorically denied. The Coast Guard is concerned about the safety and welfare of all persons on board. Generally, double bunks are built into the hull structure whereby only one side has access to an aisle. With this type of arrangement, in an emergency, individual would have to climb over one another to gain access to the only avenue of escape. This is unacceptable. In the interest of safety and alleviating fatigue of the ship's company, each person should be assigned his or her own berth, which is of sufficient size, clear of obstructions, and immediately adjacent to an aisle. If an OCMI determines that a double bunk can satisfy these conditions, then special consideration, allowing a double bunk, can be granted under the new section, § 169.112.

Section 169.317(e) Four commenters stated that a 24 inch vertical distance between bunks is more appropriate for a sailing school vessel. The regulations have been amended to reflect this fact.

Sections 169.317(i) and 169.320 One commenter recommended deleting these sections concerning crew and hospital spaces as they are not suitable to the design and construction of sailing school vessels. This recommendation has been adopted. These sections were placed in the proposed regulations because under the law, 46 U.S.C. 11101, sailing school vessels were considered merchant vessels, and merchant vessels were required to have crew and hospital spaces. Pub. L. 98–557, October 30, 1984, amended 46 U.S.C. 11101 by stating that sailing school vessels are not considered merchant vessels of the United States. Therefore, the regulations are no longer required by statute, and they have been deleted from the final rule.

Section 169.319 Two commenters recommended reducing the required number of toilets and washbasins to one toilet and washbasin for every 20 persons. They felt that this was a more realistic ratio considering the typical design of a sailing vessel. This change has been made in the final rules.

Section 169.323(a)(1) The proposed regulations required all free-standing furniture to be constructed of noncombustible material. One commenter stated that many existing vessels have wooden free-standing tables and it would be expensive to replace them. It was further stated that little would be added to overall safety of the vessel by requiring the tables to be removed. It was recommended that this section only apply to new vessels. This recommendation has been adopted. While it is important to keep the amount of combustible material on board a vessel to a minimum, the added level of protection is not justified due to the costs involved with replacing this equipment on an existing vessel. The final rule has been changed to allow existing wooden furniture on existing vessels.

Section 169.515(b) One commenter stated that requiring liferafts in excess of that necessary to accommodate all persons on board is excessive. Another commenter recommended that the section only apply to vessels certificated for exposed water service. The final rules have been modified to reflect the later recommendation. Additional inflatable liferafts are required for each vessel certificated for exposed water service, where an added margin of safety is necessary.

Section 169.515(d) Much confusion arose over the term "open boat" as used in the proposed regulation. The paragraph was intended to exempt the unique boats and program operated by Hurricane Island Outward Bound School from the primary lifesaving equipment requirement due to the special construction of their boats. The Coast Guard has decided that exempting boats of special construction operated by a specific school from certain requirements is best addressed by the OCMI through the new special consideration section, § 169.112 and not by stating exceptions in the regulations. This paragraph has been deleted from the final rule.

Section 169.551(b) One commenter recommended modifying the regulations to reflect recent law change dealing with exposure suits. This comment has been adopted. Exposure suits are required on each vessel operating in certain exposed or partially protected waters and the exception for vessels with totally enclosed liferafts has been deleted.

Two commenters recommended deleting the requirement for exposure suits as they are expensive and unrealistic. This recommendation has not been adopted. Exposure suits are a necessary element of personnel safety. However the final rules have been modified to allow the substitution of Type V exposure personal flotation devices for the required exposure suits. These devices are less costly, easier to work in, and provide an adequate level of protection against hypothermia.

Section 169.555 The proposed regulations required each vessel certificated for exposed or partially protected waters to have an approved Class A EPIRB. One commenter recommended amending the requirement for vessels certificated for partially protected waters to require these vessels to carry Class C instead of Class A EPIRBs. This recommendation has been adopted. Also the commenter suggested that the proposed rule for EPIRBs in lifesaving apparatus be amended to allow Class C as well as Class B EPIRBs. This change has not been made. However, the final rules have been changed to require Class S EPIRBs in lifesaving apparatus. This reflects the latest Federal Communications Commission standard.

Section 169.564(a)(3) Three commenters recommended deleting the requirement for a fixed fire extinguishing system in galleys on small vessels. They stated that portable extinguishers provide ample coverage and in some cases are more effective than a fixed system. This recommendation has been adopted. The final rule only requires a fixed system for galleys on vessels greater than 90 feet in length. Smaller sailing school vessels will be required to have a B–II portable extinguisher for every 500 cubic feet of galley space.

Section 169.565(c) One commenter questioned whether fixed CO_2 extinguishing system controls can be located both inside and outside of the protected space. The proposed regulations require controls to be located outside the protected area only. The regulation remains as written in the proposed rules. Controls located inside the protected space can be dangerous and are not allowed.

Section 169.601 One commenter suggested adding a paragraph which authorizes the OCMI to accept departures from the regulations for equipment and arrangements on existing vessels. Although a paragraph has not been added to this section, the

recommendation has been adopted. A new section, § 169.112, has been added to the final rule. This section authorizes the OCMI to accept departures from the regulations whenever special circumstances or arrangements warrant doing so, and an adequate level of safety is provided. This applies to all vessels and all regulations, not just machinery and electrical requirements on existing vessels.

Sections 169.613 and 169.615 One commenter stated that the proposed regulations concerning fuel systems were excessive for small sailing vessels. The Coast Guard concurs with this statement. Accordingly, in the final rules, a new paragraph, which allows vessels of 65 feet and under to meet Subchapter "T" regulations, has been added to each of these sections.

Section 169.620 One commenter recommended deleting this requirement. Rudder stops are necessary to prevent damage or jamming when a vessel goes astern under power. They are probably not necessary on many sailing vessels. Therefore, this section has been deleted and § 169.618(b) has been amended to reflect that steering systems on vessels with an auxiliary means of propulsion must not jam at the vessel's maximum astern speed.

Section 169.652 One commenter recommended deleting requirements for bilge piping for vessels of 40 feet and under because sailing vessels of this size, except open boats, are impracticable for use in sail training and were not intended to be covered by the Sailing School Vessel Act of 1982. The Coast Guard disagrees, and the recommendation has not been adopted. The Act applies to vessels of less than 500 gross tons, not just those greater than 40 feet in length.

Section 169.654 Three comments dealing with this section on bilge pumps were received. The wording of this section, when read in conjunction with § 169.652, created confusion. The proposed regulations have been substantially modified to parallel the requirements for bilge piping and to eliminate inconsistency and confusion.

Section 169.668(d) One commenter stated that 10 inches of head room over batteries is not always possible on smaller vessels and recommended that the requirement only apply to vessels greater than 65 feet in length. The Coast Guard concurs with the intent of this recommendation. The requirement for 10 inches of head room over batteries has been deleted for all vessels subject to this section. The final rule requires that batteries be accessible so as to permit removal.

Section 169.672(b) The proposed regulations required that power and lighting circuits have stranded copper conductors. One commenter recommended allowing solid copper conductors on existing vessels which have operated safely for years. This recommendation has been adopted. There is no need to rewire vessels simply because they have solid vice stranded copper conductors. Stranded conductors will be required on new vessels only.

Section 169.678 Two commenters questioned the need for drip hoods and nonconducting hand rails on switch boards, particularly on smaller vessels. It was recommended that the requirements be similar to those contained in Subchapter "T." The Coast Guard concurs in part. The onerous requirements for working space area has been deleted from the final rule. The grab rail requirement has been modified to allow an exception where surrounding bulkheads and decks are of an insulating material such as fiberglass or wood. The requirement for drip hoods remains; drip hoods are needed to protect against falling liquid.

Section 169.703 Six comment letters were received on the subject of LPG/CNG cooking equipment. One letter included a summary of the thirty-eight comments received on a recently published proposed regulation on the carriage and use of liquefied and nonliquefied flammable gas on vessels carrying passengers (49 FR 10685). The majority of commenters favored permitting the use of Liquefied Petroleum Gas/Compressed Natural Gas (LPG/CNG) as a cooking medium. The primary sources of concern are the housing requirements for cylinders and the fact that CNG and LPG are governed by the same rules. It was also recommended that the National Fire Protection Association Standard (NFPA) No. 302 be adopted as an alternative to the American Boat and Yacht Council (ABYC) standards. The latter recommendation has been adopted. In view of the great similarities of the standards, the Coast Guard is adopting both ABYC and NFPA as the basic reference for LPG or CNG installations. However, due to a few differences between these standards which are considered significant, certain requirements are being added to each of them. Specifically, these requirements are as follows:

a. If NFPA 302 is used as the standard, then the following ABYC sections must also be complied with:

1. LPG or CNG must be odorized in accordance with A–1.5.d or A–22.5.b, respectively.

2. Ovens shall be equipped with a flame failure switch in accordance with A–1.10.b for LPG or A–22.10.b for CNG.

3. The marking and mounting of LPG cylinders shall be in accordance with A–1.6.b.

4. Only LPG cylinders of the vapor withdrawal type are permitted as specified in A–1.5.b.

b. If ABYC A–1 or A–22 is used as the standard for an LPG or CNG installation, then the following requirements shall also be met:

1. Pilot lights or glow plugs are prohibited.

2. The use or stowage of stoves with attached cylinders is prohibited as specified in paragraph 6–5.1 of NFPA 302.

c. If ABYC A–22 is used as the standard for a CNG installation, then the CNG cylinders, regulating equipment, and safety equipment shall meet the requirements of paragraphs 6–5.11.1, 2, 3, 5.11.5, and 5.11.8 of NFPA 302.

Almost all of the commenters recommended deleting the requirement for cylinders to be stored in a metal locker or housing on or above the weather deck. The reasons cited were lack of space, interference of the tank and fuel supply line with the rigging on sail vessels, that the metal cylinder enclosure would interfere with the working of the sails on sailboats, and the increased probability of the cylinder being damaged by wave action. All commenters suggested adoption of the ABYC standards for cylinder stowage without modification. After reevaluating this requirement and that contained in the ABYC and NFPA standards, it has been decided that the industry standards provide an adequate level of safety with one exception, the ABYC requirement for the stowage of CNG cylinders. Therefore the requirement to stow cylinders in metal enclosures located above the weather deck has been deleted to allow for the exceptions provided by the industry standards. Also the proposed requirements contained in § 169.703(c)(2) (ii) and (iii) have been deleted as they merely reiterated industry standards.

Regarding CNG cylinders, ABYC permits their stowage anywhere on the vessel while NFPA 302 requires them to be stowed similarily to LPG cylinders. Apparently, ABYC feels that any CNG which leaked from a cylinder stowed inside a vessel would rise to the top of the compartment and exit to the atmosphere via the ventilation system. Although this is true, the Coast Guard is in agreement with NFPA that the possibility of the CNG encountering an

ignition source before it exited the vessel is too great. Therefore, the Coast Guard is requiring that CNG cylinder stowage be similar to that for LPG as set forth in section 6-5.11.3 of NFPA 302.

One commenter recommended prohibiting the use of LPG. This comment has not been adopted. If installed in accordance with the regulations, LPG is as safe as CNG. There is no need to preclude LPG from the list of authorized cooking mediums.

One commenter recommended that each vessel utilizing LPG have a bilge blower system in the deepest area of the bilge. This recommendation has not been adopted. There is no need to install a bilge blower system if the LPG installation is designed and stowed in accordance with ABYC and NFPA standards.

Section 169.709(b) One commenter recommended deleting the requirement for vessels certificated for partially protected waters to carry an emergency compass. This recommendation has been adopted.

Section 169.711 One commenter stated that the regulation was unclear as to what constitutes acceptable emergency lighting. The statement was reinforced when the commenter recommended that vessels of less than 90 feet be allowed to employ a battery-powered emergency lighting system, subject to keeping flashlights readily available. The recommended change is unnecessary, since it is already authorized by the proposed rule. A lighting system that automatically shifts to battery power upon loss of the generator is an acceptable type of emergency lighting, and the proposed regulation requires that all vessels carry portable lights, such as flashlights, as a back-up. However, this confusion demonstrated the need for rewriting the section. The final rule has been rewritten so as to better delineate the types of emergency lighting sytems that are acceptable.

One commenter stated that small sail vessels have difficulty satisfying the proposed requirement for automatic actuation of the emergency lighting system. The Coast Guard recognizes the fact that on sailing school vessels, unlike on passenger vessels, the persons on board are familiar with the layout of the vessel, and the need to restore lighting rapidly is not as crucial. Under such conditions, there is no need to require automatically-actuated emergency lighting; a manually-controlled system will accomplish the same effect. Therefore, the requirement has been deleted from the final rule.

Section 169.715 One commenter stated that the proposed regulations concerning radio installations violate certain Federal Communications Commission (FCC) regulations. The Coast Guard concurs. Radiotelephone installations are under the jurisdiction of the FCC. The final rules have been modified to reflect this fact.

Section 169.741 One commenter recommended that the size of markings be at least 1" high and that a vessel's document number be used in lieu of the hailing port. This recommendation has not been adopted. There is no reason for prescribing the size of letters on personal flotation devices and ring lifebuoys. These markings are only there so that an individual can identify the vessel in distress. The reason for denying the document number recommendation is discussed below.

Section 169.748(a)(2) Two commenters recommended deleting the requirement for marking the vessel's hailing port on the stern and instead use the vessel's document number. The reason was to be consistent with a recently published Coast Guard notice of proposed rulemaking. This recommendation has not been adopted. The referenced material was a proposed change to the regulations not a final regulation. However, since the hull marking requirements for sailing school vessels are the same as other vessels, there is no need to duplicate the regulations in this rulemaking; they are already adequately covered in Part 67 of this chapter. Therefore, this section has been deleted from the final rule.

Sections 169.813, 169.815, 169.817, 169.821, 169.829, and 169.833 One commenter stated that these operational regulations are "big ship" requirements and should only apply to vessels greater than 65 feet in length and over 100 gross tons. This recommendation is not adopted except for § 169.815 concerning emergency signals. Smaller vessels are not required to have general alarms and whistles. Therefore, it is not reasonable to require that they utilize such equipment. This section has been modified so that it only applies to vessels of 100 gross tons and over. All the other sections remain unchanged. They are necessary and applicable for all vessels regardless of size.

Sections 169.813, 169.815, 169.817, 169.821, 169.823, 169.827, 169.829, 169.831, 169.833, 169.835, 169.841, and 169.857 One commenter stated that these operational regulation sections presume on the prerogatives of the vessel owner and master. The Coast Guard does not agree. Each of these requirements is necessary to ensure the safety of the vessel and the ship's company. The sections remain in the final rules.

Section 169.853 One commenter recommended only requiring the display of plans on vessels of 100 gross tons and over. This recommendation has been adopted. This requirement is only appropriate for larger vessels and the final rules have been modified accordingly.

Section 169.857 One commenter stated that the wording of the section, particularly the requirement to inform individuals that the vessel does not meet the same high level of safety standards required for an oceangoing passenger vessel, is offensive and subject to improper connotation, and recommended modification. The Coast Guard partially agrees to the extent that the notice requirement states that the vessel *does* not meet certain standards. The section has been reworded to eliminate this connotation but still advises the public that a sailing school vessel is not required to meet the same standards as a passenger vessel on a comparable route.

Section 171.055(d)(2) Several commenters thought that the definition for sail area was ambiguous and could be translated so as to excessively penalize a vessel with a lot of sail overlap. The definition has been changed in the final rule to clear ambiguity and to reflect the Coast Guard's interpretation of the definition.

Section 171.057 One commenter suggested that catamarans do not make suitable sailing school vessels. A sailing vessel, desiring to carry six or more sailing school students and or instructors and meeting these regulations may be certificated as a sailing school vessel, regardless of hull form. No change is made in the final rule.

Section 173.057(a) Several commenters suggested that the permissible mean length for allowing Class 1 watertight doors be increased above 90 feet. Recognizing the dimensions and arrangements of existing sailing vessels, this requirement has been changed to a mean length of 125 feet in the final rule.

Section 173.057(b) Several commenters objected to requirements for Class 1 watertight doors as inconvenient, excessive, and detracting from rather than contributing to safety. One commenter suggested marking the doors "CLOSE IN EMERGENCY" rather than "RECLOSE AFTER USE." The Coast Guard has reviewed numerous sinkings which could have been prevented by the maintenance of existing watertight integrity. No change is made in the final rule.

Section 173.058 Several commenters thought that double bottom requirements were excessive and should be eliminated for wooden vessels and for steel vessels less than 150–165 feet in length. The Coast Guard has not seen any supporting evidence of differences in bottom damage survivability between wooden and steel vessels. However, we agree that retrofitting existing vessels with double bottoms is an excessive requirement. Also, double bottom requirements for sailing vessels should not be more restrictive than those for other passenger carrying vessels. The final rule has been changed to reflect these positions.

Section 173.063 Six comments supported the American Sail Training Association's recommendations for reduced stability numerals used in the dynamic balance to downflooding and dynamic balance to knockdown criteria. These recommendations have been supported by a study of certain existing vessels. The study recommends that a vessel's required stability numerals for downflooding and knockdown be related to its angle of downflooding and range of stability, respectively. This method, with a size related modification, is included in the final rule.

One commenter suggested that required stability numerals should be higher for smaller vessels. This comment, with supporting documentation, showed that the relationship to size is best compared to displacement. The final rule has a multiplier applied to the required stability numeral which takes this into account.

Several commenters supported the American Sail Training Association's position that there is no weather related reason for requiring higher stability numerals on vessels operating in exposed waters than on vessels operating in protected or partially protected waters. The Coast Guard agrees; however, higher numerals are warranted for vessels operating in exposed waters for the following reasons:

(a) It is more difficult to seek shelter from a storm.

(b) Weather forecasting is less reliable.

(c) It is more difficult to obtain assistance.

Overall the stability numerals have been modified, however the final rule continues to require a slightly higher numeral for vessels operating in exposed waters.

The changes made in this section are based primarily on the recommendations of the American Sail Training Association. The properties of forty-nine sailing vessels of various configurations and sizes were analyzed to establish the downflooding and knockdown numerals. Of the known sailing school vessels only five would not meet the criteria in this final rule, and with relatively minor modifications three of the five could comply.

Paperwork Reduction Act

This rulemaking contains information collection requirements. These items have been submitted to the Office of Management and Budget for review under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et. seq.) and have been approved by OMB. The section numbers and corresponding control numbers are as follows: §§ 169.111, 169.201, 169.205, 169.211, 169.213, 169.215, 169.217, 169.233, 169.235, (OMB #2115–0517); 169.205 (OMB #2115–0007); 169–807 (OMB #2115–0003); 169.305 (OMB #2115–0095); 169.841 (OMB #2115–0071); 169.509 (OMB #2115–0132); 169.205, 169.218, 169.219, 169.813, 169.841, 169.857, (OMB #2115–0546).

Final Evaluation and Economic Certification

This final rule is considered to be non-major under Executive Order 12291 and nonsignificant under the DOT regulatory policies and procedures (44 FR 11034; February 26, 1979). A final regulatory evaluation has been prepared and placed in the rulemaking docket. It may be inspected or copied at Room 2110, 2100 Second Street SW., Washington, DC from 7:30 a.m. to 4:00 p.m. Copies may also be obtained by contacting the person listed in the "For Further Information Contact" paragraph.

The economic impact on industry is nonsignificant. As explained in the final evaluation, the proposed regulations afford vessel owners an alternative to the regulations that presently govern their operations. The Coast Guard does not have specific information on how many vessels will seek certification as sailing school vessels, although it is believed that as many as 100 vessels may request inspection. The final rule only requires vessel owners or operators deciding to engage in sailing school operations to have their vessels inspected under these regulations. Section 169.103 has been modified to clarify this point. The owner has the option of operating under existing regulations or the new sailing school vessel regulations. There would be no incentive to operate under the sailing school vessel regulations unless the vessel owner viewed them as either less costly or allowing greater operating flexibility. Also previously uninspected vessels may be able to carry more persons than previously allowed. Therefore, operation under these final regulations is in essence voluntary and no new costs will be imposed on the public.

It is expected that the owners of sailing school vessels will seek inspection under these regulations as they are more ideally suited to their operations. To the extent that the regulations are written specifically for sailing school vessels, the final rules provide a cost savings to the affected vessel operators. They permit the use of vessels currently not operating as inspected vessels. Many large wooden vessels, having histories of safe operation, which previously could not operate as inspected passenger vessels because of their construction, may now be able to operate as a sailing school vessel with over six students.

Since the impact of this final rule is expected to be minimal, the Coast Guard certifies that it will not have a significant economic impact on a substantial number of small entities.

The Coast Guard has assessed the environmental effects of these regulations and found no foreseeable significant impact on the environment.

These regulations are being made effective on publication. The Sailing School Vessel Act became effective on April 15, 1984. Full implementation of the Act is dependent on these regulations. Owners of vessels intended for operation as sailing school vessels have been hindered in carrying out modifications due to the lack of final standards. No vessel owner is required to comply with these regulations, and will elect to do so only to take advantage of the increased flexibility they afford. Therefore, the Coast Guard finds there is good cause, under 5 U.S.C. 553(d), to make these rules effective in less than 30 days after publication.

List of Subjects

46 CFR Part 169

Marine safety, Sailing school vessels, and Administrative practice and procedure.

46 CFR Part 170

Marine safety, Subdivision, Stability, Vessels, Tank vessels, Cargo vessels, Nuclear vessels, Passenger vessels, Oceanographic vessels, Sailing vessels, Nautical schools, Tugboats, Towboats, Mobile offshore drilling units, Barges, Grain, Oil and gas exploration, Hazardous material transportation, Gases, and Natural gases.

46 CFR Part 171

Marine safety, Subdivision, Stability, Vessels, Passenger vessels, Sailing vessels, Barges.

46 CFR Part 173

Marine safety, Subdivision, Stability, Vessels, Cargo vessels, Oceanographic vessels, Nautical vessels, Tugboats, Towboats, Barges.

For the reasons set out in the preamble, the Coast Guard amends Title 46, Code of Federal Regulations as follows:

1. By adding Part 169 to Subchapter R, "Nautical Schools" to read as follows:

PART 169—SAILING SCHOOL VESSELS

Authority: 46 U.S.C. 3306, 49 CFR 1.46(b).

Subpart 169.100—General Provisions

§ 169.101 Purpose.

The regulations in this part set forth uniform requirements which are suited to the particular characteristics and specialized operations of sailing school vessels as defined in Title 46, United States Code section 2101(30).

§ 169.103 Applicability.

(a) This subchapter applies to each foreign and domestic vessel operating as a sailing school vessel except as follows:

(1) A vessel of a foreign nation signatory to the International Convention for the Safety of Life at Sea and which has on board a current valid Safety Certificate; or

(2) A vessel of a foreign nation having inspection laws approximating those of the United States together with reciprocal arrangements with the United States and which has on board a current valid certificate of inspection issued by its government.

(b) This subchapter does not apply to—

(1) Any vessel operating exclusively on inland waters which are not navigable waters of the United States;

(2) Any vessel while laid up, dismantled, and out of service;

(3) Any vessel with title vested in the United States and which is used for public purposes except vessels of the U.S. Maritime Administration;

(4) Any vessel carrying one or more passengers; or

(5) Any vessel operating under the authority of a current valid certificate of inspection issued in accordance with the requirements of Subchapter H or T, 46 CFR Parts 70 thru 78 and Parts 175 thru 187, respectively.

(c) A vessel which engages in trade or commerce or carries one or more passengers, cannot operate under a certificate of inspection as a sailing school vessel, but must meet the rules and regulations governing the service in which it is engaged.

§ 169.107 Definitions.

(a) "Approved" means accepted by the Commandant unless otherwise stated.

(b) "Coast Guard District Commander" means an officer of the Coast Guard designated by the Commandant to command all Coast Guard activities within a district.

(c) "Commandant" means the Commandant of the Coast Guard or an authorized representative of the Commandant.

(d) "Existing vessel" means a sailing school vessel, whose keel was laid prior to (publication date), which applies for certification as a sailing school vessel prior to (one year from publication date), and whose initial inspection for certification is completed prior to (two years from publication date).

(e) "Exposed Waters" means waters more than 37 kilometers (20 nautical miles) from the mouth of a harbor of safe refuge, or other waters the Officer in Charge, Marine Inspection determines to present special hazards due to weather or other circumstances.

(f) "Guest" means an individual on board a sailing school vessel who is not a member of the ship's company and has not contributed any consideration, either directly or indirectly, for carriage on the vessel. Guests are not considered passengers for the purpose of these regulations.

(g) "Headquarters" means the Office of the Commandant, United States Coast Guard, Washington, DC 20593.

(h) "Instructor" means any person who is aboard a sailing school vessel for the purpose of providing sailing instruction and is not an officer, operator, or member of the crew required by regulation to be aboard the vessel, and has not paid any consideration, either directly or indirectly for his or her carriage on the vessel.

(i) "Length" means the mean length. It is the mean or average between length on deck (LOD) and length between perpendiculars (LBP). "Length on deck" (LOD) means the length between the

forward-most and after-most points on the weather deck, excluding sheer. "Length between perpendiculars" (LBP) means the horizontal distance between the perpendiculars taken at the forward-most and after-most points on a vessel's waterline corresponding to the deepest operating draft.

(j) "Marine Inspector" means any person from the civilian or military branch of the Coast Guard assigned by the Officer in Charge, Marine Inspection or any other person designated by the Coast Guard to perform duties with respect to the inspection, enforcement, and administration of vessel safety and navigation laws and regulations.

(k) "Master" means the senior licensed individual having command of the vessel.

(l) "New vessel" means a sailing school vessel which is not an existing vessel.

(m) "Officer In Charge, Marine Inspection (OCMI)" means any person from the civilian or military branch of the Coast Guard designated as such by the Commandant and who, under the direction of the Coast Guard District Commander, is in charge of the inspection zone in which the vessel is located for the performance of duties with respect to the inspections, enforcement, and administration of vessel safety and navigation laws and regulations.

(n) "Partially Protected Waters" means—

(1) Waters within 37 kilometers (20 nautical miles) of a harbor of safe refuge, unless determined by the OCMI to be exposed waters; and

(2) Those portions of rivers, harbors, lakes, etc. which the OCMI determines not to be sheltered.

(o) "Passenger" means any person carried on board a vessel other than—

(1) The owner or his representative;

(2) The master and bona fide members of the crew who are engaged in the business of the vessel and paid for their services;

(3) Any employee of the owner of the vessel engaged in the business of the owner, except when the vessel is operating under a bareboat charter;

(4) Any employee of the bareboat charterer of the vessel engaged in the business of the bareboat charterer;

(5) Any quest; or

(6) Any sailing school instructor or sailing school student.

(p) "Protected Waters" means sheltered waters presenting no special hazards such as most rivers, harbors, lakes, etc.

(q) "Qualified Organization" means an educational organization, State, or political subdivision of a State that owns or demise charters, and operates a sailing school vessel for the purpose of providing sailing instruction. The educational organization must satisfy the requirements of section 501(c)(3) of the Internal Revenue Code of 1954 and must be exempt from tax under section 501(a) of such Code, as now or hereafter amended.

(r) "Recognized Classification Society" means the American Bureau of Shipping or other classification society recognized by the Commandant.

(s) "Rules of the Road" means the statutory and regulatory rules governing navigation of vessels.

(t) "Sailing Instruction" means teaching, research, and practical experience in operating vessels propelled primarily by sail, and may include—

(1) Any subject related to that operation and the sea, including seamanship, navigation, oceanography, other nautical and marine sciences, and maritime history and literature; and

(2) When in conjunction with a subject referred to in paragraph (t)(1) of this paragraph, instruction in mathematics and language arts skills to sailing school student having learning disabilities.

(u) "Sailing School Student" means any person who is aboard a sailing school vessel for the purpose of receiving sailing instruction.

(v) "Sailing School Vessel" means a vessel of less than 500 gross tons, carrying six or more individuals who are sailing school students or sailing school instructors, principally equipped for propulsion by sail even if the vessel has an auxiliary means of propulsion, and owned or demise chartered and operated by a qualified organization during such times as the vessel is operated exclusively for the purposes of sailing instruction.

(w) "Ship's Company" means the officers and crew of a sailing school vessel, sailing school students, and sailing school instructors.

(x) "Watertight" means designed and constructed to withstand a static head of water without any leakage, except that "watertight equipment" means enclosed equipment constructed so that a stream of water from a hose (not less than 1 inch in diameter) under head of about 35 feet from a distance of about 10 feet, and for a period of 5 minutes, can be played on the apparatus without leakage.

(y) "Weathertight" means that water will not penetrate into the unit in any sea condition, except that "weathertight equipment" means equipment constructed or protected so that exposure to a beating rain will not result in the entrance of water.

§ 169.109 Equivalents.

Substitutes for a fitting, appliance, apparatus, or equipment, may be accepted by the Commandant if the substituted item is as effective and consistent with the requirements and minimum safety standards specified in this subchapter.

§ 169.111 Administrative procedures.

(a) Upon receipt of a written application for inspection, the Officer in Charge, Marine Inspection assigns a marine inspector to inspect the vessel at a mutually agreed upon time and place.

(b) The owner or a representative shall be present during the inspection.

(c) If during the inspection, the vessel or its equipment is found not to conform to the requirements of law or the regulations in this subchapter, the marine inspector lists all requirements which have not been met and presents the list to the owner or a representative.

(d) In any case where the owner of a vessel or his representative desires further clarification of, or reconsideration of any requirement placed against his vessel, he may discuss the matter with the Officer in Charge, Marine Inspection.

§ 169.112 Special consideration.

In applying the provisions of this part, the Officer in Charge, Marine Inspection, may give special consideration to departures from the specific requirements when special circumstances or arrangements warrant such departures and an equivalent level of safety is provided.

§ 169.113 Appeals.

Whenever any person directly interested in or affected by any decision or action of any Officer in Charge, Marine Inspection, feels aggrieved by such decision or action, he may appeal to the Coast Guard District Commander having jurisdiction, and to the Commandant under the provisions of section 2.01-70 of this title.

§ 169.115 Incorporation by reference.

(a) In this subchapter portions or the entire text of certain industrial standards and specifications are referred to as the governing requirements for materials, equipment, tests, or procedures to be followed. These standards and specification requirements specifically referred to in this subchapter are the governing requirements for the subject matters covered unless specifically limited,

modified, or replaced by other regulations in this subchapter.

(b) These materials are incorporated by reference into this part with the approval of the Director of the Federal Register. The Office of the Federal Register publishes a table, "Material Approved for Incorporation by Reference," which appears in the Finding Aids section of this volume. In that table is found citations to the particular sections of this part where the material is incorporated with the approval by the Director of the Federal Register. To enforce any edition other than the one listed in paragraph (c) of this section, notice of change must be published in the **Federal Register** and the material must be made available. All approved material is on file at the Office of the Federal Register, Washington, DC 20408 and at the U.S. Coast Guard, Merchant Vessel Inspection Division, Washington D.C. 20593.

(c) The materials approved for incorporation by reference in this part are:

(1) American Boat and Yacht Council (ABYC), P.O. Box 806, 190 Ketchum Ave., Amityville, NY 11701
P-1-73—"Safe Installation of Exhaust Systems for Propulsion and Auxiliary Engines" (1973)
H-24.9 (g) and (h)—"Fuel Strainers and Fuel Filters" (1975)
H-2.5—"Ventilation of Boats Using Gasoline—Design and Construction" (1981)
A-1-78—"Marine LPG—Liquefied Petroleum Gas Systems"
A-3-70—"Recommended Practices and Standards Covering Galley Stoves"
A-22-78—"Marine CNG—Compressed Natural Gas Systems"

(2) National Bureau of Standards, c/o Superintendent of Documents, U.S. Government Printing Office, Washington D.C. 20402
Special Pub. 440 (SD Cat. No. C13.10:490), "Color: Universal Language and Dictionary of Names", 1976

(3) National Fire Protection Association (NFPA) Batterymarch Park, Quincy, MA 02269
302—"Pleasure and Commercial Motor Craft," Chapter 6 (1980)
306—"Control of Gas Hazards on Vessels" (1980)
70—"National Electrical Code," Article 310-8 and Table 310-13 (1980)

(4) Naval Publications and Forms Center, Customer Service Code 1052, 5801 Tabor Ave., Philadelphia, PA 19120
Federal Specification ZZ-H-451 "Hose, Fire, Woven-Jacketed Rubber or Cambric-Lined, with Couplings, F."

(5) Underwriters Laboratories, 333 Pfingsten road, Northbrook, IL 60062
UL 19-78—"Woven Jacketed, Rubber Lined Fire Hose"

§ 169.117 OMB Control numbers.

Purpose. This section collects and displays the control numbers assigned to information collection and recordkeeping requirements in this Subchapter by the Office of Management and Budget (OMB) pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). The Coast Guard intends that this section comply with the requirements of 44 U.S.C. 3507(f) which requires that agencies display a current control number assigned by the Director of OMB for each approved agency information collection requirement.

46 CFR Part—	OMB control No.
169.111	2115-0517
169.201	2115-0517
169.205	2115-0007, 2115-0517, 2115-0546
169.211	2115-0517
169.213	2115-0517
169.215	2115-0517
169.217	2115-0517
169.218	2115-0546
169.219	2115-0546
169.233	2115-0517
169.235	2115-0517
169.305	2115-0095
169.509	2115-0132
169.807	2115-0003
169.813	2115-0546
169.841	2115-0546, 2115-0071
169.857	2115-0546

§ 169.119 Vessel status.

For the purpose of 46 U.S.C. 11101, 46 App. U.S.C. 291 and 46 App. U.S.C. 883 a sailing school vessel is not deemed a merchant vessel or a vessel engaged in trade or commerce.

§ 169.121 Loadlines.

Sailing school vessels must meet the applicable loadline regulations contained in Subchapter E (Load Lines) of this chapter.

Subpart 169.200—Inspection and Certification

Certificate of Inspection

§ 169.201 When required.

(a) No sailing school vessel shall be operated without a valid Certificate of Inspection, Form CG-3753.

(b) Except as noted in this subpart, each sailing school vessel inspected and certificated under the provisions of this subchapter must, during the tenure of the certificate, be in full compliance with the terms of the certificate when carrying six or more individuals who are sailing school students or sailing school instructors.

(c) If necessary to prevent delay of the vessel, a temporary Certificate of Inspection, Form CG-854, is issued pending the issuance and delivery of the regular Certificate of Inspection, Form CG-3753. The temporary certificate is carried in the same manner as the regular certificate and is considered the same as the regular certificate of inspection which it represents.

§ 169.203 Description.

The certificate of inspection issued to a vessel describes the vessel, the route which it may travel, the minimum manning requirements, the major lifesaving equipment carried, the minimum fire extinguishing equipment and life preservers required to be carried, the maximum number of sailing school students and instructors and the maximum number of persons which may be carried, the name of the owner and operator, and such conditions of operations as may be determined by the Officer in Charge, Marine Inspection.

§ 169.205 How to obtain or renew.

(a) A qualified organization attempting to obtain or renew a certificate of inspection for a vessel must submit to the Coast Guard Officer in Charge, Marine Inspection located in or nearest the port at which the inspection is to be made, the following—

(1) An application for inspection on Form CG-3752; and

(2) Evidence that the vessel has been designated as a sailing school vessel or an application for designation, as set forth in § 169.218; and

(3) Information concerning the program's age and physical qualifications for students and instructors and the ratio of students to instructors.

(b) The application for initial inspection of a vessel being newly constructed or converted must be submitted prior to the start of such construction or conversion.

(c) The construction, arrangement and equipment of all vessels must be acceptable to the cognizant Officer in Charge, Marine Inspection, as a prerequisite of the issuance of the initial certificate of inspection. Acceptance will be based on the information, specifications, drawings and calculations available to the Officer in Charge, Marine Inspection, and on the successful completion of an initial inspection for certification.

(d) Certificates of inspection will be renewed by the issuance of new certificates of inspection.

(e) The condition of the vessel and its equipment must be acceptable to the cognizant Officer in Charge, Marine Inspection, as a prerequisite of the certificate of inspection renewal. Acceptance will be based on the condition of the vessel as found at the inspection for certification.

§ 169.207 Period of validity.

(a) Certificates of inspection are issued for a period of two years.

(b) Certificates of inspection may be revoked, or suspended and withdrawn by the Officer in Charge, Marine Inspection, at any time for noncompliance with the provisions of this subchapter or requirements established thereunder.

§169.209 Routes permitted.

(a) The area of operation for each vessel is designated by the Officer in Charge, Marine Inspection and recorded on its Certificate of Inspection. Each area of operation is described on the Certificate of Inspection under the major headings "exposed waters," "partially protected waters," or "protected waters," as applicable. Further limitations imposed or extensions granted are described by reference to bodies of waters, geographical points, distance from geographical points, distances from land, depths of channel, seasonal limitations, etc.

(b) Operation of vessels on routes of lesser severity than those specifically described or designated on the Certificate of Inspection are permitted, unless expressly prohibited on the Certificate of Inspection. The general order of severity is: exposed, partially protected, and protected waters.

§ 169.211 Permit to proceed for repair.

(a) The Officer in Charge, Marine Inspection, may issue a permit to proceed to another port for repair, Form CG–948, to a vessel if in his judgment it can be done with safety even if the Certificate of Inspection of the vessel has expired or is about to expire.

(b) The permit is issued only upon the written application of the master, owner, or agent of the vessel.

(c) The permit states upon its face the conditions under which it is issued and that guests may not be carried when operating under the permit. The permit must be carried in a manner similar to that described in § 169.217(a) for a certificate of inspection.

§ 169.213 Permit to carry excursion party.

(a) A vessel may be permitted to engage in a temporary excursion operation with a greater number of persons and/or on a more extended route than permitted by its certificate of inspection when in the opinion of the Officer in Charge, Marine Inspection, the operation can be undertaken with safety. A "Permit To Carry Excursion Party" Form CG–949, is a prerequisite of such an operation.

(b) Any Officer in Charge, Marine Inspection, having jurisdiction may issue a permit to carry an excursion party upon the written application of the operator, owner or agent of the vessel.

(c) The OCMI will reevaluate the vessel's sailing instruction program to ensure that the permit fits within the scope of the training program and that the vessel continues to meet the definition of a sailing school vessel.

(d) The OCMI may require an inspection prior to the issuance of a permit to carry an excursion party.

(e) The permit states upon its face the conditions under which it is issued, a reminder about the prohibition against carrying passengers, the number of persons the vessel may carry, the crew required, and additional lifesaving or safety equipment required, the route for which the permit is granted, and the dates on which the permit is valid.

(f) The permit must be carried with the certificate of inspection. Any vessel operating under a permit to carry an excursion party must be in full compliance with the terms of its certificate of inspection as supplemented by the permit.

§ 169.215 Certificate of inspection amendment.

(a) An amended certificate of inspection may be issued at any time by any Officer in Charge, Marine Inspection. The amended certificate of inspection replaces the original. An amended certificate of inspection may be issued to authorize and record a change in the character of a vessel or in its route, equipment, ownership, operator, etc., from that specified in the current certificate of inspection.

(b) A request for an amended certificate of inspection must be made to the Officer in Charge, Marine Inspection, by the master, operator, owner, or agent of the vessel at any time there is a change in the character of a vessel or in its route, equipment, ownership, operation etc., as specified in its current certificate of inspection.

(c) The OCMI may require an inspection prior to the issuance of an amended certificate of inspection.

§ 169.217 Posting.

The certificate of inspection must be framed under glass or other suitable transparent material and posted in a conspicuous place on the vessel except on open boats where the certificate may be retained in a watertight container, which is secured to the vessel.

Letter of Designation

§ 169.218 Procedures for Designating sailing school vessels.

(a) Upon written request by a qualified institution, a determination is made by the OCMI whether the vessel may be designated as a sailing school vessel.

(b) The request should contain sufficient information to allow the OCMI to make this determination. At a minimum the following items must be submitted:

(1) A detailed description of the vessel, including its identification number, owner, and charterer.

(2) A specific operating plan stating precisely the intended use of the vessel and the intended course of instruction for sailing school students.

(3) A copy of the Internal Revenue Service designation as a non-profit, tax-exempt, organization under sections 501(a) and 501(c)(3) of the Internal Revenue Code.

(4) An affidavit certifying that the owner or charterer has financial resources to meet any liability incurred for death or injury to sailing school students or sailing school instructors on voyages aboard the vessel, in an amount not less than $50,000 for each student and instructor.

(5) Any additional information as requested by the Officer in Charge, Marine Inspection.

(c) If a designation is granted it is indicated on the certificate of inspection and remains valid for the duration of the certificate, provided all operating conditions remain unchanged.

(d) In the event of a change, the institution must advise the OCMI who issued the designation. After reviewing the pertinent information concerning the change, the OCMI shall determine if the vessel is eligible to retain its designation as a sailing school vessel.

§ 169.219 Renewal of letter of designation.

At least 60 days prior to the expiration date of the certificate of inspection, a request for renewal must be submitted in the same manner as described in § 169.218. If the request for renewal is submitted to the OCMI who made the initial determination and all operating conditions remain unchanged, the information need not be resubmitted.

Inspection for Certification

§ 169.220 General.

(a) An inspection is required before the issuance of a certificate of inspection.

(b) An inspection for certification is not made until after receipt of the information required in § 169.205(a) of this subchapter.

§ 169.221 Initial inspection for certification.

(a) The initial inspection includes an inspection of the hull structure, yards, masts, spars, rigging, sails, machinery, and equipment, including unfired pressure vessels.

(b) The initial inspection of a vessel being newly constructed or converted normally consists of a series of inspections during the construction or conversion.

(c) The inspection ensures that the vessel and its equipment comply with the regulations in this subchapter to the extent they are applicable to the vessel being inspected, and are in accordance with approved plans. The inspection also ensures that the materials, workmanship and condition of all parts of the vessel and its machinery and equipment are in all respects satisfactory for the service intended, and that the vessel is in possession of a valid certificate issued by the Federal Communications Commission, if required.

(d) Before construction is started, the owner, operator, or builder must develop plans indicating the proposed arrangement and construction of the vessel. This list of plans to be developed and the required disposition of these plans are set forth in § 169.305.

§ 169.222 Scope of inspection for certification.

Items normally included in an Inspection for Certification are:

(a) Structure.

(b) Watertight integrity.

(c) Pressure vessels and appurtenances.

(d) Piping.

(e) Auxiliary machinery.

(f) Steering apparatus.

(g) Electrical installations.

(h) Lifesaving appliances.

(i) Navigation equipment.

(j) Fire detecting and extinguishing systems.

(k) Pollution prevention equipment.

(l) Sanitary conditions.

(m) Fire hazards.

(n) Verification of valid certificates issued by the Federal Communications Commission.

(o) Lights and signals required by navigation rules.

(p) Bilge and ballast systems.

(q) Rigging, yards, masts, spars, and sails.

§ 169.223 Subsequent inspections for certification.

An inspection for renewal of a certificate of inspection includes an inspection of the structure, machinery, yards, spars, masts, rigging, sails, and equipment. The inspection ensures that the vessel is in satisfactory condition, fit for the service intended and complies with the applicable regulations in this subchapter.

Reinspection

§ 169.225 When required.

At least one reinspection shall be made on each sailing school vessel holding a valid certificate of inspection. The inspection, when possible, will be made between the tenth and fourteenth month of the period for which the certificate is valid. The owner, operator, or master must contact the OCMI to arrange for this inspection.

§ 169.227 Scope.

The scope of the reinspection is the same as the inspection for certification.

Drydocking or Hauling Out

§ 169.229 When required.

(a) Unless otherwise authorized by the Commandant, each vessel must be drydocked or hauled out for examination at intervals not to exceed—

(1) 24 months if it is operated in salt water.

(2) 72 months if it operates exclusively in fresh water.

§ 169.231 Scope of drydock examination.

(a) The examination includes the underwater hull and appendages, propellers, shafting, stern bearings, rudders, through-hull fittings, sea valves and strainers, and is of sufficient scope to determine that these items are in a satisfactory condition for the service intended.

(b) The marine inspector may require any part or all of the propeller shafting to be drawn for examination of the shafting and stern bearing.

(c) Sea chests, sea valves, and sea strainers must be opened for internal examination.

§ 169.233 Notice.

The owner or operator shall notify the OCMI when the vessel is to be placed on a drydock.

Repairs and Alterations

§ 169.235 Permission required.

(a) Repairs or alterations to the hull, machinery, or equipment which affects the safety of the vessel may not be made without the knowledge and approval of the Officer in Charge, Marine Inspection.

(b) Drawings, sketches or written specifications describing the alterations in detail must be submitted to the OCMI. Proposed alterations must be approved by the Officer in Charge, Marine Inspection, before work is started.

(c) Drawings are not required for repairs or replacements in kind.

§ 169.236 Inspection and testing required.

(a) The provisions of NFPA 306, "Control of Gas Hazards on Vessels," are used as a guide in conducting the inspections and issuing certificates required by this section.

(b) Until an inspection has been made to determine that the operations can be undertaken safely, no alterations, repairs, or other operations involving riveting, welding, burning, or other fire-producing actions may be made—

(1) within or on the boundaries of fuel tanks; or

(2) to pipelines, heating coils, pumps, fittings, or other appurtenances connected to fuel tanks.

(c) Inspections must be conducted as follows:

(1) In ports or places in the United States or its territories and possessions, the inspection must be made by a marine chemist certificated by the National Fire Protection Association; however, if the services of such certified marine chemist are not reasonably available, the Officer in Charge, Marine Inspection, upon the recommendation of the vessel owner and his contractor on their representative, may authorize a person to inspect the particular vessel. If the inspection indicates that the operations can be undertaken with safety, a certificate setting forth this fact in writing must be issued by the certified marine chemist or the authorized person before the work is started. The certificate must include any requirements necessary to reasonably maintain safe conditions in the spaces certified throughout the operation, including any precautions necessary to eliminate or minimize hazards that may be present from protective coatings or residues from cargoes.

(2) When not in a port or place in the United States or its territories and possessions, and when a marine chemist or a person authorized by the Officer in Charge, Marine Inspection, is not reasonably available, the senior officer present shall conduct the inspection and enter the results of the inspection in the vessel's logbook.

(d) It is the responsibility of the senior officer present to secure copies of certificates issued by the certified marine chemist or a person authorized by the Officer in Charge, Marine Inspection. It is the responsibility of the senior officer present, insofar as the persons under his control are concerned, to maintain a safe condition on the vesssel by full observance of all requirements listed by the marine chemist in the certificate.

Inspections

§ 169.237 Inspection standards.

Vessels are inspected for compliance with the standards required by this subchapter. Items not covered by standards in this subchapter must be in accordance with good marine practice and acceptable to the Officer in Charge, Marine Inspection.

§ 169.239 Hull.

At each inspection for certification, the vessel must be afloat and ready for the following tests and inspections of the hull structure and its appurtenances:

(a) All accessible parts of the exterior and interior of the hull, the watertight bulkheads, and weather deck are examined. Where the internals of the vessel are completely concealed, sections of the lining or ceiling may be removed or the parts otherwise probed or exposed so that the inspector may be satisfied as to the condition of the hull structure.

(b) All watertight closures in the hull, decks and bulkheads are examined and operated.

(c) The condition of the superstructure, masts, and similar arrangements constructed on the hull is checked. All spars, standing rigging, running rigging, blocks, fittings, and sails, including storm sails are inspected.

(d) All railings and bulwarks and their attachment to the hull structure are inspected. Special attention is paid to ensure that guards or rails are provided in all dangerous places.

(e) All weathertight closures above the weather deck are inspected. The provisions for drainage of sea water from the exposed decks are checked.

§ 169.241 Machinery.

(a) At each initial and subsequent inspection for certification the Coast Guard examines and tests the following items to the extent necessary to determine that they are in proper operating condition and fit for the service for which they are intended:

(1) *Engine starting system.* Alternate methods of starting are checked.

(2) *Engine control mechanisms.* Mechanisms are operationally tested and visually examined.

(3) *Auxiliary machinery.* All machinery essential to the routine operation of the vessel is checked.

(4) *Fuel systems.* Tanks, tank vents and other appurtenances, piping and pipe fittings are examined. The fuel systems for the auxiliary propulsion engines and all other fuel systems installed are checked. All valves in the fuel lines are tested by operating locally and at remote operating positions.

(5) *Sea valves and bulkhead closure valves.* All overboard discharge and intake valves are checked.

(6) *Bilge and drainage systems.* The means provided for pumping bilges are operationally tested. All suction strainers are examined.

(b) During all inspections special attention is paid to ensure that no fire hazards exist and that guards or protective devices are provided in all hazardous places.

§ 169.243 Electrical.

At each inspection for certification the following items are examined and tested to the extent necessary to determine that they are in proper operating condition, safe electrical condition, and fit for the service for which they are intended:

(a) *Electrical cable.* All cable is examined as far as practicable without undue disturbance of the cable or electrical apparatus.

(b) *Overload or circuit protective devices.* Circuit breakers are tested by manual operation and fuses examined visually. The ratings of fuses are checked to determine suitability for the service intended.

(c) *Rotating machinery.* Rotating electrical machinery essential to the routine operation of the vessel is examined.

(d) *Generators, etc.* All generators, motors, lighting fixtures and circuit interrupting devices located in spaces or areas which may contain flammable vapors are checked.

(e) *Storage batteries.* Batteries are checked for condition and security of stowage.

(f) *Fire detection and alarm system.* Electrical apparatus, which operates as part of or in conjunction with a fire detection or alarm system installed on board the vessel, is operationally tested. The test is applied, in a manner to simulate, as closely as practicable, the actual operation in case of fire.

§ 169.245 Lifesaving equipment.

At each inspection for certification the following tests and inspections of lifesaving equipment are conducted:

(a) All air tank buoyant units of all lifesaving appliances are tested for airtightness.

(b) Each lifeboat is lowered to near the water and loaded with its allowed capacity, evenly distributed throughout the length. The total weight used is at least equal to the allowed capacity of the lifeboat considering persons to weigh 75 kg (165 pounds) each. The lifeboat is then lowered into the water until it is afloat and released from the falls.

(c) Each personal flotation device is examined to determine its serviceability. If found to be satisfactory, it is stamped "Passed," together with the date and the port. If found to be unsatisfactory, the personal flotation device must be removed from the vessel's equipment and repaired. If it is beyond repair it must be destroyed in the presence of the Coast Guard inspector.

(d) Each lifeboat winch electrical control apparatus is opened and inspected.

(e) Where gravity davits are installed, it must be demonstrated that the lifeboat can be swung out and lowered from any stopped position by merely releasing the brake on the lifeboat winch. The use of force to start the davits or the lifeboat winch is not permitted.

(f) Inflatable liferaft containers are examined for defects and the inspector verifies that the inflatable liferafts and hydraulic releases, if installed, have been serviced at an approved facility in accordance with the provisions of Subparts 160.051 and 160.062, respectively, of this chapter.

(g) All other items of lifesaving equipment are examined to determine that they are in suitable condition.

§ 169.247 Firefighting equipment.

(a) At each inspection for certification and at such other times as considered necessary all fire-extinguishing equipment is inspected to ensure it is in suitable condition. Tests may be necessary to determine the condition of the equipment. The inspector verifies that the tests and inspections required in Tables 169.247 (a)(1) and (a)(2) of this subchapter have been conducted by a qualified servicing facility at least once every twelve months.

(1) Hand portable fire extinguishers and semi-portable fire extinguishing systems are examined for excessive corrosion and general condition.

(2) All parts of the fixed fire-extinguishing systems are examined for

excessive corrosion and general condition.

(3) Piping, controls, valves, and alarms on all fire-extinguishing systems are checked to be certain the system is in operating condition.

(4) The fire main system is operated and the pressure checked at the most remote and highest outlets.

(5) Each firehose is subjected to a test pressure equivalent to its maximum service pressure.

TABLE 169.247(a)(1).—PORTABLE EXTINGUISHERS

Type unit	Test
Foam	Discharge. Clean hose and inside of extinguisher thoroughly. Recharge.
Carbon dioxide	Weigh cylinders. Recharge if weight loss exceeds 10 pct of weight of charge. Inspect hose and nozzle to be sure they are clear.
Dry chemical (cartridge-operated type).	Examine pressure cartridge and replace if end is punctured or if cartridge is otherwise determined to have leaked or to be in unsuitable condition. Inspect hose and nozzle to see they are clear. Insert charged cartridge. Be sure dry chemical is free-flowing (not caked) and chamber contains full charge.
Dry chemical (stored pressure).	See that pressure gage is in operating range. If not, or if seal is broken, weigh or otherwise determine that full charge of dry chemical is in extinguisher. Recharge if pressure is low or if dry chemical is needed.
HALON 1211 or HALON 1301).	See that pressure gage, if provided, is in operating range. Recharge if pressure is low. Weigh cylinder. Recharge if weight loss exceeds 10 pct of weight of charge. Inspect hose and nozzle to ensure they are clear.

TABLE 169.247(a)(2).—FIXED SYSTEMS

Type system	Test
Carbon dioxide or HALON 1301.	Weigh cylinders. Recharge if weight loss exceeds 10 pct of weight of charge.

§ 169.249 Pressure vessels.

Pressure vessels must meet the requirements of Part 54 of this chapter. The inspection procedures for pressure vessels are contained in Subpart 61.10 of this chapter.

§ 169.251 Steering apparatus.

At each inspection for certification the steering apparatus is inspected and operationally tested to determine that its condition is satisfactory and that it is fit for the service intended.

§ 169.253 Miscellaneous systems and equipment.

(a) At each inspection for certification all items in the ship's outfit, such as ground tackle, navigation lights, compass, etc., which are required to be carried by the regulations in this subchapter are examined and tested as necessary to determine that they are fit the service intended.

(b) Approved work vests, where carried, are inspected as provided in § 169.556.

§ 169.255 Sanitary inspection.

At each inspection for certification and reinspection quarters, toilet and washing spaces, galleys, serving pantries, lockers, etc., are examined to determine that they are serviceable and in a sanitary condition.

§ 169.257 Unsafe practices.

(a) At each inspection for certification, reinspection, and at every other vessel inspection all observed unsafe practices and hazardous situations must be corrected.

(b) At each inspection for certification and at every other vessel inspection the bilges and other spaces are examined to see that there is no accumulation of oil or other matter which might create a fire hazard.

§ 169.259 Limitations of inspections.

The OCMI may require that a vessel and its equipment meet any test or inspection deemed necessary to determine that they are suitable for the service in which they are to be employed.

Subpart 169.300—Construction and Arrangement

Plans

§ 169.305 Plans required.

(a) Except as provided in paragraphs (b) and (c) of this section the owner or builder shall, before the start of construction or before the initial inspection of the vessel, submit to the Officer in Charge, Marine Inspection of the inspection zone where the vessel is to be inspected, at least one copy of each of the following plans:

(1) Midship section.

(2) Outboard profile.

(3) Inboard profile.

(4) Arrangement of decks.

(5) Lifesaving equipment installation and arrangement.

(6) Machinery installation.

(7) Electrical installation.

(8) Fire control plan.

(9) Fuel tanks.

(10) Piping systems.

(11) Hull penetrations and shell connections.

(12) Lines and offsets, curves of form, and capacities of the tanks including size and location on vessel.

(13) Masts, including integration into the ship's structure.

(14) Rigging plan showing sail areas and centers of effort as well as the arrangement, dimensions, and connections of the standing rigging.

(b) For vessels less than 65 feet in length, the owner may submit specifications, sketches, photographs, line drawings or written descriptions in lieu of any of the required drawings provided the required information is adequately detailed and acceptable to the Officer in Charge, Marine Inspection.

(c) The Officer in Charge, Marine Inspection, may waive submission of some or all of the structural plans called for by paragraph (a) of this section for an existing vessel with a history of at least 5 years of safe operation, or if the design and construction of the vessel are essentially similar to a vessel which has a proven record of safe operation in similar service upon similar waters.

§ 169.307 Plans for sister vessels.

Plans are not required for any vessel which is a sister ship to a vessel, provided that—

(a) The approved plans for the original vessels are already on file at any Marine Inspection Office;

(b) The owner of the plans authorizes their use for the new construction;

(c) The regulations have not changed since the original plan approval; and

(d) There are no major modifications to any of the systems used.

Hull Structure

§ 169.309 Structural Standards.

(a) Compliance with the standards established by a recognized classification society will, in general, be considered satisfactory evidence of the structural adequacy of a vessel.

(b) Masts, posts and other supporting structures are to have adequate strength to withstand the highest loadings imposed by the sail systems during all normal and emergency conditions. Particular attention must be given to the integration of the masts and rigging into the hull structure. The hull structure must be adequately reinforced and stiffened locally to ensure sufficient strength and resistance to plate buckling.

(c) The design, materials, and construction of masts, yards, booms, bowsprits, and standing rigging must be suitable for the intended service. Detailed calculations with respect to the strength of the sail system may be required. Approval by a recognized classification society may be considered satisfactory evidence of the adequacy of the sail system.

(d) When scantlings differ from established standards and it can be demonstrated that a craft approximating the same size, power and displacement has been built to the proposed scantlings and has been in satisfactory service, insofar as structural adequacy is concerned, for a period of a least 5 years, the proposed scantling may be approved. A detailed structural analysis may be required.

(e) Special consideration will be given to the structural requirements of vessels not contemplated by the standards of a recognized classification society and to the use of materials not specially included in these standards.

§ 169.311 Fire protection.

(a) The general construction of the vessel must be designed to minimize fire hazards. Each vessel which carries more than 100 persons or has overnight accommodations for more than 49 persons must meet the requirements of Subpart 72.05 of this chapter. Each vessel which is certificated to carry 100 persons or less or had overnight accommodations for less tan 50 persons must meet the requirements of § 169.323.

(b) A fire detector, listed by a recognized testing laboratory, must be installed in each unmanned engine space.

(c) Smoke detectors, listed by a recognized testing laboratory, must be installed in each berthing compartment, sail locker, and public area.

(d) Internal combustion engine exhausts, boiler and galley uptakes, and similar sources of ignition must be kept clear of and suitably insulated from any woodwork or other combustible matter.

(e) Lamp, paint, oil lockers and similar compartments must be constructed of metal or wholly lined with metal.

§ 169.313 Means of escape.

(a) Except as provided by paragraph (f) of this section, there must be at least two means of escape from all areas generally accessible to persons onboard. At least one means of escape must be independent of watertight doors and lead directly to the open deck. Windows and windshields of sufficient size and proper accessibility may be used as one avenue of escape.

(b) The two means of escape must be as widely separated as practical to minimize the possibility of one incident blocking both escapes.

(c) Except as provided by paragraph (d) of this section, a vertical ladder and deck scuttle may not be designated as one of the means of escape.

(d) A vertical ladder and deck scuttle may be used as a second means of escape if—

(1) The primary means of escape is an enclosed stairtower or stairway;

(2) The installation of two stairways is impracticable;

(3) The scuttle is located where it can not be interfered with; and

(4) The scuttle is fitted with a quick-acting release and a hold-back to hold the scuttle in an open position.

(e) The required means of escape must not have locking devices.

(f) Where the length of the compartment is less than 12 feet, one vertical means of escape is acceptable provided that—

(1) There is no source of fire in the space, such as a galley stove, heater, etc., and the vertical escape is remote from the engine or fuel tank space, and

(2) The arrangement is such that the installation of two means of escape does not materially improve the safety of the vessel or those on board.

(g) Dead end corridors or the equivalent, more than 40 feet in length are prohibited.

(h) Each means of escape must be of adequate size to accommodate rapid evacuation.

(i) Each vertical ladder must have rungs that are:

(1) at least 16 inches in length;

(2) not more than 12 inches apart, uniform for the length of the ladder;

(3) at least 3 inches from the nearest permanent object in back of the ladder; and

(4) except when unavoidable obstructions are encountered, there must be at least 4½ inches clearance above each rung.

§ 169.315 Ventilation (other than machinery spaces).

(a) All enclosed spaces within the vessel must be properly ventilated in a manner suitable for the purpose of the space.

(b) A means must be provided to close off all vents and ventilators.

(c) Living spaces must be ventilated by a mechanical system unless it can be shown that a natural system will provide adequate ventilation in all ordinary weather conditions. Provided that paragraph (a) of this section is satisfied, a vessel having only a natural ventilation system must satisfy the following: $V/A > 1.4$ where V is the total area of the vents in square inches and A is the product in square feet of the vessel's design waterline length times its maximum beam.

Living Spaces

§ 169.317 Accommodations.

(a) Quarters must have sufficient fresh air, light and heat. Quarters must not be located forward of the collision bulkhead or farther forward in the vessel than a vertical plane located at 5 percent of the vessel's loadline length abaft the forward side of the stem. The space must not be located totally below the deepest load waterline.

(b) Bulkheads separating accommodations from machinery spaces, paint lockers, storerooms, washrooms, and toilet facilities are to be odorproof.

(c) All quarters are to be properly drained, odorproof and protected from heat and noise.

(d) Each person on board must have a separate berth which is of sufficient size and generally clear of all pipes, ventilation ducts and other installations.

(e) Each bunk must be constructed of wood, fiberglass or metal. If fitted with a mattress, the mattress must be covered with material which has been treated to give it fire resistant properties and which will provide the mattress with a reasonably smooth surface. There must be a minimum vertical distance between bunks of 24 inches.

(f) A means of access must be provided for each berthing arrangement where the upper berth is more than 60 inches above the deck.

(g) The construction and arrangement must allow free and unobstructed access to each berth. Each berth must be immediately adjacent to an aisle leading to a means of escape from the living area.

(h) A properly arranged hammock may be used as a berth.

§ 169.319 Washrooms and toilets.

(a) Sailing school vessels must have one toilet and on washbasin for every 20 persons. Each toilet and washbasin must have adequate plumbing.

(b) Each washroom and toilet room must properly drain and the scupper to the washroom must be of sufficient size and situated in the lowest part of the space.

(c) Each sailing school vessel must meet the applicable requirements of Title 33, Code of Federal Regulations, Part 159.

§ 169.321 Motion picture projectors and film.

Motion picture projectors may use only acetate or slowburning films. Nitrocellulose film is prohibited.

§ 169.323 Furniture and furnishings.

Each sailing school vessel certificated

to carry 100 persons or less or having overnight accommodations for less than 50 persons must meet the following requirements:

(a) Except as provided by paragraph (b) of this section, all free-standing furniture must be constructed of noncombustible material. Upholstery and padding used in furniture must be of fire resistant materials.

(b) Existing solid wooden furniture may be retained on existing vessels.

(c) Draperies must be fabricated of fire resistant fabrics.

(d) Rugs and carpets must be of wool or other material having equivalent fire resistant qualities.

(e) Trash receptacles must be constructed of non-combustible materials with solid sides and bottoms and have solid noncombustible covers.

Rails and Guards

§ 169.327 Deck rails.

(a) All rails or lifelines must be at least 30 inches high and permanently supported by stanchions at intervals of not more than 7 feet. Stanchions must be through bolted or welded to the deck.

(b) Rails or lifelines must consist of evenly spaced courses. The spacing between courses must not be greater than 12 inches. The opening below the lowest course must not be more than 9 inches. Lower rail courses are not required where all or part of the space below the upper rail is fitted with a bulwark, chain link fencing, wire mesh, or an equivalent.

(c) Small vessels of the open type and vessels of unusual construction must have rails or equivalent protection as considered necessary by the Officer in Charge, Marine Inspection.

§ 169.329 Storm rails.

Suitable storm rails or hand grabs must be installed where necessary in all passageways, at deckhouse sides, and at ladders and hatches where persons might have normal access.

§ 169.331 Guards in hazardous locations.

Each exposed hazard, such as gears or machinery, must be properly protected with covers, guards, or rails.

Subpart 169.400—Watertight Integrity, Subdivision, and Stability

§ 169.401 Applicability.

Each vessel must meet the applicable requirements in Subchapter S, Parts 170–174, of this chapter.

Subpart 169.500—Lifesaving and Firefighting Equipment

Lifesaving Equipment—General

§ 169.505 Equipment installed but not required.

Each item of lifesaving equipment installed on board a vessel must be of an approved type.

§ 169.507 Responsibility of master.

The master or operator shall ensure that the lifeboats, liferafts, davits, falls, personal flotation devices, and other lifesaving appliances are at all times ready for use, and that all equipment required by the regulations in this subchapter is provided, maintained, serviced, and replaced as indicated.

§ 169.509 Approval for repairs and alterations.

No extensive repairs or alterations, except in an emergency, may be made to any item of lifesaving equipment without advance notice to the Officer in Charge, Marine Inspection. Repairs and alterations must be made to the original standard of construction and tested in the manner specified in this subpart and applicable requirements in Subchapter Q of this chapter. Emergency repairs or alterations must be reported as soon as practicable to the nearest Officer in Charge, Marine Inspection.

Primary Lifesaving Equipment

§ 169.513 Types of primary equipment.

(a) *Lifeboats*—Each lifeboat must be of a type approved under Subpart 160.035 of this chapter. Installation and arrangement of each lifeboat including davits and winches must meet the requirements of Part 94 of this chapter.

(b) *Inflatable Liferafts.* (1) Each inflatable liferaft must be of a type approved under Subpart 160.051 of this chapter.

(2) The inflatable liferaft and liferaft container must show on or near their respective nameplates, marking approved by the Coast Guard that contains—

(i) An approval number consisting of "160.051/" followed by a number that is greater than 49 followed by a revision number (e.g. 160.051/50/1); or

(ii) An approval number consisting of "160.051/" followed by a number that is smaller than 50 that is followed by a revision number (e.g. 160.051/48/1); the words "MOD TEMP," and the date that an inspector found that the liferaft met § 160.051–5(c)(4) of this chapter.

(3) Each inflatable liferaft must be marked "Ocean Service," except that inflatable liferafts on vessels operating on protected waters or partially protected waters may be marked "Limited Service."

(c) *Life floats.* Each lifefloat must be of a type approved under Subpart 160.027 of this subchapter.

§ 169.515 Number required.

(a) Except as provided in paragraph (c) of this section, each vessel must have sufficient lifeboats or inflatable liferafts to accommodate all persons on board.

(b) Each vessel certificated for exposed waters must have additional inflatable liferafts to accommodate 25% of the persons on board or the number of persons accommodated in the largest lifeboat or liferaft, whichever is greater.

(c) Vessels certificated for protected waters only may carry lifefloats of a combined capacity to accommodate all persons on board in lieu of the lifeboats and inflatable liferafts required in paragraph (a) of this section.

§ 169.517 Rescue boat.

All vessels certificated for exposed or partially protected waters service must have a suitable motor rescue boat, except when a motor lifeboat is provided or when, in the opinion of the Officer in Charge, Marine Inspection, the vessel is of such design and operating characteristics that the vessel itself provides a satisfactory man overboard rescue platform.

§ 169.519 Availability.

(a) Each lifeboat, inflatable liferaft, and lifefloat must be kept in good working order and be readily available.

(b) The decks on which lifeboats, liferafts, and lifefloats are carried must be kept clear of obstructions which could interfere with the immediate boarding and launching of the lifesaving appliances.

§169.521 Stowage.

(a) *General.* Each lifeboat, inflatable liferaft, and lifefloat must be stowed so that—

(1) It is capable of being launched within 10 minutes or, in the case of vessels having one compartment subdivision, 30 minutes;

(2) It does not impede the launching or handling of other lifesaving appliances;

(3) It does not impede the marshaling of persons at the embarkation stations, or their embarkation; and

(4) It is capable of being put in the water safely and rapidly even under unfavorable conditions of list and trim.

(b) *Lifeboat stowage.* Each lifeboat must be stowed to meet the following requirements:

(1) Each lifeboat must be attached to a separate set of davits.

(2) Lifeboats must not be stowed in the bow of the vessel nor so far aft as to be endangered by the propellers or overhang of the stern.

(3) Lifeboats must be stowed so that it is not necessary to lift them in order to swing out the davits.

(4) Means must be provided for bringing the lifeboats against the ship's side and holding them there so that persons may safely embark, unless the lifeboats are arranged for boarding at the stowage position.

(5) Lifeboats must be fitted with skates or other suitable means to facilitate launching against an adverse list of up to 15 degrees. However, skates may be dispensed with if, in the opinion of the Commandant, the arrangements ensure that the lifeboats can be satisfactorily launched without them.

(6) Means must be provided outside the machinery space to prevent the discharge of water into the lifeboats while they are being lowered.

(c) *Inflatable liferaft stowage.* Inflatable liferafts must be stowed so that they will float free in the event of the vessel sinking. Stowage and launching arrangements must be to the satisfaction of the Officer in Charge, Marine Inspection.

(d) *Life float stowage.* Each life float must be stowed to meet the requirements of this paragraph.

(1) Each life float must be secured to the vessel by a painter and a float-free link that is—

(i) Certified to meet Subpart 160.073 of this chapter;

(ii) Of proper strength for the size of the life float as indicated on its identification tag; and

(iii) Secured to the painter at one end and secured to the vessel on the other end.

(2) The means by which the float-free link is attached to the vessel must—

(i) Have a breaking strength of at least the breaking strength of the painter.

(ii) If synthetic, be of a dark color or of a material certified to be resistant to deterioration from ultraviolet light; and

(iii) If metal, be corrosion resistant.

(3) If the life float does not have a painter attachment fitting, a means for attaching the painter must be provided by a wire or line that—

(i) Encircles the body of the device;

(ii) Will not slip off;

(iii) Has a breaking strength that is at least the breaking strength of the painter; and

(iv) If synthetic, is of a dark color or is of a material certified to be resistant to deterioration from ultraviolet light.

(4) The float-free link described in paragraphs (d)(1) and (d)(2) of this section is not required if the vessel operates solely in waters that have a depth less than the length of the painter.

(5) If the vessel carries more than one life float, the life floats may be grouped and each group secured by a single painter, provided that—

(i) The combined weight of each group of life floats does not exceed 400 pounds;

(ii) Each life float is individually attached to the painter by a line that meets paragraphs (d)(2) and (d)(3) of this section and which is long enough so that each can float without contacting any other life float in the group; and

(iii) The strength of the float-free link and the strength of the painter under paragraphs (d)(1)(ii) and (d)(2) of this section is determined by the combined capacity of the group of life floats.

(6) Each life float, as stowed, must be capable of easy launching. Life floats weighing over 400 pounds must not require lifting before launching.

(7) Life floats must be secured to the vessel only by a painter and lashings that can be easily released or by hydraulic releases. They must not be stowed in more than four tiers. When stowed in tiers, the separate units must be kept apart by spacers.

(8) There must be means to prevent shifting.

(e) *Hydraulic Releases.* Each hydraulic release used in the installation of any inflatable liferaft or life float must meet Subpart 160.062 of this chapter.

Equipment for Primary Lifesaving Apparatus

§ 169.525 General.

(a) Equipment for primary lifesaving apparatus must kept in good condition.

(b) Lifeboats, inflatable liferafts and lifefloats must be fully equipped before the vessel is navigated and throughout the voyage.

(c) No person may stow in any lifeboat, inflatable liferaft, or lifefloat any article not required by this subpart unless the article is authorized by the OCMI, in good working order, and properly stowed so as not to reduce the seating capacity, the space available to the occupants, or adversely affect the seaworthiness of the livesaving apparatus.

(d) Loose equipment, except boathooks in lifeboats, must be securely attached to the lifesaving appliance to which it belongs.

§ 169.527 Required equipment for lifeboats.

Lifeboats must be equipped in accordance with Table 169.527. This equipment is described in § 169.529.

TABLE 169.527

Letter identification and item	Exposed and partially protected waters	Protected waters
a—Bailer	1	None
b—Bilge pump	1	None
c—Boathooks	2	1
d—Bucket	2	1
e—Compass and mounting	1	None
f—Ditty bag	1	None
g—Drinking cup	1	None
h—Fire extinguisher (motor-propelled lifeboats only)	2	2
i—First-aid kit	1	None
j—Flashlight	1	None
k—Hatchet	2	1
l—Heaving line	2	None
m—Jackknife	1	None
n—Ladder, lifeboat, gunwale	1	None
o—Lantern	1	1
p—Lifeline	1	1
q—Life preservers	2	2
r—Locker	1	None
s—Mast and sail (oar-propelled lifeboats only)	1	None
t—Matches (boxes)	2	1
u—Mirror, signaling	2	None
v—Oars (units)	1	1
w—Oil, illuminating (quarts)	1	None
x—Oil, storm, (gallons)	1	None
y—Painter	2	1
z—Plug	1	1
aa—Provisions (per person)	2	None
bb—Rowlocks (units)	1	1
cc—Rudder and tiller	1	None
dd—Sea anchor	1	None
ee—Signals, distress, floating orange smoke	2	None
ff—Signals, distress, red hand flare (units)	1	None
gg—Signals, distress, red parachute flare (units)	1	None
hh—Tool kit (motor-propelled lifeboats only)	1	1
ii—Water (quarts per person)	3	None
jj—Whistle, signaling	1	None
kk—Fishing kit	1	None
ll—Cover, protecting	1	None
mm—Signals, lifesaving	1	None

§ 169.529 Description of lifeboat equipment.

(a) *Bailer.* The bailer must have a lanyard attached and must be of sufficient size and suitable for bailing.

(b) *Bilge pump.* Bilge pumps must be approved under Subpart 160.044 of this chapter. They must be of the size given in Table 169.529(b) depending upon the capacity of the lifeboat as determined by the six-tenths rule as described in § 160.035-9(b) of this chapter.

TABLE 169.529(b)

Capacity of lifeboat, cubic feet		Bilge pump size
Over—	Not over—	
	330	1
330	700	2
700		3

(c) *Boathooks.* Boathooks must be of the single hook ballpoint type. Boathook handles must be of clear grained white ash, or equivalent, and of a length and diameter as given in Table 169.529(c).

TABLE 169.529(c)

Length of lifeboat, feet		Boathook handles	
Over—	Not over—	Diameter, inches	Length, feet
	23	1.50	8
23	29	1.75	10
29		2	12

(d) *Bucket.* Each bucket must be of heavy gage galvanized iron, or other suitable corrosion-resistant metal, of not less than 2-gallon capacity, and must have a 6-foot lanyard of 12-thread manila or equivalent attached.

(e) *Compass and mounting.* The compass and mounting must be of an approved type.

(f) *Ditty bag.* The ditty bag must consist of a canvas bag or equivalent and must contain a sailmaker's palm, needles, sail twine, marline, and marline spike.

(g) *Drinking cups.* Drinking cups must be enamel coated or plastic, graduated in milliliters or ounces, and provided with lanyards 3 feet in length.

(h) *Fire extinguishers.* Each fire extinguisher must be an approved Type B–C, Size I. One must be attached to each end of the lifeboat.

(i) *First-aid kit.* The first-aid kit must be approved under Subpart 160.041 of this chapter.

(j) *Flashlights.* Each flashlight must be approved under Subpart 161.008 of this chapter. Three spare cells (or one 3-cell battery) and two spare bulbs, stowed in a watertight container, must be provided with each flashlight. Batteries must be replaced yearly during the annual stripping, clearing, and overhaul of the lifeboat.

(k) *Hatchets.* Hatchets must be approved under Subpart 160.013 of this chapter. They must be attached to the lifeboat by individual lanyards and be readily available for use, one at each end of the lifeboat.

(l) *Heaving line.* The heaving line must be of adequate strength, 10 fathoms in length, and 1 inch in circumference. It must remain buoyant after being submerged for 24 hours.

(m) *Jackknife.* The jackknife must be approved under Subpart 160.043 of this chapter.

(n) *Ladder, lifeboat gunwale.* The lifeboat gunwale ladder must consist of 3 flat wood steps with cut outs for hand holds. The steps must be spaced 12 inches apart and fastened with ⅝ inch diameter manila rope or equivalent. Each rope end must be tied inside the lifeboat at about amidships with the ladder stowed on top of the side benches and ready for immediate use.

(o) *Lantern.* The lantern must contain sufficient oil to burn for at least 9 hours, and be ready for immediate use. In totally enclosed lifeboats, an interior lighting system may be used in lieu of a lantern.

(p) *Lifeline.* The lifeline must be properly secured to both sides of the lifeboat along its entire length, festooned in bights not longer than 3 feet, with a seine float in each bight. The float may be omitted if the line is of an inherently buoyant material and absorbs little or no water. The lifeline must be of a size and strength not less than ⅜-inch diameter manila. The bights must hang to within 12 inches of the water when the lifeboat is light.

(q) *Life preservers.* Life preservers must be of an approved type. These preservers are in addition to those required by § 169.539 of this chapter.

(r) *Locker.* The locker must be suitable for the storage and preservation of the small items of equipment required under § 169.527.

(s) *Mast and sail.* A unit, consisting of a standing lug sail together with the necessary spars and rigging, must be provided in accordance with Table 169.529(s). The sails must be of good quality canvas, or other material acceptable to the Commandant, colored Indian Orange (Cable No. 70072, Standard Color Card of America). Rigging must consist of galvanized wire rope not less than three-sixteenths inch in diameter. The mast and sail must be protected by a suitable cover.

TABLE 169.529(s)

Length of lifeboat, feet		Standing lug sail										Commercial designation number	Mast [1]			Yard [1]		
		Area, square feet	Luff and head lengths		Leach length		Foot length		Clew to throat		Ounces per square yard		Length		Diameter, inches	Length		Diameter, inches
Over—	Not over—		Feet	Inches	Feet	Inches	Feet	Inches	Feet	Inches			Feet	Inches		Feet	Inches	
	17	58	5	11	12	1	8	10	10	10	14.35	10	11	2	3	6	11	2
17	19	74	6	8	13	8	10	0	12	2	14.35	10	12	6	3	7	8	2
19	21	93	7	5	15	1	11	2	13	8	14.35	10	13	10	3½	8	5	2½
21	23	113	8	3	16	11	12	4	15	1	14.35	10	15	2	3½	9	3	2½
23	25	135	9	0	18	6	13	6	16	6	14.35	10	16	6	4	10	0	3
25	27	158	9	9	20	0	14	7	17	10	17.50	8	17	10	4	10	9	3
27	29	181	10	5	21	5	15	7	19	1	17.50	8	19	2	4½	11	5	3¼
29	31	203	11	0	22	6	16	6	20	3	20.74	6	20	6	4½	12	0	3¼
31 [2]																		

[1] Mast lengths measured from heel to center of upper halyard sheave. Mast diameters measured at thwart. Mast and yard shall be of clear-grained spruce, fir, or equivalent.
[2] Subject to special consideration.

(t) *Matches.* A box of friction matches in a watertight container, stowed in an equipment locker or secured to the underside of the stern thwart if no locker is fitted, must be provided.

(u) *Mirrors, signaling.* Signaling mirrors must be of an approved type.

(v) *Oars.* A unit, consisting of a complement of rowing oars and steering oar, must be provided for each lifeboat in accordance with Table 169.529(v) except that motor-propelled and hand-propelled lifeboats need only be equipped with four rowing oars and one steering oar. In any case, the emergency lifeboats must be provided with the full complement of oars prescribed by the table. All oars must be buoyant.

TABLE 169.529(v)

Length of lifeboat (feet)		Number of oars—		Length of oars (feet)—	
Over—	Not over—	Rowing	Steering	Rowing	Steering
.....	15	4	1	8	9
15	19	6	1	10	11
19	21	6	1	11	12
21	23	6	1	12	13
23	25	8	1	13	14

TABLE 169.529(v)—Continued

Length of lifeboat (feet)		Number of oars—		Length of oars (feet)—	
Over—	Not over—	Rowing	Steering	Rowing	Steering
25	27	8	1	14	15
27	.....	8	1	15	16

(w) *Oil, illuminating.* One quart of illuminating oil must be provided in a metal container if a lantern is carried.

(x) *Oil, storm.* One gallon of vegetable, fish, or animal oil must be

provided in a suitable metal container so constructed as to permit a controlled distribution of oil on the water, and so arranged that it can be attached to the sea anchor.

(y) *Painter.* Painters must be of manila rope not less than 2¾ inches in circumference, or equivalent, and of a length not less than 3 times the distance between the deck on which the lifeboat is stowed and the light draft of the vessel. For lifeboats on vessels certificated for exposed or partially protected water service, one of the painters must have a long eye splice and be attached to the thwart with a toggle. The other painter must be attached to the stem.

(z) *Plug.* The automatic drain required in the lifeboat must be provided with a cap or plug attached to the lifeboat by a suitable chain.

(aa) *Provisions.* Approved emergency rations must be provided, consisting of 10,000 kJ (2390 calories) for each person the lifeboat is approved to carry. The provisions must be stowed in lockers or other compartments providing suitable protection.

(bb) *Rowlocks.* A unit, consisting of sufficient rowlocks and rowlock sockets for each oar required by Table 169.529(w) plus 2 additional rowlocks must be provided. The rowlocks must be attached to the lifeboat by separate chains so as to be available for immediate use, except that the 2 additional spare rowlocks must be carried in the equipment locker or stowed near the stern if no locker is fitted. The rowlocks and rowlock sockets must be distributed so as to provide the maximum amount of single banked oars practicable.

(cc) *Rudder and tiller.* The rudder and tiller must be constructed in accordance with § 160.035–3(t) of this chapter.

(dd) *Sea anchor.* The sea anchor must be of an approved type.

(ee) *Signals, distress, floating orange smoke.* The floating orange smoke distress signals must be approved under subpart 160.022 of this chapter. The signals must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(ff) *Signals, distress, red hand flare.* A unit consists of twelve hand red flare distress signals approved under Subpart 160.021 or 160.023 of this chapter and stored in a watertight container. Signals must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(gg) *Signals, distress, red parachute flare.* A unit consists of twelve parachute red flare distress signals with an approved means of projection approved under Subparts 160.024 and 160.028 respectively; or twelve approved hand-held rocket-propelled parachute red flare distress signals approved under Subpart 160.036. Flares must be stored in a portable watertight container. Flares must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after the date of expiration.

(hh) *Tool kit.* The tool kit must consist of at least the following tools in a suitable container:

(1) One 12-once ball peen hammer.

(2) One screwdriver with 6-inch blade.

(3) One pair 8-inch slip joint pliers.

(4) One 8-inch adjustable end wrench.

(ii) *Water.* (1) For each person the lifeboat is certified to carry, there must be provided three quarts of drinking water in containers approved under Subpart 160.026. Water must be replaced no later than the first annual stripping, cleaning, and overhaul of the lifeboat after date of expiration.

(2) One or more desalting kits, approved under Subpart 160.058 of this chapter, may be used as a substitute for one-third of the drinking water required.

(3) The drinking water must be stowed in drinking water tanks, lockers, or other compartments providing suitable protection.

(jj) *Whistle, signaling.* The whistle must be of the ball-type or multi-tone type, of corrosion resistant construction, with a 36-inch lanyard attached, and in good working order.

(kk) *Fishing kit.* The fishing kit must be approved under Subpart 160.061 of this chapter.

(ll) *Cover, protecting.* The cover must be of highly visible color and capable of protecting the occupants against exposure.

(mm) *Table of lifesaving signals.* The table of lifesaving signals must be in accordance with the provisions of Chapter V, Regulation 16, of the International Convention for Safety of Life at Sea, 1974, and must be printed on water resistant paper.

§ 169.531 Required equipment for liferafts.

Each liferaft must be fitted with the equipment required by and described in § 160.051–7(c) of Subchapter Q (Specifications) of this chapter.

§ 169.535 Required equipment for lifefloats.

Each lifefloat must be equipped in accordance with Table 169.535. The equipment is described in § 169.537.

TABLE 169.535

Letter identification and Item	Number required for each lifefloat	
	Exposed and partially protected water	Protected water
(a) Boathook	1	1
(b) Lifeline	1	1
(c) Paddles	4	4
(d) Painter	1	1
(e) Water light	1	None

§ 169.537 Description of equipment for lifefloats.

(a) *Boathook.* Each boathook must be of the single hook ball point type. Boathook handles must be of clear grained white ash, or equivalent, not less than 6 feet long and 1½ inches in diameter.

(b) *Lifeline and pendants.* The lifeline and pendants must be as furnished by the manufacturer with approved life floats. Replacement lifelines and pendants must meet the requirements in Subpart 160.010 of this chapter.

(c) *Paddles.* Paddles must be not less than 5 feet long.

(d) *Painter.* The painter must—

(1) Be at least 30m (100 ft.) long, but not less than 3 times the distance between the deck on which the life float(s) are stowed and the light draft of the vessel,

(2) Have a breaking strength of at least 6.7 KN (1500 lbs.), except that if the capacity of the life float is 50 persons or more, the breaking strength must be at least 13.4 KN (3000 lbs.),

(3) Be of a dark color, if synthetic, or of a type certified to be resistant to deterioration from ultraviolet light, and

(4) Be stowed in such a way it runs freely when the life float floats away from the sinking vessel.

(e) *Water light.* The water light must be approved under subpart 161.010 of this chapter. The water light must be attached to the lifefloat by a 12-thread manila or equivalent synthetic lanyard 3 fathoms in length.

Personal Flotation Devices

§ 169.539 Type required.

All personal flotation devices (PFDs) must be either—

(a) a Type I approved under Subpart 160.055, 160.002, or 160.005 of Subchapter Q (specification) of this chapter; or

(b) a Type V approved specifically for sailing school vessel use under Subpart 160.064 or 160.077 of Subchapter Q of this chapter; or

(c) a Type II approved under Subparts 160.047, 160.052, or 160.060 or a Type III approved under Subpart 160.064 if the vessel carries exposure suits or Type V

exposure PFDs, in accordance with section 169.551.

§ 169.541 Number required.

Each vessel must be provided with an approved adult personal flotation device of an appropriate size for each person carried. In addition, unless the service is such that children are never carried, there must be provided an approved personal flotation device of a suitable size for each child carried.

§ 169.543 Distribution and stowage.

(a) Personal flotation devices must be distributed through the upper part of the vessel in protected places convenient to the persons on board.

(b) If practicable, personal flotation device containers must be designed to allow the PFDs to float free.

(c) Personal flotation devices for children, when provided, must be stowed separately.

(d) Lockers, boxes, and closets in which PFDs are stowed must not be capable of being locked.

§ 169.545 Markings.

(a) Each personal flotation device must be marked with the vessel's name.

(b) Where PFDs are stowed so that they are not readily visible to persons onboard, the containers in which they are stowed must be marked "adult personal flotation devices" or "child personal flotation devices", as appropriate, and with the number contained therein, in at least 1-inch letters and figures.

(c) Each personal flotation device carried on vessels certificated for exposed or partially protected waters service must have a light approved under Subpart 161.012 of this chapter. The light must be securely attached to the front shoulder area of the personal flotation device.

(d) Each personal flotation device must have at least 200 sq. cm. (31 sq. in.) of retroreflective material attached on its front side and at least 200 sq. cm. on its back side. If the personal flotation device is reversible, retroreflective material must be applied as described above on both sides.

(e) Retroreflective material required by this section must be Type I material that is approved under Subpart 164.018 of this chapter.

Additional Lifesaving Equipment

§ 169.549 Ring life buoys and water lights.

(a)(1) The minimum number of life buoys and the minimum number to which water lights must be attached must be in accordance with the following table:

TABLE 169.549(a)(1)

Length of vessel	Minimum number of buoys	Minimum number of buoys with waterlights attached
Under 100	2	1
100 feet to less than 200 ft	4	2
200 feet to less than 300 ft	6	2
300 feet to less than 400 ft	12	4
400 feet to less than 600 ft	18	9

(2) One lifebuoy on each side of a vessel must have an attached line at least 15 fathoms in length.

(b) All lifebuoys must be placed where they are readily accessible. They must be capable of being readily cast loose.

(c)(1) All ring lifebuoys must be approved under Subpart 160.050 or 160.064 of this chapter and be international orange in color.

(2) Each water light must be approved under Subpart 161.010 of this chapter.

§ 169.551 Exposure suits.

(a) This section applies to each vessel operating in exposed or partially protected waters service except those—

(1) operating on routes between 32°N and 32°S in the Atlantic Ocean.

(2) operating on routes between 35°N and 35°S latitude in all other waters.

(b) Each vessel to which this section applies must have for each person on board an exposure suit approved under Subpart 160.071 or a Type V exposure PFD approved under Subpart 160.053.

§ 169.533 Pyrotechnic distress signals.

(a) All pyrotechnic distress signals must be of an approved type.

(b) Replacement must be made no later than the first inspection for certification or reinspection after the date of expiration.

(c) Except as otherwise provided in this section, each vessel must carry the following pyrotechnic distress signals:

(1) 6 hand red flare distress signals, and 6 hand orange smoke distress signals; or,

(2) 12 hand held rocket propelled prachute red flare distress signals.

(e) All pyrotechnic distress signals must be carried near the helm or in a location considered suitable by the Officer in Charge, Marine Inspection.

(f) All pyrotechnic distress signals must be stowed in a portable watertight container.

§ 169.555 Emergency position indicating radio beacon (EPIRB).

(a) Each vessel certificated for exposed waters must have an approved Class A emergency position indicating radiobeacon (EPIRB), and each vessel certificated for partially protected waters must have an approved Class C emergency position indicating radiobeacon (EPIRB). The required EPIRB must be—

(1) Operational;

(2) Stowed where it is readily accessible for testing and use; and

(3) Stowed in a manner so that it will float free if the vessel sinks.

(b) Each vessel must have an additional Class S EPIRB for every twenty-five persons onboard, for use in the lifeboats and liferafts.

§ 169.556 Work vests.

(a) Buoyant work vests carried under the permissive authority of this section must be approved under Subpart 160.053 of this chapter.

(b) Approved buoyant work vests are items of safety apparel and may be carried aboard vessels to be worn by persons when working near or over the water under favorable working conditions. Work vests are not accepted in lieu of any of the required number of approved personal flotation devices and must not be worn during drills and emergencies.

(c) The approved buoyant work vests must be stowed separately from personal flotation devices, and in locations where they will not be confused with personal flotation devices.

(d) Each work vest is subject to examination by a marine inspector to determine its serviceability. If a work vest is found not to be in a serviceable condition, then it must be repaired or removed from the vessel. If a work vest is beyond repair, it must be destroyed in the presence of the marine inspector.

Firefighting Equipment

§ 169.559 Fire pumps.

(a) Each sailing school vessel must be equipped with fire pumps as required in Table 169.559(a).

TABLE 169.559(a).—Fire Pumps

Length	Exposed and partially protected water service	Protected water service
65 feet but less than 90 feet	[1] 1	0
90 feet but less than 120 feet	[2] 1	[1] 1
120 feet or greater	[2] 2	[1] 1

[1] May be driven off a propulsion engine and may be used as a bilge pump.
[2] Must be driven by a source of power independent of the propulsion engine and may be used as a bilge pump.
[3] One pump may be driven off a propulsion unit and one pump may be used as a bilge pump. Pumps must be located in separate spaces.

(b) Fire pump capacity must be in accordance with the following:

Vessel length	Minimum capacity
Less than 90 ft	5.5 m^3/hr (25 gpm).
90 feet but less than 120 ft	11.0 m^3/hr (50 gpm).
Greater than 120 ft	14.3 m^3/hr (66.6 gpm).

(c) Each fire pump must be fitted with a pressure gage on the discharge side of the pump.

(d) Each vessel must have a hand operated portable fire pump having a capacity of at least 1.1 m^3/hr (5 gpm). This pump must be equipped with suction and discharge hose suitable for use in firefighting.

§ 169.561 Firemain.

(a) Each vessel required to be provided with a power-driven fire pump must also be provided with a fire main, hydrants, hoses and nozzles.

(b) Fire hydrants must be of sufficient number and located so that any part of the vessel may be reached with an effective stream of water from a single length of hose.

(c) All piping, valves, and fittings must be in accordance with good marine practice and suitable for the purpose intended.

§ 169.563 Firehose.

(a) One length of firehose must be provided for each fire hydrant required.

(b) Vessels less than 90 feet in length must have commercial firehose or equivalent of not over 1½ inch diameter or garden hose of not less than ⅝ inch nominal inside diameter. If garden hose is used, it must be of a good commercial grade constructed of an inner rubber tube, plies of braided cotton reinforcement and an outer rubber cover, or of equivalent material, and must be fitted with a commercial garden hose nozzle of good grade bronze or equivalent metal.

(c) Vessels of 90 feet or greater must have lined commercial firehose that conform to Underwriters' Laboratories, Inc. Standard 19 or Federal Specification ZZ–H–451. The firehose must be fitted with a combination nozzle approved under § 162.027 of this chapter.

(d) Each length of firehose must be a single piece 50 feet long.

(e) Firehose must be connected to the hydrants at all times, except that, on open decks where no protection is afforded to the hose, it may be temporarily removed from the hydrant in heavy weather and stowed in an accessible nearby location.

§ 169.564 Fixed extinguishing system, general.

(a) Fixed carbon dioxide or halogenated extinguishing systems must be installed to protect the following spaces—

(1) The machinery and fuel tank spaces of all vessels, except where machinery and fuel tank spaces are so open to the atmosphere as to make the use of a fixed system ineffective;

(2) The paint and oil rooms and similar hazardous spaces; and

(3) The galley stove area, for vessels greater than 90 feet in length and certificated for exposed or partially protected water service.

(b) Each fixed extinguishing system must be of an approved carbon dioxide or halogenated type and installed to the satisfaction of the Officer in Charge, Marine Inspection.

§169.565 Fixed Carbon Dioxide System.

(a) The number of pounds of carbon dioxide required for each space protected must be equal to the gross volume of the space divided by the appropriate factor in Table 169.565(a).

TABLE 169.565(a)

Gross volume of compartment, cubic feet		Factor
Over—	Not over—	
0	500	15
500	1,600	16
1,600	4,500	18
4,500		20

(b) A separate supply of carbon dioxide is not required for each space protected. The total available supply must be sufficient for the space requiring the greatest amount.

(c) *Controls.* (1) Each control and valve for the operation of the system must be outside the spaces protected and accessible at all times.

(2) Each branch line must be fitted with an approved shutoff valve. Each valve must be kept closed at all times except to operate the particular system.

(3) The arrangements must be such that the entire charge to any space can be introduced into the space by the operation of one valve selecting the space, and one control for releasing the required amount of fire extinguishing agent. The release control must be of an approved type and located adjacent to the branch line shutoff valve.

(4) Complete but simple instructions for the operation of the system must be located in a conspicuous place at or near the releasing control device.

(5) Each control valve to branch lines must be labeled to indicate the space served.

(d) *Piping.* (1) The pipe and fittings for the extinguishing systems must be in accordance with the system manufacturer's approved design manual.

(2) Each pipe, valve, and fitting of ferrous materials must be galvanized.

(3) Each dead-end line must extend at least 2 inches beyond the last orifice and must be closed with cap or plug.

(4) Each pipe, valve, and fitting must be securely supported and, where necessary, protected against injury.

(5) Drains and dirt traps must be fitted where necessary to prevent accumulation of dirt or moisture. Each drain and dirt trap must be located in accessible locations but not in accommodation spaces.

(3) *Discharge outlets.* (1) The area of discharge outlets shall be as specified in the manufacturer's approved design manual.

(2) The discharge of the required amount of carbon dioxide must be complete within two minutes.

(f) *Cylinders.* (1) Each cylinder must be securely fastened and supported, and where necessary protected against injury. Cylinders must be located outside the space protected.

(2) Each cylinder must be mounted in an upright position or inclined not more than 30° from the vertical, except that cylinders which are fitted with flexible or bent siphon tubes may be inclined not more than 80° from the vertical.

(3) Each cylinder used for storing extinguishing agent must be approved and marked in accordance with Department of Transportation regulations.

(4) Each cylinder must be mounted so it is readily accessible and capable of easy removal for recharging and inspection. Cylinders must be capable of being weighed in place.

(5) Where subject to moisture, cylinders must be installed so that a space of at least 2 inches is provided between the flooring and the bottom of the cylinders.

(6) Each cylinder storage area must be properly ventilated and the temperature inside must not exceed 130 °F.

(g) Provision must be made by means of plugs, covers, dampers, etc., to prevent the admission of air into the space protected.

(h) Systems must be fitted with a delayed discharge and an alarm bell arranged so the alarm sounds for at least twenty seconds before the carbon dioxide is released into the space.

§ 169.567 Portable extinguishers.

(a) The minimum number of portable fire extinguishers required on each vessel is determined by the Officer in Charge, Marine Inspection, in accordance with Table 169.567(a) and other provisions of this subpart.

TABLE 169.567(a)

Space protected	Total number extinguishers required	Type extinguishers permitted		Coast Guard classification
		Medium	Minimum size	
Living space and open boats	1 per 1,000 cu. ft. of space	Halon 1211 or 1301	2½ pounds	B-1.
		Foam	1¼ gallons	
		Carbon dioxide	4 pounds	
		Dry Chemical	2 pounds	
Propulsion machinery space with fixed CO_2 or halon system.	1	Foam	1¼ gallons	
		Carbon dioxide	4 pounds	
		Dry chemical	2 pounds	
		Halon 1211 or 1301	2½ pounds	
Propulsion machinery space without fixed CO_2 or halon system.	2	Foam	2½ gallons	
		Carbon dioxide	15 pounds	B-II.
		Dry chemical	10 pounds	
		Halon 1211 or 1301	10 pounds	
Galley (without fixed system)	1 per 500 cu. ft	Foam	2½ gallons	
		Carbon dioxide	15 pounds	
		Dry chemical	10 pounds	
		Halon 1211 or 1301	10 pounds	

(b) The Officer in Charge, Marine Inspection, may permit the use of any approved fire extinguishers, including semiportable extinguishers, which provide equivalent fire protection.

(c) All portable fire extinguishers installed on vessels must be of an approved type.

(d) Portable fire extinguishers must be stowed in a location convenient to the space protected.

(e) Portable fire extinguishers must be installed and located to the satisfaction of the Officer in Charge, Marine Inspection.

(f) Portable fire extinguishers which are required to be protected from freezing must not be located where freezing temperatures may be expected.

(g) Each vessel must carry spare charges for at least 50 percent of each size and variety of hand portable extinguishers required. For units that can not be readily recharged on the vessel, one spare extinguisher for each classification carried onboard must be provided in lieu of spare charges.

§ 169.569 Fire axes.

(a) Each vessel must carry at least the number of fire axes set forth in Table 169.569(a). The Officer in Charge, Marine Inspection may require additional fire axes necessary for the proper protection of the vessel.

TABLE 169.569(a)

Length		Number of axes
Over	Not over	
	65	0
65	90	1
90	120	2
120	150	3
150		4

(b) Fire axes must be stowed so as to be readily available in the event of emergency.

(c) If fire axes are not located in the open or behind glass, they must be placed in marked enclosures containing the fire hose.

Subpart 169.600 Machinery and Electrical

§ 169.601 General.

(a) The regulations in this subpart contain requirements for the design, construction and installation of machinery on sailing school vessels.

(b) Machinery must be suitable in type and design for the purpose intended. Installations of an unusual type and those not addressed by this subpart are subject to the applicable regulations in Subchapter F (Marine Engineering) and Subchapter J (Electrical Engineering) of this chapter.

(c) The use of liquefied inflammable gases, such as propane, methane, butane, etc., as fuel, except for cooking purposes, is prohibited.

Internal Combustion Engine Installations

§ 169.605 General.

(a) Generators, starting motors, and other spark producing devices must be mounted as high above the bilges as practicable.

(b) Gages to indicate engine cooling water temperature, exhaust cooling water temperature and engine lubricating oil pressure must be provided and located in plain view.

(c)All electrical components of the engine must be protected in accordance with § 183.410 of Title 33, Code of Federal Regulations to prevent ignition of flammable vapors.

§ 169.607 Keel cooler installations.

(a) Except as provided in this section, keel cooler installations must meet the requirements of § 56.50–96 of this chapter.

(b) Approved metallic flexible connections may be located below the deepest load waterline if the system is a closed loop below the waterline and its vent is located above the waterline.

(c) Fillet welds may be used in the attachment of channels and half round pipe sections to the bottom of the vessel.

(d) Short lengths of approved nonmetallic flexible hose may be used at machinery connections fixed by hose clamps provided that—

(1) The clamps are of a corrosion resistant material;

(2) The clamps do not depend on spring tension for their holding power; and

(3) Two clamps are used on each end of the hose or one hose clamp is used and the pipe ends are expanded or beaded to provide a positive stop against hose slippage.

§ 169.608 Grid cooler installations

(a) Hull penetrations for grid cooler installations must be made through a cofferdam or at a sea chest.

(b) Grid coolers must be suitably protected against damage from debris and grounding by recessing the unit into the hull or by the placement of protective guards.

(c) Each grid cooler hull penetration must be equipped with a shutoff valve.

§ 169.609 Exhaust systems.

Engine exhaust installations and associated cooling sytems must be built in accordance with the requirements of American Boat and Yacht Council, Inc. Standard P–1, "Safe Installation of Exhaust Systems for Propulsion and Auxiliary Machinery" and the following additional requirements:

(a) All exhaust installations with pressures in excess of 15 pounds per square inch gage or employing runs passing through living or working spaces must meet the material specifications of Part 56 of Title 46, Code of Federal Regulations.

(b) Horizontal dry exhaust pipes are permitted if they do not pass through living or berthing spaces, terminate above the deepest load waterline, are arranged to prevent entry of cold water from rough seas, and are constucted of corrosion resistant material at the hull penetration.

(c) When the exhaust cooling system is separate from the engine cooling system, a suitable warning device must be provided to indicate a failure of water flow in the exhaust cooling system.

§ 169.611 Carburetors.

(a) This section applies to all vessels having gasoline engines.

(b) Each carburetor other than a down-draft type, must be equipped with integral or externally fitted drip collectors of adequate capacity and arranged so as to permit ready removal of fuel leakage. Externally fitted drip collectors must be covered with flame screens.

(c) Each gasoline engine must be equipped with an approved means of backfire flame control. Installations of backfire flame arresters or engine air and fuel induction systems bearing basic Approval No. 162.015 may be continued in use as long as they are servicable and in good condition. New installations or replacements must meet one of the following requirements:

(1) The backfire flame arrester must be approved under Subpart 162.041 of this chapter. The flame arrester must be secured to the air intake with a flametight connection.

(2) The engine air and fuel induction system must provide adequate protection from propagation of backfire flame to the atmosphere equivalent to that provided by an approved backfire flame arrester. A gasoline engine utilizing an air and fuel induction system, and operated without an approved backfire flame arrester, must have the installation approved, tested and labelled in accordance with Subpart 162.042 of this chapter.

(3) The carburetor or the engine air induction system must have an attachment which disperses engine backfire flames to the atmosphere outside the vessel in such a manner that

the flames will not endanger the vessel, persons on board, or nearby vessels and structures. Each attachment must be of metallic construction with flametight connections and firmly secured to withstand vibration, shock, and engine backfire. These installations do not require formal approval and labelling, but must be accepted by the OCMI.

(d) Where manufacturers wish to produce vessels having an integrated engine-vessel design, the installation must be approved under Subpart 162.043 of this chapter.

Fuel Systems

§ 169.613 Gasoline fuel systems.

(a) Except as provided in paragraph (b) each gasoline fuel system must meet the requirements of § 56.50–70 of this chapter

(b) Each vessel of 65 feet and under must meet the requirements of § 182.15–25, § 182.15–30, § 182.15–35 and § 182.15–40 of this chapter.

§ 169.615 Diesel fuel systems.

(a) Except as provided in paragraph (b) each diesel fuel system must meet the requirements of section 56.50–75 of this chapter.

(b) Each vessel of 65 feet and under must meet the requirements of § 182.20–22, § 182.20–25, § 182.20–30, § 182.20–35 and § 182.20–40 of this chapter.

Steering System

§ 169.618 General.

(a) Each vessel must have an effective steering system.

(b) The steering system must be designed to withstand all anticipated loading while under sail, including shocks to the rudder. Additionally, the steering system on vessels with an auxiliary means of propulsion must not be susceptible to damage or jamming at the vessel's maximum astern speed.

(c) The main steering gear must be capable of moving the rudder from hard-over to hard-over at an average rate of not less than 2½° per second with the vessel at design service speed (ahead).

§ 169.619 Reliability.

(a) Except where the OCMI judges it impracticable, the steering system must—

(1) provide continued or restored steering capability in the event of a failure or malfunction of any single steering system component other than the rudder or rudder stock;

(2) be independent of other systems, including auxiliary propulsion machinery; and

(3) be operable in the event of localized fire or flooding.

(b) A main and independent auxiliary steering gear must be provided, except when—

(1) a small vessel uses a tiller or direct mechanical linkage as the primary means of controlling the rudder; or

(2) installation of an auxiliary steering gear is not possible.

Note.— A partial reduction of normal steering capability as a result of malfunction or failure is acceptable. This reduction should not be below that necessary for the safe navigation of the vessel.

(c) The strength and reliability of any component that is not provided in duplicate must be suitable to the cognizant OCMI. Where redundant or backup equipment or components are provided to meet the requirements of paragraphs (a) and (b) of this section, the following must be provided:

(1) A means to readily transfer from the failed equipment or component to the backup.

(2) Readily available tools or equipment necessary to make the transfer.

(3) Instructions for transfer procedures, posted at the main steering location.

(4) A means to steady the rudder while making the transfer.

§ 169.621 Communications.

A reliable means of voice communications must be provided between the main steering location and each alternate steering location.

§ 169.622 Rudder angle indicators.

Each vessel must have a rudder angle indicator at the main steering location that meets the requirements of § 113.40–10 of this chapter, except where a tiller or direct mechanical linkage is the primary means of controlling the rudder.

§ 169.623 Power-driven steering systems.

(a) Power-driven steering systems must have means to be brought into operation from a dead ship condition, without external aid. The system must automatically resume operation after an electric power outage.

(b) Control of power-driven steering systems from the main steering control location must include, as applicable—

(1) Control of any necessary ancillary device (motor, pump, valve, etc.);

(2) A pilot light to indicate operation of each power unit; and

(3) Visual and audible alarms to indicate loss of power to the control system or power units and overload of electric motors.

(c) Overcurrent protection for steering system electric circuits must meet § 111.93–11 of this chapter, as applicable.

Ventilation

§ 169.625 Compartments containing diesel machinery.

(a) Spaces containing machinery must be fitted with adequate dripproof ventilators, trunks, louvers, etc., to provide sufficient air for proper operation of the propulsion and auxiliary engines.

(b) Air-cooled propulsion and auxiliary engines installed below deck must be fitted with air intake ducts or piping from the weather deck. The ducts or piping must be arranged and supported to safely sustain stresses induced by weight and engine vibration and to minimize transfer of vibration to the supporting structure. Prior to installing ventilation for the engines, plans or sketches showing the machinery arrangement including air intakes, exhaust stack, method of attachment of ventilation ducts to the engine, location of spark arresting mufflers and capacity of ventilation blowers must be submitted to the OCMI for approval.

(c) Spaces containing machinery must be fitted with at least two ducts to furnish natural or mechanical supply and exhaust ventilation. One duct must extend to a point near the bottom of the compartment, and be installed so that the ordinary collection of water in the bilge will not trap the duct. Where forced ventilation is installed, the duct extending to the bottom of the compartment must be the exhaust. The total inlet area and the total outlet area of ventilation ducts must be not less than one square inch for each foot of beam of the vessel. These minimum areas must be increased when such ducts are considered part of the air supply to the engines.

(d) All ducts must be of rigid permanent noncombustible construction, properly fastened, supported, and reasonably gastight from end to end.

(e) All supply ducts for ventilation purposes must be provided with cowls or scoops having a free area not less than twice the required duct area. When the cowls or scoops are screened, the mouth area must be increased to compensate for the area of the screen wire. Dampers are prohibited in supply ducts. Cowls or scoops must be kept open at all times except when weather would endanger the vessel if the openings were not temporarily closed. Supply and exhaust openings must not be located where the natural flow of air is unduly obstructed, or adjacent to possible sources of vapor ignition, and must not be located where exhaust air may be taken into the supply vents.

§ 169.627 Compartments containing diesel fuel tanks.

Unless they are adequately ventilated, enclosed compartments or spaces containing diesel fuel tanks and no machinery must be provided with a gooseneck vent of not less than 2½ inches in diameter. The vent opening must not be located adjacent to possible sources of vapor ignition.

§ 169.629 Compartments containing gasoline machinery or fuel tanks.

Spaces containing gasoline machinery or fuel tanks must have natural supply and mechanical exhaust ventilation meeting the requirements of American Boat and Yacht Council Standard H–2.5, "Design and Construction; Ventilation of Boats Using Gasoline.

§ 169.631 Separation of machinery and fuel tank spaces from accommodation spaces.

(a) Machinery and fuel tank spaces must be separated from accommodation spaces by watertight or vapor tight bulkheads of double diagonal wood, marine plywood, steel plate, or equivalent construction.

(b) On vessels less than 90 feet in length, segregation may be by means of a watertight or vapor tight engine box.

Piping Systems

§ 169.640 General.

(a) Vital piping systems, as defined in § 169.642 of this subpart, must meet the material and pressure design requirements of Subchapter F of this chapter.

(b) Except as provided in this paragraph, nonmetallic piping system materials must meet the applicable requirements of 46 CFR 56.60–25.

(1) Rigid nonmetallic materials are acceptable for use in bilge, ballast, and machinery-connected piping systems on vessels less than 120 feet in length, provided that bilge and fire systems do not use the same piping.

(2) Nonmetallic piping is prohibited in fuel systems except where flexible hose is permitted.

(3) Rigid nonmetallic materials may be used in non-vital systems.

§ 169.642 Vital systems.

For the purpose of this part, the following are considered vital systems—

(a) A marine engineering system identified by the OCMI as being crucial to the survival of the vessel or to the protection of the personnel on board; and

(b) On vessels greater than 120 feet in length—

(1) Bilge system;

(2) Ballast system;

(3) Fire protection system;

(4) Fuel oil system; and

(5) Steering and steering control system.

Bilge Systems

§ 169.650 General.

All vessels must be provided with a satisfactory arrangement for draining any compartment, other than small buoyancy compartments, under all practical conditions. Sluice valves are not permitted in watertight bulkheads except as specified in § 169.652(a).

§ 169.652 Bilge piping.

(a) All vessels of 26 feet in length and over must be provided with individual bilge lines and suction for each compartment except that the space forward of the collision bulkhead may be serviced by a sluice valve or portable bilge pump if the arrangement of the vessel is such that ordinary leakage can be removed this way.

(b) The bilge pipe on vessels 65 feet in length and under must be not less than one inch nominal pipe size. On vessels greater than 65 but less than 120 feet in length the bilge pipe must be not less than one and one-half inches. Piping on vessels of 120 feet or greater or of 100 gross tons or greater must meet the requirements contained in section 56.50–50 of this chapter.

(c) Each bilge suction must be fitted with a suitable strainer having an open area not less than three times the area of the bilge pipe.

(d) Each individual bilge suction line must be led to a central control point or manifold. Each line must be provided with a stop valve at the control point or manifold and a check valve at some accessible point in the bilge line, or a stop-check valve located at the control point or manifold.

(e) Each bilge pipe piercing the collision bulkhead must be fitted with a screw-down valve located on the forward side of the collision bulkhead and operable from above the weather deck.

§ 169.654 Bilge pumps.

(a) Vessels of less than 65 feet in length must have a portable hand bilge pump having a maximum capacity of 5 gpm.

(b) In addition to the requirements of paragraph (a) of this section, vessels of 26 feet but less than 40 feet in length must have a fixed hand bilge pump or fixed power bilge pump having a minimum capacity of 10 gpm. If a fixed hand pump is installed, it must be operable from on deck.

(c) In addition to the requirements of paragraph (a) of this section, vessels of 40 feet but less than 65 feet must have a fixed power bilge pump having a minimum capacity of 25 gpm.

(d) Vessels of 65 feet in length but less than 120 feet and under 100 gross tons must have two fixed power bilge pumps having a combined minimum capacity of 50 gpm.

(e) Vessels of 120 feet or greater and vessels of 100 gross tons and over must have two fixed power pumps meeting the capacity requirements of § 56.50–55(c) of this chapter.

(f) Each power driven bilge must be self priming.

(g) Each fixed bilge pump required by this section must be permanently connnected to the bilge main.

(h) Bilge pumps may also be connected to the firemain provided that the bilge system and firemain system may be operated simultaneously.

Electrical

§ 169.662 Hazardous locations.

Electrical equipment must not be installed in lockers that are used to store paint, oil, turpentine, or other flammable liquids unless the equipment is explosion-proof or intrinsically safe in accordance with sections 111.105–9 or 111.105–11 of this chapter.

Electrical Installations Operating at Potentials of Less Than 50 Volts on Vessels of Less than 100 Gross Tons

§ 169.664 Applicability.

The requirements in this subpart apply to electrical installations operating at potentials of less than 50 volts on vessels of less than 100 gross tons.

§ 169.665 Name plates.

Each generator, motor and other major item of power equipment must be provided with a name plate indicating the manufacturer's name, its rating in volts and amperes or in volts and watts and, when intended for connection to a normally grounded supply, the grounding polarity.

§ 169.666 Generators and motors.

(a) Each vessel of more than 65 feet in length having only electrically driven fire and bilge pumps must have two generators. One of these generators must be driven by a means independent of the auxiliary propulsion plant. A generator that is not independent of the auxiliary propulsion plant must meet the requirements of § 111.10–4(c) of this chapter.

(b) Each generator and motor must be in a location that is accessible, adequately ventilated, and as dry as practicable.

(c) Each generator and motor must be mounted as high as practicable above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(d) Each generator must be protected from overcurrent by a circuit breaker, fuse or an overcurrent relay.

§ 169.667 Switchboards.

(a) Each switchboard must be in as dry a location as praticable, accessible, protected from inadvertent entry, and adequately ventilated. All uninsulated current carrying parts must be mounted on nonabsorbent, noncombustible, high dielectric insulating material.

(b) Each switchboard must be—

(1) Totally enclosed; and

(2) Of the dead front type.

(c) Each ungrounded conductor of a circuit must have at the point of attachment to the power source either—

(1) A Circuit breaker; or

(2) A switch and fuse.

(d) Each switch other than one mounted on a switchboard must be of the enclosed type.

§ 169.668 Batteries.

(a) Each battery must be in a location that allows the gas generated in charging to be easily dissipated by natural or induced ventilation.

(b) Except as provided in paragraph (c) of this section, a battery must not be located in the same compartment with a gasoline tank or gasoline engine.

(c) If compliance with paragraph (b) of this section is not practicable, the battery must be effectively screened by a cage or similar structure to minimize the danger of accidental spark through dropping a metal object across the terminals.

(d) Each battery must be located as high above the bilges as practicable and secured against shifting with motion of the vessel. Each battery and battery connection must be accessible so as to permit removal.

(e) All connections must be made to battery terminals with permanent type connectors. Spring clips or other temporary type clamps may not be used.

(f) Each battery must be located in a tray of lead or other suitable material resistant to deteriorating action by the electrolyte.

(g) Each battery charger intended for connection to a commercial supply voltage must employ a transformer of the isolating type. An ammeter that is readily visible must be included in the battery charger circuit.

(h) A voltage dropping resistor, provided for charging a battery, must be mounted in a ventilated noncombustible enclosure that prevents hazardous temperatures at adjacent combustible materials.

(i) The main supply conductor from the battery must have an emergency switch, located as close as practicable to the battery, that opens all ungrounded conductors.

(j) If a storage battery is not in the same compartment and adjacent to the panel or box that distributes power to the various lighting, motor and appliance branch circuits, the storage battery lead must be fused at the battery.

§ 169.669 Radiotelephone equipment.

A separate circuit from the switchboard must be provided for each radiotelephone installation.

§ 169.670 Circuit breakers.

(a) Each circuit breaker must be of the manually reset type designed for—

(a) Inverse time delay;

(b) Instantaneous short circuit protection; and

(c) Repeated opening of the circuit without damage to the circuit breaker.

§ 169.671 Accessories.

Each light, receptacle and switch exposed to the weather must be watertight and must be constructed of corrosion-resistant material.

§ 169.672 Wiring for power and lighting circuits.

(a) Wiring for power and lighting circuits must have copper conductors, of 14 AWG or larger, and—

(1) Meet Article 310–8 and Table 310–13 of the National Electrical Code;

(2) Be listed as "50 volt boat cable"; or

(3) Meet Subpart 111.60 of this chapter.

(b) Wiring for power and lighting circuits on new vessels must have stranded conductors.

(c) Conductors must be sized so that—

(1) They are adequate for the loads carried; and

(2) The voltage drop at the load terminals is not more than 10 percent.

§ 169.673 Installation of wiring for power and lighting circuits.

(a) Wiring must be run as high as practicable above the bilges.

(b) Wiring, where subject to mechanical damage, must be protected.

(c) A wiring joint or splice must be mechanically secure and made in a junction box or enclosure.

(d) Unless a splice is make by an insulated pressure wire connector, it must be thoroughly soldered and taped with electrical insulating tape or the soldered joint must be otherwise protected to provide insulation equivalent to that of the conductors joined.

(e) Where ends of stranded conductors are to be clamped under terminal screws, they must be formed and soldered unless fitted with pressure terminal connectors.

(f) Conductors must be protected from overcurrent in accordance with their current-carrying capacities.

(g) Conductors supplying motors and motor operated appliances must be protected by a separate overcurrent device that is responsive to motor current. This device must be rated or set at not more than 125 percent of the motor full-load current rating.

(h) On metallic vessels the enclosures and frames of all major electrical equipment must be permanently grounded to the metal hull of the vessel by the mounting bolts or other means. Cable armor must not be used as the normal grounding means.

(i) On nonmetallic vessels, the enclosures and frames of major electrical equipment must be bonded together to a common ground by a normally noncurrent carrying conductor.

(j) For grounded systems the negative polarity of the supply source must be grounded to the metal hull or, for nonmetallic vessels, connected to the common ground.

(k) On a nonmetallic vessel, where a ground plate is provided for radio equipment it must be connected to the common ground.

(l) For grounded systems, hull return must not be used except for engine starting purposes.

Electrical Installations Operating at Potentials of 50 Volts or More on Vessels of Less than 100 Gross Tons

§ 169.674 Applicability.

The requirements in this subpart apply to electrical installations operating at potentials of 50 volts or more, on vessels of less than 100 gross tons.

§ 169.675 Generators and motors.

(a) Each generator and motor must be fitted with a nameplate of corrosion-resistant material marked with the following information as applicable:

(1) Name of manufacturer.

(2) Manufacturer's type and frame designation.

(3) Output in kilowatts or horsepower rating.

(4) Kind of rating (continuous, intermittent, etc.).

(5) Revolutions per minute at rated load.

(6) Amperes at rated load.

(7) Voltage.

(8) Frequency if applicable.

(9) Number of phases, if applicable.

(10) Type of winding (for direct-current motors).

(b) Each vessel of more than 65 feet in length having only electrically driven fire and bilge pumps must have two generators. One of these generators must be driven by a means independent of the auxiliary propulsion plant. A generator that is not independent of the auxiliary propulsion plant must meet the requirements of § 111.10-4(c) of this chapter.

(c) Each generator and motor must be in a location that is accessible, adequately ventilated, and as dry as practicable.

(d) Each generator and motor must be mounted as high as practicable above the bilges to avoid damage by splash and to avoid contact with low lying vapors.

(e) Each motor for use in a location exposed to the weather must be of the watertight or waterproof type or must be enclosed in a watertight housing. The motor enclosure or housing must be provided with a check valve for drainage or a tapped hole at the lowest part of the frame for attaching a drain pipe or drain plug.

(f) Except as provided in paragraphs (g) and (h) of this section, each generator and motor for use in a machinery space must be designed for an ambient temperature of 50 degrees C. (122 degrees F.).

(g) A generator or motor may be designed for an ambient temperature of 40 degrees C. (104 degrees F.) if the vessel is designed so that the ambient temperature in the machinery space will not exceed 40 degrees C. under normal operating conditions.

(h) A generator or motor designed for 40 degrees C. may be used in a 50 degrees C. ambient location provided it is derated to 80 percent of full load rating, and the rating or setting of the overcurrent device is reduced accordingly. A nameplate specifying the derated capacity must be provided for each motor and generator.

(i) A voltmeter and an ammeter must be provided that can be used for measuring voltage and current of each generator that is in operation. For each alternating-current generator a means for measuring frequency must also be provided. Additional control equipment and measuring instruments must be provided, if needed, to ensure satisfactory operation of each generator.

§ 169.676 Grounded electrical systems.

(a) Except as provided in paragraph (b) of this section, each electrical system must meet § 111.05 of this chapter.

(b) Ground detection is not required.

§ 169.677 Equipment protection and enclosure.

(a) Except as provided in this section, all electrical equipment including motors, generators, controllers, distribution panels, consoles, etc., must be at least dripproof and protected.

(b) Equipment mounted on a hinged door of an enclosure must be constructed or shielded so that no live parts of the door mounted equipment will be exposed to accidental contact by a person with the door open and the circuit energized.

(c) Any cabinet, panel, or box containing more than one source of potential in excess of 50 volts must be fitted with a sign warning personnel of this condition and identifying the circuits to be disconnected to remove all the potentials in excess of 50 volts.

(d) Each distribution panelboard must be enclosed.

§ 169.678 Main distribution panels and switchboards.

(a) A distribution panel to which the generator leads are connected, and from which the electric leads throughout the vessel directly or indirectly receive their electric power is a switchboard.

(b) Each switchboard must have a driphood or an equivalent means of protecting against falling liquid.

(c) Nonconductive deck materials, mats, or gratings must be provided in front of each switchboard.

(d) If the switchboard is accessible from the rear, nonconductive deck material, mats, or gratings must be provided in the rear of the switchboard.

(e) Metal cases of instruments and secondary windings of instrument transformers must be grounded.

(f) Each switchboard must be placed in a location that is accessible, adequately ventilated, and as dry as practicable. All uninsulated current carrying parts must be mounted on nonabsorbent, noncombustible, high dielectric insulating material.

(g) Each switchboard must be of the dead front type.

(h) Each switchboard must have front and, if accessible from the back, rear non-conducting hand rails except on vessels where the surrounding bulkheads and decks are of an insulating material such as fiberglass or wood.

§ 169.679 Wiring for power and lighting circuits.

Wiring for each power and lighting circuit must meet Subpart 111.60 of this chapter.

§ 169.680 Installation of wiring for power and lighting circuits.

(a) Wiring must be run as high as practicable above the bilges.

(b) Each cable installed where particularly susceptible to damage such as locations in way of doors, hatches, etc, must be protected by removable metal coverings, angle irons, pipe, or other equivalent means. All metallic coverings must be electrically continuous and grounded to the metal hull or common ground, and all coverings such as pipe that may trap moisture must be provided with holes for drainage. Where cable protection is carried through a watertight deck or bulkhead, the installation must maintain the watertight integrity of the structure.

(c) Each cable entering a box or fitting must be protected from abrasion, and must meet the following requirements:

(1) Each opening through which conductors enter must be adequately closed.

(2) Cable armor must be secured to the box or fitting.

(3) In damp or wet locations, each cable entrance must be watertight.

(d) The enclosures of all equipment must be permanently grounded to the metal hull of the vessel by the mounting bolts or other means. Cable armor must not be used as the normal grounding means.

(e) On a nonmetallic vessel, the enclosures must be bonded to a common ground by a normal noncurrent carrying conductor.

(f) On a nonmetallic vessel, where a ground plate is provided for radio equipment it must be connected to the common ground.

(g) Except as provided in paragraph (i) of this section, each armored cable must have a metallic covering that is—

(1) Electrically and mechanically continuous; and

(2) Grounded at each end of the run to—

(i) The metal hull; or

(ii) The common ground required by paragraph (e) of this section on nonmetallic vessels.

(h) In lieu of being grounded at each end of the run as required by paragraph (g) of this section, final sub-circuits may be grounded at the supply end only.

(i) All equipment, including switches, fuses, lampholders, etc., must be of a type designed for the proper potential and be so identified.

(j) Except as provided in paragraph (l) of this section, each junction box, connection box, and outlet box, must have an internal depth of at least 1½ inches.

(k) For a box incorporated in a fixture having a volume of not less than 20 cubic inches, the depth may be decreased to not less than 1 inch.

(l) Each conductor, except a fixture wire within a box, must have a free space computed using the volume per conductor given in Table 169.680(l). If a fitting or device such as a cable clamp, hickey, switch or receptacle is contained in the box, each fitting or device must count as one conductor.

TABLE 169.680(l)

Size of conductor A.W.G.	Free space for each conductor in box, cubic inches
14	2.0
12	2.25
8	2.50
1	3.0

(m) Each junction box, connection box, and outlet box for use in a damp or wet location must be of watertight construction.

(n) Each lighting fixture must be constructed in accordance with the requirements of Subchapter J of this chapter.

(o) A separate circuit from the switchboard must be provided for each radiotelephone installation.

(p) Knife switches must be so placed or designed that gravity or vibration will not tend to close them. Knife switches, unless of the double throw type, must be connected so that the blades are dead when the switch is in the open position.

(q) Circuits must be connected to the fuse end of switches and to the coil end of circuit breakers, except that generator leads or incoming feeders may be connected to either end of circuit breakers.

(r) Receptacle outlets and attachment plugs for the attachment of portable lamps, tools, and similar apparatus supplied as ship's equipment and operating at 100 volts or more, must provide a grounding pole and a grounding conductor in the portable cord to ground the non-current carrying metal parts of the apparatus.

(s) Receptacle outlets of the type providing a grounded pole must be of a configuration that will not permit the dead metal parts of portable apparatus to be connected to a live conductor.

§ 169.681 Disconnect switches and devices.

(a) Externally operable switches or circuit breakers must be provided for motor and controller circuits and must open all ungrounded conductors of the circuit.

(b) If the disconnect means is not within sight of the equipment that the circuit supplies, means must be provided for locking the disconnect device in the "open" position.

(c) For circuits protected by fuses, the disconnect switch required for fuses in § 132.64(b) of this chapter is adequate for disconnecting the circuit from the supply.

(d) The disconnect means may be in the same enclosure with motor controllers.

(e) Disconnect means must be provided to open all conductors of generator and shore power cables.

§ 169.682 Distribution and circuit loads.

(a) Except as provided in paragraph (b) of this section, the connected load on a lighting branch circuit must not exceed 80 percent of the rating of the overcurrent protective device, computed using the greater of—

(1) The lamp sizes to be installed; or

(2) 50 watts per outlet.

(b) Circuits supplying electrical discharge lamps must be computed using the ballast input current.

(c) The branch circuit cables for motor and lighting loads must be no smaller than No. 14 AWG.

§ 169.683 Overcurrent protection, general.

(a) Overcurrent protection must be provided for each ungrounded conductor for the purpose of opening the electric circuit if the current reaches a value that causes an excessive or dangerous temperature in the conductor or conductor insulation.

(b) Disconnect means must be provided on the supply side of and adjacent to all fuses for the purpose of deenergizing the fuses for inspection and maintenance purposes. All disconnect means must open all ungrounded conductors of the circuit simultaneously.

(c) Each conductor, including a generator lead and shore power cable, must be protected in accordance with its current-carrying capacity.

(d) If the allowable current-carrying capacity of a conductor does not correspond to a standard size fuse, the next larger size or rating may be used but not exceeding 150 percent of the allowable current-carrying capacity of the conductor.

(e) Plug (screw in type) fuses and fuseholders must not be used in circuits exceeding 125 volts between conductors. The screw shell of plug type fuseholders must be connected to the load of the circuit. Edison base fuses may not be used.

(f) If the allowable current-carrying capacity of the conductor does not correspond to a standard rating of circuit breakers, the next larger rating not exceeding 150 percent of the allowable current-carrying capacity of the conductor may be used.

(g) Lighting branch circuits must be protected against overcurrent either by fuses or circuit breakers rated at not more than 20 amperes.

(h) Each circuit breaker must be of the manually reset type designed for—

(1) Inverse time delay;

(2) Instantaneous short circuit protection; and

(3) Repeated opening of the circuit in which it is to be used without damage to the circuit breaker.

(i) Circuit breakers must indicate whether they are in the open or closed position.

(j) Devices such as instruments, pilot lights, ground detector lights, potential transformers, etc. must be supplied by circuits protected by overcurrent devices.

(k) Each generator must be protected with an overcurrent device set at a value not exceeding 15 percent above the full-load rating for continuous rated machines or the overload rating for special rated machines.

§ 169.684 Overcurrent protection for motors and motor branch circuits.

(a) Except as provided in paragraph (d) of this section, each motor must be provided with running protection against overcurrent. A protective device integral with the motor that is responsive to motor current or to both motor current and temperature may be used.

(b) The motor branch circuit conductors, the motor control apparatus, and the motors must be protected against overcurrent due to short circuits or grounds with overcurrent devices.

(c) The motor branch circuit overcurrent device must be capable of carrying the starting current of the motor.

(d) Each manually started continous duty motor, rated at one horsepower or less, that is within sight from the starter location, is considered as protected against overcurrent by the overcurrent device protecting the conductors of the branch circuit.

§ 169.685 Electric heating and cooking equipment.

(a) Each electric space heater for heating rooms and compartments must be provided with thermal cutouts to prevent overheating. Each heater must be so constructed and installed as to prevent the hanging of towels, clothing, etc., on the heater, and to prevent overheating of heater parts and adjacent bulkheads or decks.

(b) All electric cooking equipment, attachments, and devices, must be of rugged construction and so designed as to permit complete cleaning, maintenance, and repair.

(c) Doors for electric cooking equipment must be provided with heavy duty hinges and locking devices to prevent accidental opening in heavy seas.

(d) Electric cooking equipment must be mounted to prevent dislodgment in heavy seas.

(e) For each grill or similar type cooking equipment, means must be provided to collect grease or fat and to prevent spillage on wiring or the deck.

(f) Where necessary for safety of personnel, grab rails must be provided. Each electric range must be provided with sea rails with suitable barriers to resist accidental movement of cooking pots.

§ 169.686 Shore power.

If a shore power connection is provided it must meet the following requirements:

(a) A shore power connection box or receptacle and a cable connecting this box or receptacle to the main distribution panel must be permanently installed in an accessible location.

(b) The shore power cable must be provided with a disconnect means located on or near the main distribution panel.

Electrical Installations on Vessels of 100 Gross Tons and Over

§ 169.687 General.

Except as provided in this subpart, electrical installations on vessels of 100 gross tons and over must meet the requirements of Parts 110–113 of this chapter.

§ 169.688 Power supply.

(a) The requirements of this section apply in lieu of Subpart 111.10 of this chapter.

(b) If a generator is used to provide electric power for any vital system listed in §169.642 of this subchapter, at least two generating sets must be provided. At least one required generating set must be independent of the auxiliary propulsion machinery. A generator that is not independent of the auxiliary propulsion plant must meet the requirements of §111.10–4(c) of this chapter. With any one generating set stopped, the remaining set(s) must provide the power necessary for each of the following:

(1) Normal at sea load plus starting of the largest vital system load that can be started automatically or started from a space remote from the main distribution panel (switchboard).

(2) All vital systems simultaneously with nonvital loads secured.

(c) The adequacy of ship service generators must be demonstrated to the satisfaction of the OCMI during the initial inspection required by § 169.221 of this subchapter.

§ 169.689 Demand loads.

Demand loads must meet § 111.60–7 of this chapter except that smaller demand loads for motor feeders are acceptable if the cable is protected at or below its current-carrying capacity.

§ 169.690 Lighting branch circuits.

Each lighting branch circuit must meet the requirements of § 111.75–5 of this chapter, except that—

(a) Appliance loads, electric heater loads, and isolated small motor loads may be connected to a lighting distribution panelboard; and

(b) Branch circuits in excess of 30 amperes may be supplied from a lighting distribution panelboard.

§ 169.691 Navigation lights.

Navigation light systems must meet the requirements of § 111.75–17 of this chapter except the requirements of § 111.75–17 (a) and (c).

§ 169.692 Remote stop stations.

In lieu of the remote stopping systems required by Subpart 111.103 of this chapter, remote stop stations must be provided as follows:

(a) A propulsion shutdown in the pilothouse for each propulsion unit,

(b) A bilge slop or dirty oil discharge shutdown at the deck discharge,

(c) A ventilation shutdown located outside the space ventilated, and

(d) A shutdown from outside the engineroom for the fuel transfer pump, fuel oil service pump, or any other fuel oil pump.

§ 169.693 Engine order telegraph systems.

An engine order telegraph system is not required.

Subpart 169.700—Vessel Control, Miscellaneous Systems, and Equipment

§ 169.703 Cooking and heating.

(a) Cooking and heating equipment must be suitable for marine use. Cooking installations must meet the requirements of ABYC Standard A–3, "Recommended Practices and Standards covering galley stoves."

(b) The use of gasoline for cooking, heating or lighting is prohibited on all vessels.

(c) The use of liquefied petroleum gas (LPG) or compressed natural gas (CNG) is authorized for cooking purposes only.

(1) The design, installation and testing of each LPG system must meet either ABYC A–1 or Chapter 6 of NFPA 302.

(2) The design, installation, and testing of each CNG system must meet either Chapter 6 of NFPA 302 or ABYC A–22.

(3) The stowage of each cylinder must comply with the requirements for the stowage of cylinders of liquefied or non-liquefied gases used for heating, cooking, or lighting in Part 147 of this chapter.

(4) If the fuel supply line enters an enclosed space on the vessel, a remote shutoff valve must be installed which can be operated from a position adjacent to the appliance. The valve must be a type that will fail closed, and it must be located between the regulator and the point where the fuel supply enters the enclosed portion of the vessel.

(5) If Chapter 6 of NFPA 302 is used as the standard, then the following additional requirements must also be met:

(i) LPG or CNG must be odorized in accordance with ABYC A–1.5.d or A–22.5.b, respectively.

(ii) Ovens must be equipped with a flame failure switch in accordance with ABYC A–1.10.b for LPG or A–22.10.b for CNG.

(iii) The marking and mounting of LPG cylinders must be in accordance with ABYC–1.6.b.

(iv) LPG cylinders must be of the vapor withdrawal type as specified in ABYC A–1.5.b.

(6) If ABYC A–1 or A–22 is used as the standard for an LPG on CNG installation, then pilot lights or glow plugs are prohibited.

(7) If ABYC A–22 is used as the standard for a CNG installation, then the following additional requirements must also be met:

(i) The CNG cylinders, regulating equipment, and safety equipment must meet the installation, stowage, and testing requirements of paragraphs 6–5.11.1, 2, 3; 6–5.11.5; and 6–5.11.8 of NFPA 302.

(ii) The use or stowage of stoves with attached cylinders is prohibited as specified in paragraph 6–5.1 of NFPA 302.

§ 169.705 Mooring equipment.

Each vessel must be fitted with ground tackle and hawsers deemed necessary by the Officer in Charge, Marine Inspection, depending upon the size of the vessel and the waters on which it operates.

§ 169.709 Compass.

(a) Each vessel must be fitted with a magnetic steering compass.

(b) Each vessel certificated for exposed water service must have an emergency compass in addition to the one required in paragraph (a).

§ 169.711 Emergency lighting

(a) Each vessel must be equipped with a suitable number of portable battery lights.

(b) Each vessel of 100 gross tons and over must satisfy the emergency lighting requirements for a miscellaneous self-propelled vessel as contained in Part 112 of this chapter.

(c) Each vessel of less than 100 gross tons that has accommodation spaces located below the main deck must have permanently installed lighting which is connected to a single emergency power source or permanently installed, relay-controlled, battery-operated lanterns. The lighting or lanterns must be fitted along the avenues of escape, in the wheelhouse, and in the engine compartment.

(1) A single emergency power source, if provided, must be independent of the normal power source and must be either a generator or a storage battery.

(d) The emergency power source and batteries for individual, battery-operated, lanterns must have the capacity to supply all connected loads simultaneously for at least 6 hours of continuous operations. If the emergency lighting is provided by battery power, then an automatic battery charger that maintains the battery(s) in a fully charged condition must be provided.

(e) The emergency lighting system must be capable of being fully activated from a single location.

§ 169.713 Engineroom communication system.

An efficient communication system must be provided between the principal steering station and the engineroom on vessels which are not equipped with pilothouse controls if, in the opinion of the Officer in Charge, Marine Inspection, this is necessary for proper operation of the vessel.

§ 169.715 Radio.

(a) Radiotelegraph and radiotelephone installations are required on certain vessels. Details of these requirements and the details of the installations are contained in regulations of the Federal Communications Commission (FCC) in Title 47, Code of Federal Regulations, part 83.

(b) A valid certificate issued by the FCC is evidence that the radio installation is in compliance with the requirements of that agency.

§ 169.717 Fireman's outfit.

(a) Each vessel greater than 120 feet but less than 150 feet in length must carry one approved fireman's outfit consisting of—

(1) An approved-contained breathing apparatus with belt and lifeline;

(2) An approved flame safety lamp;

(3) One flashlight listed by an independent testing laboratory as suitable for use in hazardous locations;

(4) One fire ax;

(5) Boots and gloves of rubber or other electrically nonconducting material;

(6) A rigid helmet which provides effective protection against impact; and

(7) Protective clothing.

(b) Each vessel 150 feet or greater must carry two fireman's outfits. The outfits must be stowed in widely separated accessible locations.

(c) Lifelines must be of steel or bronze wire rope. Steel wire rope must be either inherently corrosion resistant or made so by galvanizing or thinning. Each end must be fitted with a hook with keeper having a throat opening which can be readily slipped over a ⅝-inch bolt. The total length of the lifeline is dependent upon the size and arrangement of the vessel, and more than one line may be hooked together to achieve the necessary length. No individual length of lifeline may be less than 50 feet in length. The assembled lifeline must have a minimum breaking strength of 1,500 pounds.

(d) A complete recharge must be carried out for each self-contained breathing apparatus and a complete set of spare batteries and bulb must be carried for each flashlight. The spares must be stowed in the same location as the equipment it is to reactivate.

(e) Protective clothing must be constructed of material that will protect the skin from the heat of fire and burns from scalding steam. The outer surface must be water resistant.

§ 169.721 Storm sails and halyards (exposed and partially protected waters only).

(a) Unless clearly unsuitable, each vessel must have one storm trysail of appropriate size. It must be sheeted independently of the boom and must have neither headboard nor battens.

(b) Each vessel having headsails must also have one storm head sail of appropriate size and strength.

(c) Each vessel must have at least two halyards, each capable of hoisting a sail.

§ 169.723 Safety belts.

Each vessel must carry a harness type safety belt conforming to Offshore Racing Council (ORC) standards for each person on watch or required to work the vessel in heavy weather.

169.725 First aid kit.

Each vessel must carry an approved first aid kit, constructed and fitted in accordance with Subpart 160.041 of this chapter.

§ 169.726 Radar Reflector.

Each nonmetallic vessel less than 90 feet in length must exhibit a radar reflector of suitable size and design while underway.

Markings

§ 169.730 General alarm bell switch.

On vessels of 100 gross tons and over there must be a general alarm bell switch in the pilothouse, clearly and permanently identified by lettering on a metal plate or with a sign in red letters on a suitable background: "GENERAL ALARM"

§ 169.731 General alarm bells.

On vessels of 100 gross tons and over each general alarm bell must be identified by red lettering at least ½ inch high: "GENERAL ALARM—WHEN BELL RINGS GO TO YOUR STATION."

§ 169.732 Carbon dioxide alarm.

Each carbon dioxide alarm must be conspicuously identified: "WHEN ALARM SOUNDS—VACATE AT ONCE. CARBON DIOXIDE BEING RELEASED."

§ 169.733 Fire extinguishing branch lines.

Each branch line valve of every fire extinguishing system must be plainly and permanently marked indicating the spaces served.

§ 169.734 Fire extinguishing system controls.

Each control cabinet or space containing valves or manifolds for the various fire extinguishing systems must be distinctly marked in conspicuous red letters at least 2 inches high: "CARBON DIOXIDE FIRE EXTINGUISHING SYSTEM," or "HALON FIRE EXTINGUISHING SYSTEM," as appropriate.

§ 169.735 Fire hose stations.

Each fire hydrant must be identified in red letters and figures at least two inches high "FIRE STATION NO. 1," "2," "3," etc. Where the hose is not stowed in the open or readily seen behind glass, this identification must be placed so as to be readily seen from a distance.

§ 169.736 Self-contained breathing apparatus.

Each locker or space containing self-contained breathing apparatus must be marked "SELF-CONTAINED BREATHING APPARATUS."

§ 169.737 Hand portable fire extinguishers.

Each hand portable fire extinguisher must be marked with a number, and the location where it is stowed must be marked with a corresponding number. The marks must be at least ½ inch high. Where only one type and size of hand portable fire extinguisher is carried, the numbering may be omitted.

§ 169.738 Emergency lights.

Each emergency light must be marked with a letter "E" at least ½ inch high.

§ 169.739 Lifeboats.

(a) The name and port of the vessel marked on its stern as required by § 67.15 of this chapter must be plainly marked or painted on each side of the bow of each lifeboat in letters not less than 3 inches high.

(b) Each lifeboat must have its number plainly marked or painted on each side of the bow in figures not less than 3 inches high. The lifeboats on each side of the vessel must be numbered from forward aft, with the odd numbers on the starboard side.

(c) The cubical contents and number of persons allowed to be carried in each lifeboat must be plainly marked or painted on each side of the bow of the lifeboat in letters and numbers not less than 1½ inches high. In addition, the number of persons allowed must be plainly marked or painted on top of at least 2 thwarts in letters and numbers not less than 3 inches high.

(d) Each oar must be conspicuously marked with the vessel's name.

(e) Where mechanical disengaging apparatus is used, the control effecting the release of the lifeboat must be painted bright red and must have thereon in raised letters either the words—"DANGER-LEVER DROPS BOAT", or the words—"DANGER-LEVER RELEASES HOOKS".

(f) The top of thwarts, side benches and footings of lifeboats must be painted or otherwise colored international orange. The area in way of the red mechanical disengaging gear control lever, from the keel to the side bench, must be painted or otherwise colored white, to provide a contrasting background for the lever. This band of white should be approximately 12 inches wide depending on the internal arrangements of the lifeboat.

§ 169.740 Liferafts and lifefloats.

(a) Rigid type liferafts and lifefloats, together with their oars and paddles, must be conspicuously marked with the vessel's name and port of the vessel as marked on its stern as required by § 67.15 of this chapter.

(b) The number of persons allowed on each rigid type liferaft and lifefloat must be conspicuously marked or painted thereon in letters and numbers at least 1½ inches high.

(c) There must be stenciled in a conspicuous place in the immediate vicinity of each inflatable liferaft the following:

INFLATABLE LIFERAFT NO———

———PERSONS CAPACITY

These markings must not be placed on the inflatable liferaft containers.

§ 169.741 Personal flotation devices and ring life buoys.

Each personal flotation device and ring life buoy must be marked with the vessel's name.

§ 169.742 Firehose and axes.

Each fire hose and axe must be marked with the vessel's name.

§ 169.743 Portable magazine chests.

Portable magazine chests must be marked in letters at least 3 inches high: "PORTABLE MAGAZINE CHEST—FLAMMABLE—KEEP LIGHTS AND FIRE AWAY."

§ 169.744 Emergency position indicating radio beacon (EPIRB).

Each EPIRB must be marked with the vessel's name.

§ 169.745 Escape hatches and emergency exits.

Each escape hatch and other emergency exit must be marked on both sides using at least 1-inch letters: "EMERGENCY EXIT, KEEP CLEAR", unless the markings are deemed unnecessary by the Officer in Charge, Marine Inspection.

§ 169.746 Fuel shutoff valves.

Each remote fuel shutoff station must be marked in at least 1-inch letters indicating purpose of the valves and direction of operation.

§ 169.747 Watertight doors and hatches.

Each watertight door and watertight hatch must be marked on both sides in at least 1-inch letters: "WATERTIGHT DOOR—CLOSE IN EMERGENCY" or "WATERTIGHT HATCH—CLOSE IN EMERGENCY", unless the markings are deemed unnecessary by the Officer in Charge, Marine Inspection.

§ 169.750 Radio call sign.

Each vessel certificated for exposed or partially protected water service must have its radio call sign permanently displayed or readily available for display upon its deck or cabin top in letters at least 18 inches high.

Subpart 169.800—Operations

§ 169.805 Exhibition of licenses.

Licensed personnel on any vessel subject to this subchapter shall have their licenses in their possession and available for examination at all times when the vessel is being operated.

§ 169.807 Notice of casualty.

(a) The owner, agent, master, or person in charge of a vessel involved in a marine casualty shall give notice as soon as possible to the nearest Coast Guard Marine Safety or Marine Inspection Office, whenever the casualty involves any of the following:

(1) Each accidental grounding and each intentional grounding which also meets any of the other reporting criteria or creates a hazard to navigation, the environment or the safety of the vessel;

(2) Loss of main propulsion or primary steering or any associated component or control system which causes a reduction of the maneuvering capabilities of the vessel. Loss means that systems, components, sub-system or control systems do not perform the specified or required function;

(3) An occurrence materially and adversely affecting the vessel's seaworthiness or fitness for service or route, including but not limited to fire, flooding, or failure or damage to fixed fire extinguishing systems, lifesaving equipment, auxiliary power generating equipment, Coast Guard approved equipment or bilge pumping systems;

(4) Loss of life;

(5) Injury causing a person to remain incapacitated for a period in excess of 72 hours; or

(6) An occurrence resulting in damage to property in excess of $25,000.00. Damage includes the cost necessary to restore the property to the service condition which existed prior to the casualty but does not include the cost of salvage, gas freeing, drydocking, or demurrage.

(b) The notice must include the name and official number of the vessel involved, the name of the vessel's owner or agent, nature, location and circumstances of the casualty, nature and extent of injury to persons, and the damage to property.

(c) In addition to the notice required, the person in charge of the vessel shall

report in writing or in person, as soon as possible to the Officer in Charge, Marine Inspection at the port in which the casualty occurred or nearest the port of first arrival. Casualties must be reported on Form CG–2692.

(d) The owner, agent, master, or other person in charge of any vessel involved in a marine casualty shall retain for three years the voyage records of the vessel such as both rough and smooth deck and engineroom logs, navigation charts, navigation work books, compass deviation cards gyrocompass records, record of draft, aids to mariners, radiograms sent and received, the radio log, and crew, sailing school student, instructor, and guest lists. The owner agent, master, or other officer in charge, shall make these records available to a duly authorized Coast Guard officer or employee for examination upon request.

(e) Whenever a vessel collides or is connected with a collision with a buoy or other aid to navigation under the jurisdiction of the Coast Guard, the person in charge of the vessel shall report the accident to the nearest Officer in Charge, Marine Inspection. A report on Form CG–2692 is not required unless any of the results listed in paragraph (b) of this section occur.

§ 169.809 Charts and nautical publications.

As appropriate for the intended voyage, all vessels must carry adequate and up-to-date—

(a) Charts;
(b) Sailing directions;
(c) Coast pilots;
(d) Light lists;
(e) Notices to mariners;
(f) Tide tables; and
(g) Current tables.

§ 169.813 Station bills.

(a) A station bill (muster list) shall be prepared and signed by the master of the vessel. The master shall ensure that the bill is posted in conspicuous locations throughout the vessel, particularly in the living spaces, before the vessel sails.

(b) The station bill must set forth the special duties and duty station of each member of the ship's company for the various emergencies. The duties must, as far as possible, be comparable with the regular work of the individual. The duties must include at least the following and any other duties necessary for the proper handling of a particular emergency:

(1) The closing of airports, watertight doors, scuppers, sanitary and other discharges which lead through the vessel's hull below the margin line, etc., the stopping of fans and ventilating systems, and the operating of all safety equipment.

(2) The preparing and launching of lifeboats and liferafts.

(3) The extinguishing of fire.

(4) The mustering of guests, if carried, including the following:

(i) Warning the guests.

(ii) Seeing that they are dressed and have put on their personal flotation devices in a proper manner.

(iii) Assembling the guests and directing them to the appointed stations.

(iv) Keeping order in the passageways and stairways and generally controlling the movement of the guests.

(v) Seeing that a supply of blankets is taken to the lifeboats.

§ 169.815 Emergency signals.

(a) The station bill must set forth the various signals used for calling the ship's company to their stations and for giving instructions while at their stations.

(b) On vessels of 100 gross tons and over the following signals must be used.

(1) The first alarm signal must be a continuous blast of the vessel's whistle for a period of not less than 10 seconds supplemented by the continuous ringing of the general alarm bells for not less than 10 seconds.

(2) For dismissal from fire alarm stations, the general alarm must be sounded three times supplemented by three short blasts of the vessel's whistle.

(3) The signal for boat stations or boat drill must be a succession of more than six short blasts, followed by one long blast, of the vessel's whistle supplemented by a comparable signal on the general alarm bells.

(4) For dismissal from boat stations, three must be three short blasts of the whistle.

(c) Where whistle signals are used for handling the lifeboats, they must be as follows:

(1) To lower lifeboats, one short blast.

(2) To stop lowering the lifeboats, two short blasts.

§ 169.817 Master to instruct ship's company.

The master shall conduct drills and give instructions as necessary to insure that all hands are familiar with their duties as specified in the station bill.

§ 169.819 Manning of lifeboats and liferafts.

(a) The provisions of this section shall apply to all vessels equipped with lifeboats and/or liferafts.

(b) The master shall place a licensed deck officer, an able seaman, or a certificated lifeboatman in command of each lifeboat or liferaft. Each lifeboat or liferaft with a prescribed complement of 25 or more persons must have one additional certificated lifeboatman.

(c) The person in charge of each lifeboat or liferaft shall have a list of its assigned occupants, and shall see that the persons under his orders are acquainted with their duties.

§ 169.821 Patrol person.

(a) The master shall designate a member of the ship's company to be a roving patrol person, whenever the vessel is operational.

(b) The roving patrol person shall frequently visit all areas to ensure that safe conditions are being maintained.

§ 169.823 Openings.

(a) Except as provided in paragraph (b) of this section, all watertight doors in subdivision bulkheads, hatches, and openings in the hull must be kept closed during the navigation of the vessel.

(b) The master may permit hatches or other openings to be uncovered or opened for reasonable purposes such as ship's maintenance, when existing conditions warrant the action and the openings can readily be closed.

§ 169.824 Compliance with provisions of certificate of inspection.

The master or person in charge of the vessel shall see that all of the provisions of the certificate of inspection are strictly adhered to. Nothing in this subpart shall be construed as limiting the master or person in charge of the vessel, on his own responsibility, from diverting from the route prescribed in the certificate of inspection or taking such other steps as he deems necessary and prudent to assist vessels in distress or for other similar emergencies.

§ 169.825 Wearing of safety belts.

The master of each vessel shall ensure that each person wears an approved safety harness when aloft or working topside in heavy weather.

Tests, Drills, and Inspections

§ 169.826 Steering, communications and control.

The master shall test the vessel's steering gear, signaling whistle, engine controls, and communications equipment prior to getting underway.

§ 169.827 Hatches and other openings.

The master is responsible for seeing that all hatches, openings in the hull, and watertight doors are properly closed tight.

§ 169.829 Emergency lighting and power systems.

(a) Where fitted, the master shall have the emergency lighting and power systems operated and inspected at least once in each week that the vessel is navigated to ensure that the system is in proper operating condition.

(b) The master shall have the internal combustion engine driven emergency generators operated under load for at least 2 hours at least once in each month that the vessel is navigated.

(c) The master shall have the storage batteries for emergency lighting and power systems tested at least once in each 6-month period that the vessel is navigated to demonstrate the ability of the storage battery to supply the emergency loads for the specified period of time.

(d) The date of each test and the condition and performance of the apparatus must be noted in the official logbook.

§ 169.831 Emergency position indicating radio beacon (EPIRB).

The master shall ensure that—

(a) The EPIRB required in § 169.555 of this subchapter is tested monthly, using the integrated test circuit and output indicator, to determine that it is operative; and

(b) The EPIRB's battery is replaced after the EPIRB is used and before the marked expiration date.

§ 169.833 Fire and boat drills.

(a) When the vessel is operating, the master shall conduct a fire and boat drill each week. The scheduling of drills is at the discretion of the master except that at least one fire and boat drill must be held within 24 hours of leaving a port if more than 25 percent of the ship's company have been replaced at that port.

(b) The fire and boat drill must be conducted as if an actual emergency existed. All persons on board including guests shall report to their respective stations and be prepared to perform the duties specified in the station bill.

(1) Fire pumps must be started and a sufficient number of outlets used to ascertain that the system is in proper working order.

(2) All rescue and safety equipment must be brought from the emergency equipment lockers and the persons designated must demonstrate their ability to use the equipment.

(3) All watertight doors which are in use while the vessel is underway must be operated.

(4) Weather permitting, lifeboat covers and strongbacks must be removed, plugs or caps put in place, boat ladders secured in position, painters led forward and tended, and other life saving equipment prepared for use. The motor and hand-propelling gear of each lifeboat, where fitted, must be operated for at least 5 minutes.

(5) In port, every lifeboat must be swung out, if practicable. The unobstructed lifeboats must be lowered to the water and the ship's company must be exercised in the use of the oars or other means of propulsion. Although all lifeboats may not be used in a particular drill, care must be taken that all lifeboats are given occasional use to ascertain that all lowering equipment is in proper order and the crew properly trained. The master shall ensure that each lifeboat is lowered to the water at least once every 3 months.

(6) When the vessel in underway, and weather permitting, all lifeboats must be swung out to ascertain that the gear is in proper order.

(7) The person in charge of each lifeboat and liferaft shall have a list of its crew and shall ensure that the persons under his or her command are acquainted with their duties.

(8) Lifeboat equipment must be examined at least once a month to ensure that it is complete.

(9) The master shall ensure that all persons on board fully participate in these drills and that they have been instructed in the proper method of donning and adjusting the personal flotation devices and exposure suits used and informed of the stowage location of these devices.

(c) The master shall have an entry made in the vessel's official logbook relative to each fire and boat drill setting forth the date and hour, length of time of the drill, numbers on the lifeboats swung out and numbers on those lowered, the length of time that motor and hand-propelled lifeboats are operated, the number of lengths of hose used, together with a statement as to the condition of all fire and lifesaving equipment, watertight door mechanisms, valves, etc. An entry must also be made to report the monthly examination of the lifeboat equipment. If in any week the required fire and boat drills are not held or only partial drills are held, an entry must be made stating the circumstances and extend of the drills held.

(d) A copy of these requirements must be framed under glass or other transparent material and posted in a conspicuous place about the vessel.

§ 169.837 Lifeboats, liferafts, and lifefloats.

(a) The master or person in charge shall ensure that the lifeboats, rescue boats, liferafts, and lifefloats, are properly maintained at all times, and that all equipment for the vessel required by the regulations in this subchapter is provided, maintained, and replaced as indicated or when necessary and no less frequently than required by paragraph (b) of this section.

(b) The master shall ensure that:

(1) Each lifeboat has been stripped, cleaned and thoroughly overhauled at least once in each year.

(2) The fuel tanks of motor propelled lifeboats have been emptied and fuel changed once every twelve months.

(3) Each lifefloat has been cleaned and thorughly overhauled once every twelve months.

(4) Each inflatable liferaft has been serviced at an approved facility every 12 months or not later than the next vessel; inspection for certification if the time since the date of the last servicing does not exceed 15 months.

§ 169.839 Firefighting equipment.

(a) The master or person in charge shall ensure that the vessel's firefighting equipment is at all times ready for use and that all firefighting equipment required by the regulations in this subchapter is provided, maintained, and replaced as indicated.

(b) The master or person in charge shall have performed at least once every 12 months the tests and inspections of all hand portable fire extinguishers, semiportable fire extinguishing systems, and fixed fire extinguishing systems on board as described in § 169.247 of this subchapter. The master or person in charge shall keep records of the tests and inspections showing the dates when performed, the number and/or other identification of each unit tested and inspected, and the name(s) of the person(s) and/or company conducting the tests and inspections. These records must be made available to the marine inspectors upon request and must be kept for the period of validity of the vessel's current certificate of inspection. Conducting these tests and inspections does not relieve the master or person in charge of his responsibility to maintain this firefighting equipment in proper condition at all times.

§ 169.841 Logbook entries.

(a) Each vessel subject to the inspection provisions of this subchapter must have an official logbook.

(b) The master shall place all entries required by law or regulation in the logbook.

(c) A Coast Guard form "Official Logbook" may be utilized or the owner may utilize his own format for an official logbook. The logs must be kept available

for review by the Coast Guard for a period of one year after the date to which the records refer or for the period of validity of the vessel's current certificate of inspection, whichever is longer.

(d) All tests, drills, inspections and notifications required in this subchapter must be entered in the official logbook.

(e) Prior to getting underway the master shall enter in the logbook the name of each sailing school student, sailing school instructor, and guest onboard, and the fact that each person was notified of the applicable safety standards for sailing school vessels as required by § 169.857 of this chapter.

§ 169.847 Lookouts.

Nothing in this part exonerates any master or officer of the watch from the consequences of any neglect to keep a proper lookout.

§ 169.849 Posting placards containing instructions for launching and inflating inflatable liferafts.

Every vessel equipped with inflatable liferafts must have posted in conspicuous places readily accessible to the ship's company and guests approved placards containing instructions for launching and inflating inflatable liferafts. The number and location of such placards for a particular vessel shall be determined by the Officer in Charge, Marine Inspection.

§ 169.853 Display of plans.

(a) Each vessel of 100 gross tons and over must have permanently exhibited for the guidance of the master, general arrangement plans for each deck showing the fire control stations, the various sections enclosed by fire resisting bulkheads, the sections enclosed by fire retarding bulkheads, together with the particulars of the fire alarms, detecting systems, fire extinguishing appliances, means of access to different compartments, ventilation systems and the position of dampers and remote stops.

(b) Plans must clearly show for each deck the boundaries of the watertight compartments, the openings therein with the means of closure and the position of any controls, and the arrangements for the correction of any list due to flooding.

§ 169.855 Pre-underway training.

Prior to getting underway the master shall ensure that each sailing school student and sailing school instructor, who has not previously been instructed, is instructed in the handling of sails, emergency procedures, nautical terms, location and use of lifesaving and firefighting equipment, and the general layout of the vessel.

§ 169.857 Disclosure of safety standards.

(a) This section applies to all sailing school vessels and all promotional literature or advertisements offering passage or soliciting sailing school students or instructors for voyages on sailing school vessels.

(b) Each item of promotional literature or advertisement that offers passage or solicits students or instructors of voyages onboard a sailing school vessel must contain the following information:

(1) The name of the vessel;

(2) The country of registry;

(3) A statement detailing the role and responsibility of a sailing school student or instructor; and

(4) A statement that the vessel is inspected and certificated as a sailing school vessel and is not required to meet the same safety standards required of a passenger vessel on a comparable route.

(c) Before getting underway the master shall ensure that each sailing school student, sailing school instructor, and guest, who has not previously been notified, is notified of the specialized nature of sailing school vessels and that the applicable safety requirements for these vessels are not the same as those applied to passenger vessels.

PART 170—STABILITY REQUIREMENTS FOR ALL INSPECTED VESSELS

2. The authority citation for Part 170 is revised to read as follows:

Authority: 43 U.S.C. 1333(d); 46 U.S.C. 3306 and 3703; 46 App. U.S.C. 86, 88a; 50 U.S.C. 198; E.O. 12234, 45 FR 58801; 49 CFR 1.46(b), (n)(6), (z).

3. In § 170.055, by adding new paragraphs (h)(6), (s) and (t) to read as follows:

§ 170.055 Definitions concerning a vessel.

* * * * *

(h) * * *

(6) "Mean length" is the average of the length between perpendiculars (LBP) and the length on deck (LOD).

* * * * *

(s) "Existing sailing school vessel" means a sailing vessel whose keel was laid prior to (publication date), which has an application for initial inspection for certification as a sailing school vessel on file with the Coast Guard prior to (one year from publication date), and whose initial inspection for certification is completed prior to (two years from publication date).

(t) "New sailing school vessel" means a sailing school vessel which is not an existing sailing school vessel.

4. In § 170.070 by adding a new paragraph (b)(5) to read as follows:

§ 170.070 Applicability.

* * * * *

(b) * * *

(5) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

5. In § 170.105, by adding a new paragraph (b)(5) to read as follows:

§ 170.105 Applicability.

* * * * *

(b)* * *

(5) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

6. In § 170.160, by adding a new paragraph (b)(4) to read as follows:

§ 170.160 Specific Applicability.

* * * * *

(b) * * *

(4) A sailing school vessel that is an open boat that complies with the requirements in § 173.063(e) of this subchapter.

* * * * *

7. In § 170.245, by revising introductory text to paragraph (b) to read as follows:

§ 170.245 Foam flotation material.

* * * * *

(b) If foam is used to comply with § 171.070(d), § 171.095(c), or § 173.063(e) of this subchapter, the following applies:

* * * * *

PART 171—SPECIAL RULES PERTAINING TO VESSELS CARRYING PASSENGERS

8. The authority citation for Part 171 is revised to read as follows:

Authority: 46 U.S.C. 1333(d); 46 U.S.C. 3306 and 3703; 46 App. U.S.C. 86, 88a; 50 U.S.C. 198; E.O. 12234, 45 FR 58801; 49 CFR 1.46(b), (n)(6), (z).

9. In § 171.001, by revising paragraph (b) to read as follows:

§ 171.001 Applicability.

* * * * *

(b) Specific sections of this part also apply to nautical school ships, sailing school vessels, oceanographic vessels, and nuclear vessels. The applicable sections are listed in Subparts C and D of Part 173 and Subpart D of Part 174 of this subchapter.

10. In § 171.035, by adding paragraph (a)(5) to read as follows:

§ 171.035 Intact stability requirements for a sailing vessel or an auxiliary sailing vessel.

(a) * * *

(5) A sailing school vessel that carries a combined total of six or more sailing school students or instructors.

* * * * *

§ 171.055 [Amended]

11. In 171.055 by changing the definition for area in paragraph (d)(2) to read as follows:

A = the projected lateral area or silhouette in square feet (meters) of the portion of the vessel above the waterline computed with all sail set and trimmed flat. Sail overlap areas need not be included except parachute type spinnakers which are to be added regardless of overlap.

12. By revising introductory text in §§ 171.057 (a) and (b) to read as follows:

§ 171.057 Intact stability requirements for a sailing catamaran.

(a) A sailing vessel that operates on protected waters must be designed to satisfy the following equation:

* * * * *

(b) A sailing vessel that operates on partially protected or exposed waters must be designed to satisfy the following equation:

* * * * *

PART 173—SPECIAL RULES PERTAINING TO VESSEL USE

13. The authority citation for Part 173 is revised to read as follows:

Authority: 46 U.S.C. 1333(d); 46 U.S.C. 3306 and 3703; 46 App. U.S.C. 86, 88a; 50 U.S.C. 198; E.O. 12234, 45 FR 58801; 49 CFR 1.46(b), (n)(6), (z).

§ 173.055 [Redesignated as § 173.051]

14. By redesignating § 173.055 *Public nautical school ships* as § 173.051.

§ 173.060 [Redesignated as § 173.052]

15. By redesignating § 173.060 *Civilian nautical school ships* as § 173.052.

16. By adding § 173.053–§ 173.063 to read as follows:

§ 173.053 Sailing school vessels.

(a) In addition to the requirements in §§ 173.054 through 173.063, each sailing school vessel must comply with the provisions of Subpart A of Part 171 of this subchapter.

(b) In addition to regular passengers, for the purpose of complying with §§ 171.070 through 171.073 and § 171.080, the following will also be counted as passengers:

(1) Sailing school students

(2) Sailing school instructors

(3) Guests

§ 173.054 Watertight subdivision and damage stability standards for new sailing school vessels.

(a) Each new sailing school vessel which has a mean length greater than 75 feet (22.8 meters) *or* which carries more than 30 persons must comply with—

(1) Section 171.040(a)(1);

(2) Sections 171.070 through 171.073; and

(3) Section 171.080 for Type II subdivision and damage stability.

(b) Each new sailing school vessel which has a mean length of 75 feet (22.8 meters) or less and carries more than 30 persons must comply with either—

(1) Section 171.040(a)(1) and 171.043; or

(2) Section 171.040(a)(1), §§ 171.070 through 171.073, and § 171.080.

(c) Each new sailing school vessel which does not carry more than 30 persons must have a collision bulkhead unless it has a mean length less than 40 feet (12.2 meters) and is certificated for protected or partially protected waters service only.

§ 173.055 Watertight subdivision and damage stability standards for existing sailing school vessels.

(a) Except as provided in paragraph (c) of this section, an existing sailing school vessel which carries more than 49 persons must be fitted with a collision bulkhead and any additional bulkheads necessary to provide one compartment subdivision.

(b) Except as provided in paragraph (c) of this section, an existing sailing school vessel which has a mean length greater than 65 feet (19.8 meters), must be fitted with additional transverse watertight bulkheads necessary to provide one compartment subdivision, when the following Subdivision Numerals are exceeded:

(1) For vessels to be operated on Exposed Waters:

$$L \times N > 4000$$

(2) For vessels to be operated on Partially Protected Waters:

$$L \times N > 4500$$

(3) For vessels to be operated on Protected Waters:

$$L \times N > 5000$$

where L is the mean length and N is the number of persons on board

(c) An existing sailing school vessel which is required to meet a one compartment subdivision standard and has a mean length of 90 feet (27.4 meters) or less may, instead of one compartment subdivision, be fitted with a collision bulkhead and sufficient air tankage or other internal buoyancy to maintain the fully-loaded vessel afloat with positive stability in the flooded condition.

(d) Except as provided in paragraph (e) of this section, an existing sailing school vessel which has a mean length greater than 65 feet (19.8 meters) must be fitted with a collision bulkhead.

(e) On an existing sailing school vessel, operating on protected waters, which has a mean length of 90 feet (27.4 meters) or less with no other requirement for subdivision, the collision bulkhead may be omitted.

(f) An existing sailing school vessel, operating on exposed waters, which has a mean length of 65 feet (19.8 meters) or less and is carrying more than 15 persons, must be fitted with a collision bulkhead.

§ 173.056 Collision and other watertight bulkheads.

(a) Collision bulkheads required by this section must comply with the requirements in § 171.085 of this subchapter.

(b) Each sailing school vessel required to meet paragraph (a) of § 173.054 must comply with the machinery space bulkhead requirements in § 171.095 of this subchapter.

§ 173.057 Permitted locations for Class 1 watertight doors.

(a) Class I doors are permitted in any location on a sailing school vessel which has a mean length of 125 feet (38.1 meters) or less.

(b) Class I doors fitted in accordance with § 170.270 of this subchapter shall additionally be marked in two-inch letters "RECLOSE AFTER USE", and be provided with a remote position indicator at the main navigating station of the vessel.

§ 173.058 Double bottom requirements.

Each new sailing school vessel which has a mean length greater than 165 feet (50.3 meters) and is certificated for exposed water service must comply with the double bottom requirements in §§ 171.105 through 171.109, inclusive, of this subchapter.

§ 173.059 Penetrations and openings in watertight bulkheads.

Penetrations and openings in watertight bulkheads must comply with the requirements in Subpart E of Part 171 of this subchapter.

§ 173.060 Openings in the side of a vessel below the bulkhead or weather deck.

(a) Openings in the side of a vessel below the bulkhead or weather deck

must comply with the requirements in Subpart F of Part 171 of this subchapter.

(b) In addition to the requirements in paragraph (a) of this section, each sailing school vessel which has a mean length greater than 90 feet must comply with the requirements in § 56.50–95 of Subchapter F of this chapter.

§ 173.061 Watertight integrity above the margin line.

The watertight integrity of each sailing school vessel above the margin line must comply with the requirements in Subpart G of Part 171 of this subchapter.

§ 173.062 Drainage of weather deck.

The weather deck of each sailing school vessel must be provided with drainage in accordance with the requirements in Subpart H of Part 171 of this subchapter.

§ 173.063 Intact stability requirements.

(a) Except as provided in this section, each sailing school vessel must meet the intact stability requirements in § 171.035 of this subchapter.

(b) In applying the requirements in § 170.170 and § 171.050 of this subchapter, the value of "T" is equal to the angle of heel at which the deck edge is immersed or ⅓ of the downflooding angle, whichever is less.

(c) In applying the requirements of § 171.055(d) (1) and (2) of this subchapter—

(1) The value "X" is equal to 0.6 long tons/square foot (9.8 metric tons/square meter).

(2) For a vessel in service on protected or partially protected waters, values "Y" and "Z" are determined from graphs 173.063 (a) and (b) and multiplied by the multiplier in graph 173.063(e).

(3) For a vessel in service on exposed waters, "Y" and "Z" are determined from graphs 173.063 (c) and (d) and multiplied by the multiplier from graph 173.063(e).

(4) To convert required numerals to units of "metric tons/square meter," multiply by 10.94.

(d) Each vessel of the open boat type that is required to comply with the requirements in § 171.035 (d) through (h) of this subchapter, may instead comply with the requirements in paragraph (e) of this section.

(e) In lieu of complying with the requirements of paragraph (b) of this section, an open boat may be provided with sufficient air tankage or other internal buoyancy to maintain the vessel afloat when the vessel is completely flooded or capsized. If foam is used to comply with this paragraph, it must be installed in accordance with the requirements in § 170.245 of this subchapter.

(f) A sailing school catamaran must meet the intact stability requirements in § 171.057.

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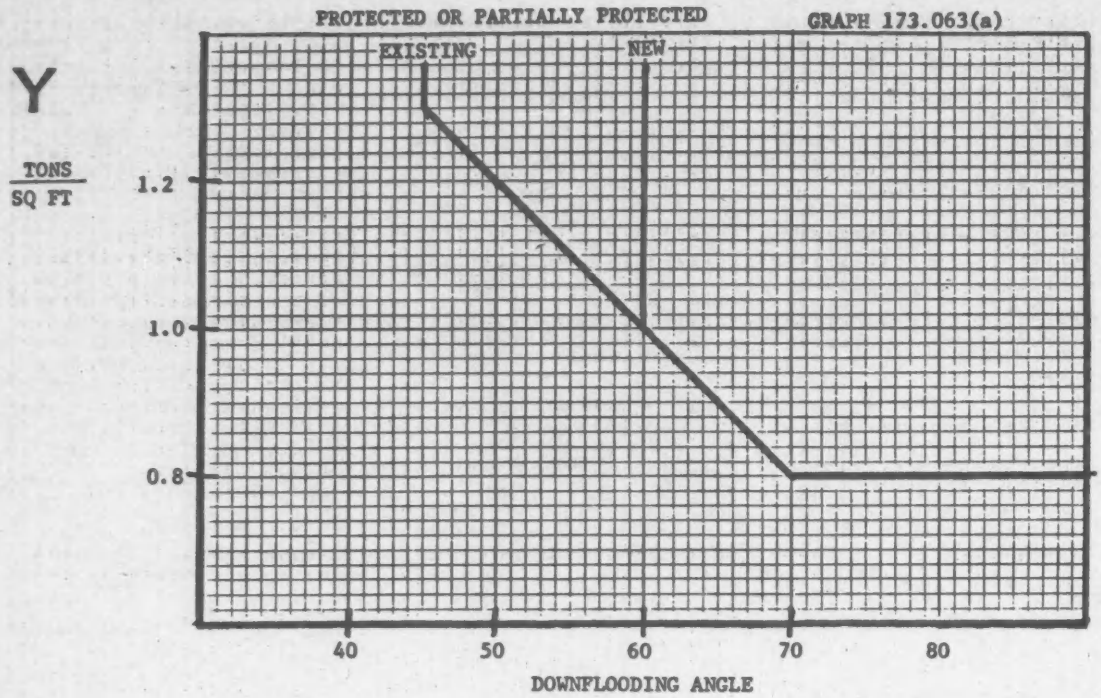
PROTECTED OR PARTIALLY PROTECTED
GRAPH 173.063(a)
EXISTING
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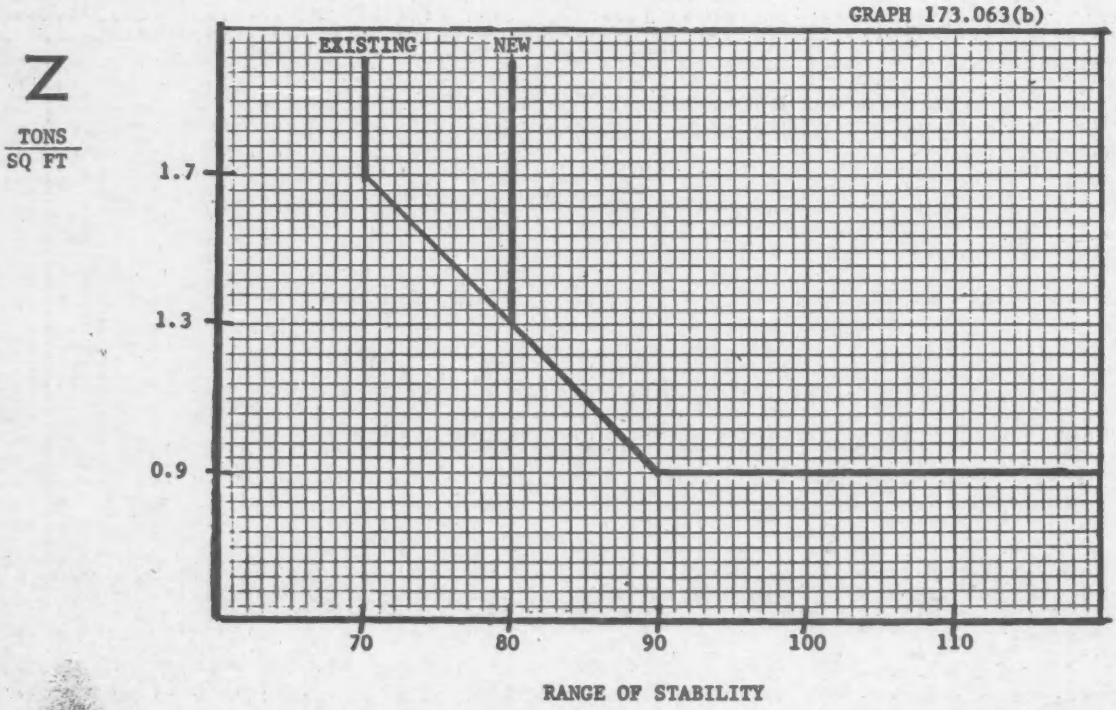
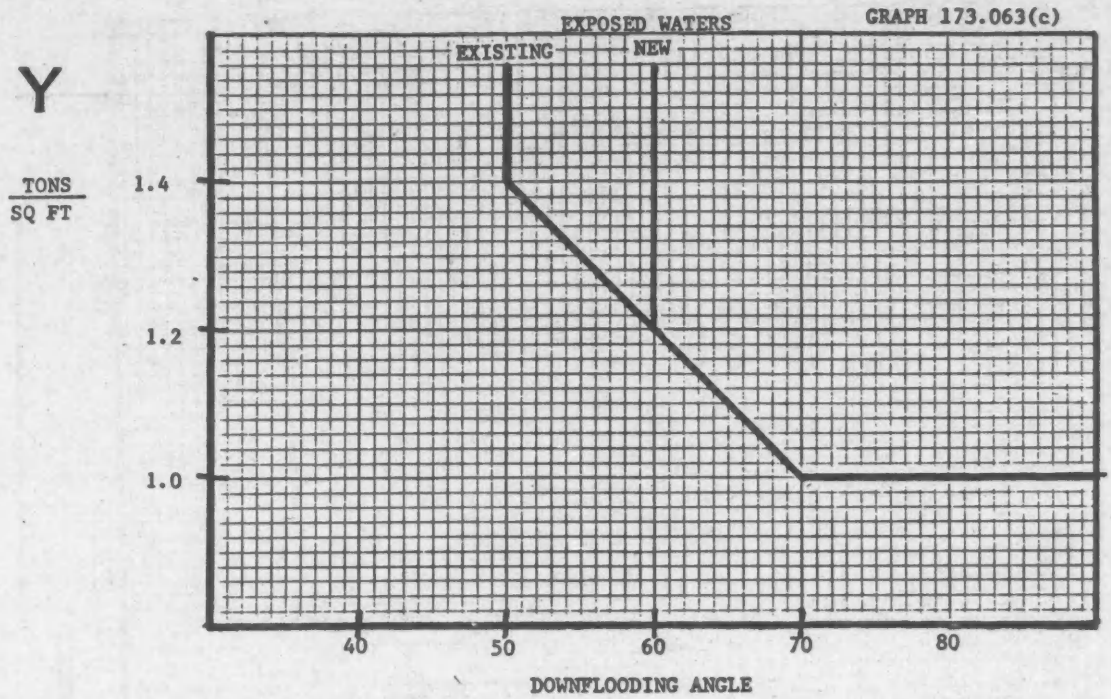
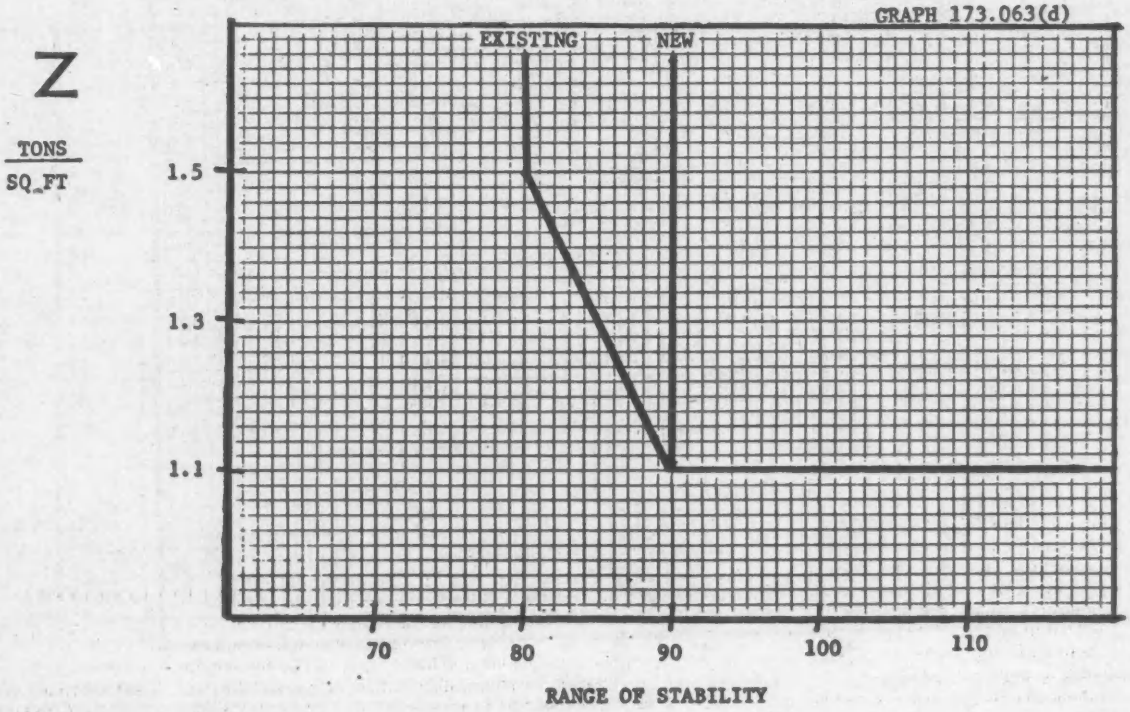
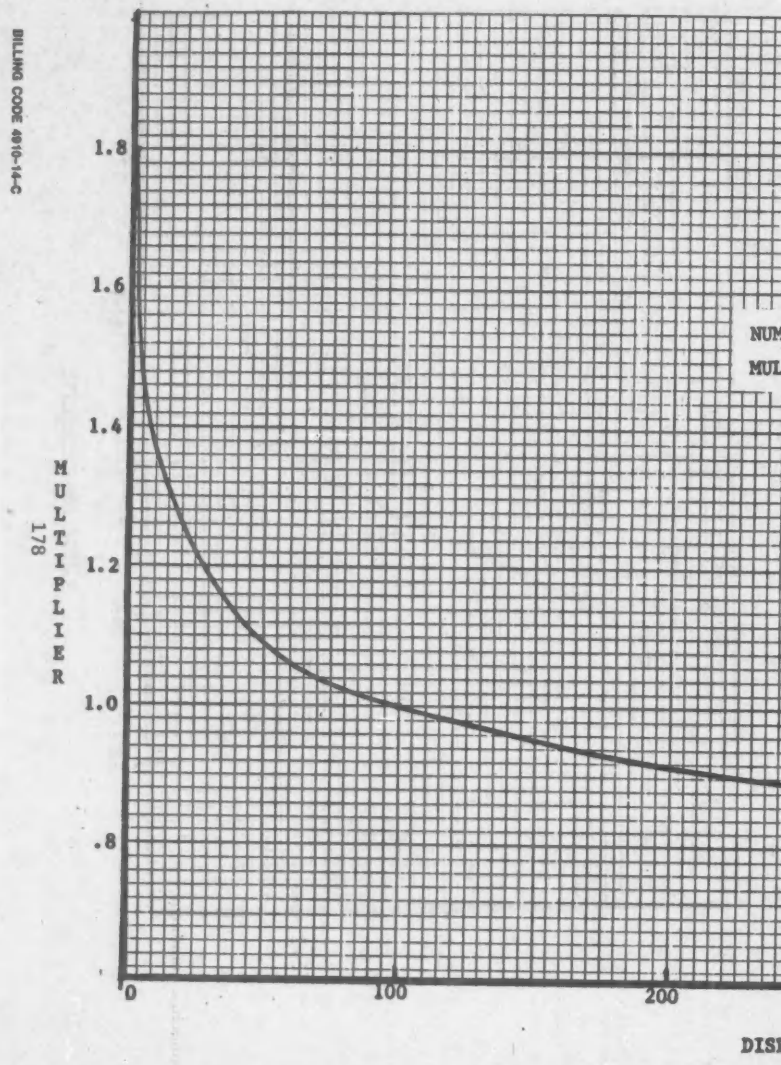
Y
TONS
SQ FT
1.2
1.0
0.8
40
50
60
70
80
DOWNFLOODING ANGLE


GRAPH 173.063(b)
EXISTING
NEW
Z
TONS
SQ FT
1.7
1.3
0.9
70
80
90
100
110
RANGE OF STABILITY

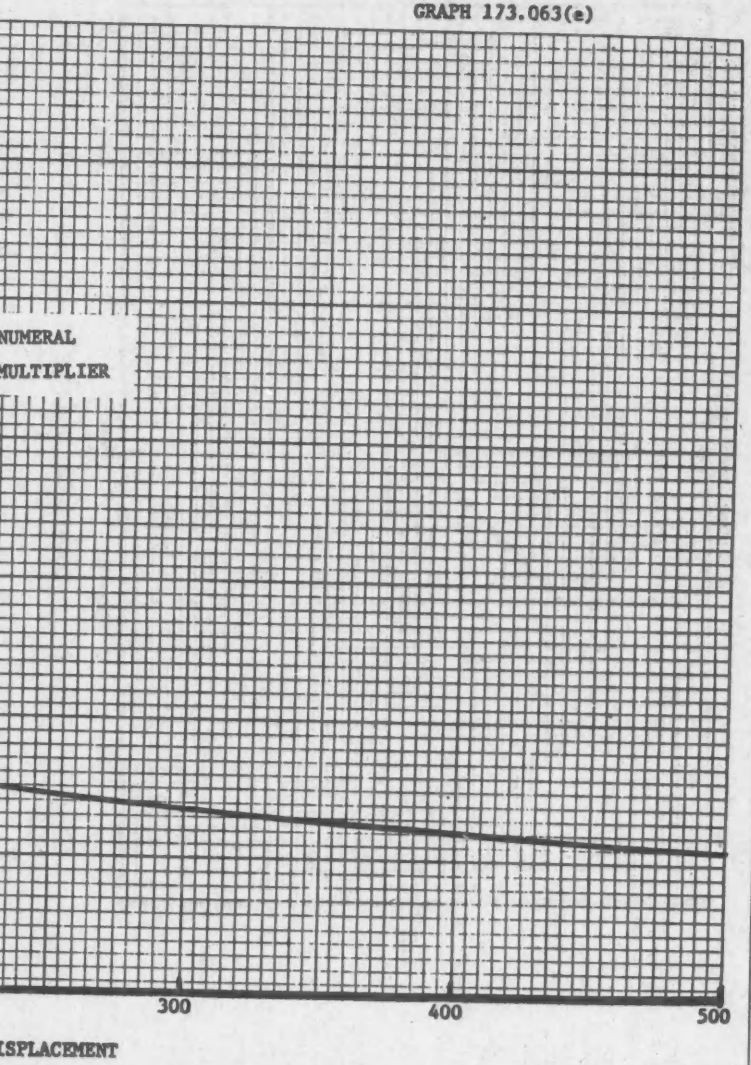






BILLING CODE 4910-14-C

GRAPH 173.063(e)



Dated: December 31, 1985.

J.W. Kime,

Commodore, U.S. Coast Guard, Chief, Office of Merchant Marine Safety.

[FR Doc. 86-176 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-14-M

FEDERAL COMMUNICATIONS COMMISSION

47 CFR Part 68

[CC Docket No. 81-216; RM-2845; et al; CC Docket No. 84-490; RM-4458; FCC 85-580]

Amendment of the Rules Concerning Connection of Telephone Equipment, Systems and Protective Apparatus to the Telephone Network; Etc.

AGENCY: Federal Communications Commission.

ACTION: Final rules.

SUMMARY: In response to several petitions for rulemaking, the Commission has made several technical modifications to Part 68 of the rules, which sets forth the technical standards for registration and interconnection to the telephone network of customer provided terminal equipment. Specifically, the FCC has: reduced the dc on-hook resistance specified in § 68.312(b)(1)(i) from 10 megohms to 5 megohms; amended § 68.200(j)(1) and § 68.502 to permit registration of terminal equipment with "make busy" leads, used in multiple answering machines to facilitate transfer of incoming calls to successive lines; eliminated requirements for registration of certain types of cords, passive adapters and cross-connect panels from § 68.200(h); amended § 68.300 to require registered terminal equipment labeling to show its country of origin; amended § 68.200(j) to make PR/PC leads attached to terminal equipment subject to Part 68 standards for hazardous voltages, signal power limitations, minimum call durations requirements and leakage current limitations; approved a new RJ38X jack to allow alarm dialers to alert the user when the alarm dialer has been disconnected from the network; amended § 68.200(j) to permit registration of specialty adapters to be used primarily to connect programmable data modems to key telephone systems and PBXs without use of special jacks; created Part 68 interconnection standards to permit direct connection of terminal equipment to Local Area Data Channels, specified additional loop simulator circuits and off-premises line simulator circuits in §68.3; amended section 68.318 to require as a condition of registration that automatic dialing equipment terminate calling to a particular number after 15 successive attempts.

EFFECTIVE DATE: February 10, 1986.

ADDRESS: Federal Communications Commission, Washington, DC 20554.

FOR FURTHER INFORMATION CONTACT: Patrick Donovan, Federal Communications Commission, Washington, DC 20554 (202)-634-1832.

SUPPLEMENTARY INFORMATION:

List of Subjects in 47 CFR Part 68

Administrative practice and procedures, Communications common carriers, Communications equipment, Reporting and recordkeeping requirements, Telephone.

Third Report and Order

In the matter of petitions seeking amendment of Part 68 of the Commission's Rules Concerning Connection of Telephone Equipment, Systems and Protective Apparatus to the Telephone Network; Notice of Inquiry into Standards for Inclusion of One and Two-Line Business and Residential Premises Wiring and Party Line Service in Part 68 of the Comission's Rules; CC Docket No. 81-216, RM-2845, RM-2930, RM-3195, RM-3206, RM-3227, RM-3283, RM-3316, RM-3329, RM-3348, RM-3501, RM-3526, RM-3530, RM-4054; and petition to amend Part 68 of the Commission's Rules to Permit Registration of Terminal Equipment for Connection to Voiceband Private Line Channels that Utilize Loop Start, Ringdown or Inband Signaling and Voiceband Metallic Private Line Channels; CC Docket No. 84-490, Rm-4458.

Adopted October 30, 1985.

Released November 4, 1985.

By the Commission.

Introduction

1. The above-captioned petitions for rulemaking request diverse modifications, additions and deletions to Part 68 of the Commission's rules, 47 C.F.R. Part 68.[1] For the most part, these petitions raise technical engineering issues concerning interconnection of terminal equipment to the nationwide telephone network. In *Notice of Proposed Rulemaking*, CC Docket No. 84-490, FCC 84-230, released May 23, 1984, the Commission requested comment on issues raised in RM-4458 concerning amendments to Part 68 applicable to private line channels using loop start, ringdown or inband signaling. In *Notice of Proposed Rulemaking and Notice of Inquiry* in CC Docket No. 81-216 (*First Notice*), 85 F.C.C. 2d 868 (1981), the Commission requested comment on issues raised in the other petitions for rulemaking captioned above including *inter alia*, a proposed reduction in dc on-hook impedance limitations, proposed installation requirements for cross-connect panels, interconnection standards for terminal equipment connected to local area data chanels, and proposed country of origin labeling for registered terminal equipment.[2] Comment was also sought in the *First Notice* on various amendments to Part 68 proposed by the Commission *sua sponte*. The Commission's proposals concerned registration of terminal equipment power supplies, elimination of the abbreviated registration requirements for extension cords, electrically transparent adapters and connectorized panels, registration of test equipment and consistency with equipment radio emission standards under Part 15.[3] In this *Third Report and Order* we evaluate the parties' comments in response to these notices of proposed rulemaking and make final disposition of the issues raised which were not resolved in earlier stages of this proceeding. We will discuss the various issues raised *seriatum*.

Contentions and Discussion

2. *RM-2845*. In this petition, CCL proposes that the dc on-hook resistance requirement of § 68.312(b)1)(i), On-hook

[1] Part 68 provides the technical and procedural standards under which telephone terminal equipment and systems may be directly connected to the nationwide network. For a complete background to Part 68, see Memorandum Opinion and Order (Fourth Report) in Docket Nos. 19528, 20774 and 21182, 70 F.C.C. 2d 1800 (1979).

[2] Comments in response to the NPRM in CC Docket 81-216 were filed by: American Telephone & Telegraph Co. (AT&T), Communications Certification Laboratory (CCL), Communications Workers of America (CWA), Control Q, Inc. (Control Q), Crest Industries (Crest), Datapoint Corp. (Datapoint), Dictaphone Corp. (Dictaphone), Dynascan Corp. (Dynascan), Electronics Industries Association (EIA), Electra Company (Electra), GTE Service Corp. (GTE), Independent Data Communications Manfacturers Association (IDCMA), International Business Machines Corp. (IBM), Lanier Business Products, Inc. (Lanier), Mura Corp. (Mura), J.P. Neil (Neil), National Telephone Cooperative Association (NTCA), North American Telephone Association (NATA), Northern Telecom, Inc. (NTI), Rolm Corp. (Rolm), Southern Pacific Communications Co. (SPCC), Tandy Corp. (Tandy), Technidyne Corp. (Technidyne), Tone Commander Systems (Tone Commander), Utilities Telecommunications Council (UTC) and Wilcom Products, Inc. (Wilcom). Comments and/or Reply Comments were received for CC Docket No. 84-490 from ATT-Information Systems (ATT-IS), Bell Operating Companies (BOCs), Department of Defense (DoD), GTE, IDCMA, and Rockwell International (Rockwell).

[3] In previous decisions in CC Docket 81-216 the Comission has established rules for customer-installed non-system premises wiring, *First Report and Order*, FCC 84-182, 49 F.R. 21719, May 23, 1984, *reconsideration pending*, and adopted Part 68 interconnection standards for network channel terminating equipment employed in connection with digital transmission services, *Second Report and Oder*, FCC 84-522, released November 26, 1984, *reconsideration pending*.

Impedance Limitations, be lowered from 10 to 1 megohm. CCL claims that the current standard is more strict than necessary in order to prevent any identifiable network harm, and that reductions in the current standard would reduce terminal equipment manufacturing costs. Datapoint Corporation supports a reduction to 1 megohm. In response to the CCL proposal, AT&T contends that reduction in the requirement to a value lower than 5 megohms could have serious effects on telephone company maintenance programs. (Para. 3, Reply Comments). AT&T opposes any reduction below this level. GTE, IDCMA and Northern Telecom support a reduction to 5 megohms. Control Q and Crest Industries both proposed a reduction to 0.5 megohm.

3. The dc on-hook resistance limitations are based on necessary telephone company maintenance and testing operations without which serious network service quality degradation could occur.[4] None of the parties suggests that the current 10 megohm level is essential to these telephone company maintenance and testing operations, but AT&T has argued that any level below five megohms could result in inaccurate testing programs. On the other hand, neither CCL nor the other parties in favor of a reduction to one megohm or lower have submitted any evidence that adequate telephone company testing could be maintained below 5 megohms. Accordingly, we will amend § 68.312(b)(1)(i) to provide for a 5 megohm on-hook impedance level. This will ameliorate equipment manufacturing costs in this area, while preserving the integrity of telephone company maintenance operations.

4. *RM-3195.* Dictaphone proposes amendment of § 68.200, Application for Equipment Registration, to permit connection of terminal equipment with "make-busy" leads (MB/MB1). Such leads allow telephone lines to be "made busy" or "busied out" in order to facilitate customers' maintenance and load balancing functions on terminal equipment. A typical example involves the use of multiple answering machines where, as each machine on a rotary hunt reaches its capacity, the line associated with that machine "busies out" and the machine connected to the next line accepts further incoming calls.

5. GTE suggests that because many devices create the artificial busy condition by contact closure on the MB/MB1 leads, compliance with the 40 kilohm requirement contained in § 68.312(b)(1)(iv), On-hook Impedance Limitations, could be accomplished by equipment redesign. For its part, AT&T proposes a new subsection (j)(1) to § 68.200 to redefine the MB/MB1 leads as network connections subject only to Section 68.304, Leakage Current Limitations, and § 68.306, Hazardous Voltage Limitations, when tested in an isolated tip and ring configuration; but subject to all Part 68 requirements when bridged to tip and ring. Consequently, AT&T states that redesign of terminal equipment that employs contact closure should not be required in order to comply with the proposed rules. Specifically, AT&T proposes a new jack configuration, denominated RJ18C, for single-line make-busy service, which would be wired by the telephone company to assure satisfactory operation with the serving central office. (Similarly, GTE proposes the type RJ2MB jack to designate the required wiring configuration of a 50-pin jack for multiline applications.)

6. Central office lines may be "busied out" in a variety of ways depending in large part on the switching equipment used in the telephone company's central office. For example, a No. 5 crossbar central office requires special sensing circuitry and the use of a separate wire pair to provide the make-busy feature. Telephone company central office switches of this type may interpret direct tip-ring shorts designed to achieve the make-busy state as circuit troubles. We view this as a potential harm to the network. Use of the jacks proposed by AT&T and GTE would provide a solution to this kind of problem. Accordingly, we will amend the rules to permit registration of terminal devices with make-busy leads, and we will adopt the RJ18C and FR2MB jack configurations. *See* §§ 68.3(b), 68.200(j)(1) and 68.502 in the attached Appendix.

7. *RM-3206.* IEEE seeks to amend § 68.310 of the rules to establish IEEE Standard 455-1976 Test Procedure as the exclusive standard for longitudinal balance measurements. Section 68.310 sets out the minimum longitudinal balance coefficients permitted under all reasonable conditions of application of earth ground to the equipment under test. IEEE proposes that a different performance test methodology be used, *viz.*, the L-M (longitudinal-metallic) standard, instead of the present M-L (metallic-longitudinal) standard. Comments generally support the IEEE standard as an alternative test, but no parties supported it as the exclusive test.

8. The Commission has already exhaustively addressed the appropriate method for longitudinal balance measurements. In the *First Report and Order in Docket No.* 19528, 56 FCC 2d 593 (1975), L-M testing method was adopted. In *Memorandum Opinion and Order* in Docket No. 19528, 58 FCC 2d 716 (1975), L-M was converted to M-L balance, and the Commission carefully provided for alternative means of longitudinal balance testing. Thus, the present § 68.310(a) provides that "other means may be used to determine the balance coefficient herein, provided that adequate documentation of the appropriateness, precision and accuracy of the alternative procedure is provided by the applicant." in *Memorandum Opinion and Order* in Docket No. 19528, 64 FCC 2d 1058 (1977), the Commission rejected a petition seeking return to L-M balance. Similarly, in the present case, we are not persuaded to mandate the IEEE standard as the exclusive longitudinal balance test. First, IEEE has not shown that the L-M test will provide accurate results when applied to active devices such as loop extenders, VF repeaters, carrier channels, digital switches, etc., although it may be satisfactory for use with passive devices. Therefore, the IEEE proposal may not be acceptable as an exclusive standard since it may not be applicable to these types of devices. Moreover, as indicated, the Commission has already provided that alternative testing procedures may be employed. Part 68 applicants are free to employ the IEEE standard subject to the standards of § 68.310. Accordingly, we will deny the IEEE petition.

9. *RM-3227.* This petition for rulemaking deals with the treatment in Part 68 of cross-connect panels, cords

[4] The current § 68.312(b)(1)(i) provides that for all registered terminal equipment and protective circuitry the dc resistance between tip and ring conductors, and between each of the tip and ring conductors and earth ground, shall be greater than 10 megohms for dc test voltages up to and including 100 volts. The purpose of this requirement is to maintain the telephone companies' preventive and reactive loop maintenance programs, *viz.* the cable pressure monitoring (CPM) and automatic line insulation testing (ALIT) programs. CPM assures quick recognition of faults in cables that are pressurized with dry air to prevent entry of noise-producing moisture. The ALIT procedure is used by telephone companies to monitor the condition of insulation of cables serving residential and business customers. The equipment used for this purpose electronically scans a group of lines and makes resistance measurements between tip and ground and ring and ground while customers' equipment is in the on-hook state to determine whether excessive leakage exists. In addition to detecting faults in cable pairs, terminals and sheaths, ALIT reveals insulation resistance breakdowns between conductors of adjoining cable pairs.

and passive adapters.[5] Under § 68.200(h)(1) of the rule cross-connect panels, cords and passive adapters are subject to abbreviated registration procedures. In its petition, CCL proposed that we create in Part 68 new registration designations for key systems and PBXs using cross-connect panels. These designations would inform the telephone company that extra-system wiring had been installed. CCL also requested that the installation of cross-connect fields be made subject to the institutional protection for premises wiring contained in § 68.215 of the rules. Section 68.215 imposes training requirements for installation of premises wiring. In the *First Notice* the Commission offered this proposal for comment and sought comment on the possibility of eliminating from Part 68 the abbreviated registration requirements for these devices.

10. Comments support the Commission's proposal to not require registration of cross-connect panels, cords and passive adapters. However, commenters suggest that installation of cross-connect panels by unqualified persons does create a potential for harm. Thus, AT&T states that it has no objection to connection of unregistered cross-connect panels if installation instructions are included in the registration application of associated terminal equipment and given to the customer. CCL states that if these devices are unregistered it would be acceptable to create a notification requirement to the telephone company when cross-connect panels are installed in lieu of its proposed registration classifications.

11. At the present time, large numbers of PBXs and other customer-owned devices have been connected to the network through cords, passive adapters and cross-connect panels. We have received no complaints concerning harm caused by the direct connection of these devices. Moreover, these devices have been manufactured and sold without registration (since it was unclear whether cross connect devices required registration) and without objection from either telephone companies or customers. We believe, therefore, that the registration requirements in the rules for some of these devices impose unnecessary regulatory requirements. Accordingly, we will eliminate them.

[5] Cross-connect panels are frequently installed between fully protected key telephone systems and PBXs and the telephone network interface. They provide a means of making various wire connections between the registered terminal device and the network interface. They are electrically transparent and passive in that they neither generate nor use any electrical energy.

We concur in the parties' concerns that improper installation of cross-connect devices carries the potential for network harm. However, any improper installation resulting in network harm is also likely to cause malfunctioning of the customer's terminal equipment. In other words, any improper installation of cross-connect panels will be rapidly discovered by the customer and corrective measures taken. Moreover, we believe that equipment manufacturers will supply complete installation instructions to the customer in order to enhance the marketability of their product. Accordingly, we do not believe that it will be necessary to adopt in Part 68 formal training or customer instructional requirements in order to protect against network harm caused by faulty installation of cross-connect panels. Therefore, we will not adopt the parties' requests on training and instructional requirements.

12. *RM–3283.* In this petition for rulemaking, CCL requests that PR/PC leads be defined as control leads subject to leakage current limitation standards set forth in § 68.304 of the Rules. (PR/PC leads are used to connect customer data equipment to the programming resistor in some programmable data jacks for the purpose of setting the output signal of the data equipment.)

13. Commenting parties favored this proposal. However, AT&T urges that additional tests be applied to PR/PC leads on data equipment for all permitted settings of programming resistors. Specifically, AT&T suggests application of a limited set of requirements under § 68.306, Hazardous Voltage Limitations, application of § 68.308, Signal Power Limitations; and application of § 68.314, Minimum Call Duration Requirements. IDCMA claims that hazardous voltage requirements for PR/PC leads are unnecessary and supports application of only the leakage current requirements of § 68.304. IDCMA claims that requiring PR/PC leads to meet the requirements of § 68.306(a) and (b)(1) would be burdensome on data equipment manufacturers.

14. PR/PC leads are not now subject to leakage current limitations of § 68.304. However, these leads appear at the network interface and the proposed amendments making PR/PC leads subject to § 68.304 would ensure that harmful current leakages from these leads directly into the telephone network or into adjacent leads will not occur. Moreover, these leads also could contain hazardous voltages. Manufacturers are currently complying with the hazardous voltage limitations of § 68.306 with respect to other types of leads appearing at the network interface, and IDCMA has not demonstrated that the costs of making PR/PC leads subject to the same limitations outweighs the benefits of network protection.[6] In addition, the signal power limitations of § 68.308 and minimum call duration requirements of § 68.314 are designed to prevent identifiable network harms, and no showing has been made that they are unnecessary for PR/PC leads. Accordingly, we will adopt appropriate rule amendments making PR/PC leads subject to each of these network harm standards. *See* § 68.200(j)(4) in the attached Appendix.

15. *RM–3316.* In this petition D. Reginald Tibbetts proposes a modification to the RJ31X and RJ33X jack configurations to provide a continuity path between contacts 2 and 7 (the CY1 and CY2 leads). Such a path, using a jumper wire connected to CY1 and CY2 at the jack would permit an alarm system to signal the user when the alarm dialer plug is disconnected from the telephone network.[7] AT&T and GTE filed comments in support. However, AT&T also suggests that the modified type RJ31X jack be identified as a new configuration RJ38X. This proposed new jack would encompass the proposed changes to the existing RJ33X and RJ31X making the modifications to them proposed by Tibbetts unnecessary. Accordingly, we will adopt the AT&T proposal.

16. *RM–3329.* In this petition IDCMA has proposed a modification to the RJ45S jack to permit the use of a 9200 Ohm resistor for the purpose of connecting programmable data modems

[6] The present § 68.306(a) requires that voltages on all leads appearing at the network interface be non-hazardous under all conditions of operation or failure. Similarly, § 68.306(b)(1) requires that all leads at the network interface be physically separated from commercial power and be physically separated from leads to non-registered equipment which potentially could contain hazardous voltages under operating conditions. Since these rules make *all* leads appearing at the network interface subject to hazardous voltage limitations, our rule changes on this issue merely clarify the application of § 68.300 to PR/PC leads.

[7] Most alarm dialers make use of the type RJ31X series jack for connection to the telephone network. The RJ31X jack is normally connected in series ahead of all other jacks located on the customer's premises. This permits the alarm dialer to preempt the line in the event of an emergency, i.e., it will terminate any on-going call so that an emergency call can be made. An alarm system utilizing the RJ31X jack with shorted contacts 2 and 7 would not be able to make an outgoing call if its plug were disconnected; however, it would facilitate the sounding of a local alarm upon the unauthorized disconnection of the alarm system from the telephone network.

to key telephone systems and PBXs.[8] IDCMA states that this would enable connection of a programmed data modem at the permissive signal power level behind a PBX. In the *First Notice* we offered this proposal for comment but also requested comments on the alternative of using specialty adapters between the RJ45S jack and the data modem. These adapters employ a 9200-Ohm resistor and convert a programmable data modem to the fixed resistance of the permissive mode. Certain registration requirements were proposed for these adapters.[9] *See First Notice* at para. 37. The parties' comments in response to the *First Notice*, including IDCMA's, favor the registration and use of specialty adapters in lieu of modifications to the RJ45S configuration. The Commission finds that use of these adapters will promote flexibility in use of terminal equipment and increase consumer options. Accordingly, we will include these specialty adapters as a new class of registered devices.[10]

17. However, both GTE and AT&T request that these adapters be subject to the requirements of § 68.304, Leakage Current Limitations, and § 68.310, Longitudinal Balance Limitations. AT&T further requests the imposition of § 68.308, Signal Power Limitations, as a registration requirement. We will make appropriate rule changes to make these specialty adapters subject to leakage current and longitudinal balance limitations. However, specialty adapters can only affect signal power to the extent of the tolerance of the resistor that is used in their construction, *i.e.* the 9200-Ohm resistor, and these resistors are already subject to the requirements of § 68.502(e), Data Configurations. A signal power test, therefore, would constitute an unnecessary regulatory requirement, and will not be required. We are also including GTE's suggestion that the labeling requirement for specialty adapters show only the registration number, with no need to inform the telephone company of its use because it is a "fool-proof" passive device unlikely to cause harm to the network. *See* Appendix, § 68.3, Definitions, and § 68.200(j)(3), Specialty Adapters.

18. *RM-3501.* In this petition, CWA urges the adoption of rules requiring country of origin labeling on all equipment registered under Part 68, including all components used therein. Comments were received from AT&T, GTE, NTI, IBM, NATA, Datapoint, and Tone Commander. All comments opposed CWA's proposal. The comments generally claimed that: (a) Country of origin labeling has nothing to do with the mandate of Part 68, *e.g.*, protection of the network; (b) country of origin labeling is the responsibility of the United States Customs Service (USCS) and the Federal Trade Commission; and (c) requiring country of origin labeling for all components used in equipment assembly would be an extremely onerous and expensive undertaking.

19. We believe at this time that requiring country of origin labeling for all components used in the manufacture of telephone equipment could be unduly burdensome to manufacturers with little or no utility to the end consumer. The burden associated with country of origin labeling for assembled devices, by comparison, is insignificant since the new information is merely a minor addition to information already required. When weighed against the public benefit of providing consumers with important information concerning telephone equipment and assisting USCS in enforcing the provisions of 19 U.S.C. 1304, we believe requiring such country of origin labeling of assembled devices is warranted. Indeed, we note that approximately 70% of telephone devices currently being registered are manufactured outside the United States, and the Part 68 registration number does not of itself give effective notice of country of origin. The Commission has already adopted country of origin labeling for equipment subject to authorization programs under Parts 15, 18, and 83 of the Rules. *Report and Order* in Docket No. 20790, 70 F.C.C.2d 2346 (1979), *recon. granted in part*, 82 F.C.C.2d 477 (1980).[11] Accordingly, we will adopt country of origin labeling for equipment registered under Part 68. *See* new § 68.300(b)(4).[12]

20. *RM-3526.* In this petition, AT&T has proposed amendments to Part 68 to create registration standards for, and to permit interconnection of terminal equipment to, local area data channel service (LADC). LADC is a digital communications service transmitting greater-than-voiceband data over short distances by means of metallic private lines. At the present time, interconnection of terminal equipment to LADC is governed by local carrier tariffs. These tariffs require that interconnection be made through means of a telephone company provided channel protection unit (CPU).[13]

21. IDCMA complains that AT&T's proposed signal power limitations are too stringent. It notes that the signal power limitations proposed in AT&T's comments to the *First Notice* are more stringent than those originally set forth in the AT&T petition for rulemaking. It argues that most terminal equipment connected to LADC would not comply with these proposed signal power limitations. AT&T claims that its proposed standards are intended to prevent interference to analog carrier systems by LADC facilities sharing the same cable. It further claims that based on growth of LADC since the filing of its initial petition for rulemaking that LADC channels will occupy a greater proportion of space within cables shared with analog facilities. Therefore, according to AT&T, somewhat more

[8] The rules require data modems to make use of the "permissive" (-9dBm) mode of connection when used behind PBXs and key telephone systems. "Programmable" modems connect to special data jacks, such as the type RJ45S, which contain a bank of signal power setting resistors—one of which is chosen to assure the transmitted signal power does not exceed specified limits for each particular loop.

[9] For the most part these specialty adapters are adapters that contain a fixed, non-switchable resistance to permit the direct connection of an 8-position data plug to a 6-position jack.

[10] As we noted in the *First Notice*, one such adapter has been registered by Arminger Associates, FCC Reg. No. APZ9P9-67263-AD-N.

[11] In Docket 20790 the Commission adopted revisions to Part 2, 15, 18, and 83 of the rules to establish a single system of coded identifiers for all devices covered under the equipment authorization program. These identifiers, assigned by the Commission and affixed by label to all authorized equipment, consist of alpha-numeric characters unique to each authorization, grantee, manufacturer, and specific equipment or family of equipment. The purpose of the single identifier system is to avoid administrative problems associated with grantee compliance with multiple identification requirements for similar equipment types, inexact identification of equipment on documents submitted to the U.S. Customs Service (USCS), and for ease of Commission recordkeeping tasks. USCS submitted comments in Docket No. 20790 urging that country of origin labeling of imported devices also appear on the identifier label. In the interest of assisting the USCS, the Commission adopted an amendment to § 2.295(a) of the Rules to require country of origin labeling (as required by 19 U.S.C. 1304) on all labels carrying the new FCC identifier.

[12] The rule we are adopting provides that the country of origin of the registered device will be determined in accordance with regulations of the United States Customs Service implementing 19 U.S.C. 1304.

[13] In Interconnection Order, CC Docket 81-216, 94 F.C.C. 2d 5 (1983), the Commission determined that carriers had failed to justify restrictive tariff provisions preventing customer provision and interconnection of network channel terminating equipment (NCTE), including customer service units, employed in connection with digital transmission services. In Second Report and Order, CC Docket 81-216, FCC 84-522, released November 26, 1984, *reconsideration pending*, the Commission adopted final Part 68 interconnection standards for Dataphone Digital Service (DDS) and 1.544 Mbps digital service. LADC presents different network interface parameters, however, and therefore requires different Part 68 standards. Our decision today creates interconnection standards for equipment, such as a customer provided CPU, intended for direct attachment to LADC digital service.

stringent limitations are necessary to prevent interference to these analog facilities. We believe that AT&T's explanation of its proposed new signal power limitations is reasonable. No showing has been made that they are more restrictive than necessary to prevent interference to adjacent analog channels. Concerning existing equipment, the grandfathering provisions of § 68.2(e) will permit orderly assimilation of existing LADC devices without significant cost to any party. Accordingly, we reject IDCMA's arguments on this point.

22. AT&T proposes that signal power limitations be extended to 6 MHz to provide protection to T1 carrier systems and systems operating at approximately twice T1 carrier rates. IDCMA expresses concern that the AT&T proposal will place new signal power limitations for equipment used on non-LADC services. AT&T responds that the proposed extension should not impose a hardship on manufacturers of non-LADC equipment because equipment used for voiceband transmission is not designed to utilize frequencies above the voiceband. Therefore, equipment that now complies with the previous requirement up to 1 MHz should readily comply with the more lenient requirement up to 6 MHz. We believe AT&T's analysis is correct. Accordingly, we are adopting the proposed 6 MHz limitation.[14]

23. IDCMA and AT&T have proposed different approaches to determine acceptable bit patterns for testing equipment compliance with standardized spectral requirements. IDCMA proposes that the exclusive test pattern be a standard CCITT-recommended 511-bit pseudorandom pattern.[15] This bit pattern is based on a serial data generator and consequent serial bit pattern. AT&T, on the other hand, proposes a range of test patterns depending on the type of equipment under test. Not all terminal equipment uses serial data techniques; some terminal equipment transmits multiple, logically independent signals, and for these types of equipment, the CCITT standard would not be appropriate. Moreover, the data pattern most likely to produce objectionable crosstalk depends upon terminal design and is not necessarily a serial pattern. Accordingly, the proposed CCITT bit pattern should not be mandated as the exclusive bit pattern. Therefore, we are accepting AT&T's proposed § 68.307(g)(7). In addition to other testing techniques, this rule section will permit use of the CCITT bit pattern where appropriate.

24. As part of its proposed Part 68 standards for LADC, AT&T has included a schematic diagram for an LADC simulator circuit. This simulator circuit would be used to test for Part 68 compliance. IDCMA objects to AT&T's proposed simulator circuit as being "unnecessary, complicated and unreasonably expensive to construct." However, these essentially conclusory and unsupported allegations do not demonstrate that the proposed simulator circuit is not a reasonable means of testing. At least one testing laboratory has successively constructed a suitable simulator circuit for an IDCMA member that uses an alternative circuit design.[16] Accordingly, we will include in part 68 the LACD loop simulator circuit.

25. IDCMA also questions whether terminal equipment connected to LADC-like channels obtained under "special assembly" tariff provisions would be eligible for grandfathering.[17] AT&T agrees that such equipment which was connected with telephone company approval and caused no harm to the network should be qualified for grandfathering. Accordingly, Section 68.2(e)(4), Scope, is modified to include grandfathering of equipment connected as special assemblies.

26. In order to prevent equipment registered under the proposed LADC standards to be connected to other services, AT&T proposes a new equipment label which contains the statement, "For use solely on LADC Interfaces." We believe the orderly administration of the registration program would be better served by segregating all LADC equipment, *i.e.*, permitting only grandfathered or registered LADC equipment to be connected to the LADC service. Rather than specify this limitation on the label, however, we prefer to code the registration number with an appropriate identifier.[18] Furthermore, the RJ48C modular and RJ48M 50-position plug/jack arrangements, which provide unique network connections for equipment to be used in the LADC service, will also serve to prevent the inadvertent connection of LADC equipment to other services which could be harmful to the network.[19]

27. *RM–4054.* In this petition, AT&T proposes the addition of an alternative termination circuit to the current Part 68 loop and off-premises simulator circuits in order to permit a broader representation of actual network impedances during registration testing. AT&T suggests that hybrid balance circuitry tested in conjunction with this alternative test termination circuit will be reasonably assured of remaining within the bounds of the signal power limitations specified in Section 68.308 of the rules when connected to actual network loops. No oppositions were filed in response to the NPRM and supportive comments were received from GTE and AT&T. We believe this alternative termination would aid testing for compliance with Part 68 standards and, therefore, will adopt it. *See* Appendix section 68.3, Loop

[14] Both AT&T and IDCMA have proposed editorial changes in § 68.308 to separate the requirements specifically intended for LADC terminal equipment. These proposals will clarify the application of this rule to LADC and will be adopted. They include omitting § 68.308(e)(5)(iii) (restricting coherent keying), and § 68.308(f)(5) (longitudinal balance requirement). We will also modify § 68.308(f)(3)(ii) to reflect the intent to apply to peak-to-peak voltage, and § 68.308(f)(4) to indicate the metallic terminating impedance is 600 Ohms and the longitudinal terminating impedance is 500 Ohms. Figure 68.308(a) is modified to extend the weighting function to cover frequencies down to 10 Hz as required for LADC applications. Figure 68.308(b) is modified to provide longitudinal voltage test circuits to reflect the changes in signal power limitations adopted herein.

[15] The CCITT 511-bit pseudorandom code is a serial data generator used for making standardized signal power measurements on certain types of digital circuits. CCITT Vol. 6 (Yellow Book). Data Communications over the Telephone Network, V. 52 Recommendation, p. 221, Geneva 1981.

[16] *See* application for registration of General DataCom's Model GSU–1M Baseband Data Set prepared by Communications Certification Laboratory, received May 3, 1983. This application was not accepted for filing since the device was not registerable under Part 68 in the absence of LADC standards.

[17] "Special assembly" is terminology used in telephone company tariffs to identify unique, one-of-a-kind assemblage of telephone terminal equipment.

[18] Such a code will be assigned by staff during the processing of LADC equipment applications. Other examples of such coding include the "CX" designator for privately owned pay telephones.

[19] While the Commission in this instance is adopting Part 68 standards to permit connection of terminal equipment to LADC channels without necessity of a telephone company provided protective device, the parties are reminded that the Commission has not foreclosed other options implemented at the state level or through industry efforts for creation of standards for connection of terminal equipment to the network. It has been the Commission's consistent policy that the federal interconnection policies do not foreclose any state from creating interconnection programs so long as such action creates additional options to customers with respect to permissible interconnection to the network and provided that network protection is maintained and there is no interference or impairment of interstate services. In the Matter of Telerent Leasing Corp. et al., 45 F.C.C.2d 204 (1974), *att'd sub nom.*, North Carolina Utilities Commission v. FCC, 552 F.2d 1036 (4th Cir.), *cert. denied*, 434 U.S. 874 (1979). Such additional options insofar as they relate to provision of interstate services would be required under Section 203 of the Communications Act to be properly filed with this Commission in carrier tariffs for interstate services. *Id.*

Simulator Circuit and Off-Premises Line Simulator Circuit, the simulator circuit of § 68.3(i), and note 3, Figures 68.3(a) and (f).

28. *RM-4458.* In this petition for rulemaking, AT&T requests modifications and additions to Part 68 standards applying to connection of terminal equipment to private line services in order to accommodate: (1) Certain technical characteristics of voiceband private line channels utilizing loop start, ringdown or inband signaling and (2) voiceband metallic private line channels. In general, the parties' comments support the AT&T petition, and we believe that the proposed technical modifications to accommodate the characteristics of the types of private lines indicated will implement more fully the Commission's determination to include private line channels within the scope of Part 68. *Private Line Channels under Part 68,* Docket No. 79-143, 76 F.C.C. 2d 246 (1980). However, some minor issues have been raised concerning the AT&T proposals. For example, IDCMA expresses concern that the scope of the proposed modifications may be misinterpreted to apply to private line services for which registration of terminal equipment is not required. IDCMA is referring to certain private line channels offered under AT&T's Tariff F.C.C. No. 260, including Series 3002 data channels, for which registration of terminal equipment is not now required. These private line channels inherently contain a high degree of protection against the range of harms generally contemplated by Part 68. Customers have been permitted to interconnect devices to these services without concern for registration. No need has been demonstrated to include these services under Part 68. Accordingly, we are clarifying the proposed rule to ensure that Part 68 regulatory requirements will not unnecessarily be imposed on these private line services.

29. ATT-IS requests that the Commission adopt "grandfathering" provisions for equipment types covered by the AT&T petition different from those normally applied under Part 68.[20] The current requirements for grandfathered eligibility for installations of equipment to the network without registration are: (1) That the equipment be of a type that was connected to the network as of a certain date or (2) that a particular unit of equipment was actually connected to the network as of a specified date. The ATT-IS proposal would change the second criterion from the date the particular unit was connected to the network to the date the unit was manufactured. ATT-IS asserts that manufacturers typically stamp the date of manufacture or serial number on their equipment, so that this propsal would provide a means to determine the grandfather eligibility of the equipment with "speed, ease and certainty." The BOCs contend that different grandfathering statndards for these services would create unnecessary customer confusion. The normal grandfathering provision permits continued use and operation of units of equipment "of a type" lawfully connected to the network as of the effective date of a rule-promulgating order. No new such units may be connected after the "register only" date. There has been no showing that the window for grandfathered equipment created by these rules does not provide adequate protection to customers and manufacturers. Moreover, we do not believe that the Commission should create separate categories of grandfathering specifications pertaining to particular classes of equipment absent some unique or special circumstances. ATT-IS has not made any such showing here. Accordingly, we will not accept its proposal.

30. Finally, the Department of Defense (DOD) requests that in addition to Part 68 modifications covering connection of terminal equipment to private line services using loop start, ringdown or inband signaling and voiceband metallic channels, the Commission should adopt Part 68 standards for switched private line services. This would potentially permit customers such as DOD to utilize 4-wire interfaces to interconnect customer-provided multiplexing equipment with telephone company services regardless of the type of interface ordered by the customer for the other end of the VF channel. We believe that the DOD proposal engenders a matter that is beyond the scope of this proceeding. Switched private line networks may have significantly different operational and interface parameters than the private line channels covered in this proceeding, and neither DOD nor other parties have submitted sufficiently detailed or comprehensive comments to form the basis for Part 68 revisions for switched private line networks. DOD is free to submit a separate petition for rulemaking fully documenting and justifying any necessary standards for this service, however. Accordingly, we do not accept DOD's proposal at this time.

Test Equipment

31. In the *First Notice* (at paras. 58-59) we noted that users of large PBXs have a need to test or measure facility parameters using their own test equipment. We observed that requiring all test equipment to be registered might add considerable burden to the administration of Part 68, yet offer little additional assurance of network integrity or safety. Among the devices encompassed by "test equipment" are instruments used by telecommunications technicians in installation and maintenance activities, including oscilloscopes, meters, linemen's test sets, portable signaling devices and the like. All of these are connected to the network either momentarily or for short periods of time, typically for a few minutes or less. The *First Notice* contained a proposed rule section which would resolve the status of test equipment under Part 68 (including a grandfathering provision to permit existing test equipment to remain connected without registration).

32. Pending rulemaking, we permitted registration of test equipment, including portable traffic recorders, so long as the equipment complied with existing Part 68 rules, including the signal power limitation of -9dBm required by § 68.308(b)(1)(i). As an interim measure, AT&T filed a tariff that permitted direct connection of certain customer-provided test equipment meeting the following criteria: The equipment must: (1) Be limited to transmission signal power generating and/or detecting; (2) be of a type that was lawfully connected to a telephone company-provided service as of March 6, 1981; and (3) comply with Subpart D of Part 68. Subsequently, AT&T modified its tariffs to permit the connection of automatic test equipment utilizing responders provided that the signal power specifications in Bell System Technical Advisory No. 17 and Bell System Technical Reference, PUB 60101 were met. In addition, the tariff required the customer to file an affidavit with the telephone company providing assurance that the test equipment would operate in accordance with the requirements specified in Part 68.

33. Comments were received from AT&T, Datapoint, GTE, Hewlett-Packard, IDCMA, NATA, NTCA, REA, Rockwell, ROLM, SPCC, UTC and Wilcom. The comments generally support not requiring registration of test equipment designed for "momentary" connection to the network such as oscilloscopes, meters, linemen's test sets

[20] Generally, once a device is "grandfathered", it may be connected (and reconnected) to the network during its useful service life.

and the like which are typically used in installation and maintenance activities on the subscriber's side of the network interface and that offer little or no potential for harm in their normal operation.[21] We conclude from the comments that all parties will benefit by not requiring registration of such equipment.

34. However, comments generally recommend registration of test equipment such as portable traffic recorders which are typically connected for periods of days of weeks, and test equipment capable of generating and/or detecting test tones. Our analysis indicates that this type of test equipment could cause harm to the network, just as any other signal source connected to the network. Accordingly, we will adopt the parties' requests that portable traffic recorders and tone generating test equipment be registered.[22] The *First Notice* requested suggestions for a suitable grandfather period. Several suggestions were made, varying from 12 to 18 months. We believe eighteen months to be a suitable transition period. *See* § 68.2(g).

Registration of Power Supplies

35. Protection of the telephone network from potential harms of power supplies—which do not connect across tip and ring—has been assured through registration of host terminal equipment containing the supplies. Power supplies have not been separately registered. We stated in the *First Notice* that we did not generally favor such registration, but that we would consider arguments in support thereof. Comments were received from AT&T and CCL supporting registration of power supplies; comments from Datapoint Corp., IDCMA, and Utilities Telecommunications Council (UTC) opposed registration of power supplies.

36. CCL notes that the Commission has included several private line ports for registration under Part 68, including Off Premises Stations, Automatic Indication of Outward Dialing and E & M tie trunks. These ports frequently require the connection of external power supplies. Customers usually procure such power supplies from various industry sources based on the general requirements specified by the terminal equipment manufacturer. CCL asserts that such power supplies obtained from general trade sources should require registration under Part 68 to assure compliance with § 68.304, Leakage Current Limitations, and § 68.308, Signal Power Requirements. AT&T notes that power supplies using switching regulators have the potential of adversely affecting the compliance of terminal equipment with the requirements of § 68.308, Signal Power Limitations.

37. These comments do not convince us that our initial determination not to register power supplies was wrong. We note that local and state electrical codes often require the use of U.L. listed or equivalent power supplies. In addition, as we have received no compliants alleging network harm caused by excessive leakage from power supplies since the start of the registration program. Finally, we believe interference noise caused by switching-type power supplies is properly addressed by Part 15 of the rules. Therefore, we find there is no need to require registration of these devices.

Additional Technical Revisions

38. *Automatic Dialers.* In the *First Notice* the Commission addressed potential network harm caused by various types of automatic dialing terminal equipment. *First Notice*, paras. 62–64. This potential harm was essentially congestion at telephone central offices, particularly during the peak network usage periods, caused by the proliferation of telephone devices incorporating circuitry that permits automatic redialing of telephone numbers. Devices such as alarm dialers, repertory dialers, computerized polling machines, and telephones capable of automatic number repetition could severely limit availability of customer trunks, causing delays in customers' access to the telephone network, *i.e.*, difficulty "getting dial tone." These delays occur when large numbers of calls are placed in a short period of time, such as in response to radio station contests, or during local emergency conditions, *e.g.*, power failures. We proposed in the *First Notice* to limit sequential dialers (designed to dial a series of numbers one after the other) to dialing a number just once before proceeding to another number. We also proposed that repertory dialers (designed to dial or redial a single selected number), as well as sequential dialers operating as automatic repertory dialers, be limited to one dialing attempt per five minute period. Call duration attempts would be limited to 60 seconds. We stated that there would be no limitations where the number dialed is for emergency purposes.[23]

39. Comments were generally in support of the Commission's proposals. However, the comments suggest that there is a diversity of situations and special applications requiring longer than normal ringing duration or a greater than normal number of call attempts before a destination can be reached, *i.e.*, for interstate and international calls. These variabilities make it impractical to fashion a time limit for automatic dialers for duration of call attempts. Instead, we are accepting the simpler GTE proposal of limiting successive call attempts to a single number of fifteen, *i.e.*, a single number can be dialed no more than fifteen successive times unless manually reactivated. No objections were raised to the GTE proposal.

40. One issue that seems to be assuming more importance currently relates to what constitutes a "dialer", in the context of our requirement limiting successive call attempts. Our requirement will apply without question to terminal equipment such as alarm dialers, repertory dialers, computerized polling and telemarketing machines, and automatic redialing telephone instruments. Modems with automatic dialing capabilities, which are not so readily identifiable as "dialers", may dial one or more numbers repeatedly, sensing a tone response if the called party (another modem) answers. If the modem itself determines when and how often a redial is to be performed, it is relatively simple to impose registration standards on how often such action may be done. However, we are informed that many such devices used with personal or other computers do not themselves make this determination; rather, the determination may be made by the computer itself. Imposition of redialing limitations through the registration process seemingly would necessitate redesign of the modem (so that it could limit the redialing capability) or a requirement for some form of control over the hardware, software or firmware resident in (or utilized with) the computer itself. This issue has not been

[21] REA urges that devices that apply breakdown test voltages to the line which may cause harm be prohibited from use by the customer.

[22] Wilcom has requested that the signal level limitation used in the registration of test equipment pending rulemaking, *see* para. 32 *infra*, be changed from –9dBm averaged over 3 seconds to –9dBm averaged over 60 seconds to facilitate practical usage of test equipment. ROLM urges retention of the 0 dBm level, averaged over 3 seconds, which is used by the BOCs for network testing. We will adopt the 0 dBm level based on its successful use in the interim program; the telephone companies' tariffs provide alternative remedies should application of 0 dBm test tones result in audible crosstalk or other harm. *See* Appendix, § 68.308(b)(1)(v).

[23] Pending completion of rulemaking proceedings, the Common Carrier Bureau has required as a condition of registration that automatic dialers terminate call attempts after fifteen attempts at the same number.

explored adequately in the record. With the increasing numbers of personal computers with modems, the redialing and potential attendant network harm warrants further consideration of this matter. Accordingly, we are concurrently issuing a further notice of proposed rulemaking in this proceeding to solicit comments and ascertain whether and how redialing controls can or should be imposed upon the manufacturers, distributors or users of modems and/or computers to prevent the kind of harm associated with repertory dialing. *See, Fourth Notice of Proposed Rulemaking,* CC Docket 81-216, FCC 85-591, adopted October 30, 1985.

41. In the *First Notice*, the Commission proposed exempting single-address "emergency" calls from these limitations. However, based on the Commission's experience with registered emergency dialers it appears that most emergency dialers contain provision for dialing alternative numbers sequentially to enhance the probability of success for completing such a critical call. And, as explained in the *First Notice*, para. 63, no limitations on dialing attempts are necessary if the automatic dialer alternates calls among two or more numbers. Consequently, there appears to be no need for a special exemption for "emergency" dialers.[24]

42. *Part 15 Consistency.* Part 15 of the Commission's rules sets forth radio emission standards for devices emitting radio signals in order to prevent interference to radio communications. In *First Report and Order—Technical Standards for Computing Equipment,* Docket No. 20780, 79 F.F.C.2d 28 (1979), the Commission amended Subpart J of Part 15 to limit the interference potential through power lines of electronic computing equipment by establishing conduction standards for digital equipment generating timing signals or pulses at frequencies between 450 kHz and 30 MHz. Some radio devices subject to these Part 15 requirements are also connected to the telephone network and subject to Part 68 standards. In the *First Notice* the Commission proposed amending the signal power limitations in Part 68, § 68.308, to contain essentially the same standards. This would involve signal power limitations for devices operating between 1 Mhz and 30 Mhz. Present Part 68 standards only encompass signals up to 1 Mhz.

43. In response, the parties have not submitted data indicating any substantial potential of network harm caused by devices operating in the range from 1-30 MHz. Indeed, the only test data, submitted by GTE, concerns cordless telephones operating between 1.6 and 2.0 MHz. These data indicate at least a theoretical potential of network interference caused by cordless telephones employing carrier current transmission techniques.[25] However, in *Report and Order,* Gen. Docket No. 83-325, 96 F.C.C.2d 195 (1984) the Commission established new interim provisions for cordless telephones, and provided for new channels at 46 and 49 MHz. The Commission also required manufacturers to cease manufacturing cordless telephones operating between 1.6 and 2.0 MHz after October 1, 1984. This means that there will be no radio transmission below 30 MHz from cordless telephones manufactured after that date. Moreover, concerning cordless telephones currently in use, the Commission has received virtually no complaints that these devices are causing interference in ways against which the proposed new signal power limitations would protect. Accordingly, we find that this area of potential network harm is negligible, and that the initial proposal in the *First Notice* would impose unnecessary regulatory requirements. Therefore, this proposal will not be adopted.

44. *Section 68.312.* Table I of § 68.312, On-hook Impedance Limitations, sets forth the conditions and limitations of various types of ringing encountered in network signaling. We proposed in the *First Notice* to add type Q (20 Hz) ringing to the current list of ringer types in that table. In their comments, GTE and AT&T support our proposal and note that the heading in Table I, "Simulated ringing voltage superimposed on 52.5 Volts dc," be corrected to read 56.5 Volts to maintain consistency with that shown in Figure 68.3, Loop Simulator Circuits. This change will be adopted in conjunction with adoption of the new ringing type.[26]

45. *Section 68.314.* This section, Billing Protection, requires that there be no data transmission during the first 2 seconds after an answering data terminal goes into the off-hook mode, *i.e.,* is "answered." Section 68.314, however, permits certain operations to take place during the 2-second interval, such as disabling echo suppressors, adjusting automatic gain controls, establishing synchronization and signaling the mode of operation of the receiving data equipment at the far end of the communications link. These "handshaking" operations are generally necessary to allow proper end-to-end connection. We believe that § 68.314(a)(2)(i) should be clarified to encompass the newer technology "echo cancelling" devices as well as the older "echo suppressors." The term "echo control devices" will accomplish this purpose. Accordingly, we are making this editorial amendment to § 68.314(a)(2)(i).[27]

46. *Section 68.502.* In the *First Notice* we proposed that in order to preserve uniformity throughout § 68.502, Configurations, the wording, "The telephone company will consecutively wire these lines to the jack as shown below without skipping any positions" should be deleted from the descriptions of USOC jack types RJ21X, RJ23X and RJ24X in § 68.502(d). The new intermixed jack wiring structure filed under tariff revisions in response to our *First Report and Order* in Docket CC No. 79-143, 76 F.C.C2d 246 (1980), provides considerable new flexibility in the means of connection to the telephone network so that the consecutive wiring note in § 68.502(d) is no longer needed. In the *First Notice* we also recommended modifying §§ 68.502 (a) and (d) to permit the types RJ11C and RJ21X jacks to be used with PBX and key telephone systems. No oppositions were received to these proposals. Comments were received from Datapoint, GTE and AT&T in support of these amendments.[28] Accordingly, we will make the changes to § 68.502 originally proposed in the *First Notice.*

Conclusion and Ordering Clauses

47. For the purposes of Regulatory Flexibility Act, 5 U.S.C. 604, the Commission certifies that this report and order will not have a substantial economic impact on a significant number of entities. Where alternative resolutions were available, we have chosen the least costly alternative and in some instances have eliminated unnecessary requirements. This order has resolved many outstanding rulemaking petitions that have the net effect of simplifying and clarifying the

[24] In the First Notice the Commission set forth proposed limitations on automatic dialers as a new subsection of § 68.110, Compatibility of the Telephone Network and Terminal Equipment. In the rules adopted herein, however, we have placed limitations on automatic dialers in a new § 68.318, Additional Limitations, in subpart D of Part 68, Conditions of Registration. This will clarify that compliance with automatic dialing limitations is a prerequisite to registration. *See* new § 68.318(c).

[25] In carrier current transmission techniques the terminal equipment uses either the A/C power line or the telephone line as a radio transmission antenna.

[26] This amendment is editorial in nature and does not warrant further public comment. *See* Administrative Procedure Act, section 553(a)(3)(B), 5 U.S.C. 553(a)(3)(B).

[27] *Id.*

[28] *Id.*

rules; it has addressed several clarifying editorial amendments; and it has opened the way for the provision of new service offerings (Local Area Data Channels and several types of Voiceband Private Line Channels) which do not require the use of Protective Connecting Arrangements (PCAs).

48. Accordingly, it is ordered, pursuant to 47 U.S.C. 151, 154(i), 154(j), 201–205, 218, 220, 313, 403, 412, and 5 U.S.C. 553, That Part 68 of the Commission's Rules and Regulations, 47 CFR 68.1, *et seq.*, is amended as set forth in the attached appendices.

49. It is further ordered, That the Secretary shall cause a copy of this order to be printed in the **Federal Register** and shall send a copy to the Counsel for Advocacy of the Small Business Administration in accordance with section 603(a) of the Regulatory Flexibility Act (5 U.S.C. 601 *et. seq.*, (1980).

50. It is further ordered, That the rule amendments adopted herein shall become effective February 10, 1986.

Federal Communications Commission.

William J. Tricarico,

Secretary.

Appendix

Part 68 of the Commission's Rules and Regulations (Chapter I of Title 47 of the Code of Federal Regulations Part 68) is amended as follows:

1. The authority citation for Part 58 continues to read as follows:

Authority: Secs. 4, 201, 202, 203, 204, 205, 208, 215, 218, 313, 314, 403, 404, 410, 602, 48 Stat. as amended, 1066, 1070, 1071, 1072, 1073, 1076, 1077, 1087, 1094, 1098, 1102; 47 U.S.C. Secs. 154, 201, 202, 203, 204, 205, 208, 215, 218, 313, 314, 403, 404, 410, 602.

a. Section 68.2 is amended to add new paragraphs (a)(6), (7) and (8) to redesignate paragraph (e) as paragraph (i) and add new paragraphs (e), (g) and (h) as follows:

§ 68.2 Scope.

* * * * *

(a) *General.* * * *

* * * * *

(6) Of registered terminal equipment or registered protective circuitry to Local Area Data Channels and to channels which are similar to Local Area Data Channels that are obtained as special assemblies.

(7) Of all terminal equipment or systems to voiceband private line channels for 2-point and multipoint private line services (excluding those identified in Category II, A.T.&T. Tariff F.C.C. No. 260 or subsequent revisions) that utilize loop start, ringdown on inband signaling; or voiceband metallic channels.

(8) Of the types of test equipment specified in § 68.3, Definitions.

* * * * *

(e) *Grandfathered Terminal Equipment for Connection to Local Area Data Channels.* All terminal equipment of a type directly connected to Local Area Data Channels or directly connected under special assembly tariff provisions to telephone company-supplied, non-loaded, metallic, greater-than-voiceband circuits for the purpose of providing limited distance data transmission as of February 10, 1986, may be connected thereafter up to August, 10, 1987, and may remain connected for life, without registration unless subsequently modified.

* * * * *

(g) *Grandfathered Test Equipment:*

(1) Test equipment directly connected to the telephone network on February 10, 1986, is considered to be grandfathered and may remain connected to the telephone network for life without registration unless subsequently modified.

(2) New installations of test equipment may be performed up to August 10, 1987 without registration, provided that the test equipment is of a type directly connected to the public switched network or services identified in § 68.2(a) (1), (2), (3), (5), (6), and (7) for life without registration unless subsequently modified.

(h) *Grandfathered Terminal Equipment or Systems for Connection to Voiceband Private Line Channels for 2-point and Multipoint Private Line Services that Utilize Loop Start, Ringdown, or Inband Signaling; or Voiceband Metallic Channels*:

(1) Terminal equipment or systems, including premises wiring and protective apparatus (if any), directly connected to voiceband and private lines for 2-point or multipoint service on February 10, 1986, may remain connected to hat private line type service for life without registration unless subsequently modified, except for modifications allowed under § 68.2(h)(3).

(2) New installations of equipments may be installed (including additions to existing systems) up to August 10, 1987 without registration of any equipments involved, provided that these equipments are of a type directly connected to voiceband private lines for 2-point or multipoint services. These equipments may remain connected to the private line-type service for life without registration, unless subsequently modified, except for modifications allowed under § 68.2(h)(3).

(3) Modification to systems and installations involving unregistered equipment:

(i) Use of other than fully-protected premises wiring is a modification under § 68.2. As an exception to the general requirements that no modification is permitted to unregistered equipment whose use is permitted under § 68.2, certain modifications are authorized herein.

(ii) Other than fully-protected premises wiring may be used if it is qualified in accordance with procedures and requirements of § 68.215. Since there is no "registrant" of unregistered equipment, the training and authority required by § 68.215(c) will have to be received from the equipment's manufacturer.

(iii) Existing separate, identifiable, and discrete protective apparatus may be removed or replaced with apparatus of lesser protective function, provided that any premises wiring to which the private line service is thereby exposed conforms to § 68.2(h)(3)(ii) above. Minor modifications to existing unregistered equipments are authorized to facilitate installation of premises wiring, so long as they are performed under the responsible supervision and control of a person who complies with § 68.215(c). Since there is no "registrant" of unregistered equipment, the training and authority required by § 68.215(c) will have to be received from the manufacturer of the equipment so modified.

§ 68.3 [Amended]

2. Section 68.3 is amended as follows:

A. By removing all paragraph designations and rearranging the definitions in alphabetical order.

B. By redesignating the numbered paragraph designations within the definitions as appropriate alphabets.

C. By revising the definitions of "loop similator circuit" and "fully protected system premises wiring", and by adding the other definitions that are shown below.

D. By revising Figures 68.3 (a), (b), and (f), redesignating Figure (j) as Figure (l), and adding new Figures 68.3 (i), (j) and (k).

The amended portions of § 68.3 reads as follows:

* * * * *

Coin-Implemented Telephone: A telephone containing all circuitry required to execute coin acceptance and related functions within the instrument itself and not requiring coin service signaling from the central office.

Coin Service: Central office implemented coin telephone service.

Companion Terminal Equipment: Companion terminal equipment represents the terminal equipment that would be connected at the far end of a network facility and provides the range of operating conditions that the terminal equipment which is being registered would normally encounter.

Continuity Leads: Terminal equipment continuity leads at the network interface designated CY1 and CY2 which are connected to a strap in a series jack configuration for the purpose of determining whether the plug associated with the terminal equipment is connected to the interface jack.

Inband Signaling Private Line Interface: The point of connection between an inband signaling voiceband private line and terminal equipment or systems where the signaling frequencies are within the voiceband. All tip and ring leads shall be treated as telephone connections for the purposes of fulfilling registration conditions.

Local Area Data Channel (LADC) Leads: Terminal equipment leads at the interface used to transmit and/or receive signals which may require greater-than-voiceband frequency spectrum over private line metallic channels designated Local Area Data Channels (LADC). These leads should be treated as "telephone connections" as defined in this section or as tip and ring connections where the term "telephone connection" is not used.

Local Area Data Channel Simulator Circuit: A circuit for connection in lieu of a Local Area Data Channel to provide the appropriate impedance for signal power tests. The schematic of Figure 68.3(k) is illustrative of the type of circuit that will be required over the given frequency ranges. When used, the simulator shall be operated over the appropriate range of loop resistance for the equipment under test, under all voltages and polarities that the terminal under test and a connected companion unit are capable of providing.

Loop Simulator Circuit. A circuit that simulates the network side of a 2-wire or 4-wire telephone connection during testing The required circuit schematics are shown in Figure 68.3(a) for 2-wire loop or ground start circuits, Figure 68.3(b) for 2-wire reverse battery circuits, Figure 68.3(c) for 4-wire loop or ground start circuits, Figure 68.3(d) for 4-wire reverse battery circuits, and Figure 68.3(j) for voiceband metallic channels. Figure 68.3(i) is an alternative termination for use in the 2-wire loop simulator circuits. Other implementations may be used provided that the same dc voltage and current characteristics and ac impedance characteristics will be presented to the equipment under test as are presented in the illustrative schematic diagrams. When used, the simulator shall be operated over the entire range of loop resistance as indicated in the figures, and with the indicated polarities and voltage limits. Whenever loop current is changed, sufficient time shall be allocated for the current to reach a steady-state condition before continuing testing.

Make-Busy Leads: Terminal equipment leads at the network interface designated MB and MB1. The MB lead is connected by the terminal equipment to the MB1 lead when the corresponding telephone line is to be placed in an unavailable or artificially busy condition.

Ringdown Private Line Interface: The point of connection between ringdown voiceband private line service and terminal equipment or systems which provide ringing (20 or 30 Hz) in either direction for alerting only. All tip and ring leads shall be treated as telephone connections for the purposes of fulfilling registration conditions. On 2-wire circuits the ringing voltage is applied to the ring conductor with the tip conductor grounded. On 4-wire circuits the ringing voltage is simplexed on the tip and ring conductors with ground simplexed on the tip (1) and ring (1) conductors.

Specialty Adapters: Adapters that contain passive components such as resistive pads or bias resistors typically used for connecting data equipment having fixed-loss loop or programmed data jack network connections to key systems or PBXs.

System premises wiring. * * *

(a) Fully Protected Systems Premises Wiring. Premises wiring which is either:

(1) No greater than 50 feet in length (measured linearly between the points where it leaves equipment or connector housings) and registered as a component of and supplied to the user with the registered terminal equipment or protective circuitry with which it is to be used. Such wiring shall either be pre-connected to the equipment or circuitry, or may be so connected by the user (or others) if it is demonstrated in the registration application that such connection by the untrained will not result in harm, using relatively fail-safe means.

(2) A cord which complies with the previous subsection either as an integral length or in combination with no more than one connectorized extension cord. If used, the extension cord must comply with the requirements of § 68.200(h) of these Rules.

* * * * *

Test Equipment. Equipment connected at the customer's premises that is used on the customer's side of the network interfaces: (a) to measure characteristics of the telephone network; or (b) to detect and/or isolate a communications fault between a terminal equipment entity and the telephone network. Registration is required for test equipment capable of functioning as temporary terminal equipment, such as portable traffic recorders or equipment capable of transmitting test tones, either as generators or responders.

Voiceband Metallic Private Line Channel Interface: The point of connection between a voiceband metallic private line channel and terminal equipment or systems where the network does not provide any signaling or transmission enhancement. Registered terminal equipment or systems may use convenient signaling methods so long as the signals are provided in such a manner that they cannot interfere with adjacent network channels. All tip and ring leads shall be treated as telephone connections for the purpose of fulfilling registration conditions.

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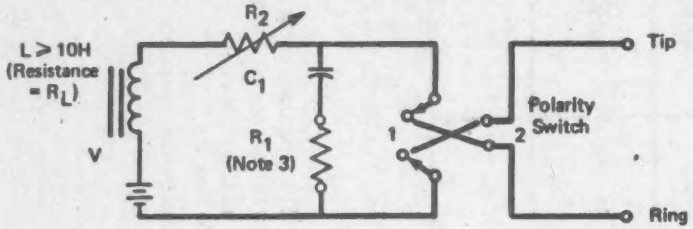
LOOP SIMULATO

LOOP SIMULATOR FOR LOOP START
AND GROUND START CIRCUITS



C_1 = 500 μFD, −10%, + 50%
R_1 = 600Ω ± 1%

Condition	V, Volts		Switch Position For Test	$R_2 + R_L$
1	Min 42.5	Max 52.5	Both	Continuously Variable Over 400 To 1740Ω
2	105		2	2000Ω

Figure 68.3(a)

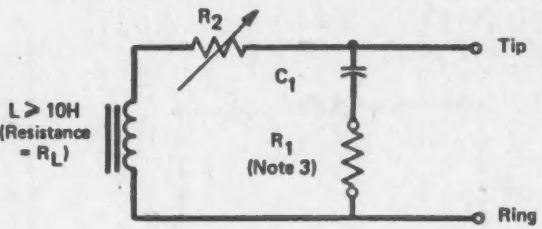
NOTES:

1. Means shall be used to generate, at the point of tip and ring connections to the t current and ac impedance which are generated by the illustrative circuits depicte
2. In the Longitudinal Balance Limitations, Section 68.310, the use of the "dc port components R_1 and C_1 above should be removed.
3. Tests for compliance may be made with either R_1 = 600 ohms or R_1 replaced by termination shown in Figure 68.3(i).

Figure, 68.3 (a) And

OR CIRCUITS

LOOP SIMULATOR FOR REVERSE BATTERY CIRCUITS



C_1 = 500 μFD, −10% + 50%
R_1 = 600Ω ± 1%

$R_2 + R_L$
Continuously Variable Over 400 To 2450Ω

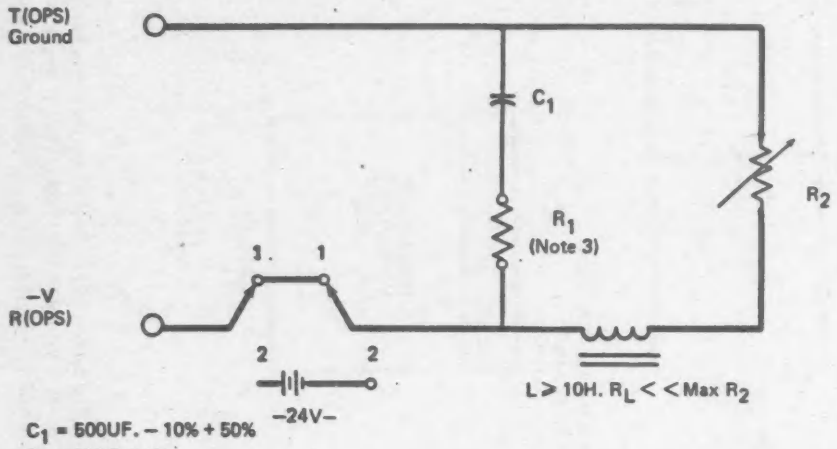
Figure 68.3(b)

e terminal equipment or protective circuitry, the parameters of dc line
cted above (as appropriate for the equipment under test).
ortion of the loop simulator circuit" is specified. In such case,

by the alternative

d 68.3 (b)

OFF-PREMISES LOOP SIMULATOR



C_1 = 500UF. – 10% + 50%
R_1 = 600Ω ± 1%

		$R_2 + R_L$ Continuously Variable Over The Following Range		
Condition	Switch Position For Test	Class A	Class B	Class C
1	1	R_L To 200Ω	R_L To 800Ω	R_L To 1800Ω
2	2	Not Applicable	200 To 2300Ω	900 To 3300Ω

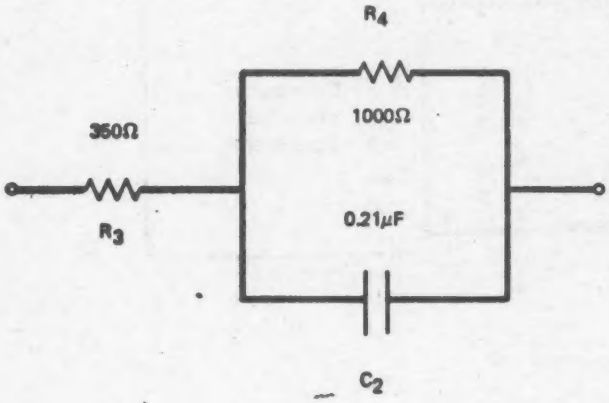
The minimum dc current present for all resistance ranges of conditions 1 and 2 shall be 16 ma.

NOTES:

1. Means shall be used to generate, at the point of tip (T OPS) and ring (R OPS) connections to the PBX, the range of resistance and impedance which are employed by the illustrative circuit depicted above.
2. In the longitudinal balance limitations, Section 68.310, the use of the "dc portion of the line simulator" is specified. In such case, components R_1 and C_1 above shall be removed.
3. Tests for compliance may be made with either R_1 = 600 ohms or R_1 replaced by the alternative termination shown in Figure 68.3(i).

Figure 68.3(f)

ALTERNATIVE TERMINATION



$R_3 = 350\Omega \pm 1\%$

$R_4 = 1000\Omega \pm 1\%$

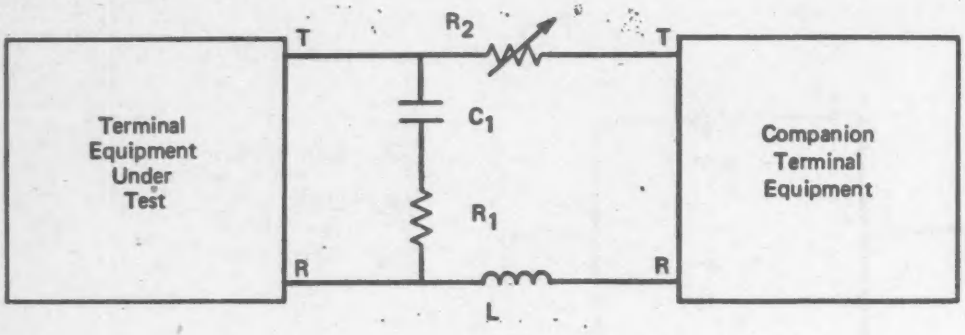
$C_2 = 0.21\mu F \pm 1\%$

NOTE:

When this alternative termination is used during signal power compliance testing, it replaces R_1 (600Ω) in the loop simulator circuit.

Figure 68.3(i)

LOOP SIMULATOR CIRCUIT VOICEBAND METALLIC CHANNELS



C_1 = 500μF -10%, +5%
R_1 = 600 OHMS ± 1%
L > 10H., Resistance = R_L

$R_2 + R_L$
Continually Variable From R_L To R_X

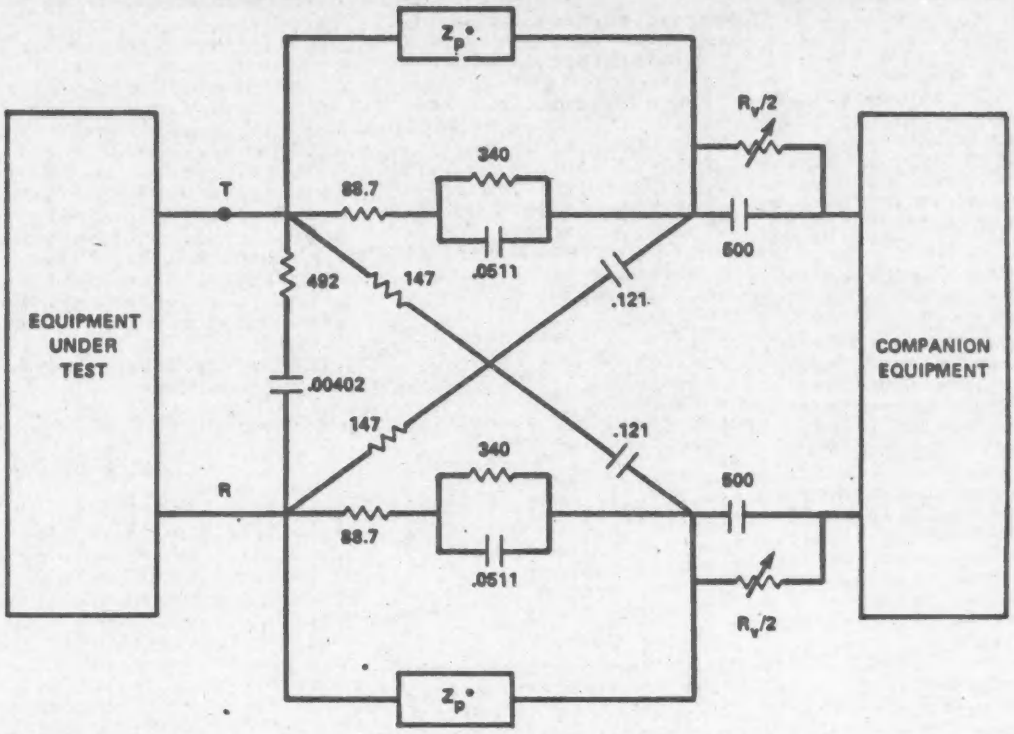
Where: R_X = Signaling Range Of Terminal Equipment Under Test And,

$R_L << R_X$

NOTES:

1. For Longitudinal Balance Measurements (Section 68.310), The DC Portion Of The Loop Simulator Should Be Provided By Removing R_1 And C_1. Companion Terminal Equipment Grounds (Including Power Supplies) Must Be Isolated From Longitudinal Balance Circuit Grounds.

Figure 68.3 (j)



RESISTANCES (OHMS), CAPACITANCES (μF) TOLERANCES ± 2%

$R_v + R_p$ = 50 THRU 3000 OHMS

*Z_p = MAGNITUDE OF THE LOW PASS FILTER IMPEDANCE = < 25 Ω DC; > 3 KΩ 10 Hz – 6 Hz

(R_p) ½ = DC RESISTANCE OF LOW PASS FILTER Z_p ‖ 428.7 Ω

FIGURE 68.3 (K) LADC IMPEDANCE SIMULATOR FOR METALLIC VOLTAGE TESTS.

BILLING CODE 6712-01-C

3. Section 68.100 is revised to read as follows:

§ 68.100 General.

In accordance with the rules and regulations in Subpart B of this Part, terminal equipment may be directly connected to the public switched telephone network and to those private line services included in § 68.2(a).

4. Section 68.200 is amended to revise paragraph (h) and add a new paragraph (j) as follows:

§ 68.200 Application for equipment registration.

* * * * *

(h) Electrically transparent adapters, extension cords, line-transfer swiches and cross-connect panels need not be registered provided they meet the requirements of § 68.304(a) and the temperature-humidity requirements of § 68.302(b). Descriptive installation procedures for cross-connect panels (where used) must be provided in equipment registration applications. Additional requirements include:

(1) An extension cord must consist of a male connector and a female connector and wiring between them which is no longer than 25 feet.

(2) Transfer switches must be manually operated, not use relays, and be wired in a balanced tip and ring configurations. Switch wiring must be "fully protected" wiring, no longer than 25 feet.

* * * * *

(j) Terminal equipment having the following lead connections to standard jacks or adapters are subject to the following compliance tests:

(1) *Make-Busy Leads:* The MB and MB1 leads shall be considered telephone connections and comply with the requirements of §§ 68.304 and 68.306 when isolated from tip and ring. When the corresponding telephone line is of the loop-start type the tip and ring leads shall comply with all Part 68 rules when the MB and MB1 leads are bridged to the tip and ring connections.

(2) *Continuity Leads:* Leakage current limitations shall be met as specified in § 68.304. The design of the terminal equipment shall assure that the open circuit dc voltage to ground shall not exceed 18 volts; the dc current in a short circuit across CY1 and CY2 shall not exceed 10 milliamperes; and any ac voltage to ground appearing on the continuity leads from sources in the terminal equipment shall not exceed 5 volts peak. The leads, CY1 and CY2, shall be treated as telephone connections for the purpose of hazardous voltage limitation tests and are only required to comply with § 68.304, 68.306(a) and (b)(1). Terminal equipment furnished with CY1 and CY2 leads shall comply with the criteria of § 68.308 and 68.314 with a short circuit across the CY1 and CY2 leads.

(3) Specialty adapters need only be evaluated for compliance with §§ 68.304 and 68.310 under the conditions specified in § 68.310. Resistors used for setting signal power levels must meet the requirements of §68.502(e). Specialty adapters may be labelled, "FCC Reg. No. XXX". (The proper number should be included.) The other information required by §§68.300 need not be provided.

(4) Data jack programmed resistor leads (PR and PC): *See* § 68.502(e). Leakage current limitations shall be met as specified in § 68.304. PR and PC will be treated as telephone connections for the purpose of hazardous voltage limitation tests and are only required to comply with § 68.306(a) and (b)(1). Equipment furnished with PR and PC leads shall comply with the criteria of § 68.308 and § 68.314 for all permitted values of the programming resistor specified in § 68.502(e).

5. Section 68.213 is amended to revise paragraphs (a) and (g)(3)(ii) as follows:

§ 68.213 Installation of other than "fully protected" non-system premises wiring.

(a) *Scope of this rule.* Provisions of this rule are limited to "unprotected" premises wiring used with simple installations of wiring for one and two-line residential and business telephone service. More complex installations of wiring for multiple line services, for use with systems such as PBX and key telephone systems, are controlled by § 68.215 of these rules.

* * * * *

(g) * * *

(3) * * *

(ii) After failure of acceptance testing or after harm has resulted from installed wiring: The telephone company may require withdrawal of all wiring run concealed in ducts, conduit or wall spaces which reasonably could have caused the failure or harm, to determine conformance of the wiring to the information provided by the subscriber.

* * * * *

6. Section 68.300 is amended to add new paragraphs (b)(4) and (b)(5) as follows:

§ 68.300 Labeling Requirements.

* * * * *

(b) * * *

(4) Country of origin of the equipment: Made in ———. Required if the equipment is not manufactured in the United States. Country of origin shall be determined in accordance with 19 U.S.C. 1304 and regulations promulgated thereunder.

(5) As used herein, "permanently affixed" means that the required nameplate data is etched, engraved, stamped, indelibly printed or otherwise permanently marked. Alternatively, the required information may be permanently marked on a nameplate of metal, plastic, or other material fastened to the enclosure by welding, riveting, etc., or with a permanent adhesive. Such a nameplate must be able to last the expected lifetime of the equipment in the environment in which the equipment will be operated and must not be readily detachable.

7. Section 68.302 is amended to revise paragraph (f) as follows:

§ 68.302 Environmental Simulation.

* * * * *

(f) *Failure Modes Resulting from the Application of Metallic and Longitudinal Surges:* Registered terminal equipment and registered protective circuitry are permitted to reach a failure-mode state in violation of longitudinal balance requirements of § 68.310, and or terminal equipment connected to Local Area Data Channels a failure-mode state in violation of the longitudinal signal power requirements of § 68.308, after application of the electrical surges specified in paragraphs (d) and (e) herein, provided that: (1) Such failure results from an intentional, designed failure mode which has the effect of connecting telephone or auxiliary connections with earth ground; and, (2) if such a failure-mode state is reached, the equipment is designed in such a manner that it would become substantially and noticeably unusable by the user, or an indication is given to the user (e.g., an alarm), in order that such equipment can be immediately disconnected or repaired.

Note: * * *

8. Section 68.304 is amended to add paragraph (h) and to revise the Table "Voltage Applied for Various Combinations of Electrical Connections" and add new note (6) to that Table as follows:

§ 68.304 Leakage Current Limitations.

* * * * *

(h) All PR, PC, CY1 and CY2 leads

* * * * *

VOLTAGE APPLIED FOR VARIOUS COMBINATIONS OF ELECTRICAL CONNECTIONS

Voltage sources connected between	Value*
(a) and (c) note (5)	1000
(a) and (d) note (5)	1000
(a) and (f) note (5)	1000

VOLTAGE APPLIED FOR VARIOUS COMBINATIONS OF ELECTRICAL CONNECTIONS—Continued

Voltage sources connected between	Value*
(a) and (g) note (5)	1000
(a) and (h) note (6)	1000
(b) and (c)	1500
(b) and (d)	1500
(b) and (e)	1500
(b) and (h)	1500
(c) and (f)	1000
(c) and (g)	1000
(d) and (f)	1000
(d) and (g)	1000
(f) and (h)	1000

* Value to which test voltage is gradually increased, rms, 60 Hertz.

Note: (1) * * *

* * * * *

(6) Leakage current limitations shall be met between each of the point (h) leads and all pairs of tip and ring telephone connections.

9. Section 68.306 is amended to add new paragraphs (a)(7) and (a)(8) as follows:

§ 68.306 Hazardous Voltage Limitations.

(a) *General.* * * *

(7) For Local Area Data Channel interfaces, during normal operating modes including terminal equipment initiated maintenance signals, registered terminal equipment shall assure, except during the application of ringing (limitations specified in paragraph (d) of this section), with respect to telephone connections (tip, ring, tip 1, ring 1) that:

(i) Under normal operating conditions, the rms current per conductor between short-circuited conductors, including dc and ac components, does not exceed 350 milliamperes. For other than normal operating conditions, the rms current between any conductor and ground or between short-circuited conductors, including dc and ac components, may exceed 350 milliamperes for no more than 1.5 minutes.

(ii) The dc voltage between any conductor and ground does not exceed 80 volts. Under normal operating conditions it shall not be positive with respect to ground (though positive voltages up to 80 volts may be allowed during brief maintenance states);

(iii) Ac voltages are less than 42.4 volts peak between any conductor and ground, (Terminal equipment shall comply while other interface leads are both (A) unterminated and (B) individually terminated to ground); and,

(iv) Combined ac and dc voltages between any conductor and ground are less than 42.4 volts peak when the absolute value of the dc component is less than 21.2 volts, and less than (28.8 + 64 × Vdc) when the absolute value of the dc component is between 21.2 and 80 volts.

(8) During normal operation, registered terminal equipment for connection to ringdown voiceband private line interfaces or vioceband metallic channel interfaces shall assure that:

(i) Ringing voltage is used for alerting only, does not exceed the voltage and current limits specified in paragraph (d), and is: (A) applied to the ring conductor with the tip conductor grounded for 2-wire interfaces, or (B) simplexed on the tip and ring conductors with ground simplexed on the tip (1) and ring (1) conductors for 4-wire interfaces.

(ii) Except during the signaling mode or for monitoring voltage, there is no significant positive dc voltage with respect to ground (not over +5 volts): (A) for 2-wire ports between the tip lead and ground and the ring lead and ground, and (B) for 4-wire ports between the tip lead and ground, the ring lead and ground, the tip 1 lead and ground, and the ring 1 lead and ground.

(iii) The dc current per lead, under short circuit conditions shall not exceed 140 milliamperes.

* * * * *

10. Section 68.308 is amended to revise paragraph (b)(1)(i), revise note (b) in paragraph (b)(1)(ii), add new paragraph (b)(1)(v), (b)(1)(vi), and (b)(1)(vii), revise paragraphs (b)(5)(i)(A) and (b)(5)(i)(C), add paragraphs (b)(5)(i)(G) and (b)(5)(i)(H), revise paragraphs (d) and (e), revise paragraph (f) and redesignate it paragraph (g), add a new paragraph (f), redesignate current paragraph (g) as paragraph (h), and to revise figures 68.308(a) and 68.308(b) as follows:

§ 68.308 Signal Power Limitations.

* * * * *

(b) * * *

(1) * * *

(i) For registered terminal equipment or registered protective circuitry, connected to interfaces associated with services contained in § 68.2(a)(1), § 68.2(a)(2), and § 68.2(a)(7), other than data equipment or data protective circuitry which is registered in accordance with § 68.308(b)(4), the maximum power of other than live voice signals delivered to a loop simulator circuit shall not exceed −9dB with respect to one milliwatt, when average over any 3-second interval. No manufacturing tolerance is allowed which would permit this power to be exceeded by any unit of equipment.

(ii) * * *

Notes: (a) * * *

(b) The 4-Wire CTS shall meet the requirements for Tie Trunk Transmission Interfaces as defined in § 68.3.

* * * * *

(v) For registered test equipment or registered test circuitry the maximum signal power delivered to a loop simulator circuit shall not exceed 0 dBm when averaged over any 3-second interval. No manufacturing tolerance is allowed which would permit this power to be exceeded by any unit of equipment.

(vi) For voiceband private lines using ringdown or inband signaling the maximum power of other than live voice signals delivered to a 600 ohm termination shall not exceed −13dBm when averaged over any 3-second interval.

(vii) For voiceband private lines using inband signaling in the band 2600±150 Hz, the maximum power delivered to a 600-ohm termination shall not exceed −8 dBm during the signaling mode. The maximum power delivered to a 600 Ohm termination in the on-hook steady state supervisory condition shall not exceed −20 dBm. The maximum power of other than live voice signals delivered to a 600-ohm termination during the non-signaling mode and for other inband systems shall not exceed −13dBm when averaged over any 3-second interval. The maximum signal power may be exceeded by as much as 1.0 dB by a single unit of equipment or circuitry, provided that the power averaged over all units of production complies with the specified limitation.

* * * * *

(5) * * *

(i) * * *

(A) The source impedance for all measurements shall be 600 ohms. All ports shall be terminated in *appropriate* loop or private line channel simulator circuits or 600 ohm terminations. The numerical "avg." and "max." requirements mean that the net gain for each type of connection through such equipment or circuitry shall be designed not to exceed the average gain for such paths in all units; however, the gain for any path of any single unit may exceed the average by as much as the maximum provided that the net gain, averaged over such paths in all units of production, is no greater than the average. The term "nom." allows for variations encountered in conventional terminating losses as defined in § 68.3.

(B) * * *

(C) The 4-Wire CTS shall meet the requirements for Tie Trunk

Transmission Interfaces as defined in § 68.3.

* * * * *

(G) Registered terminal equipment or protective circuitry with the capability for through-transmission from voiceband private line channels or voiceband metallic channels to other telephone network interfaces shall assure that the absolute signal power levels specified in this section, for each telephone network interface type to be connected, are not exceeded.

(H) Registered terminal equipment or protective circuitry with the capability for through transmission from voiceband private line channels or voiceband metallic private line channels to other telephone network interfaces shall assure, for each telephone network interface type to be connected, that signals with energy in the 2450 to 2750 Hertz band are not through transmitted unless there is at least an equal amount of energy in the 800 to 2450 Hertz band within 20 milliseconds of application of signal.

* * * * *

(d) *Longitudinal Voltage at Frequencies Below 4 kHz:*

The weighted root-mean-squared voltage averaged over 100 milliseconds that is the resultant of all of the component longitudinal voltages in the 100 Hz to 4 kHz band after weighting according to the curve of Figure 68.308(a), shall not exceed the maximum indicated under the conditions stated in subsection (g). The weighting curve in Figure 68.308(a) has an absolute gain of unity at 4 kHz.

Frequency range	Maximum RMS voltage	Impedance
100 Hz to 4 kHz	−30 dBV	500 ohms

(e) Voltage in the 4 kHz to 6 MHz Frequency Range—General Case—2-Wire and 4-Wire Lossless Interface—4-Wire CTS Interface (except LADC):

Except as noted, the root-mean-squared (RMS) voltage as averaged over 100 milliseconds at the telephone connections of registered terminal equipment and registered protective circuitry in all of the possible 8 kHz bands within the indicated frequency range and under the conditions specified in subsection (g) shall not exceed the maximum indicated below. For (1)(i) and (2)(i) below, "f" is the center frequency in kHz of each of the possible 8 kHz bands beginning at 8 kHz.

(1) *Metallic Voltage.*

(i) 4 kHz to 270 kHz.

Center frequency (f) of 8 kHz band	Max voltage in all 8 kHz bands	Metallic terminating impedance
8 kHz to 12 kHz.	−(6.4+12.6 logf) dBV	300 ohms
12 kHz to 90 kHz.	(23–40 logf) dBV	135 ohms
90 kHz to 266 kHz.	−55 dBV	135 ohms

(ii) 270 kHz to 6 MHz

The RMS value of the metallic voltage components in the frequency range of 270 kHz to 6 MHz shall, averaged over 2 microseconds, not exceed −15 dBV. This limitation applies with a metallic termination having an impedance of 135 ohms.

(2) *Longitudinal Voltage.*

(i) 4 kHz to 270 kHz.

Center frequency (f) of 8 kHz band	Max voltage in all 8 kHz bands	Longitudinal terminating impedance
8 kHz to 12 kHz.	−(18.4+20 logf) dBV	500 ohms
12 kHz to 42 kHz.	(3–40 logf) dBV	90 ohms
42 kHz to 266 kHz.	−62 dBV	90 ohms

(ii) 270 kHz to 6 MHz

The RMS value of the longitudinal voltage components in the frequency range of 270 kHz to 6 MHz shall, not exceed −30 dBV. This limitation applies with a longitudinal termination having an impedance of 90 ohms.

(f) *LADC Interface.* The metallic voltage shall comply with the general requirements in (1) below as well as the additional requirements specified in (2) and (3) as stated. The requirements apply under the conditions specified in subsection (g). Terminal equipment for which the magnitude of the source and/or terminating impedance exceeds 300 ohms, at any frequency in the range of 100 kHz to 6 MHz, at which the signal (transmitted and/or received) has significant power, shall be deemed not to comply with these requirements. A signal is considered to have "significant power" at a given frequency if that frequency is contained in a designated set of frequency bands which collectively have the property that the RMS voltage of the signal components in those bands is at least 90% of the RMS voltage of the total signal. The designated set of frequency bands must be used in testing all frequencies.

(1) *Metallic Voltages—Frequencies below 4 kHz.*

(i) Weighted RMS Voltage in the 10 Hz to 4 kHz Frequency Band.

The weighted root-mean-square (rms) metallic voltage averaged over 100 milliseconds, frequency components weighted according to the curve in Figure 68.308(a), shall not exceed the maximum indicated below. The weighting curve in Figure 68.308(a) has an absolute gain of unity at 4 kHz.

Frequency range	Maximum voltage
10 Hz to 4 kHz	+3 dBV

(ii) RMS Voltage in 100 Hz bands in the Frequency Range 0.7 kHz to 4 kHz.

The root-mean-squared (rms) metallic voltage averaged over 100 milliseconds in the 100-Hz bands having center frequencies between 750 Hz and 3950 Hz shall not exceed the maximum indicated below.

Center frequency (f) of 100-Hz bands	Maximum voltage
750 to 3950 Hz	−6 dBV

(2) *Metallic Voltages—Frequencies above 4 kHz—LADC Interface.*

(i) 100 Hz Bands over Frequency Range of 4 kHz to 270 kHz.

The root-mean-square (rms) voltage as averaged over 100 milliseconds in all possible 100 Hz bands between 4 kHz and 270 kHz for the indicated range of center frequencies and under the conditions specified in subsection (g) shall not exceed the maximum indicated below:

Center frequency (f) of 100 Hz bands	Maximum voltage in all 100 Hz bands
4.05 kHz to 4.60 kHz	0.5 dBV
4.60 kHz to 5.45 kHz	(59.2–90 log f)dBV
5.45 kHz to 59.12 kHz	(7.6–20 log f)dBV
59.12 kHz to 266.00 kHz	(43.1–40 log f)dBV

Where f=center frequency in kHz of each of the possible 100 Hz bands.

(ii) 8 kHz Bands over Frequency Range of 4 kHz to 270 kHz.

The root-mean-square (rms) voltage as average over 100-milliseconds in all of the possible 8 kHz bands between 4 kHz and 270 kHz for the indicated range of center frequencies and under the conditions specified in subsection (g) shall not exceed the maximum indicated below:

Center frequency of (f) 8 kHz bands	Maximum voltage in all 8 kHz bands
8 kHz to 120 kHz	(17.6–20 log f)dBV
20 kHz to 266 kHz	(59.2–40 log f)dBV

Where f=center frequency in kHz of each of the possible 8 kHz bands.

(iii) RMS Voltage at Frequencies above 270 kHz.

The root-mean-square (rms) value of the metallic voltage components in the frequency range of 270 kHz to 6 mHz

shall, averaged over 2 microseconds, not exceed −15 dBV. This limitation applies with a metallic termination having an impedance of 135 ohms.

(iv) Peak Voltage.

The total peak voltage for all frequency components in the 4 kHz to 6 MHz shall not exceed 4.0 volts.

(3) *Longitudinal Voltage.*

(i) Frequencies below 4 kHz.

With the frequency components weighted in accordance with the curve in Figure 68.308(a), the weighted root-mean-square voltage of all frequency components, in the frequency band from 10 Hz to 4 kHz, averaged over 100 milliseconds, shall not exceed the maximum indicated below under the conditions stated in subsection (g). The weighting curve in Figure 68.308(a) has an absolute gain of unity at 4 kHz.

Frequency range	Max RMS voltage
10 Hz–4kHz	−37 dBV

(ii) 4 kHz to 270 kHz

Center frequency (f) of 8 kHz band	Max voltage in all 8 kHz bands	Longitudinal terminating impedance
8 kHz to 12 kHz.	−(18.4+20logf) dBV	500 ohms
12 kHz to 42 kHz.	(3–40logf) dBV	90 ohms
42 kHz to 266 kHz.	−62 dBV	90 ohms

Where f=center frequency in kHz of each of the possible 8 kHz bands.

(iii) 270 kHz to 6 MHz.

The root-mean-square (RMS) value of the longitudinal voltage components in the frequency range of 270 kHz to 6 MHz shall, averaged over 2 microseconds, not exceed −30 dBV. This limitation applies with a longitudinal termination having an impedance of 90 ohms.

(g) Requirements in paragraphs (d), (e) and (f) apply under the following conditions:

(1) All registered terminal equipment, except equipment to be used on LADC, and all registered protective circuitry must comply with the limitations when connected to a termination equivalent to the circuit depicted in Figure 68.308(b) and during network control signaling. For message registration in the ground return mode, a termination equivalent to Figure 68.308(c) is required, and metallic voltage limitations do not apply. LADC registered terminal equipment must comply with the metallic voltage limitations when connected to the circuits of Figure 68.3(k) and must comply with the longitudinal limitations when connected to the circuits of Figure 68.308(b), as indicated.

(2) All registered terminal equipment and registered protective circuitry must comply with the limitations in the off-hook state over the range of loop currents that would flow with the equipment to an appropriate simulator circuit.

(3) Registered terminal equipment and registered protective circuitry with provision for through-transmission from other equipments shall comply with the limitations with a 1000 Hz tone applied during normal operation. Registered protective circuitry for data shall also comply with the tone level 10 dB higher than that expected during normal operation.

(4) Voice terminal equipment containing electroacoustic transducers for live voice input, including recording devices, shall comply with the limitations with a 1000 Hz acoustic signal applied to the electroacoustic transducers that results in a power delivered into a 600 ohm load impedance of −13 dB with respect to one milliwatt for the 2-wire and 4-wire lossless interfaces and −19 dB with respect to one milliwatt for the 4-wire CTS interface.

(5) Except during the transmission of ringing (§ 68.306(d)) and Dual Tone Multifrequency (DTMF) signals, LADC registered terminal equipment shall comply with all requirements in all operating states and with loop current which may be drawn for such purposes as loop back signaling. The requirements in § 68.308(f) except in paragraphs (1)(i) and (1)(ii) also apply during the application of ringing. The requirement in § 68.308(d)(2) and the requirements in § 68.308(f) (1)(i) and (1)(ii) apply during ringing for frequencies above 300 Hz and with the maximum voltage limits raised by 10 dB. DTMF signals which are used for the transmission of alphanumeric information and which comply with the requirements in § 68.308(f)(1)((i) and in § 68.308(f) (2) or (3) as applicable, shall be deemed to comply with the requirements in § 68.308(f)(1)(ii) provided that, for automatically originated DTMF signals, the duty cycle is less than 50 percent.

(6) LADC registered terminal equipment shall comply with all applicable requirements, except those specified in § 68.308(f) (1)(i) and (1)(ii), during the transmission of each possible data signal sequence of any length. For compliance with § 68.308(f)(3)(i), the limitation applies to the rms voltage averaged as follows:

(i) For digital signals, baseband or modulated on a carrier, for which there are defined signal element intervals, the rms voltage is averaged over each such interval. Where multiple carriers are involved, the voltage is the power sum of the rms voltages for the signal element intervals for each carrier.

(ii) For baseband analog signals, the rms voltage is averaged over each period (cycle) of the highest frequency of the signal (3 dB point on the spectrum). For analog signals which are modulated on a carrier (whether or not the carrier is suppressed), it is averaged over each period (cycle) of the carrier. Where multiple carriers are involved, the voltage is the power sum of the rms voltage of each carrier.

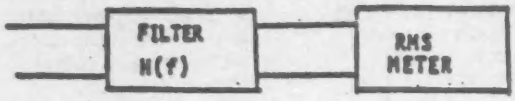
(iii) For signals other than the types defined in paragraphs (g)(6) (i) and (ii) of this section, the peak amplitude of the signal must not exceed +1 dBV.

(7) Equipment shall comply with the requirements in § 68.308(f)(1) (i) and (ii) during any data sequence which may be transmitted during normal use with a probability greater than 0.001. If the sequences transmitted by an equipment are application dependent, the user instruction material shall include a statement of any limitations assumed in demonstrating compliance of the equipment.

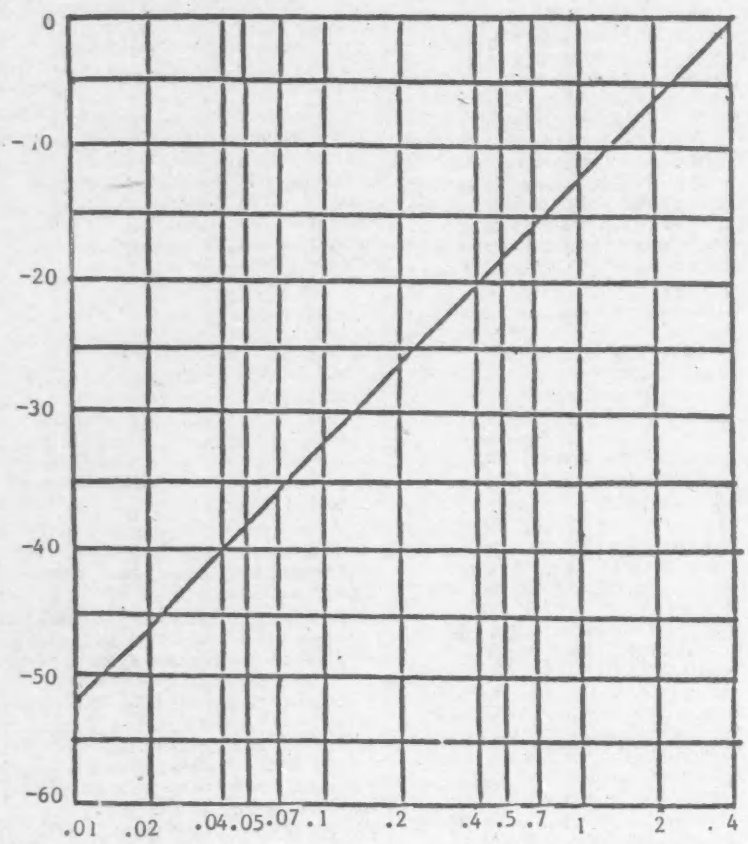
(8) In addition to the conditions specified in (5) above, LADC registered terminal equipment which operates in one or more modes as a receiver shall comply with requirements in § 68.308(f)(3) with a tone at all frequencies in the range of potential received signals and at the maximum power which may be received.

* * * * *

BILLING CODE 6712-01-M



$H(f) = -12 - 20 \log_{10} f)$dB

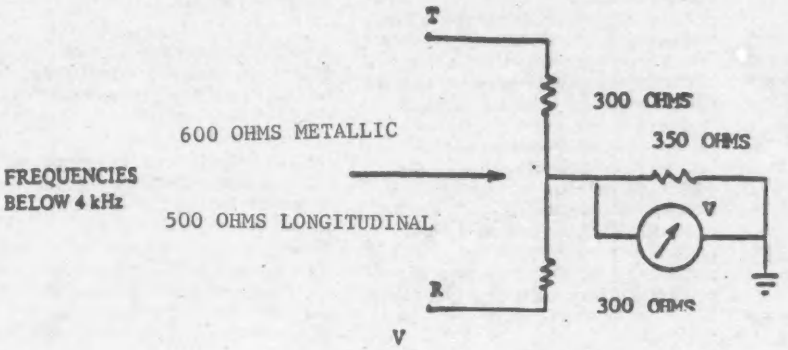


Frequency (f) in kHz

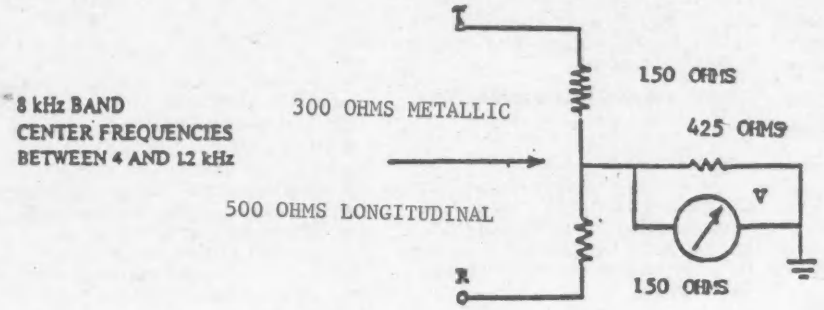
WEIGHTING FUNCTION RESPONSE

Fig. 68.308(a)

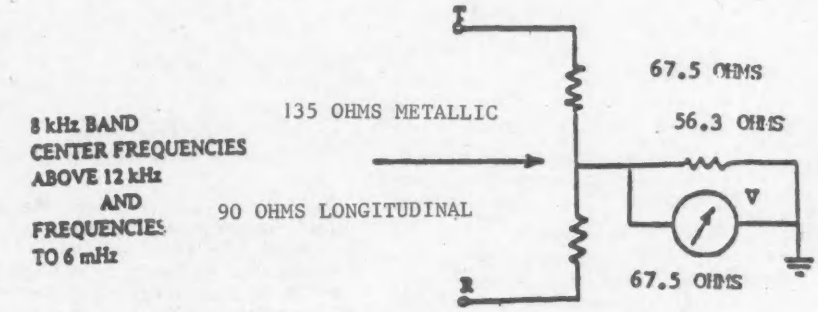
RESISTIVE TERMINATIONS
METALLIC RETURN
(MR SIMULATOR MODE 1)



Longitudinal (db) = V(dB) + 3.1 dB



VLongitudinal (dB) = V(db) + 1.4 dB



V Longitudinal (dB) = V(dB) + 4 dB

FIGURE 68.308(b)

BILLING CODE 6712-01-C

11. In § 68.310 paragaphs (b), (c), (e), and (i) are revised to read as follows:

§ 68.310 Longitudinal Balance Limitations.

* * * * *

(b) *Registered One-Port Terminal Equipment for 2-Wire Non-data Applications with Loop Start, Ringdown, Inband Signaling or Voiceband Metallic Channels.* The one-port shall be driven from a 600-ohm metallic source having a 500-ohm longtitudinal impedance.

(c) *Registered One-Port Terminal Equipment for 2-Wire Data Applications with Loop Start, Ringdown, Inband Signaling or Voiceband Metallic Channels.* The one-port shall be driven from a 600-ohm metallic source having a 500-ohm longitudinal impedance.

* * * * *

(e) *Registered Protective Circuitry for 2-Wire Applications with Loop Start, Ringdown, Inband Signaling or Voiceband Metallic Channels.* These criteria shall be met with either terminal of the interface to other equipment connected to earth ground. The interface to other equipment shall be terminated in an impedance which will be reflected to the telephone connection as 600-ohms in the off-hook state of the registered protective circuit, and the interface should not be terminated in the on-hook state. Figure 68.310(e) shows the interface of the protective circuitry being tested and the required arrangement at the interface to other equipment.

* * * * *

(i) *Registered Terminal Equipment and Registered Protective Circuitry for 4-Wire Network Ports.* The pair under test shall be driven from a 600-ohm metallic source having a 500-ohm longitudinal impedance. The pair not under test shall be terminated in a metallic impedance of 500-ohms. Other conditions are as follows:

(1) Registered Protective Circuitry for Loop Start, Ground Start, Reverse, Battery, Ringdown, Inband Signaling or Voiceband Metallic Channel Applications. These criteria shall be met with either terminal of the interface to other equipment connected to earth ground. The interface to other equipment shall be terminated in an impedance that will result in 600-ohms at each of the transmit and receive parts of the 4-wire telephone connection in the off-hook state of the registered protective circuit, and the interface should not be terminated in the on-hook state. Figure 68.130(j) shows the interface of the protective circuitry being tested and the required arrangement at the interface to other equipment.

(2) Registered Multiport Equipment for Loop Start, Ground Start, and Reverse Battery, Ringdown, Inband Signaling, or Voiceband Metallic Channel Applications. These criteria shall be satisfied for all network ports when the ports are terminated as defined below, and when interface connections other than network ports are terminated in circuits appropriate to the interface. The criteria shall also be satisfied for all values of dc loop current that the registered equipment is capable of drawing through each port when the port is connected to the appropriate 4-wire loop simulator circuit, Figure 68.3(c) or 68.3(d). The terminations for both pairs of all network ports not under test shall have a metallic impedance of 600-ohms and a longitudinal impedance of 500-ohms. Figures 68.310(g) shows this termination.

* * * * *

12. Section 68.312 is amended to revise paragraphs (b)(1)(i), (d)(1)(i), add Paragraphs (j) and (k), and revise the number "52.5" in the heading for the third column in table 1 to read "56.5" volts" and adding a new entry "Ringing Type Q" as follows:

§ 68.312 On-hook Impedance limitations.

* * * * *

(b) * * *

(1) * * *

(i) The dc resistance between tip and ring conductors, and between each of the tip and ring conductors and earth ground, shall be greater than 5 megohms for all dc voltages up to and including 100 volts.

* * * * *

(d) * * *

(1) * * *

(i) 25 megohms divided by the minimum measured on-hook dc resistance for all dc voltages up to and including 100 volts.

* * * * *

(j) *Limitations on Individual Equipment Ports with Ringdown or Inband Signaling or Voiceband Metallic Channels for Connection to Voiceband Private Line Interfaces.*

(1) Registered terminal equipment and registered protective circuitry with 2-wire ports for ringdown, inband signaling or voiceband metallic channels shall provide a dc resistance between tip and ring conductors and between each of the tip and ring conductors and earth ground greater than 30 kilohms for all dc voltages up to and including 200 volts.

(2) Registered terminal equipment and registered protective circuitry with 4-wire ports for ringdown, inband signaling or voiceband metallic channels shall provide a dc resistance between each of the tip, ring, tip 1 and ring 1 conductors and earth ground greater than 30 kilohms for all dc voltages up to and including 200 volts.

(k) Registered terminal equipment and registered protective circuitry shall not by design leave the on-hook state by operations performed directly on tip and ring leads for any other purpose than a request for service or answer of an incoming call. Make-busy indications shall be transmitted by the use of make-busy leads only as defined in § 68.3 and § 68.200 (j)(1).

TABLE I

Ringing type	Range of compatible ringing frequencies (Hz)	Simulated ringing voltage superimposed on 56.5 volts dc	Impedance limitation (Ohms)
A * * *			
*	*	*	*
P * * *			
Q	20±3	40 to 130 volts rms	1400

Note: * * *

13. Section 68.314 is amended to revise paragraphs (a) introductory text, (b) introductory text and (d) as follows:

§ 68.314 Billing Protection.

(a) *Call duration requirements on data equipment connected to the Public Switched Network, or to Tie Trunks, or to Private Lines that access the Public Switched Network.* Registered data terminal equipment and registered protective circuitry shall comply with the following requirements when answering an incoming call, except in off-hook states in which the signals are transmitted and/or received by electroacoustic transducers only: * * *

* * * * *

(b) *Voice and data equipment on-hook signal requirements for equipment connected to the Public Switched Network, or to Tie Trunks, or to Private Lines that access the Public Switched Network.* Registered protective circuitry and registered terminal equipment shall comply with the following: * * *

* * * * *

(d) *Signaling interface requirements for the terminal equipment connected to the Public Switched Network or Private*

Lines identified in subsections 68.2(a)(2) and (3). Registered terminal equipment and registered protective circuitry shall not deliver signals into a 2-wire loop simulator circuit or the transmit and receive pairs of a 4-wire loop simulator circuit or a 600-ohm termination (where appropriate) from sources internal to the registered equipment or circuitry, with energy in the 2450 to 2750 Hz band unless an equal amount of energy is present in the 800 to 2450 Hertz band.

* * * * *

14. Section 68.318 is amended to add a paragraph (c) as follows:

§ 68.318 Additional Limitations.

* * * * *

(c) Registered terminal equipment connecting to the public switched network.

(1) Limitation on automatic dialing. Automatic dialing to a particular number must cease after 15 successive attempts. This rule does not apply to manually activated dialers which dial a number just once following each activation.

16. Section 68.502 is amended as follows:

A. In the introductory paragraph, by adding the entry for "MB/MB1", just after the entry for "A/A1".

B. By revising the entry "Typical usage", in paragraph (a)(1), by revising paragraph (a)(3), and by revising the entry "Typical usage", in paragraph (d)(1), and by revising paragraph (d)(2) to read as follows:

§ 68.502 Configurations.

* * * * *

T/R—* * *

A/A1— * * *

MB/MB1—Connections to leads implementing a make-busy feature where required. The MB lead is shorted by the terminal equipment to the MB1 lead when the corresponding telephone line is to be placed in an unavailable, or artificially busy condition.

Bridged—* * *

* * * * *

(a) * * *

(1) * * *

Electrical network connection: * * *

Universal service order code (USOC): * * *

Mechanical arrangement: * * *

Typical Usage: Single Line non-key telephone, ancillary devices, PBXs and key telephone systems.

* * * * *

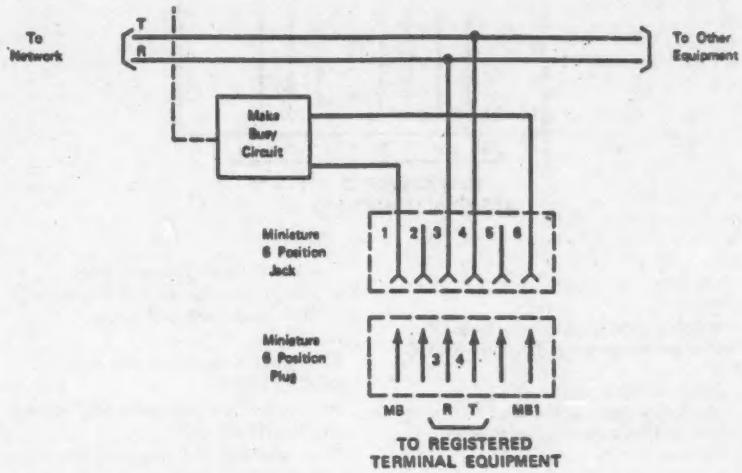
(3) Bridged T/R with make-busy arrangement; 6-position jack.

Electrical network connection: Single-line bridged tip and ring only with MB/MB1 leads. Conductors 2 and 5 are reserved for telephone company use.

Universal service order code (USOC): RJ18W for portable wall-mounted equipment—RJ18C for all others.

Mechanical arrangement: Miniature 6-position jack.

Typical usage: Single-line non-key telephone and ancillary devices connected directly to central office lines, where a make-busy requirement is needed.



* * * * *

(b) * * *

* * * * *

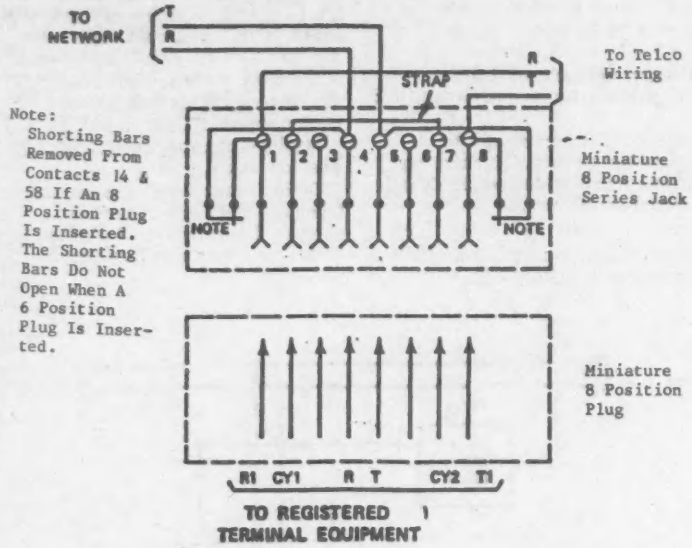
(3) Series single-line tip and ring ahead of all station equipment; 8-position series jack equipped with continuity circuit.

Electrical network connection: Series tip and ring ahead of all station equipment with continuity circuit. Conductors 3 and 6 are reserved for telephone company use.

Universal service order code (USOC): RJ38X.

Mechanical arrangement: Miniature 8-position series jack.

Typical usage: Alarm reporting devices.



* * * * *

(d) * * *

(1) * * *

Electrical network connection: * * *

Universal service order code (USOC): * * *

Mechanical arrangement: * * *

Typical usage: Traffic date recording systems, PBX's and key telephone systems.

* * * * *

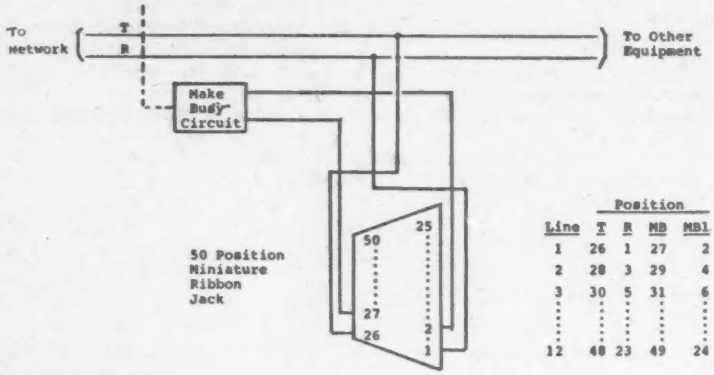
(2) Bridged multiple-line 50-position T/R with make-busy arrangement.

Electrical network connection: Multiple line bridge tip and ring with MB/MB1 leads for make-busy indication.

Universal service ordering code (USOC): RJ2MB.

Mechanical arrangement: 50-position miniature ribbon jack.

Typical usage: 2–12 non-key telephone and ancillary devices connected directly to central office lines where a make-busy requirement is needed.



	Position			
Line	T	R	MB	MB1
1	26	1	27	2
2	28	3	29	4
3	30	5	31	6
⋮	⋮	⋮	⋮	⋮
12	48	23	49	24

* * * * *

[FR Doc. 86–384 Filed 1–8–86; 8:45 am]

BILLING CODE 6712-01-M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Determination of Threatened Status for Coryphantha Robbinsorum

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Final rule.

SUMMARY: The Service determines threatened status for a plant, *Coryphantha robbinsorum* (Earle) A.D. Zimmerman (Cochise pincushion cactus). Populations of this plant are known to occur on State and private lands in Cochise County, Arizona. A population in adjacent Sonora, Mexico, is also reported. The U.S. populations are threatened with habitat destruction from grazing, exploration and potential drilling for oil, and over-collection. This proposal implements the protection provided by the Endangered Species Act of 1973, as amended.

DATE: The effective date of this rule is February 10, 1986.

ADDRESSES: The complete file for this rule is available for inspection, by appointment, during normal business hours, at the Service's Regional Office of Endangered Species, 500 Gold Avenue, S.W., Room 4000, Albuquerque, New Mexico.

FOR FURTHER INFORMATION CONTACT: Peggy Olwell, Botanist, Region 2, Office of Endangered Species, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766–3972 or FTS 474–3972).

SUPPLEMENTARY INFORMATION:

Background

Coryphantha robbinsorum was first collected by James A., James P., and John D. Robbins in 1975. The species was described by W.H. Earle (1976) as *Cochiseia robbinsorum*. Hunt (1978) placed the taxon in *Escobaria*. A.D. Zimmerman made the combination *Coryphantha robbinsorum* in 1978.

Coryphantha robbinsorum is a small, unbranched cactus. The tubercles are tightly packed in 8 and 13 spirals in mature plants (5 and 8 spirals in smaller plants). The areoles are circular to broadly oval and filled with copious white hairs. A deep furrow runs on the upper surface of the tubercle. The radial

spines number 11 to 17. Juvenile plants have 10 equal-length spines that are densely pubescent. Central spines are usually lacking. The bell-shaped flowers are pale yellow-green with a slight bronze cast. Anthers are yellow; the stigma lobes and style are green. Fruits are orange-red when ripe, but quickly turn dull red; seeds are black. Flowering occurs in March and April; fruit ripens in July and August (Zimmerman, 1978).

Historically, *C. robbinsorum* is known to occur in Cochise County, Arizona. There is also a reported population in adjacent Sonora, Mexico (Lopresti, 1984). The populations in Cochise County, Arizona average about one hectare (2.47 acres) each and are found on several isolated hills. Within an area of 10 to 16 square kilometers (4 to 6 square miles), there are roughly 40 hectares (100 acres) occupied by the plants. All of the known populations in Arizona are on a privately owned ranch and Arizona State lands. Plants are locally common over about half the range, and scattered to rare over the remainder. The population in Mexico has been reported by reliable sources, but has not been further studied.

Coryphantha robbinsorum occurs in the Semidesert Grassland (Brown and Lowe, 1980) on limestone hills at an elevation of 1,280 meters (4,198 feet). Dominant associated species are sandpaper bush (*Mortonia scabrella*), ocotillo (*Fouquieria splendens*), desert spoon (*Dasylirion wheeleri*), snakeweed (*Gutierrezia microcephala*), Palmer agave (*Agave palmeri*), amole (*Agave schottii*), and prickly pear (*Opuntia phaeacantha*) (Phillips and Brian, 1982).

Federal action involving this species began when *C. robbinsorum* was included as a category 2 species in a list of plants under review for threatened and endangered classification in the December 15, 1980, **Federal Register** (45 FR 82480). Category 2 includes taxa for which the Service has insufficient biological information upon which to make a determination as to the appropriateness of proposing the species as endangered or threatened. A status report was completed in 1982, and *C. robbinsorum* was included as a category 1 species in the supplement to the 1980 notice, published in the November 28, 1983, **Federal Register** (48 FR 53648). Category 1 includes taxa for which the Service presently has sufficient biological information to support the appropriateness of their being proposed for listing as endangered or threatened.

The Endangered Species Act Amendments of 1982 required that all petitions pending as of October 13, 1982, be treated as having been newly submitted on that date. The species covered by the December 15, 1980, notice of review were considered to be petitioned, and the deadline for a finding on those species, including *C. robbinsorum*, was October 13, 1983. On October 13, 1983, and again on October 12, 1984, the petition finding was made that listing *C. robbinsorum* was warranted but precluded by other pending listing actions, in accordance with section 4(b)(3)(B)(iii) of the Act. Such a finding requires a recycling of the petition, pursuant to section 4(b)(3)(C)(i) of the Act. A proposed rule published March 6, 1985 (50 FR 9083), constituted the next finding that the petitioned action was warranted in accordance with section 4(b)(3)(B)(ii) of the Act.

Summary of Comments and Recommendations

In the March 6, 1985, proposed rule (50 FR 9083) and associated notifications, all interested parties were requested to submit factual reports or information that might contribute to the development of a final rule. Appropriate State agencies, county governments, Federal agencies, scientific organizations, and other interested parties were contacted and requested to comment. A newspaper notice that invited general public comment was published in Douglas, Arizona in *The Daily Dispatch* on Monday, April 1, 1985. Five comments were received and are discussed below. No public hearing was requested or held.

The Washington, DC, Office of the Bureau of Land Management (BLM) raised no objection to the listing and commented that the species probably does not occur on BLM lands, and, therefore, that the listing would probably not affect that agency's activities. The Arizona State Office of the BLM commented that *C. robbinsorum* is a narrow endemic, and, as a recently described species, could be subject to heavy collection pressure. The latter office also stated that all of the habitat is on an active cattle ranch and that increased grazing could result in habitat degradation. The Service agrees and has included this information in the final rule.

John D. Robbins, the discoverer of *C. robbinsorum*, commented that the date of discovery was incorrect in the proposed rule. The service has incorporated the correct date in the final rule. He also strongly supported the listing of *C. robbinsorum* as threatened and indicated that collectors have urged him to provide locality data.

A local cactus expert commented that *C. robbinsorum* is highly restricted in its range and that a colleague had observed the plant in Sonora, Mexico. He also stated that collection could be a severe problem due to the restricted habitat of the plant, and he supported listing. He suggested that cattle grazing would not cause substantive impacts to the habitat of *C. robbinsorum*, because grazing conditions are better in surrounding areas. He mentioned limestone quarrying as a potential threat to the species. He also discussed the taxonomy of the genus and suggested that the best generic name is *Escobaria*. The Service, however, has decided to use scientific names based on the most comprehensive scientific treatment of the cactus family for the United States: L. Benson, *The Cacti of the United States and Canada*, Stanford University Press, 1982. This choice was made to facilitate communication among those concerned with the conservation of cacti; it does not preclude other scientific opinions. The cactus expert also reported that propagation of the plant has been successful and that seeds and plants should be widely available in the trade in the near future.

The Arizona Commission of Agriculture and Horticulture (ACAH) informed the Service that *C. robbinsorum* is protected under the Arizona Native Plant Law (ANPL) and that collecting permits for this species are not being issued at this time because of low population numbers. The Service agrees that permits should not be issued for this species and commends the ACAH on this action. This new information has been incorporated into the final rule. The ACAH also suggested that fencing of the habitat, in agreement with the State and private landowners, would protect the plants from grazing and vehicle traffic. In addition, the ACAH stated its opinion that collectors will collect this rare species regardless of the legal protection. The Service is aware that there are some people who will break laws; however, the laws still have value and merit because there are other people who will abide by them, thus protecting this and other threatened and endangered species. The Service trusts that ACAH will make a reasonable effort to use its authority under ANPL to protect this species on State and private lands.

Summary of Factors Affecting the Species

After a thorough review and consideration of all information available, the Service has determined that *C. robbinsorum* should be classified as a threatened species. Procedures found at section 4(a)(1) of the Endangered Species Act (16 U.S.C. 1531 *et seq.*) and regulations promulgated to

implement the listing provisions of the Act (codified at 50 CFR Part 424) were followed. A species may be determined to be an endangered or threatened species due to one or more of the five factors described in section 4(a)(1) of the Act. These factors and their application to *Coryphantha robbinsorum* (Earle) A.D. Zimmerman (Cochise pincushion cactus) are as follows:

A. *The present or threatened destruction, modification, or curtailment of its habitat or range.* Threats to the survival of *C. robbinsorum* include habitat destruction due to livestock grazing leading to trail formation, soil disturbance, erosion channels, and direct destruction of plants by trampling. One population studied by Phillips and Brian (1982) was immediately adjacent to a livestock water source; livestock trails leading to the tank and service roads were evident in topographically less rugged parts of the habitat. All of the known range in Arizona is on an active cattle ranch, including private land and State land leased for grazing. While overgrazing is not a serious problem, and the owners of the ranch are conservation-oriented and sympathetic to preservation of the cactus (Zimmerman, pers. comm., February 27, 1984), a change in grazing practices or ranch ownership could lead to rapid deterioration of present conditions.

A source of potentially serious concern is exploration for oil in the area. At least one deep well was drilled around 1976, and the access road passed through a *C. robbinsorum* population. Although no oil was found, additional exploration continues. The present ranch owners do not own the mineral rights to the area (Zimmerman, pers. comm., February 27, 1984).

B. *Overutilization for commercial, recreational, scientific, or educational purposes. Coryphantha robbinsorum* is very desirable cactus for private and commercial collectors because of its small size, beauty, and recent recognition. Steven Brack, Belen, New Mexico (pers. comm., January 19, 1984), noted its vulnerability to any stress, and stated that collection is the main threat to the species. He further stated that confidentiality of the location is the key factor in its protection. Zimmerman (pers. Comm., February 27, 1984) noted that more than half of the total population is on less than 4 percent of the total habitat, some 40 hectares (100 acres). Because individuals of this species are so concentrated, they are potentially very vulnerable to commercial cactus exploitation. Density of plants on the remaining 96 percent of the potential habitat is very low. Theoretically, collectors could reduce the plants to 5 to 10 percent of their present numbers if the proper habitat were thoroughly searched. Once reduced to widely scattered individuals in marginal habitat, the species might be unable to recover and would be vulnerable to extinction from natural events.

C. *Disease or predation.* No evidence of damage or death of plants from insects, pathogens, rodents, or other animals has been noted. Cattle do not intentionally graze these plants, but inadvertent trampling and habitat damage by range cattle may be a threat (Phillips and Brian, 1982).

D. *The inadequacy of existing regulatory mechanisms.* The Arizona Native Plant Law (A.R.S. Chap. 7, Art. 1, Sec. 3–901 C.I.) includes all members of the cactus family on its list of protected plants. These may be collected only with a State permit and permission of the landowner. *Coryphantha robbinsorum* is not included in the more restrictive prohibited list, which allows collection only for scientific or educational purposes under permit (Sec. 3–901 B). However, permits are not being issued by the State at this time for *C. robbinsorum* because of low population numbers (Robert Countryman, Arizona Commission of Agriculture and Horticulture, pers. comm., 1985). The Arizona Native Plant Law provides no protection against habitat loss or incidental taking or destruction, which are the major risks to the species.

E. *Other natural or manmade factors affecting its continued existence. Coryphantha robbinsorum* has a much lower reproductive potential than most other cacti (Zimmerman, pers, comm., February 27, 1984), with an estimated average production of 3 fruits, with 20 seeds each, per plant per year (Brack, 1984). According to Zimmerman, absence of these cacti from nearly half the isolated patches of apparently suitable habitat may be the result of natural local extinctions. A delicate balance between local extinction and recolonization in small "islands" of suitable habitat may be a natural feature of the biology of the species.

If such a balance exists, any reserve intended to provide for the survival of this species would have to encompass several adjacent patches of suitable habitat to allow for local extinctions and recolonization.

Range fires and competition with dense grasses could become threats should grazing be eliminated entirely (Zimmerman, pers. comm., February 27, 1984). The low estimated population and restriction to a specific habitat type within a very restricted geographic range would intensify the effects of any adverse impacts of the species or its habitat (Phillips and Brian, 1982).

The Service has carefully assessed the best scientific information available regarding the past, present, and future threats faced by this species in determining to make the rule final. Based on this evaluation, the preferred action is to list *C. robbinsorum* as threatened without critical habitat. Threatened status is appropriate because the population, while extremely limited in distribution and facing serious potential threats, has a sufficient number of plants to maintain itself if not heavily affected by collection. The threats are mitigated by the remote, unpublicized location and the concern of the present landowners for preservation of the cactus. The reasons for not designating critical habitat are discussed below.

Critical Habitat

Section 4(a)(3) of the Act, as amended, requires that to the maximum extent prudent and determinable, the Secretary designate critical habitat at the time a species is determined to be endangered or threatened. The Service finds that designation of critical habitat is not prudent for *C. robbinsorum* at this time, because its restricted distribution, accessibility, and attractiveness to cactus collectors make it vulnerable to threats from collection. The cactus may be sought as a curiosity by collectors of rare cacti, if critical habitat descriptions and maps are published in the **Federal Register.** Such publication would call attention to this species, make specimens easy to locate, and increase vulnerability to taking.

Available Conservation Measures

Conservation measures provided to species listed as endangered or threatened under the Endangered Species Act include recognition, recovery actions, requirements for Federal protection, and prohibitions against certain practices. Recognition through listing encourages and results in conservation actions by Federal, State, and private agencies, groups, and individuals. The Endangered Species Act provides for possible land acquisition and cooperation with the States, and requires that recovery actions be carried out for all listed species. Such actions are initiated by the Service following listing. The protection required of Federal agencies and taking

prohibitions are discussed, in part, below.

Section 7(a) of the Act, as amended, requires Federal agencies to evaluate their actions with respect to any species that is proposed or listed as endangered or threatened and with respect to its critical habitat. Regulations implementing this interagency cooperation provision of the Act are codified at 50 CFR Part 402, and are now under revision (see proposal at 48 FR 29990; June 29, 1983). Section 7(a)(2) requires Federal agencies to ensure that activities they authorize, fund, or carry out are not likely to jeopardize the continued existence of a listed species or to destroy or adversely modify its critical habitat. If a Federal action may affect a listed species or its critical habitat, the responsible Federal agency must enter into formal consultation with the Service. There are no known Federal actions that may affect *C. robbinsorum*, which occurs only on private and State lands.

The Act and its implementing regulations found at 50 CFR 17.71 and 17.72 set forth a series of general trade prohibitions and exceptions that apply to all threatened plant species. With respect to *C. robbinsorum*, all trade prohibitions of section 9(a)(2) of the Act, implemented by 50 CFR 17.71, apply. These prohibitions, in part, make it illegal for any person subject to the jurisdiction of the United States to import or export, transport in interstate or foreign commerce in the course of a commercial activity, or sell or offer for sale this species in interstate or foreign commerce. Seeds from cultivated specimens of threatened plant species are exempt from these prohibitions provided that a statement of "cultivated origin" appears on their containers. Certain exceptions can apply to agents of the Service and State conservation agencies. The Act and 50 CFR Section 17.72 also provide for the issuance of permits to carry out otherwise prohibited activities involving threatened species under certain circumstances. It is anticipated that few permits would ever be issued since the species is not common in cultivation or in the wild.

Section 9(a)(2)(B) of the Act, as amended in 1982, prohibits the removal and reduction to possession of endangered plant species from areas under Federal jurisdiction. Section 4(d) allows for the provision of such protection to threatened species through regulations. This protection will apply to *C. robbinsorum* when revised regulations are promulgated. Permits for exceptions to this prohibition are available under regulations to be codified at 50 CFR 17.62 (50 FR 39681, September 30, 1985). At present, no populations of *C. robbinsorum* are known to exist on Federal lands. Requests for copies of the regulations on plants and inquiries regarding them may be addressed to the Federal Wildlife Permit Office, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235–1903).

On July 1, 1975, *Coryphantha robbinsorum* was listed on Appendix II of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES). The effect of this listing is that a permit is required from the country of origin for export. Commercial trade is allowed but only after the country of export has determined that it will not harm the wild populations. International movement of this species is minimal. The Service will review this species to determine whether it should be listed on Appendix I of CITES.

National Environmental Policy Act

The Fish and Wildlife Service has determined that an Environmental Assessment, as defined by the National Environmental Policy Act of 1969, need not be prepared in connection with regulations adopted pursuant to section 4(a) of the Endangered Species Act of 1973, as amended. A notice outlining the Service's reasons for this determination was published in the **Federal Register** on October 25, 1983 (48 FR 49244).

Literature Cited

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Earle, W.H. 1976. *Cochiseia* Earle, genus novum. Saguaroland Bulletin 30:65–66.

Hunt, D.R. 1978. Amplification of the genus *Escobaria*. Cactus and Succulent Journal of Great Britain 40:13.

Lopresti, V. 1984. *Coryphantha robbinsorum* en Mexico. Cactus and Succulent Journal of Mexico 29:81.

Phillips, B.G., and N.J. Brian. 1982. Status report on *Coryphantha robbinsorum*. U.S. Fish and Wildlife Service, Office of Endangered Species, Albuquerque, N.M.

Zimmerman, A.D. 1978. The relationships of *Cochiseia robbinsorum* Earle. Cactus and Succulent Journal (U.S.) 50:293–297.

Authors

The authors of this final rule are Heather A. Stout and Peggy Olwell, Office of Endangered Species, U.S. Fish and Wildlife Service, P.O. Box 1306, Albuquerque, New Mexico 87103 (505/766–3972 or FTS 474–3972). The preliminary listing package was provided by Dr. Arthur Phillips, III, and Dr. Barbara G. Phillips, Museum of Northern Arizona, Flagstaff, Arizona. Status information was provided by Dr. Barbara G. Phillips and Ms. Nancy Brian, Museum of Northern Arizona, Route 4, Box 720, Flagstaff, Arizona 86001 (602/774–5211).

List of Subjects in 50 CFR Part 17

Endangered and threatened Wildlife, Fish, Marine mammals, Plants (agriculture).

Regulation Promulgation

PART 17—[AMENDED]

Accordingly, Part 17, Subchapter B of Chapter I, Title 50 of the Code of Federal Regulations, is amended as set forth below:

1. The authority citation for Part 17 continues to read as follows:

Authority: Pub. L. 93–205, 87 Stat. 884; Pub. L. 94–359, 90Stat. 911; Pub. L 95–632, 92 Stat. 3751; Pub. L. 96–159, 93 Stat. 1225; Pub. L. 97–304, 96 Stat. 1411 (16 U.S.C. 1531 *et seq.*).

2. Amend § 17.12 (h) by adding the following, in alphabetical order, under the family Cactaceae, to the List of Endangered and Threatened Plants:

§ 17.12 Endangered and threatened plants.

* * * * *

(h) * * *

Species		Historic range	Status	When listed	Critical habitat	Special rules
Scientific name	Common name					
Cactaceae—Cactus family:						
Coryphantha robbinsorum (=*Cochisia r.*, *Escobaria r.*).	Cochise pincushion cactus	U.S.A. (AZ), Mexico (Sonora).	T	214	NA	NA

Dated: December 26, 1985.

P. Daniel Smith,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-447 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-55-M

DEPARTMENT OF COMMERCE

National Oceanic and Atmospheric Administration

50 CFR Parts 611, 672 and 675

[Docket No. 51180-5180]

Foreign Fishing, Groundfish of the Gulf of Alaska, Groundfish of the Bering Sea and Aleutian Islands Area

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of 1986 interim initial specifications for groundfish and prohibited species catch limits for Pacific halibut.

SUMMARY: NOAA announces 1986 interim apportionments of optimum yield for each category of groundfish in the Gulf of Alaska, the prohibited species catch (PSC) limits for Pacific halibut in the Gulf of Alaska, and the interim specifications of the total allowable catch and interim apportionments for each category of groundfish in the Bering Sea and Aleutian Islands area. This action is necessary to provide groundfish harvest amounts in both the Gulf of Alaska and Bering Sea and Aleutian Islands area to domestic and foreign fishermen and to control the incidental catch of Pacific halibut in the Gulf of Alaska. It is intended as a conservation and management measure, providing for full utilization of the available groundfish resources off Alaska.

DATES: This notice is effective January 1, 1986. Comments on the immediate reapportionment of reserves are invited until January 15, 1986.

ADDRESSES: Comments may be mailed to Robert W. McVey, Director, Alaska Region, NMFS, P.O. Box 1668, Juneau, AK 99802, or delivered to Room 453, Federal Building, 709 West Ninth Street, Juneau, Alaska. Copies of the documents upon which these specifications are based, as well as the Council's December 1985 recommendations, may be obtained from the North Pacific Fishery Management Council. P.O. Box 103136, Anchorage, AK 99510; 907-274-4365.

FOR FURTHER INFORMATION CONTACT: Ronald J. Berg (Fishery Management Biologist, NMFS), 907-586-7230.

SUPPLEMENTARY INFORMATION:

Background

Optimum yields (OYs) for groundfish species in the Gulf of Alaska are established by the fishery management plan (FMP) for Groundfish of the Gulf of Alaska. This FMP was developed under the Magnuson Fishery Conservation and Management Act (Magnuson Act) and is implemented by regulations appearing at § 611.92 and Part 672. Total allowable catches (TACs) in the Bering Sea and Aleutian Islands area are established for groundfish species by the FMP for Groundfish of the Bering Sea and Aleutian Islands Area. This FMP was also developed under the Magnuson Act and is implemented by regulations appearing at § 611.93 and Part 675. In the Bering Sea and Aleutian Islands area, the sum of the TACs for all species must fall within the established OY range of 1.4 to 2.0 million metric tons (mt).

The OYs and TACs for each groundfish species are apportioned initially among domestic annual processing (DAP, joint venture processing (JVP), reserves, and total allowable level of foreign fishing (TALFF) under §§ 611.92 and 672.20(a)(2) for the Gulf of Alaska and under §§ 611.93 and 675.20 (a)(4) and (a)(5) for the Bering Sea and Aleutian Islands area. DAP amounts are intended for harvest by U.S. fishermen for delivery and sale to U.S. processors. JVP amounts are intended for joint ventures in which U.S. fishermen deliver their catches to foreign processors at sea.

The reserves for the Gulf of Alaska are 20 percent of the OY for each species category. These amounts are set aside for possible reapportionment to DAP and/or to JVP if the initial apportionments prove inadequate. The reserve for the Bering Sea and Aleutian Islands area is a single, nonspecific amount, equal to the sum of 15 percent of the TACs for each species category. This reserve may also be reapportioned to DAP and/or to JVP if needed. Reserve which are not reapportioned to DAP or JVP may be reapportioned to TALFF at any time during the year.

Under §§ 611.92, 611.93, 672.20(a)(2), and 675.20(a)(4), the initial amounts of DAP and JVP will be determined each year by the Director, Alaska Region, NMFS (Regional Director). The DAP and JVP amounts must equal the actual DAP and JVP of the previous year plus any additional amounts the Regional Director projects will be used by the U.S. fishing industry during the coming fishing year, not to exceed the OY. These additional amounts are to reflect as accurately as possible the projected increases in U.S. processing and harvesting capacity and the extent to which U.S. processing and harvesting will occur during the coming year. These projections are to be based upon the latest reliable information that is available, including industry surveys, market data, and stated intentions by representatives for the U.S. fishing industry.

Under § 672.20(e) (50 FR 43193, October 24, 1985), the prohibited species catch (PSC) limits for Pacific halibut that will be applied to DAP and JVP vessels are proposed and published in the **Federal Register** by the Secretary after consulting with the Council. The proposed PSC limits were discussed in the notice of preliminary initial specifications for groundfish (50 FR 47080, November 14, 1985). A notice of final PSC limits is to be published in the **Federal Register** as soon practicable after December 15. This requirement is met herein.

At its September 24-26, 1985, meeting, the North Pacific Fishery Management Council (Council) and its Scientific and Statistical Committee (SSC) and Advisory Panel (AP) reviewed information presented by the Council's Plan Teams concerning the status of stocks in both the Gulf of Alaska and the Bering Sea and Aleutian Islands area and recommendations by the Gulf of Alaska Plan Team for Pacific halibut PSCs. The Council then recommended to the Regional Director preliminary initial apportionments of OYs and Pacific halibut PSCs in the Gulf of Alaska and initial TACs and apportionments thereof

in the Bering Sea and Aleutian Islands area. The Secretary of Commerce (Secretary) published the Council's recommendations in the **Federal Register** (50 FR 47080, November 14, 1985) and invited public comments until December 16, 1985. No comments were received.

At its December 10–14, 1985, meeting, the Council again considered reports from the Plan Teams and its SSC and AP as well as testimony from the public. The Council recommended changes in the OYs for 1986 and apportionments of DAP, JVP, reserve, and TALFF, constrained by current OYs, in the Gulf of Alaska (§ 672.20, Table 1) and 1986 TACs and apportionments of DAP, JVP, and TALFF in the Bering Sea and Aleutian Islands area (§ 675.20, Table 1).

Gulf of Alaska

An amendment to the FMP is required to change the OYs under the current structure of the Gulf of Alaska FMP. The Secretary expects to amend the FMP under authority provided to him by the Magnuson Act, but for the interim must make apportionments of OY on the basis of current (1985) OYs. This Secretarial Amendment will also address by catch requirements for other species in the pollock and Pacific cod fisheries and may grant limited TALFF afforded by the revised OYs. U.S. fishermen will fully utilize current OYs for sablefish and Pacific ocean perch throughout the Gulf of Alaska and other rockfish in the Central Southeast Outside District of the Eastern area. All reserves of these species are being reapportioned, therefore, to DAP on January 1, 1986.

The Council intends to encourage an exploratory fishery for pollock outside of Shelikof Strait from January 15 to April 10, 1986. For this purpose 45,000 mt is transferred from the initial 61,000-mt reserve. Two subareas (inside and outside of Shelikof Strait) will be defined in a later action and the DAH apportioned between them.

Initial Prohibited Species Catch Limit for Pacific Halibut.

The Council system received substantial testimony concerning the amounts of Pacific halibut that had been proposed as PSC limits in the initial **Federal Register** notice. Those limits were based on incidental catch rates of Pacific halibut caught in directed on-bottom trawl fisheries for pollock (5 percent), flounder (5 percent), and Pacific cod (7 percent). These rates were multiplied by a wide range of possible 1986 catches of pollock, flounder, and Pacific cod. At the Council's December meeting, the Plan Team also received information from the industry on the proportions of pollock, flounder, and Pacific cod that are likely to be caught by bottom trawls while fishing in either DAP or JVP operations as shown.

PROPORTIONS OF SPECIES (PERCENT) CAUGHT WHILE TARGETING ON POLLOCK, FLOUNDERS, AND PACIFIC COD

Target species	Pollock	Flounder	Pacific cod
Pollock	90	5	5
Flounder	20	65	15
Pacific cod	20	10	70

The team considered new information about the Pacific halibut bycatch rates experienced in bottom trawl fisheries for the above species and reestimated a typical rate to be 3.8 percent. The International Pacific Halibut Commission (IPHC) recommended that the mortality inflicted on Pacific halibut as a result of Gulf of Alaska groundfish operations should not exceed 2,000 mt during 1986. The Plan Team reviewed estimated rates of Pacific halibut mortality caused by bottom trawling. These estimates, provided by the IPHC, are 50 percent in DAP operations and 100 percent in JVP operations. The significant difference between the two rates is due to the greater stress imposed on Pacific halibut over the longer distances a JVP trawler travels while dragging a codend to a foreign processing vessel compared to a DAP trawler, which retrieves its codend and brings the catch on board without moving far from the fishing site. Using this new information, the Plan Team presented results from a computer model that yielded estimate of Pacific halibut that would be caught, given the actual combination of pollock, flounders, and Pacific cod apportioned between DAP and JVP. By this estimate, 1,885 mt and 322 mt of Pacific halibut are expected to be caught in DAP and JVP bottom trawls in 1986. Actual mortality, given the difference between DAP and JVP mortality rates, is 942 mt and 322 mt, respectively. The Council, therefore, recommended to the Regional Director that Gulf-wide PSC limits of 1,885 mt and 322 mt be established for DAP and JVP operations for 1986.

If the Regional Director determines that the catch of Pacific halibut by U.S. vessels delivering groundfish to foreign or U.S. processors will reach a PSC limit, he will publish a notice in the **Federal Register** prohibiting fishing with trawl gear other than off-bottom trawl gear for the rest of the year by the vessels and in the area to which the PSC limit applies. He may, however, allow some or all of those vessels to continue to fish for groundfish using bottom trawl gear under specified conditions as described at § 672.20(e).

Bering Sea and Aleutian Islands Area

The Council adopted certain changes for the Bering Sea and Aleutians Islands management unit, which vary from the status quo. The two species that presently compose the turbot complex—Greenland turbot and arrowtooth flounder—have been separated; and, the status of stocks for pollock, Pacific cod, yellowfin sole, and other flatfish has changed from that described in the preliminary notice (50 FR 47080, November 14, 1985).

Under the FMP, the sum of the individual species TACs must fall within the OY range of 1.4 to 2.0 million mt. The Council, after reviewing the status of each of the species and species groups, recommended that the sum of the 1986 TACs be 2.0 million mt. The TAC for each species or species group is reduced by 15 percent, resulting in initial TACs which are apportioned to the DAP, JVP, and TALFF on January 1. The 15 percent reserved from each TAC contributes to a non-specific operational reserve, which may be reapportioned by the Regional Director at any time during the fishing year. For 1986, as in 1985, the operational reserve is 300,000 mt.

Initial Reapportionment of Reserve

The Council recommended that the Regional Director reapportion 21,980 mt of the operational reserve to the Pacific cod initial TALFF, thus increasing it from 10,426 to 32,406 mt, which will provide a directed foreign fishery for Pacific cod. The Council also recommended that the Regional Director reapportion sufficient amounts of the operational reserve to sablefish, POP, and rockfish TALFF in order to provide bycatch amounts in foreign target fisheries for pollock, Pacific cod, yellowfin sole, "other flatfish", and turbot. The Regional Director has also increased the initial TACs for Atka mackerel by 4,630 mt and squid by 20 mt to provide bycatch amounts in DAP, JVP, and TALFF fisheries. The Regional Director, therefore, is increasing the initial TACs by the following amounts: Sablefish (Bering Sea—254 mt; Aleutian Islands area—630 mt), Pacific ocean perch (Bering Sea—124 mt; Aleutian Islands area—1,070 mt) and rockfish

(Bering Sea—140 mt; Aleutian Islands area—920 mt). Thus, a total of 29,857 mt of the operational reserve has been reapportioned to individual species TACs, reducing the operational reserve to 270,143 mt, effective January 1, 1986.

Comments Requested on the Reserve Apportionments

Under §§ 672.20(c) and 675.20(b), the Secretary may apportion reserves on such dates as he determines appropriate. Under §§ 672.20(c), 675.20(b), 611.92(c), and 611.93(b), the Secretary must provide all interested persons an opportunity to comment on the proposed apportionments before they are made, unless he finds that good cause exists for not so doing. The Secretary finds that sufficient bycatches must be made available in time to allow the harvest of target catches. Comments are invited for 15 days after the effective date of this notice. Comments should be sent to the Regional Director at the above address.

Other Matters

This action is taken under §§ 611.92(c), 611.93(b), 672.20, and 675.20 and complies with Executive Order 12291.

List of Subjects

50 CFR Part 611

Fisheries, Foreign relations, Reporting and recordkeeping requirements.

50 CFR Parts 672 and 675

Fisheries, Reporting and recordkeeping requirements.

Dated: December 31, 1985.

Carmen J. Blondin,

Deputy Assistant Administration for Fisheries Resource Management, National Marine Fisheries Service.

PART 672—GROUNDFISH OF THE GULF OF ALASKA

PART 675—GROUNDFISH OF THE BERING SEA AND ALEUTIAN ISLANDS AREA

For the reasons stated in the preamble, 50 CFR Parts 672 and 675 are amended as follows:

1. The authority citation for Parts 672 and 675 continues to read as follows:

Authority: 16 U.S.C. 1801 et seq.

2. In § 672.20(a), Table 1 is revised to read as follows:

§ 672.20 Optimum yield.

(a) * * *

TABLE 1.—INITIAL (AS OF JANUARY 1, EACH YEAR) OPTIMUM YIELD (OY), DOMESTIC ANNUAL HARVEST (DAH), DOMESTIC ANNUAL PROCESSING (DAP), JOINT VENTURE PROCESSING (JVP), RESERVE, AND TOTAL ALLOWABLE LEVEL OF FOREIGN FISHING (TALFF), ALL IN METRIC TONS. OY=DAH+RESERVE+TALFF; DAH=DAP+JVP

Species	Species code	Area [1]	OY	DAH	DAP	JVP	Reserve	TALFF
Pollock	701	Western/Central	305,000	289,000	204,000	85,000	16,000	0
		Eastern	16,600	13,280	13,280	0	3,320	0
Total			321,600	302,280	217,280	85,000	19,320	0
Pacific cod	702	Western	16,560	13,248	10,727	2,521	3,312	0
		Central	33,540	26,832	23,873	2,959	6,708	0
		Eastern	9,900	7,920	7,920	0	1,980	0
Total			60,000	48,000	42,520	5,480	12,000	0
Flounders	129	Western	10,400	8,320	7,284	1,036	2,080	0
		Central	14,700	11,770	10,686	1,084	2,930	0
		Eastern	8,400	6,720	6,720	0	1,680	0
Total			33,500	26,810	24,690	2,120	6,690	0
Pacific ocean perch [2]	780	Western	1,302	1,302	1,302	0	0	0
		Central	3,906	3,906	3,906	0	0	0
		Eastern	875	875	875	0	0	0
Total			6,083	6,083	6,083	0	0	0
Sablefish	703	Western	1,670	1,670	1,670	0	0	0
		Central	3,060	3,060	3,060	0	0	0
		W. Yakutat	1,680	1,680	1,680	0	0	0
		E. Yakutat	850–1,135	850–1,135	850–1,135	0	0	0
		Southeast	470–14,35	470–1,435	470–1,435	0	0	0
Total			7,330–8,980	7,330–8,980	7,330–8,980	0	0	0
Atka mackerel	207	Western	4,678	3,752	10	3,742	926	0
		Central	500	400	370	30	100	0
		Eastern	100	80	80	0	20	0
Total			5,278	4,232	460	3,772	1,046	0
Other rockfish [3]	849	Gulf-Wide	4,400	4,400	4,400	0	0	0
		Central S.E. Outside	600	600	600	0	0	0
Total			5,000	5,000	5,000	0	0	0
Thornyhead	749	Gulf-Wide	3,750	3,000	1,500	1,500	750	0
Squid	509	Gulf-Wide	5,000	4,000	2,000	2,000	1,000	0
Other species [4]	490	Gulf-Wide	22,460	17,968	9,074	8,894	4,492	0

[1] See figure 1 of § 672.20 for description of regulatory areas and districts.
[2] The category "Pacific ocean perch" includes *Sebastes* species *S. alutus* (Pacific ocean perch), *S. polyspinus* (northern rockfish), *S. aleutianus* (rougheye rockfish), *S. borealis* (shortraker rockfish), and *S. zacentrus* (sharpchin rockfish).
[3] The category "other rockfish" includes all fish of the genus *Sebastes* except the category "Pacific ocean perch" as defined in footnote 2 above and *Sebastolobus* (thornyhead rockfish).
[4] The category "other species" includes sculpins, sharks, skates, eulachon, smelts, capelin, and octopus. The OY is equal to 5% of the OYs of the target species.

3. In § 675.20(a), Table 1 is revised to read as follows:

§ 675.20 General limitations.

(a) * * *

TABLE 1.—1986 INITIAL TOTAL ALLOWABLE CATCH (TAC), DOMESTIC ANNUAL PROCESSING (DAP), JOINT VENTURE PROCESSING (JVP), RESERVE, AND TOTAL ALLOWABLE LEVEL OF FOREIGN FISHING (TALFF), IN THE BERING SEA (BS) AND THE ALEUTIAN ISLANDS AREA (AI), OR BOTH, ALL IN METRIC TONS. TAC=0.15 TAC+DAP+JVP+TALFF; Initial TAC=0.85 TAC=DAP+JVP+TALFF

Species	Species code	Areas	TAC [1]	DAH	DAP	JVP	TALFF
Pollock	701	BS	1,200,000	831,755	141,775	690,000	188,245
		AI	100,000	28,843	18,039	10,804	56,157
Pacific ocean perch	780	BS	825	770	576	194	55
		AI	6,800	6,800	6,340	460	50
Rockfish	849	BS	825	791	648	143	50
		AI	5,800	5,800	5,791	9	50
Sablefish	703	BS	2,250	2,072	1,826	246	95
		AI	4,200	4,187	4,159	40	50
Pacific cod	702		229,000	184,224	133,394	50,830	32,406
Yellowfin sole	720		209,500	128,330	1,030	127,300	49,745
Greenland turbot	721		33,000	10,414	5,414	5,000	17,636
Arrowtooth flounder	118		20,000	3,472	1,805	1,667	13,528
Other flatfish	129		124,200	93,742	4,192	89,550	11,828
Atka mackerel			30,800	30,800	10	30,790	50
Squid			5,000	60	10	50	4,210
Other species			27,800	7,110	110	7,000	16,520

[1] Fifteen percent of the TAC, or 300,000 mt, is apportioned to the initial operational reserve; of this, 29,857 mt is apportioned to JVP and TALFF, effective January 1, 1986; the remaining reserve is 270,143 mt.

[FR Doc. 86-349 Filed 1-3-86; 4:10 pm]
BILLING CODE 3510-22-M

50 CFR Part 655

[Docket No. 40211-4050]

Atlantic Mackerel, Squid, and Butterfish Fisheries

AGENCY: National Marine Fisheries Service (NMFS), NOAA, Commerce.

ACTION: Notice of squid specifications increase.

SUMMARY: NOAA issues this notice increasing the annual squid specifications under the Fishery Management Plan for the Atlantic Mackerel, Squid, and Butterfish Fisheries (FMP). Regulations governing the squid fisheries require publication of any specification adjustments, with reasons for such adjustments. This action is intended to foster the FMP's goal of creating benefits for the United States fishing industry.

DATES: This notice is effective January 8, 1986. Comments are invited until January 23, 1986.

ADDRESSES: Send comments to Salvatore A. Testaverde, Northeast Regional Office, NMFS, 2 State Fish Pier, Gloucester, MA 01930-3097. Mark on the outside of the envelope, "Comments on Notice of Squid Specifications 1985-1986"

FOR FURTHER INFORMATION CONTACT: Salvatore A. Testaverde, 617-281-3600, ext. 273.

SUPPLEMENTARY INFORMATION: Section 655.21(b)(1)(v) of the implementing regulations states that initial optimum yield (IOY) squid specifications will be determined annually by the Director, Northeast Region, NMFS (Regional Director), after consultation with the Mid-Atlantic Fishery Management Council, under § 655.22 (a) and (b). Specifications were made for the squid, mackerel, and butterfish fisheries in March-June 1985. The FMP also provides that the Regional Director may increase the IOY for squid up to the allowable biological catch to add to the domestic annual harvest and total allowable level of foreign fishing (TALFF) specifications during the course of the fishing year. This action provides increased *Loligo* squid specifications to take effect immediately. The Regional Director has determined that adjustment to the Loligo IOY is necessary based on recommendations received from the Mid-Atlantic and New England Fishery Management Councils. Representatives of foreign vessels which fish in the Northeast Atlantic requested from both the Councils, at their December 1985 meetings, an additional *Loligo* TALFF allocation of 2,000 metric tons (mt). This proposed amount would bring the 1985-1986 fishing year, which ends March 31, 1986, total amount of *Loligo* current optimum yield to 30,225 mt, and the total amount of *Loligo* TALFF to 7,725 mt. The rationale offered was that the foreign interest had already purchased and intended to continue purchasing U.S.-processed *Loligo* to obtain favorable recommendations for allocations of TALFF. This would be consistent with the statement made in the **Federal Register** (50 FR 12032, March 27, 1985) of interim optimum yields, stating that the IOY for *Loligo* might be adjusted to allow for increased *Loligo* TALFF based on the approximate purchase ratio of "1 mt of processed *Loligo* to 2 mt of TALFF."

The Mid-Atlantic Council has recommended that TALFF in the amount of 2,000 mt be allocated to TALFF and that the required adjustment be made to the *Loligo* IOY to accommodate that adjustment. Only that amount will be released, however, that corresponds to purchases made since October 1, 1985, when all prior commitments were completed. Such an initial release would amount to 1,000 mt. In exchange for the amount requested, the foreign vessel owners, through their U.S. representative, would guarantee U.S. purchases totaling no less than 1,000 mt of *Loligo* squid to be completed by March 31, 1986. Squid and other species' bycatch specifications must also be adjusted, as specified in the FMP and regulations for squid at § 655.21(b)(1)(iv) (A) and (B) and (v); for Atlantic mackeral at § 655.21(b)(2)(i)(A); and for butterfish at § 655.21(b)(3)(iii). The following species' bycatch TALFF specifications will increase: *Illex*, 10 percent; Atlantic mackerel, 1 percent; and butterfish, 6 percent.

In accordance with § 655.22 (a) and (b), the Secretary of Commerce finds it necessary to apportion these additional amounts without affording a prior opportunity for public comment, in order to avoid a premature closure of the *Loligo* squid fishery which is already in progress based on prior allocations. Public comments are invited, however, for 15 days after the effective date of the apportionment. The Secretary will consider all timely comments in deciding whether to continue, modify, or cancel an apportionment that has previously been made and will publish responses to those comments in the **Federal Register** as soon as practicable.

The following table lists the adjustments to the *Loligo* squid and other species' bycatch specifications.

Proposed revised specifications for Fishing Year 1984-1985 showing maximum optimum yield (Max OY), allowable catch (AC), allowable

biological catch (ABC), initial optimum yield (IOY), domestic annual harvest (DAH), domestic annual processing (DAP), joint venture processing (JVP), Reserve, and total allowable level of foreign fishing (TALFF), all in metric tons (mt).

	Squid		Butterfish	Atlantic mackerel
	Loligo	Illex		
Max OY	44,000	30,000	[a]16,000	225,300
AC				225,300
ABC	44,000	30,000	[a]16,000	
IOY	28,225	19,700	12,025	
Proposed OY[b]	30,225	19,900	12,145	
DAH	22,500	16,000	11,000	123,200
DAP	20,500	11,500	11,000	13,000
JVP	2,000	4,500		100,000
Reserve	0	0	0	51,050
TALFF	[b]7,725	[b]3,900	[b]1,145	[b]51,070

[a] Up to the figure given.
[b] Includes the 2,000 mt *Loligo* and other species' bycatch increases to TALFF.

Other Matters

This action is taken under 50 CFR Part 655 and it complies with Executive Order 12291.

In view of the need to avoid disruption of foreign and domestic fisheries, the Agency has determined that delaying the effective date of this notice is impracticable, unnecessary, and contrary to the public interest.

List of Subjects in 50 CFR Part 655

Fisheries, Reporting and recordkeeping requirements.

(16 U.S.C. 1801 *et seq.*)

Dated: January 6, 1986.

Carmen J. Blondin,

Deputy Assistant Administrator for Fisheries Resource Management, National Marine Fisheries Service.

[FR Doc. 86-474 Filed 1-8-86; 8:45 am]

BILLING CODE 3510-22-M

Proposed Rules

Federal Register
Vol. 51, No. 6
Thursday, January 9, 1986

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.

DEPARTMENT OF AGRICULTURE

Federal Crop Insurance Corporation

7 CFR Part 443

[Docket No. 0040A]

Hybrid Seed Crop Insurance Regulations

AGENCY: Federal Crop Insurance Corporation, USDA.

ACTION: Proposed rule.

SUMMARY: The Federal Crop Insurance Corporation (FCIC) hereby proposes to revise and reissue the Hybrid Seed Crop Insurance Regulations (7 CFR Part 443), effective for the 1986 and succeeding crop years. The intended effect of this rule is to: (1) Require timely planting of the male seed; (2) limit the insured's share of an indemnity on crops transferred before harvest; (3) provide both a coverage reduction and a reduction in the amount of insurance when the acreage of the female seed is planted after the final planting date; (4) change to the dollar value per bushel of production for each type and variety to determine coverage; (5) remove the provision for determining production guarantees from the policy; (6) clarify when insurance by type and variety will attach; (7) shorten the length of time an insured has to give notice when claiming an indemnity; (8) change the method of computing indemnities for production; (9) change the method of computing indemnities when acreage, share, or practice is underreported; (10) add a clause to limit the total insurability of the crop; (11) add definitions for "Approved yield", "ASCS", "Inadequate germination", "Loss ratio", "Non-seed production", "Sample", and "Seed production"; and (12) redefine "County" to provide that land identified by an ASCS farm serial number and located outside the county will be included in the county. The authority for the promulgation of this rule is contained in the Federal Corp Insurance Act, as amended.

DATES: Written comments, data, and opinions on this proposed rule must be submitted not later than February 10, 1986, to be sure of consideration.

ADDRESS: Written comments on this proposed rule should be sent to the Office of the Manager, Federal Crop Insurance Corporation, Room 4096, South Building, U.S. Department of Agriculture, Washington, D.C., 20250.

FOR FURTHER INFORMATION CONTACT: Peter F. Cole, Secretary, Federal Crop Insurance Corporation, U.S. Department of Agriculture, Washington, D.C., 20250, telephone (202) 447-3325.

SUPPLEMENTARY INFORMATION: This action has been reviewed under USDA procedures established by Departmental Regulation No. 1512-1. This action constitutes a review as to the need, currency, clarity, and effectiveness of these regulations under those procedures. The sunset review date established for these regulations is October 1, 1990.

Merritt W. Sprague, Manager, FCIC, (1) has determined that this action is not a major rule as defined by Executive Order No. 12291 because it will not result in: (a) An annual effect on the economy of $100 million or more; (b) major increases in costs or prices for consumers, individual industries, federal, State, or local governments, or a geographical region; or (c) significant adverse effects on competition, employment, investment, productivity, innovation, or the ability of U.S.-based enterprises to compete with foreign-based enterprises in domestic or export markets; and (2) certifies that this action will not increase the federal paperwork burden for individuals, small businesses, and other persons.

This action is exempt from the provisions of the Regulatory Flexibility Act; therefore, no Regulatory Flexibility Analysis was prepared.

This program is listed in the Catalog of Federal Domestic Assistance under No. 10.450.

This program is not subject to the provisions of Executive Order 12372 which requires intergovernmental consultation with State and local officials. See the Notice related to 7 CFR Part 3015, Subpart V, published at 48 FR 29115, June 24, 1983.

This action is not expected to have any significant impact on the quality of the human environment, health, and safety. Therefore, neither an Environmental Assessment nor an Environmental Impact Statement is needed.

Other than minor changes in language and format, the principal changes in the Hybrid Seed policy are:

1. Section 1.b—Add a provision to require timely planting of the male seed before insuring against inadequate germination. This requirement will help assure adequate pollenation of the female plant.

2. Section 2.d—Add a clause to change the method of calculating the insured's share of an indemnity on crops transferred before harvest. This limits indemnities to the insurable interest at the time of loss.

3. Section 2.e.—Delete "coverage reduction" and add "reduction in the dollar amount of insurance" to provide both a coverage reduction and an amount of insurance.

4. Section 2.e.—Delete "average yield" and add "dollar value per bushel of production for each type and variety." This change will enable FCIC to determine the coverage for the producer.

5. Section 4.—Delete the production guarantee provisions from the section. This change will allow the dollar value to be used in determining the amount of insurance.

6. Section 7.—Clarify that insurance attaches for each type and variety when both the male plant seed and the female plant seed of that type and variety are planted in accordance with the production management practices of the seed company, provided that the female plant seed for the type and variety is planted not later than the final planting date shown in the actuarial documents. This change will clearly state when insurance by type and variety will attach.

7. Section 8.a.—Shorten from 30 days to 10 days the time an insured has to give notice of loss when claiming an indemnity. This change allows FCIC to determine indemnites in a more timely fashion.

8. Section 9.c.—Change the method of computing the indemnity because the production guarantee has been taken out of the policy. This change will allow the dollar amount obtained by multiplying seed production to count for each type and variety by the respective dollar value per bushel of production in determining the indemnity.

9. Section 9.d—When acres are underreported, the production from all acres will count against the reported acres in calculating indemnities. This change will reduce the amount of indemnities when acres are underreported.

10. Section 9.e.—Delete "production guarantee" and add "the dollar amount of insurance".

11. Section 9.j.—Add a clause to limit the total insurability of the crop. This change will allow FCIC to consider the fair market value of production on the unit before the loss to be limited to 1½ times the highest price election available.

12. Section 17.—Add definitions for the terms "Approved yield", "ASCS", "Inadequate germination", "Loss ratio", "Non-seed production", "Sample", and "Seed production".

Amend the "County" definition to clarify that land identified by an ASCS farm serial number and located outside the county will be included in the county.

List of Subjects in 7 CFR Part 443

Crop insurance, Hybrid seed.

Proposed Rule

Accordingly, pursuant to the authority contained in the Federal Crop Insurance Act, as amended (7 U.S.C. 1501 *et seq.*), the Federal Crop Insurance Corporation hereby proposes to revise and reissue the Hybrid Seed Crop Insurance Regulations (7 CFR Part 443), effective for the 1986 and succeeding corp years, to read as follows:

PART 443—HYBRID SEED CROP INSURANCE REGULATIONS

Subpart—Regulations for the 1986 and Succeeding Crop Years

Sec.

Authority: Secs. 506, 516, Pub. L. 75–430, 52 Stat. 73, 77 as amended (7 U.S.C. 1506, 1516).

Subpart—Regulations for the 1986 and Succeeding Crop Years

§ 443.1 Availability of hybrid seed crop insurance.

Insurance shall be offered under the provisions of this subpart on hybrid seed in counties within limits prescribed by and in accordance with the provisions of the Federal Crop Insurance Act, as amended. The counties shall be designated by the Manager of the Corporation from those approved by the Board of Directors of the Corporation.

§ 443.2 Premium rates, coverage levels, and amounts of insurance.

(a) The Manager shall establish premium rates, coverage levels, and amounts of insurance for hybrid seed which will be included in the actuarial table on file in the applicable service offices for the county and which may be changed from year to year.

(b) At the time the application for insurance is made, the applicant will elect an amount of insurance per acre and a coverage level from among those levels and amounts shown on the actuarial table for the crop year.

§ 443.3 OMB control numbers.

The OMB control numbers are contained in Subpart H of Part 400, Title 7 CFR.

§ 443.4 Creditors.

An interest of a person in an insured crop existed by virtue of a lien, mortgage, garnishment, levy, execution, bankruptcy, involuntary transfer or other similar interest shall not entitle the holder of the interest to any benefit under the contract.

§ 443.5 Good faith reliance on misrepresentation.

Notwithstanding any other provision of the Hybrid Seed Insurance contract, whenever: (a) An insured under a contract of crop insurance entered into under these regulations, as a result of misrepresentation or other erroneous action or advice by an agent or employee of the Corporation: (1) Is indebted to the Corporation for additional premiums; or (2) has suffered a loss to a crop which is not insured or for which the insured is not entitled to an indemnity because of failure to comply with the terms of the insurance contract, but which the insured believed to be insured, or believed the terms of the insurance contract to have been complied with or waived; and (b) the Board of Directors of the Corporation, or the Manager in cases involving not more than $100,000.00 finds that: (1) An agent or employee of the Corporation did in fact make such misrepresentation or take other erroneous action or give erroneous advice; (2) said insured relied thereon in good faith; and (3) to require the payment of the additional premiums or to deny such insured's entitlement to the indemnity would not be fair and equitable, such insured shall be granted relief the same as if otherwise entitled thereto. Requests for relief under this section must be submitted to the Corporation in writing.

§ 443.6 The contract.

The insurance contract shall become effective upon the acceptance by the Corporation of duly executed application for insurance on a form prescribed by the Corporation. The contract shall cover the hybrid seed corp as provided in the policy. The contract shall consist of the application, the policy, and the county actuarial table. Any changes made in the contract shall not affect its continuity from year to year. The forms referred to in the contract are available at the applicable service offices.

§ 443.7 The application and policy.

(a) Application for insurance on a form prescribed by the Corporation may be made by any person to cover such person's share in the hybrid seed crop as landlord, owner-operator, or tenant. The application shall be submitted to the Corporation at the service office on or before the applicable sales closing date on file in the service office.

(b) The Corporation may discontinue the acceptance of applications in any county upon its determination that the insurance risk is excessive, and also, for the same reason, may reject any individual application. The Manager of the Corporation is authorized in any crop year to extend the sales closing date for submitting applications in any county, by placing the extended date on file in the applicable service offices and publishing a notice in the **Federal Register** upon the Manager's determination that no adverse selectivity will result during the extended period. However, if adverse conditions should develop during such period, the Corporation will immediately discontinue the acceptance of applications.

(c) In accordance with the provisions governing changes in the contract contained in policies issued under FCIC regulations for the 1986 and succeeding crop years, a contract in the form provided for under this subpart will come into effect as a continuation of a hybrid seed insurance contract issued under such prior regulations, without the filing of a new application.

(d) The application for the 1986 and succeeding crop years is found at Subpart D of Part 400—General Administrative Regulations (7 CFR 400.37, 400.38) and may be amended from time to time for subsequent crop years. The provisions of the Hybrid Seed Crop Insurance Policy for the 1986

and succeeding crop years are as follows:

DEPARTMENT OF AGRICULTURE

Federal Crop Insurance Corporation

Hybrid Seed—Crop Insurance Policy

(This is a continuous contract. Refer to Section 15.)

AGREEMENT TO INSURE: We will provide the insurance described in this policy in return for the premium and your compliance with all applicable provisions.

Throughout this policy, "you" and "your" refer to the insured shown on the accepted Application and "we," "us," and "our" refer to the Federal Crop Insurance Corporation.

Terms and Conditions

1. Causes of loss.

a. The insurance provided is against unavoidable loss of production resulting from the following causes occurring within the insurance period:

(1) Adverse weather conditions;

(2) Fire;

(3) Insects;

(4) Plant disease;

(5) Wildlife;

(6) Earthquake;

(7) Volcanic eruption; or

(8) If applicable, failure of the irrigation water supply due to an unavoidable cause occurring after the beginning of planting;

unless those causes are excepted, excluded, or limited by the actuarial table or section 9e(5).

b. We will not insure against any loss of production due to:

(1) The use of unadapted, incompatible or genetically deficient male or female seed;

(2) The neglect, mismanagement, or wrongdoing of you, any member of your household, your tenants, or employees;

(3) The failure to follow recognized good farming practices or the grower provisions of the seed contract;

(4) The impoundment of water by any governmental, public, or private dam or reservoir project;

(5) Frost or freeze after the date designated on the actuarial table;

(6) Inadequate germination even though a result of an insured cause of loss unless inspected and accepted by us before harvest is completed;

(7) Inadequate germination caused by the failure to plant the male seed at a time sufficient to assure adequate pollenation of the female plant;

(8) The failure or breakdown of irrigation equipment or facilities;

(9) The failure to follow recognized good hybrid seed irrigation practices; or

(10) Any cause not specified in section 1a as an insured loss.

2. Crop, acreage, and share insured.

a. The crop insured will be any type of female seed ("crop") you elect:

(1) Which is planted for harvest and the production is intended for the purpose of commercial seed to produce a type of the crop for grain or silage;

(2) Which is grown under a contract executed with a seed company before the acreage reporting date;

(3) Which is grown on insured acreage; and

(4) For which an amount of insurance per acre and premium rate are provided by the actuarial table.

b. An instrument in the form of a "lease" under which you retain control of the acreage on which the insured crop is grown and which provides for delivery of the crop under certain conditions and at a stipulated price will be treated as a contract under which you have the share in the crop.

c. The acreage insured for each crop year will be the crop planted on insurable acreage as designated by the actuarial table and in which you have a share, as reported by you, or as determined by us, whichever we elect.

d. The insured share is your share as landlord, owner-operator, or tenant in the insured crop at the time of planting. However, only for the purpose of determining the amount of indemnity, your share will not exceed your share on the earlier of:

(1) The time of loss; or

(2) The beginning of harvest.

e. We do not insure any acreage:

(1) Which is destroyed, it is practical to replant the crop, and such acreage is not replanted;

(2) If the farming practices carried out are not in accordance with the farming practices for which the premium rates have been established;

(3) Which is irrigated and an irrigated practice is not provided by the actuarial table unless you elect to insure the acreage as nonirrigated by reporting is as insurable under section 3;

(4) On which the female seed is initially planted after the final planting date contained in the actuarial table unless you agree, in writing, on our form to reduction in the dollar amount of insurance;

(5) Of a volunteer crop;

(6) Planted to a type or variety of the crop not established as adapted to the area or indicated as noninsurable by the actuarial table;

(7) Planted with another type of crop;

(8) Occupied by rows planted with a mixture of female and male seed;

(9) Planted and occupied by the male plants;

(10) Planted for experimental purposes;

(11) Planted for any purpose other than for commercial seed; or

(12) Grown under a contract with any seed company and that seed company refused to provide us with the records we require to determine the dollar value per bushel of production for each type and variety.

f. If insurance is provided for an irrigated practice you must report as irrigated only the acreage for which you have adequate facilities and water, at the time of planting, to carry out a good crop irrigation practice.

g. We may limit the insured acreage to any acreage limitation established under any act of Congress if we advise you of the limit prior to planting.

3. Report of acreage, share, type, and practice.

You must report on our form:

a. All the acreage of the crop planted in the county in which you have a share;

b. The practice;

c. The type; and

d. Your share at the time of planting.

You must designate separately any acreage that is not insurable. You must report if you do not have a share in any acreage of the insured crop in the county. This report must be submitted on or before the reporting date established by the actuarial table. All indemnities may be determined on the basis of information you submit on this report. If you do not submit this report by the reporting date, we may elect to determine, by unit, the insured acreage, share, practice, and type or we may deny liability on any unit. Any report submitted by you may be revised only upon our approval.

4. Coverage levels and amounts of insurance.

a. The amount of insurance and coverage levels are contained in the actuarial table.

b. Coverage level 2 will apply if you do not elect a coverage level.

c. You may change the coverage level and the amount of insurance per acre on or before the sales closing date as established by the actuarial table for submitting applications for the crop year.

5. Annual premium.

a. The annual premium is earned and payable at the time of planting. The amount is computed by multiplying the amount of insurance per acre times the premium rate, times the insured acreage, times your share at the time of planting.

b. Interest will accrue at the rate of one and one-half percent (1½%) simple interest per calendar month, or any part thereof, on any unpaid premium balance starting on the first day of the month following the first premium billing date.

c. If you are eligible for a premium reduction in excess of 5 percent based on insuring experience through the 1983 crop year under the terms of the experience table contained in the hybrid seed policy in effect for the 1984 crop year, you will continue to receive the benefit of that reduction subject to the following conditions:

(1) No premium reduction will be retained after the 1989 crop year;

(2) The premium reduction will not increase because of favorable experience;

(3) The premium reduction will decrease because of unfavorable experience in accordance with the terms of the policy in effect for the 1984 crop year;

(4) Once the loss ratio exceeds .80, no further premium reduction will apply; and

(5) Participation must be continuous.

6. Deductions for debt.

Any unpaid amount due us may be deducted from any indemnity payable to you, or from any loan or payment due you under any act of Congress or program administered by the United States Department of Agriculture or its Agencies.

7. Insurance period.

Insurance attaches for each type and variety when both the male plant seed and the female plant seed of that type and variety are completely planted in accordance with the production management practices of the seed company, provided that the female plant seed for the type and variety is planted not later than the final planting date shown in the

actuarial documents. Insurance terminates at the earliest of:

a. Total destruction of the crop;

b. Combining, threshing, or picking;

c. Final adjustment of a loss; or

d. The calendar date established by the accuarial table.

8. Notice of damage or loss.

a. In case of damage or probable loss:

(1) You must give us prompt written notice if:

(a) During the period before harvest, the crop on any unit is damaged and you decide not to further care for or harvest any part of it;

(b) You want our consent to put the acreage to another use; or

(c) After consent to put acreage to another use is given, additional damage occurs.

Insured acreage may not be put to another use until we have appraised the crop and given written consent. We will not consent to another use until it is too late to replant. You must notify us when such acreage has been put to another use.

(2) You must give us notice of probable loss at least 15 days before the beginning of harvest if you anticipate either a germination rate of less than 80 percent or a loss on any unit.

(3) If probable loss is later determined, immediate notice must be given and a representative area of the field of the unharvested crop (at least 10 feet wide and the entire length of the field) must remain unharvested for a period of 15 days from the date of notice, unless we given you written consent to harvest the area.

(4) In addition to the notices required by this section, if you are going to claim an indemnity on any unit, you must give us notice not later than 10 days after the earliest of:

(a) Total destruction of the crop on the unit;

(b) Harvest of the unit; or

(c) The calendar date for the end of the insurance period.

b. You must obtain written consent from us before you destroy any of the crop which is not to be harvested.

c. We may reject any claim for indemnity if you fail to comply with any of the requirements of this section or section 9.

9. Claim for indemnity.

a. Any claim for indemnity on a unit must be submitted to us on our form not later than 60 days after the earliest of:

(1) Total destruction of the crop on the unit;

(2) Harvest of the unit; or

(3) The calender date for the end of insurance period.

b. We will not pay any indemnity unless you:

(1) Establish the total production for the type and variety of the crop on the unit at the time of harvest and that any loss of production has been directly caused by one or more of the insured causes during the insurance period; and

(2) Furnish all information we require concerning the loss.

c. The indemnity will be determined on each unit by:

(1) Multiplying the insured acreage by the amount of insurance per acre;

(2) Subtracting from this product the sum of:

(a) The dollar amount obtained by multiplying seed production to count for each type of variety (see section 9e) by the respective dollar value per bushel of production plus;

(b) The dollar amount obtained by multiplying non-seed production to count (see section 9e) by the local market price of such production on the earlier of the date the loss is adjusted or the date such production is sold: and

(3) Multiplying this result by your share.

d. If the information reported by you under section 3 of the policy results in a lower premium than the actual premium determined to be due, the amount of insurance on the unit will be computed on the information reported, but the value of all production from insurable acreage, whether or not reported as insurable, will count against the amount of insurance.

e. The total production to be continued for a unit will include all harvested and appraised seed and non-seed production.

(1) For crop type field corn:

(a) Total seed production to count will include:

(i) All corn delivered to and accepted by the seed company;

(ii) All corn which would pass over 16/64 screen unless the germination rate is less than 80 percent warm test as determined by a certified seed test conducted from a cleaned sample taken at the time of delivery or if the mature corn is appraised, at the time of delivery; and

(iii) All harvested and appraised production which does not quality under (i) and (ii) above because the damage was caused by uninsured causes.

(b) For the purpose of determining the quantity of mature production:

(i) Shelled corn will be adjusted .12 percent for each .1 percentage point of moisture to 15.5; and

(ii) Ear corn will be measured at 70 pounds of ear corn equaling 56 pounds (one bushel) of shelled corn. The weight of ear corn required to equal one bushel of shelled corn will be increased 1.5 pounds for each percentage point of moisture in excess of 14 percent.

(2) Appraised production to count as seed production will include:

(a) Unharvested production on harvested acreage and the percent of the approved yield lost due to uninsured causes and failure to follow recognized good farming practices;

(b) Not less than the dollar amount of insurance for any acreage which is abandoned or put to another use without our prior written consent or damaged solely by an uninsured cause;

(c) Any appraisal on non-mature production; and

(d) Any appraised production on unharvested acreage.

(3) Any appraisal we have made on insured acreage and given written consent to be put to another use will be considered as seed production unless such acreage is:

(a) Not put to another use before harvest of the crop becomes general in the country and reappraised by us;

(b) Further damaged by an insured cause and reappraised by us; or

(c) Harvested.

(4) The amount of production of any unharvested acreage of the crop may be determined on the basis of field appraisals conducted after the end of the insurance period.

(5) If you elect to exclude hail and fire as insured causes of loss and the crop is damaged by hail or fire, appraisals will be made in accordance with Form FCI–78, "Request to Exclude Hail and Fire."

f. You must not abandon any acreage to us.

g. You may not sue us unless you have complied with all policy provisions. If a claim is denied, yo may sue us in the United States District Court under the provisions of 7 U.S.C. 1508(c). You must bring suite within 12 months of the date of notice of denial is received by you.

h. We have a policy for paying your indemnity within 30 days of our approval of your claim, or entry of a final judgment against us. We will, in no instance, be liable for the payment of damages, attorney's fees, or other charges in connection with any claim for indemnity, whether we approve or disapprove such claim. We will, however, pay simple interest computed on the net indemnity ultimately found to be due by us or by a final judgment from and including the 61st day after the date you sign, date, and submit to us the properly completed claim for indemnity form, if the reason for our failure to timely pay is not due to your failure to provide information or other material necessary for the computation or payment of the indemnity. The interest rate will be that established by the Secretary of the Treasury under section 12 of the Contract Disputes Act of 1978 (41 U.S.C. 611), and published in the **Federal Register** semiannually on or about January 1 and July 1. The interest rate to be paid on any indemnity will vary with the rate announced by the Secretary of the Treasury.

i. If you die, disappear, or are judicially declared incompetent, or if you are an entity other than an individual and such entity is dissolved after the crop is planted for any crop year, any indemnity will be paid to the persons determined to be beneficially entitled thereto.

j. If you have other insurance against the perils insured under this contract and damage as a result of those perils occurs during the insurance period, we will be liable for loss due to those perils only for the smaller of the amount:

(1) Of indemnity determined pursuant to this contract without regard to any other insurance; or

(2) By which the loss from those perils exceeds the indemnity paid or payable under such other insurance.

For the purpose of this section, the amount of loss from those perils will be the difference between the fair market value of the production on the unit before the loss and after the loss. The fair market value of production on the unit before the loss is limited to 1½ times the highest price election available.

10. Concealment of fraud.

We may void the contract on all crops insured without affecting your liability for premiums or waiving any right, including the

right to collect any amount due us if, at any time, you or the seed company have concealed or misrepresented any material fact or committed any fraud relating to the contract. Such voidance will be effective as of the beginning of the crop year with respect to which such act or omission occurred.

11. Transfer of right to indemnity on insured share.

If you transfer any part of your share during the crop year, you may transfer your right to an indemnity. The transfer must be on our form and approved by us. We may collect the premium from either you or your transferee or both. The transferee will have all rights and responsibilities under the contract.

12. Assignment of indemnity.

You may assign to another party your right to an indemnity for the crop year only on our form and with our approval. The assignee will have the right to submit the loss notices and forms required by the contract.

13. Subrogation. (Recovery of loss from a third party.)

Because you may be able to recover all or part of your loss from someone other than us, you must do all you can to preserve any such right. If we pay you for your loss, then your right of recovery will at our option belong to us. If we recover more than we paid you plus our expenses, the excess will be paid to you.

14. Records and access to farm.

You must keep, for 2 years after the time of loss, records of the harvesting, storage, shipment, sale, or other disposition of all of the crop production on each unit, including separate records showing the same information for production for any uninsured acreage. Failure to keep and maintain such records may, at our option, result in cancellation of the contract prior to the crop year to which the records apply, assignment of production to units by us, or a determination that no indemnity is due. Any person designated by us will have access to such records and the farm for purposes related to the contract.

15. Life of contract: cancellation and termination.

a. This contract will be in effect for the crop year specified on the application and may not be canceled by you for such crop year. Therafter, the contract will continue in force for each succeeding crop year unless canceled or terminated as provided in this section.

b. This contract may be canceled by either you or us for any succeeding crop year by giving written notice to the other on or before the cancellation date preceding such crop year.

c. This contract will terminate as to any crop year if any amount due us on this or any other contract with you is not paid on or before the termination date preceding such crop year for the contract on which the amount is due. The date of payment of the amount due if deducted from:

(1) An indemnity will be the date you sign the claim; or

(2) A payment under another program administered by United States Department of Agriculture will be the date both such other payment and setoff are approved.

d. The cancellation and termination dates are April 15.

e. If you die or are judicially declared incompetent, or if you are an entity other than an individual and such entity is dissolved, the contract will terminate as of the date of death, judicial declaration, or dissolution. If such event occurs after insurance attaches for any crop year, the contract will continue in force through the crop year and terminate at the end thereof. Death of a partner in a partnership will dissolve the partnership unless the partnership agreement provides otherwise. If two or more persons having a joint interest are insured jointly, death of one of the persons will dissolve the joint entity.

f. The contract will terminate if no premium is earned for 5 consecutive years.

16. Contract changes.

We may change any terms and provisions of the contract from year to year. If your amounts of insurance is no longer offered, the actuarial table will provide the amount of insurance which you are deemed to have elected. All contract changes will be available at your service office by December 31 preceding the cancellation date. Acceptance of any change will be conclusively presumed in the absence of notice from you to cancel the contract.

17. Meaning of terms.

For the purposes of hybrid seed crop insurance:

a. "Actuarial table" means the forms and related material for the crop year approved by us which are available for public inspection in your service office, and which show the coverage levels, premium rates, amounts of insurance, practices, insurable and uninsurable acreage, and related information regarding hybrid seed insurance in the county.

b. "Approved yield" means the result obtained by dividing the amount of insurance per acre by the dollar value per bushel of production.

c. "ASCS" means the Agricultural Stabilization and Conservation Service of the United States Department of Agriculture.

d. "Commercial seed" means the offspring of two individual seeds of different genetic character which is produced as a result of crossing. A portion of this resultant offspring is the product intended for the purpose or use on a commercial basis by an agricultural producer to produce a field crop type for grain or silage.

e. "County" means:

(1) The county shown on the application;

(2) Any additional land located in a local producing area bordering on the county, as shown by the actuarial table; and

(3) Any land identified by an ASCS farm serial number for the county but physically located in another county within the State.

f. "Crop year" means the period within which the crop is normally grown and is designated by the calendar year in which the crop is normally harvested.

g. "Female plant" means the plants grown for the purpose of producing commercial seed.

h. "Harvest" means the completion of combining, threshing, or picking of the crop on the unit.

i. "Inadequate germination" means less than 80 percent of the seed produced from female plants germinated as determined by a warm test using clean seed.

j. "Insurable acreage" means the land classified as insurable by us and shown as such by the actuarial table.

k. "Insured" means the person who submitted the application accepted by us.

l. "Loss ratio" means the ratio of indemnity to premium.

m. "Male plant" means the plants grown for the purpose of shedding pollen on female plants.

n. "Non-seed production" means all seed with inadequate germination. Designation as non-seed production under this definition may be production to count under section 9 through appraisal if the inadequate germination was because of an uninsurable cause. (See 9e(2)(a))

o. "Person" means an individual, partnership, association, corporation, estate, trust, or other legal entity, and wherever applicable, a State, a political subdivision of a State, or any agency thereof.

p. "Sample" means at least 3 pounds of shelled corn representative (field run) for each variety of seed corn grown on the unit.

q. "Seed company" means a company which contracts with a grower to produce or grow for the production of hybrid seed.

r. "Seed production" means all seed with a germination rate of at least 80 percent on a warm test using clean seed.

s. "Service office" means the office servicing your contract as shown on the application for insurance or such other approved office as may be selected by you or designated by us.

t. "Tenant" means a person who rents land from another person for a share of the crop or a share of the proceeds therefrom.

u. "Type" means the crop grown: i.e., corn, grain sorghum, sunflower, popcorn, etc.

v. "Unit" means all insurable acreage of any one of the crop types in the county on the date of planting for the crop year:

(1) in which you have a 100 percent share; or

(2) which is owned by one entity and operated by another entity on a share basis.

Land rented for cash, a fixed commodity payment, or any consideration other than a share in the crop on such land will be considered as owned by the lessee. Land which would otherwise be one unit may be divided according to applicable guidelines on file in your service office. Units will be determined when the acreage is reported. Errors in reporting units may be corrected by us to conform to applicable guidelines when adjusting a loss. We may consider any acreage and share thereof reported by or for your spouse or child or any member of your household to be your bona fide share or the bona fide share of any other person having an interest therein.

w. "Variety" means the seed produced from a pair of genetically identifiable parents.

18. Descriptive headings.

The descriptive headings of the various policy terms and conditions are formulated for convenience only and are not intended to affect the construction or meaning of any of the provisions of the contract.

19. Determinations.

All determinations required by the policy will be made by us. If you disagree with our determinations, you may obtain reconsideration of or appeal those determinations in accordance with Appeal Regulations.

20. Notices.

All notices required to be given by you must be in writing and received by your service office within the designated time unless otherwise provided by the notice requirement. Notices required to be given immediately may be by telephone or in person and confirmed in writing. Time of the notice will be determined by the time of our receipt of the written notice.

Done in Washington, D.C., on October 2, 1985.

Merritt W. Sprague,

Manager, Federal Crop Insurance Corporation.

[FR Doc. 86-489 Filed 1-8-86; 8:45 am]

BILLING CODE 3410-08-M

SMALL BUSINESS ADMINISTRATION

13 CFR Part 111

Pollution Control; Eligibility Policy

AGENCY: Small Business Administration.

ACTION: Proposed rule.

SUMMARY: SBA proposes to revert to its original position that waste disposal concerns are not eligible for pollution control financing assistance under this part.

DATE: Comments must be received on or before March 10, 1986.

ADDRESS: Written comments, in duplicate, may be sent to the Office of Special Guarantees, Small Business Administration, 4040 N. Fairfax Drive, Arlington, Virginia 22203.

FOR FURTHER INFORMATION CONTACT: Robert C. Tallon, (703) 235-2902.

SUPPLEMENTARY INFORMATION: During the early stages of the Pollution Control Financing Guarantee (PCFG) program, SBA interpreted the legislative history of its guarantee authority to preclude assistance for the acquisition of a pollution control facility designed to control pollution caused by others than the applicant itself. For this reason applications from waste disposal concerns were considered ineligible.

Upon request of the (then) Administrator of SBA, the Comptroller General of the United States reviewed this conclusion. In an unpublished decision (B-149685) dated November 14, 1978, the Comptroller General stated that SBA could extend the benefit of the program to waste disposal concerns, if it chose to do so, because

SBA is free, in the exercise of its discretion, to choose a definition of "pollution control facilities" which it feels will most effectively implement congressional intent and carry out the purposes of its guarantee program for such facilities.

But the Comptroller General cautioned that the legislative history did not necessarily support the eligibility of waste disposal concerns:

It is possible to infer from these references [in the legislative history] that the Congress intended to exclude from guarantee benefits under Section 404, those small business concerns that provide pollution abatement services to others for profit, because investments made by these firms in facilities would be productive and income producing and could provide a satisfactory return. SBA apparently made that inference in the past, and construed the language of the second portion of the definition of "pollution control facilities" set forth above, as limiting solid waste facility coverage to those facilities ameliorating pollution problems caused by the small business concern's own solid waste.

SBA has reexamined the question of eligibility of waste disposal concerns for the PCFG program and has concluded after a detailed review that the purposes of the PCFG program, as set forth in the legislative history and the statute, are better served by excluding such concerns from eligibility. Therefore, SBA proposes to return to its prior view that waste disposal concerns should not be eligible for financial assistance under the PCFG program. SBA notes that the regular business loan program under section 7(a) of the Small Business Act and the Small Business Investment and Development Company programs under the Small Business Act remain available to such concerns and are intended to assist small business with financing for their profit-making endeavors.

On the other hand, as both the Senate and House reports make clear, PCFG assistance, which is 100 percent underwritten by the Government, is intended for small concerns required to comply with ecological standards by installing nonproductive pollution abatement equipment, purchased incident to their other profit-oriented activities. Where pollution abatement is the main purpose of a concern, such equipment is dedicated to the profit-making activity itself, and is indistinguishable from equipment of any other industry providing a product or service. Upon reexamination of the legislative history of this program, SBA believes that the purchase of such equipment by firms in the pollution control business is contrary to the purposes of the pollution control financing guarantee authority. The acquisition of such equipment by small concerns is properly assisted by the regular business loan program, which is geared to "plant acquisition, construction, conversion or expansion, including the acquisition of land, material, supplies, equipment, and working capital" (15 U.S.C. 636(a)) and other SBA programs under Titles III and V of the Small Business Investment Act (15 U.S.C. 661 *et seq.*). Accordingly, SBA proposes to discontinue guaranteeing the financing of such acquisitions under the PCFG program.

The purpose of this proposed rule is to confine the pollution control program to its original intent, as evidenced by the legislative history, and to use the special environmental expertise of the office administering the program on behalf of small concerns abating their own pollution. Resource recovery properties related to such abatement will remain eligible under the definition of "Facility" in § 111.3.

The proposed rule will not have a significant economic impact on a substantial number of small entities. It is not possible to predict the small number of small concerns that would be affected by this proposed rule because our statistics are not kept on that basis, but if the proposed rule had been in effect during the time that the current rule was in effect (1980 to present), about one fifth, overall, of the pollution control guarantees would not have been made under this program:

Year	Total pollution control guarantees	Waste disposal concerns
1980	93	[1] 16
1981	63	[1] 15
1982	3	1
1983	4	1
1984	4	0
1985	[1] 8	33

[1] Estimates.

The proposed rule, if adopted, will not cause any increase in cost for consumers, Federal, State or local government agencies or geographic regions. As for a cost increase to the waste disposal industry, it is not possible to predict that there will or will not be such increase. On the one hand, the pollution control program offers fixed rate long-term 100% guaranteed financings up to $5 million, including tax-exempt financings. On the other hand, the regular business loan program offers much lower (1% vs. 3½%) guarantee fees for guaranteeing up to 90% on loans up to $500,000 for SBA's share and a term tailored to the borrower's ability to repay. As for tax-exempt financings, such are being phased out or severely curtailed in most jurisdictions.

There are no reporting, recordkeeping or other compliance requirements inherent in this proposed rule, nor would the rule duplicate, overlap or conflict with any other Federal rule.

There are no significant alternatives to this proposed rule.

For purposes of E.O. 12291 SBA states that this rule would not result in an annual economic effect of $100 million or more. The maximum financing under PCFG is $5 million. The total authority for PCFG in FY 1985 was $150 million. Accordingly, if the prior ratio of waste disposal concern financings to total PCFG authority were maintained, such financings could not exceed $30 million, assuming that the budget authority is not reduced.

Accordingly, it is SBA's view that this rule, if adopted, would not be a major rule.

The proposed amendment would also delete obsolete statutory references from the policy statement.

List of Subjects in 13 CFR Part 111

Environmental protection, Loan programs—business, Reporting and recordkeeping requirements, Small business.

PART 111—AMENDED

Accordingly, 13 CFR is amended as follows:

1. The authority citation for Part 111 continues to read as follows:

Authority: Pub. L. 94–305, 90 Stat. 663 (15 U.S.C. 634(b)(6), 694–1 and 694–2), unless otherwise noted.

2. Section 111.2 is revised to read as follows:

§ 111.2 Policy.

It is the intent of Congress to assist existing small concerns which are or are likely to be at an operational or financing disadvantage with other business concerns with respect to the planning, design, or installation of pollution control Facilities, or the obtaining of financing therefor, by authorizing SBA to guarantee fully (100 percent) directly or in cooperation with others, the periodic payments due in connection with the purchase or lease of such Facilities under a Qualified Contract. The guarantee shall be a full faith and credit obligation of the United States, and may be issued notwithstanding that the pollution control Facility is acquired by the use of proceeds from tax-exempt industrial revenue bonds.

(Catalog of Federal Domestic Assistance Program No. 59.031, Pollution Control Financing Guarantee Program)

Dated: November 27, 1985.

James C. Sanders,

Administrator.

[FR Doc. 86–462 Filed 1–8–86; 8:45 am]

BILLING CODE 8025–01–M

FEDERAL TRADE COMMISSION

16 CFR Part 13

[File No. 842 3166]

George Tannous, Steven M. Hull, John C. Anderson, Victor J. Hakim, James F. Herndon, Jr., and Peter S. Everts, Individually and as Former Partners or Employees of Credit Establishing Bureau; Proposed Consent Agreement With Analysis To Aid Public Comment

AGENCY: Federal Trade Commission.

ACTION: Proposed consent agreements.

SUMMARY: In settlement of alleged violations of federal law prohibiting unfair acts and practices and unfair methods of competition, these consent agreements, accepted subject to final Commission approval, would require, among other things, six former officials of Credit Establishing Bureau, a Detroit-based credit repair clinic that went out of business in February, 1984, to cease falsely representing in the future that respondents could improve credit records and arrange for consumers to receive major credit cards. Additionally, respondents George Tannous and Steven M. Hull, the company's founders, would be required to provide consumer redress in the form of a six-week consumer education program directed at people with credit problems similar to those of the company's clients.

DATE: Comments must be received on or before March 10, 1986.

ADDRESS: Comments should be addressed to: FTC/Office of the Secretary, Room 136, 6th Street and Pennsylvania Avenue NW., Washington, DC 20580.

FOR FURTHER INFORMATION CONTACT: FTC/I–500, Kathleen V. Buffon, Washington, DC, 20580. (202) 724–1186.

SUPPLEMENTARY INFORMATION: Pursuant to section 6(f) of the Federal Trade Commission Act, 38 Stat. 721, 15 U.S.C. 46 and § 2.34 of the Commission's Rules of Practice (16 CFR 2.34), notice is hereby given that the following consent agreements containing consent orders to cease and desist, having been filed with and accepted, subject to final approval, by the Commission, have been placed on the public record for a period of sixty (60) days. Public comment is invited. Such comments or views will be considered by the Commission and will be available for inspection and copying at its principal office in accordance with § 4.9(b)(14) of the Commission's Rules of Practice (16 CFR 4.9(b)(14)).

List of Subjects in 16 CFR Part 13

Credit improvement services, Trade practices.

Before Federal Trade Commission

[File No. 842 3166]

Agreement Containing Consent Order To Cease and Desist

In the Matter of George Tannous, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership.

The Federal Trade Commission having initiated an investigation of certain acts and practices of George Tannous, individually an as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership, and it now appearing that George Tannous, hereinafter sometimes referred to as proposed respondent, is willing to enter into an agreement containing an order to cease and desist from the use of the acts and practices being investigated,

It is hereby agreed by and between George Tannous, his attorney, and counsel for the Federal Trade Commission that:

1. Proposed respondent George Tannous is a former partner of Credit Establishing Bureau, formerly a partnership, with its office and principal place of business located at 17344 W. 12 Mile Road, Suite 103, Southfield, Michigan, 48075. George Tannous, together with others, formulated, directed and controlled the acts and practices of said business. His address is 1777½ West Lincoln, Anaheim, California, 92801.

2. Proposed respondent admits all the jurisdictional facts set forth in the draft of complaint here attached.

3. Proposed respondent waives:

(a) Any further procedural steps;

(b) The requirements that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to settle or contest the validity of the order entered pursuant to this agreement; and

(d) Any claim he may have under the Equal Access to Justice Act, 5 U.S.C. 504 *et seq.*

4. This agreement shall not become part of the public record of the

proceedings unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it, together with the draft of complaint contemplated thereby, will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify proposed respondent, in which event it will take such action as it may consider appropriate, or issue and serve its complaint (in such form as the circumstances may require) and decision, in disposition of the proceeding.

5. This agreement is for settlement purposes only and does not constitute an admission by proposed respondent that the law has been violated as alleged in the draft of complaint attached.

6. This agreement contemplates that, if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of § 2.34 of the Commission's Rules, the Commission may, without further notice to proposed respondent, (1) issue its complaint corresponding in form and substance with the draft of complaint here attached and its decision containing the following order to cease and desist in disposition of the proceeding, and (2) make information public in respect thereto. When so entered, the order to cease and desist shall have the same force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become finall upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to proposed resondent's address as stated in this agreement shall constitute service. Proposed respondent waives any right he may have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or the agreement may be used to vary or contradict the terms of the order.

7. Proposed respondent has read the proposed complaint and order contemplated hereby. He understands that once the order has been issued, he will be required to file one or more compliance reports showing that he has fully complied with the order. Proposed respondent further understands that he may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

Order

For purposes of this order, the following definitions shall apply:

A. "Credit Profile" means any written, oral or other communication of information by a consumer reporting agency bearing on a person's creditworthiness, credit standing, credit capacity, character, general reputation, personal characteristics or mode of living that is used or expected to be used or collected in whole or in part for the purpose of establishing the person's eligibility for credit;

B. "Credit Improvement Service(s)" means any service to improve a person's credit profile by removing negative information appearing in a credit profile, changing the rating of such information from negative to positive, or otherwise enhancing said credit profile in return for the payment of money; and

C. "Credit Card Procurement Service(s)" means any service to obtain a credit card on behalf of any person in return for the payment of money.

I

It is ordered that respondent George Tannous, individually and as a former partner of Credit Establishing Bureau, formerly a partnership, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit improvement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they will seek or obtain any credit profile or will perform any credit improvement service for any person;

2. Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in any credit profile or to change any rating of such information from negative to positive;

3. That they can or will improve the credit profile of any person regardless of the accuracy or date of the information appearing in the credit profile; or

4. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of this guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each guarantee offered.

C. Participating in any dispute or encouraging any person to engage in any dispute with any consumer reporting agency, pursuant to procedures authorized by section 611 of the Fair Credit Reporting Act, 15 U.S.C. 1681i, over the accuracy or completeness of any item of information in any credit profile when they know or have reason to know, from information provided by the client or otherwise, that the item of information in the credit profile is accurate and complete.

II

It is further ordered that respondent George Tannous, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit card procurement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they can or will obtain a credit card or other extension of credit on an unsecured or any other basis;

2. That they have any connection with any bank, credit card issuer or any other entity through which they can or will arrange for the issuance of credit cards or for the extension of credit;

3. That they can or will perform services for any person that will contribute in any way to that person's ability to obtain a credit card;

4. The likelihood of any person's obtaining a credit card through their services; or

5. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

III

It is further ordered that respondent George Tannous shall conduct the following public information program over radio station WJLB–98 FM, Detroit, Michigan, to inform consumers of misrepresentations that may have been made in connection with the sale of

credit improvement services and credit card procurement services: respondent shall purchase from said radio station advertising time for a sixty (60) second radio announcement to be broadcast each day between 6:00 a.m. and 8:00 p.m., Monday through Friday, and between 10:00 a.m. and 8:00 p.m., Saturday and Sunday, for a continuous six (6) week period to be designated by the Federal Trade Commission. The text of the announcements to be broadcast is attached hereto as Appendix A and Appendix B. Appendix A shall be broadcast on the first day of the six (6) week broadcast period and on alternate days thereafter. Appendix B shall be broadcast on the second day of the six (6) week broadcast period and on alternate days thereafter. All tapes prepared for use in connection with such announcements must be approved by the Federal Trade Commission prior to their initial broadcast. No modification of the text of the announcements may be made without the prior written consent of the Federal Trade Commission. Respondent shall pay all fees involved in the production and broadcast of the announcements.

IV

It is further ordered that respondent George Tannous shall maintain for at least three (3) years and, upon request, make available to the Federal Trade Commission for inspection and copying:

A. All records and documents necessary to demonstrate fully his compliance with Part III of this order, including but not limited to:

1. Copies of all contracts entered into for the production and broadcast of the announcements;

2. Copies and records of all communications concerning the text of the announcements and the dates and times that the announcements are to be broadcast; and

3. Evidence of payment for the production and broadcast of the announcements.

B. All records and documents relating to any credit improvement service or credit card procurement service that he offers to any person, including but not limited to:

1. Copies of any advertising and promotional material disseminated to any person;

2. Copies of any contracts, disclosure statements or other documents furnished to any person;

3. Copies of any material offering, directly or by implication, any money-back or satisfaction guarantee in connection with the purchase of such services;

4. Copies of any request for a refund from any person, any correspondence or other records relating to such request, and documentation sufficient to show the date, manner, amount, and recipient of any refund made; and

5. Copies of documents and records sufficient to show that, in the ordinary course of business, respondent performs the services that he represents, directly or by implication, that he can or will perform.

V

It is further ordered that respondent George Tannous and his successors and assigns distribute a copy of this order to any present or future officers, agents, representatives and employees having advertising, sales, or managerial responsibilities with respect to the subject matter of this order and that respondent and his successors and assigns secure from each such person a signed statement acknowledging receipt of said order.

VI

It is further ordered that respondent George Tannous promptly notify the Federal Trade Commission of the discontinuance of his present business or employment and of his affiliation with any new business or employment whose activities include credit improvement services or credit card procurement services. Such notice shall include the respondent's new business address and a statement of the nature of the business or employment in which the respondent is newly engaged as well as a description of respondent's duties and responsibilities in connection with the business or employment.

VII

It is further ordered that respondent shall, within sixty (60) days after the date of service upon him of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which he has complied with this order, and that respondent shall file such supplemental reports as the Commission subsequently requests.

Before Federal Trade Commission

[File No. 842 3166]

Agreement Containing Consent Order To Cease and Desist

In the matter of Steven M. Hull, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership.

The Federal Trade Commission having initiated an investigation of certain acts and practices of Steven M. Hull, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership, and it now appearing that Steven M. Hull, hereinafter sometimes referred to as proposed respondent, is willing to enter into an agreement containing an order to cease and desist from the use of the acts and practices being investigated,

It is hereby agreed by and between Steven M. Hull and counsel for the Federal Trade Commission that:

1. Proposed respondent Steven M. Hull is a former partner of Credit Establishing Bureau, formerly a partnership, with its office and principal place of business located at 17344 W. 12 Mile Road, Suite 103, Southfield, Michigan, 48075. Steven M. Hull, together with others, formulated, directed and controlled the acts and practices of said business. His address is 2015 North Bush Street, Apt. 108, Santa Ana, California, 92706.

2. Proposed respondent admits all the jurisdictional facts set forth in the draft of complaint here attached.

3. Proposed respondent waives:

(a) Any further procedural steps;

(b) The requirements that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to settle or contest the validity of the order entered pursuant to this agreement; and

(d) Any claim he may have under the Equal Access to Justice Act, 5 U.S.C. 504 *et seq.*

4. This agreement shall not become part of the public record of the proceedings unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it, together with the draft of complaint contemplated thereby, will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify proposed respondent, in which event it will take such action as it may consider appropriate, or issue and serve its complaint (in such form as the circumstances may require) and decision, in disposition of the proceeding.

5. This agreement is for settlement purposes only and does not constitute an admission by proposed respondent that the law has been violated as alleged in the draft of complaint attached.

6. This agreement contemplates that, if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of § 2.34 of the Commission's Rules, the Commission may, without further notice to proposed respondent, (1) issue its complaint corresponding in form and substance with the draft of complaint here attached and its decision containing the following order to cease and desist in disposition of the proceeding, and (2) make information public in respect thereto. When so entered, the order to cease and desist shall have the same force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become final upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to proposed respondent's address as stated in this agreement shall constitute service. Proposed respondent waives any right he may have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or the agreement may be used to vary or contradict the terms of the order.

7. Proposed respondent has read the proposed complaint and order contemplated hereby. He understands that once the order has been issued, he will be required to file one or more compliance reports showing that he has fully complied with the order. Proposed respondent further understands that he may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

Order

For purposes of this order, the following definitions shall apply:

A. "Credit Profile" means any written, oral or other communication of information by a consumer reporting agency bearing on a persons's creditworthiness, credit standing, credit capacity, character, general reputation, personal characteristics or mode of living that is used or expected to be used or collected in whole or in part for the purpose of establishing the person's eligibility for credit;

B. "Credit Improvement Service(s)" means any service to improve a person's credit profile by removing negative information appearing in a credit profile, changing the rating of such information from negative to positive, or otherwise enhancing said credit profile in return for the payment of money; and

C. "Credit Card Procurement Service(s)" means any service to obtain a credit card on behalf of any person in return for the payment of money.

I

It is ordered that respondent Steven M. Hull, individually and as a former partner of Credit Establishing Bureau, formerly a partnership, his successor and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit improvement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they will seek or obtain any credit profile or will perform any credit improvement service for any person;

2. Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in any credit profile or to change any rating of such information from negative to positive;

3. That they can or will improve the credit profile of any person regardless of the accuracy or date of the information appearing in the credit profile; or

4. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

C. Participating in any dispute or encouraging any person to engage in any dispute with any consumer reporting agency, pursuant to procedures authorized by section 611 of the Fair Credit Reporting Act, 15 U.S.C. 168li, over the accuracy or completeness of any item of information in any credit profile when they know or have reason to know, from information provided by the client or otherwise, that the item of information in the credit profile is accurate and complete.

II

It is further ordered that respondent Steven M. Hull, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit card procurement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they can or will obtain a credit card or other extension of credit on an unsecured or any other basis;

2. That they have any connection with any bank, credit card issuer or any other entity through which they can or will arrange for the issuance of credit cards or for the extension of credit;

3. That they can or will perform services for any person that will contribute in any way to that person's ability to obtain a credit card;

4. The likelihood of any person's obtaining a credit card through their services; or

5. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

III

It is further ordered that respondent Steven M. Hull shall conduct the following public information program over radio station WJZZ–106 FM, Detroit, Michigan, and in the *Detroit Free Press*, Detroit, Michigan, to inform consumers of misrepresentations that may have been made in connection with the sale of credit improvement services and credit card procurement services: respondent shall purchase from said radio station advertising time for a sixty (60) second radio announcement to be broadcast every Friday after 8:00 p.m., every Saturday between 8:00 a.m. and 8:00 p.m., every Saturday after 8:00 p.m., and every Sunday between 10:00 a.m. and 8:00 p.m., for a continuous six (6) week period to be designated by the Federal Trade Commission. The text of the announcements to be broadcast is attached hereto as Appendix A and Appendix B. Appendix A shall be broadcast on Friday and on Saturday and Appendix B shall be broadcast on Saturday and on Sunday throughout the six (6) week broadcast period. All tapes prepared for use in connection with such announcements must be approved by the Federal Trade Commission prior to their initial broadcast. No modification

of the text of the announcements may be made without the prior written consent of the Federal Trade Commission. Respondent shall pay all fees involved in the production and broadcast of the announcements.

Respondent shall also purchase from said newspaper advertising space for one (1) seven (7) line announcement to be published Friday, Saturday, and Sunday in the classified section of said newspaper, under the heading "Financial Offers and Money to Loan" for a continuous six (6) week period to be designated by the Federal Trade Commission. The text of the announcement to be published is attached hereto as Appendix C. No modification of the text of the announcement may be made without the prior written consent of the Federal Trade Commission. Respondent shall pay all fees involved in the production and publication of the announcement.

IV

It is further ordered that respondent Steven M. Hull shall maintain for at least three (3) years and, upon request, make available to the Federal Trade Commission for inspection and copying:

A. All records and documents necessary to demonstrate fully his compliance with Part III of this order, including but not limited to:

1. Copies of all contracts entered into for the production and broadcast of the announcements;

2. Copies and records of all communications concerning the text of the announcements and the dates and times that the announcements are to be broadcast; and

3. Evidence of payment for the production and broadcast of the announcements.

B. All records and documents relating to any credit improvement service or credit card procurement service that he offers to any person, including but not limited to:

1. Copies of any advertising and promotional material disseminated to any person;

2. Copies of any contracts, disclosure statements or other documents furnished to any person;

3. Copies of any material offering, directly or by implication, any money-back or satisfaction guarantee in connection with the purchase of such services;

4. Copies of any request for a refund from any person, any correspondence or other records relating to such request, and documentation sufficient to show the date, manner, amount, and recipient of any refund made; and

5. Copies of documents and records sufficient to show that, in the ordinary course of business, resondent performs the services that he represents, directly or by implication, that he can or will perform.

V

It is further ordered that respondent Steven M. Hull and his successors and assigns distribute a copy of this order to any present or future officers, agents, representatives and employees having advertising, sales, or managerial responsibilities with respect to the subject matter of this order and that respondent and his successors and assigns secure from each such person a signed statement acknowledging receipt of said order.

VI

It is further ordered that respondent Steven M. Hull promptly notify the Federal Trade Commission of the discontinuance of his present business or employment and of his affiliation with any new business or employment whose activties include credit improvement services or credit card procurement services. Such notice shall include the respondent's new business address and a statement of the nature of the business or employment in which the respondent is newly engaged as well as a description of respondent's duties and responsibilities in connection with the business or employment.

VII

It is further ordered that respondent shall, within sixty (60) days after the date of service upon him of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which he has complied with this order, and that respondent shall file such supplemental reports as the Commission subsequently requests.

Appendix A

The following is a public service message for consumers.

Have you been turned down for credit because of late payments, court judgments, or bankruptcy on your credit bureau report? If so, you should learn what your rights are under federal law.

Under the Fair Credit Reporting Act, you have the right to learn what is in your credit bureau report. And you have the right to challenge any information that is not complete and accurate. But, if the information is accurate, *no one* can require the credit bureau to remove it—unless it is out-dated. The law permits a history of late payments to be reported for 7 years. And bankruptcy may be reported for 10 years.

So don't be misled by ads promising to "clean up" your credit history. Learn what the law allows. For free information about your credit rights, write to: Credit Tips, Federal Trade Commission, Washington, DC, 20580. The address again is Credit Tips, Federal Trade Commission, Washington, DC, 20580.

Appendix B

The following is a public service message for consumers.

Have you been turned down for credit because you've never had credit before? If so, you know that a good credit history is important. Ads offering "instant credit" or major credit cards regardless of your past credit history may be misleading. Most creditors want to know credit history *before* giving you credit.

That's why most creditors contact a credit bureau when you apply for credit—they want to learn what your past payment history has been. If the credit bureau has little or no information about you, the creditor may reject your application.

To learn what's in your credit file, check with the credit bureaus in your area. You have the right to do this under the Fair Credit Reporting Act, a federal law. For free information about your credit rights and tips on how to build a better credit history, write to: Credit Tips, Federal Trade Commission, Washington, DC, 20580. The address again is Credit Tips, Federal Trade Commission, Washington, DC, 20580.

Appendix C

Bad Credit? No Credit?

For free information on credit laws and consumer problems write Credit Tips, Federal Trade Commission, Washington, DC 20580.

Before Federal Trade Commission

In the matter of John C. Anderson, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership.

[File No. 842 3166]

Agreement Containing Consent Order to Cease and Desist

The Federal Trade Commission having initiated an investigation of certain acts and practice of John C. Anderson, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership, and it now appearing that

John C. Anderson, hereinafter sometimes referred to as proposed respondent, is willing to enter into an agreement containing an order to cease and desist from the use of the acts and practices being investigated.

It is hereby agreed by and between John C. Anderson and counsel for the Federal Trade Commission that:

1. Proposed respondent John C. Anderson is a former partner of Credit Establishing Bureau, formerly a partnership, with its office and principal place of business located at 17344 W. 12 Mile Road, Suite 103, Southfield, Michigan, 48075. John C. Anderson, together with others, formulated, directed and controlled the acts and practices of said business. His address is 18665 Marsha, Riverview, Michigan, 48192.

2. Proposed respondent admits all the jurisdictional facts set forth in the draft of complaint here attached.

3. Proposed respondent waives:

(a) Any further procedural steps;

(b) The requirements that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to settle or contest the validity of the order entered pursuant to this agreement; and

(d) Any claim he may have under the Equal Access to Justice Act, 5 U.S.C. 504 *et seq.*

4. This agreement shall not become part of the public record of the proceedings unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it, together with the draft of complaint contemplated thereby, will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify proposed respondent, in which event it will take such action as it may consider appropriate, or issue and serve its complaint (in such form as the circumstances may require) and decision, in disposition of the proceeding.

5. This agreement is for settlement purposes only and does not constitute an admission by proposed respondent that the law has been violated as alleged in the draft of complaint attached.

6. This agreement contemplates that, if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of § 2.34 of the Commission's Rules, the Commission may, without further notice to proposed respondent, (1) issue its complaint corresponding in form and substance with the draft compliant here attached and its decision containing the following order to cease and desist in disposition of the proceeding, and (2) make information public in respect thereto. When so entered, the order to cease and desist shall have the same force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become final upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to proposed respondent's address as stated in this agreement shall constitute service. Proposed respondent waives any right he may have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or the agreement may be used to vary or contradict the terms of the order.

7. Proposed respondent has read the proposed complaint and order contemplated hereby. He understands that once the order has been issued, he will be required to file one or more compliance reports showing that he has fully complied with the order. Proposed respondent further understands that he may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

Order

For purposes of this order, the following definitions shall apply:

A. "Credit Profile" means any written, oral or other communication of information by a consumer reporting agency bearing on a person's creditworthinesss, credit standing, credit capacity, character, general reputation, personal characteristics or mode of living that is used to expected to be used or collected in whole or in part for the purpose of establishing the person's eligibility for credit;

B. "Credit Improvement Service(s)" means any service to improve the person's credit profile by removing negative information appearing in a credit profile, changing the rating of such information from negative to positive, or otherwise enhancing said credit profile in return for the payment of money; and

C. "Credit Card Procurement Service(s)" means any service to obtain a credit card on behalf of any person in return for the payment of money.

I

It is ordered that respondent John C. Anderson, individually and as a former partner of Credit Establishing Bureau, formerly a partnership, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit improvement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they will seek or obtain any credit profile or will perform any credit improvement service for any person;

2. Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in any credit profile or to change any rating of such information from negative to positive;

3. That they can or will improve the credit profile of any person regardless of the acuracy or date of the information appearing in the credit profile; or

4. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promplty and fully honor each such guarantee offered.

C. Participating in any dispute or encouraging any person to engage in any dispute with any consumer reporting agency, pursuant to procedures authorized by section 611 of the Fair Credit Reporting Act, 15 U.S.C. 168li, over the accuracy or completeness of any item of information in any credit profile when they know or have reason to know, from information provided by the client or otherwise, that the item of information in the credit profile is accurate and complete

II

It is further ordered that respondent John C. Anderson, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit card procurement service in or affecting commerce, as "commerce" is defined in

the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they can or will obtain a credit card or other extension of credit on an unsecured or any other basis;

2. That they have any connection with any bank, credit card issuer or any other entity through which they can or will arrange for the issuance of credit cards or for the extension of credit;

3. That they can or will perform services for any person that will contribute in any way to that person's ability to obtain a credit card;

4. the likelihood of any person's obtaining a credit card through their services; or

5. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

III

It is further ordered that respondent John C. Anderson shall maintain and, upon request, make available to the Fedral Trade Commission for inspection and copying all records and documents relating to any credit improvement service or credit card procurement service that he offers to any person for at least three (3) years from the date of such offer, including but not limited to:

1. Copies of any advertising and promotional material disseminated to any person;

2. Copies of any contracts, disclosure statements or other documents furnished to any person;

3. Copies of any material offering, directly or by implication, any money-back or satisfaction guarantee in connection with the purchase of such services;

4. Copies of any request for a refund from any person, any correspondence or other records relating to such request, and documentation sufficient to show the date, manner, amount, and recipient of any refund made; and

5. Copies of documents and records sufficient to show that, in the ordinary course of business, respondent performs the services that he represents, directly or by implication, that he can or will perform.

IV

It is further ordered that respondent John C. Anderson and his successors and assigns distribute a copy of this order to any present or future officers, agents, representatives and employees having advertising, sales, or managerial responsibilities with respect to the subject matter of this order and that respondent and his successors and assigns secure from each such person a signed statement acknowledging receipt of said order.

V

It is further ordered that respondent John C. Anderson promptly notify the Federal Trade Commission of the discontinuance of his present business or employment and of this affiliation with any new business or employment whose activities include credit improvement services or credit card procurement services. Such notice shall include the respondent's new business address and a statement of the nature of the business or employment in which the respondent is newly engaged as well as a description of respondent's duties and responsibilities in connection with the business or employment.

VI

It is further ordered that respondent shall, within sixty (60) days after the date of service upon him of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which he has complied with this order, and that respondent shall file such supplemental reports as the Commission subsequently requests.

Before Federal Trade Commission

In the matter of Victor J. Hakim, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership.

[File No. 842 3166]

Agreement Containing Consent Order To Cease and Desist

The Federal Trade Commission having initiated an investigation of certain acts and practices of Victor J. Hakim, individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership, and it now appearing that Victor J. Hakim, hereinafter sometimes referred to as proposed respondent, is willing to enter into an agreement containing an order to cease and desist from the use of the acts and practices being investigated,

It is hereby agreed by and between Victor J. Hakim and counsel for the Federal Trade Commission that:

1. Proposed respondent Victor J. Hakim is a former partner of Credit Establising Bureau, formerly a partnership, with its office and principal place of business located at 17344 W. 12 Mile Road, Suite 103, Southfield, Michigan, 48075. Victor J. Hakim, together with others, formulated, directed and controlled the acts and practices of said business. His address is 17010 Edwards, Soughfield, Michigan, 48076.

2. Proposed respondent admits all the jurisdictional facts set forth in the draft of complaint here attached.

3. Proposed respondent waives:

(a) Any further procedural steps;

(b) The requirements that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to settle or contest the validity of the order entered pursuant to this agreement; and

(d) Any claim he may have under the Equal Access to Justice Act, 5 U.S.C. 504 *et seq.*

4. This agreement shall not become part of the public record of the proceedings unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it, together with the draft of complaint contemplated thereby, will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify proposed respondent, in which event it will take such action as it may consider appropriate, or issue and serve its complaint (in such form as the circumstances may require) and decision, in disposition of the proceeding.

5. This agreement is for settlement purposes only and does not constitute an admission by proposed respondent that the law has been violated as alleged in the draft of complaint attached.

6. This agreement contemplates that, if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of § 2.34 of the Commission's Rules, the Commission may, without further notice to proposed respondent, (1) issue its complaint corresponding in form and substance with the draft of complaint here attached and its decision containing the following order to cease and desist in disposition of the proceeding, and (2) make information public in respect thereto. When so entered, the order to cease and desist shall have the same

force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become final upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to proposed respondent's address as stated in this agreement shall constitute service. Proposed respondent waives any right he may have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or the agreement may be used to vary or contradict the terms of the order.

7. Proposed respondent has read the proposed complaint and order contemplated hereby. He understands that once the order has been issued, he will be required to file on or more compliance reports showing that he has fully complied with the order. Proposed respondent further understands that he may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

Order

For purposes of this order, the following definitions shall apply:

A. "Credit Profile" means any written, oral or other communication of information by a consumer reporting agency bearing on a person's creditworthiness, credit standing, credit capacity, character, general reputation, personal characteristics or mode of living that is used or expected to be used or collected in whole or in part for the purpose of establishing the person's eligibility for credit;

B. "Credit Improvement Service(s)" means any service to improve a person's credit profile by removing negative information appearing in a credit profile, changing the rating of such information from negative to positive, or otherwise enhancing said credit profile in return for the payment of money; and

C. "Credit Card Procurement Service(s)" means any service to obtain a credit card on behalf of any person in return for the payment of money.

I

It is ordered that respondent Victor J. Hakim, individually and as a former partner of Credit Establishing Bureau, formerly a partnership, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit improvement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they will seek or obtain any credit profile or will perform any credit improvement service for any person;

2. Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in any credit profile or to change any rating of such information from negative to positive;

3. That they can or will improve the credit profile of any person regardless of the accuracy or date of the information appearing in the credit profile; or

4. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

C. Participating in any dispute or encouraging any person to engage in any dispute with any consumer reporting agency, pursuant to procedures authorized by section 611 of the Fair Credit Reporting Act, 15 U.S.C. 1681i, over the accuracy or completeness of any item of information in any credit profile when they know or have reason to know, from information provided by the client or otherwise, that the item of information in the credit profile is accurate and complete.

II

It is further ordered that respondent, Victor J. Hakim, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit card procurement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they can or will obtain a credit card or other extension of credit on an unsecured or any other basis;

2. That they have any connection with any bank, credit card issuer or any other entity through which they can or will arrange for the issuance of credit cards or for the extension of credit;

3. That they can or will perform services for any person that will contribute in any way to that person's ability to obtain a credit card;

4. The likelihood of any person's obtaining a credit card through their services; or

5. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

III

It is further ordered that respondent Victor J. Hakim shall maintain and, upon request, make available to the Federal Trade Commission for inspection and copying all records and documents relating to any credit improvement service or credit card procurement service that he offers to any person for at least three (3) years from the date of such offer, including but not limited to:

1. Copies of any advertising and promotional material disseminated to any person;

2. Copies of any contracts, disclosure statements or other documents furnished to any person;

3. Copies of any material offering, directly or by implication, any money-back or satisfaction guarantee in connection with the purchase of such services;

4. Copies of any request for a refund from any person, any correspondence or other records relating to such request, and documentation sufficient to show the date, manner, amount, and recipient of any refund made; and

5. Copies of documents and records sufficient to show that, in the ordinary course of business, respondent performs the services that he represents, directly or by implication, that he can or will perform.

IV

It is further ordered that respondent Victor J. Hakim and his successors and assigns distribute a copy of this order to any present or future officers, agents, representatives and employees having advertising, sales, or managerial responsibilities with respect to the subject matter of this order and that respondent and his successors and assigns secure from each such person a signed statement acknowledging receipt of said order.

V

It is further ordered that respondent Victor J. Hakim promptly notify the Federal Trade Commission of the discontinuance of his present business or employment and of his affiliation with any new business or employment whose activities include credit improvement services or credit card procurement services. Such notice shall include the respondent's new business address and a statement of the nature of the business or employment in which the respondent is newly engaged as well as a description of respondent's duties and responsibilities in connection with the business or employment.

VI

It is further ordered that respondent shall, within sixty (60) days after the date of service upon him of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which he has complied with this order, and that respondent shall file such supplemental reports as the Commission subsequently requests.

Before Federal Trade Commission

In The Matter of JAMES F. HERNDON, JR., individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership.

[File No. 842 3166]

Agreement Containing Consent Order To Cease and Desist

The Federal Trade Commission having initiated an investigation of certain acts and practices of James F. Herndon, Jr., individually and as a former partner trading and doing business as Credit Establishing Bureau, formerly a partnership, and it now appearing that James F. Herndon, Jr., hereinafter sometimes referred to as proposed respondent, is willing to enter into an agreement containing an order to cease and desist from the use of the acts and practices being investigated,

It is hereby agreed by and between James F. Herndon, Jr. and counsel for the Federal Trade Commission that:

1. Proposed respondent James F. Herndon, Jr., is a former partner of Credit Establishing Bureau, formerly a partnership, with its office and principal place of business located at 17344 W. 12 Mile Road, Suite 103, Southfield, Michigan, 48075. James F. Herndon, Jr., together with others, formulated, directed and controlled the acts and practices of said business. His address is 20576 Vaughan, Detroit, Michigan, 48219.

2. Proposed respondent admits all the jurisdictional facts set forth in the draft of complaint here attached.

3. Proposed respondent waives:

(a) Any further procedural steps;

(b) The requirements that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to settle or contest the validity of the order entered pursuant to this agreement; and

(d) Any claim he may have under the Equal Access to Justice Act, 5 U.S.C. 504 *et seq.*

4. This agreement shall not become part of the public record of the proceedings unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it, together with the draft of complaint contemplated thereby, will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify proposed respondent, in which event it will take such action as it may consider appropriate, or issue and serve its complaint (in such form as the circumstances may require) and decision, in disposition of the proceeding.

5. This agreement is for settlement purposes only and does not constitute an admission by proposed respondent that the law has been violated as alleged in the draft of complaint attached.

6. This agreement contemplates that, if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of § 2.34 of the Commission's Rules, the Commission may, without further notice to proposed respondent, (1) issue its complaint corresponding in form and substance with the draft of complaint here attached and its decision containing the following order to cease and desist in disposition of the proceeding, and (2) make information public in respect thereto. When so entered, the order to cease and desist shall have the same force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become final upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to proposed respondent's address as stated in this agreement shall constitute service. Proposed respondent waives any right he may have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or the agreement may be used to vary or contradict the terms of the order.

7. Proposed respondent has read the proposed complaint and order contemplated hereby. He understands that once the order has been issued, he will be required to file one or more compliance reports showing that he has fully complied with the order. Proposed respondent further understands that he may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

Order

For purposes of this order, the following definitions shall apply:

A. "Credit Profile" means any written, oral or other communication of information by a consumer reporting agency bearing on a person's creditworthiness, credit standing, credit capacity, character, general reputation, personal characteristics or mode of living that is used or expected to be used or collected in whole or in part for the purpose of establishing the person's eligibility for credit;

B. "Credit Improvement Service(s)" means any service to improve a person's credit profile by removing negative information appearing in a credit profile, changing the rating of such information from negative to positive, or otherwise enhancing said credit profile in return for the payment of money; and

C. "Credit Card Procurement Service(s)" means any service to obtain a credit card on behalf of any person in return for the payment of money.

I

It is ordered that respondent James F. Herndon, Jr., individually and as a former partner of Credit Establishing Bureau, formerly a partnership, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit improvement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they will seek or obtain any credit profile or will perform any credit improvement service for any person;

2. Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in any credit profile or to change any rating of such information from negative to positive;

3. That they can or will improve the credit profile of any person regardless of the accuracy or date of the information appearing in the credit profile; or

4. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

C. Participating in any dispute or encouraging any person to engage in any dispute with any consumer reporting agency, pursuant to procedures authorized by section 611 of the Fair Credit Reporting Act, 15 U.S.C. 1681i, over the accuracy or completeness of any item of information in any credit profile when they know or have reason to know, from information provided by the client or otherwise, that the item of information in the credit profile is accurate and complete.

II

It is further ordered that respondent, James F Herndon, Jr., his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit card procurement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they can or will obtain a credit card or other extension of credit on an unsecured or any other basis;

2. That they have any connection with any bank, credit card issuer or any other entity through which they can or will arrange for the issuance of credit cards or for the extension of credit;

3. That they can or will perform services for any person that will contribute in any way to that person's ability to obtain a credit card;

4. The likelihood of any person's obtaining a credit card through their services; or

5. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

III

It is further ordered that respondent James F. Herndon, Jr., shall maintain and, upon request, make available to the Federal Trade Commission for inspection and copying all records and documents relating to any credit improvement service or credit card procurement service that he offers to any person for at least three (3) years from the date of such offer, including but not limited to:

1. Copies of any advertising and promotional material disseminated to any person;

2. Copies of any contracts, disclosure statements or other documents furnished to any person;

3. Copies of any material offering, directly or by implication, any money-back or satisfaction guarantee in connection with the purchase of such services;

4. Copies of any request for a refund from any person, any correspondence or other records relating to such request, and documentation sufficient to show the date, manner, amount, and recipient of any refund made; and

5. Copies of documents and records sufficient to show that, in the ordinary course of business, respondent performs the services that he represents, directly or by implication, that he can or will perform.

IV

It is further ordered that respondent James F. Herndon, Jr., and his successors and assigns distribute a copy of this order to present or future officers, agents, representatives and employees having advertising, sales, or managerial responsibilities with respect to the subject matter of this order and that respondent and his successors and assigns secure from each such person a signed statement acknowledging receipt of said order.

V

It is further ordered that respondent James F. Herndon, Jr. promptly notify the Federal Trade Commission of the discontinuance of his present business or employment and of his affiliation with any new business or employment whose activities include credit improvement services or credit card procurement services. Such notice shall include the respondent's new business address and a statement of the nature of the business or employment in which the respondent is newly engaged as well as a description of respondent's duties and responsibilities in connection with the business or employment.

VI

It is further ordered that respondent shall, within sixty (60) days after the date of service upon him of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which he has complied with this order, and that respondent shall file such supplemental reports as the Commission subsequently requests.

Before Federal Trade Commission

[File No. 842 3166]

Agreement Containing Consent Order To Cease and Desist

In The Matter of PETER S. EVERTS, individually and as a former employee of Credit Establishing Bureau, formerly a partnership.

The Federal Trade Commission having initiated an investigation of certain acts and practices of Peter S. Everts, individually and as a former employee of Credit Establishing Bureau, formerly a partnership, and it now appearing that Peter S. Everts, hereinafter sometimes referred to as proposed respondent, is willing to enter into an agreement containing an order to cease and desist from the use of the acts and practices being investigated,

It is hereby agreed by and between Peter S. Everts and counsel for the Federal Trade Commission that:

1. Proposed respondent Peter S. Everts is a former employee of Credit Establishing Bureau, formerly a partnership, with its office and principal place of business located at 17344 W. 12 mile Road, Suite 103, Southfield, Michigan, 48075. Peter S. Everts, together with others, directed, managed and supervised the acts and practices of said business. His address is 1206 Marseilles Street, Rochester, Michigan, 48063.

2. Proposed respondent admits all the jurisdictional facts set forth in the draft of complaint here attached.

3. Proposed respondent waives:

(a) Any further procedural steps;

(b) The requirements that the Commission's decision contain a statement of findings of fact and conclusions of law;

(c) All rights to seek judicial review or otherwise to settle or contest the

validity of the order entered pursuant to this agreement; and

(d) Any claim he may have under the Equal Access to Justice Act, 5 U.S.C. 504 *et seq.*

4. This agreement shall not become part of the public record of the proceedings unless and until it is accepted by the Commission. If this agreement is accepted by the Commission it, together with the draft of complaint contemplated thereby, will be placed on the public record for a period of sixty (60) days and information in respect thereto publicly released. The Commission thereafter may either withdraw its acceptance of this agreement and so notify proposed respondent, in which event it will take such action as it may consider appropriate, or issue and serve its complaint (in such form as the circumstances may require) and decision, in disposition of the proceeding.

5. This agreement is for settlement purposes only and does not constitute an admission by proposed respondent that the law has been violated as alleged in the draft of complaint attached.

6. This agreement contemplates that, if it is accepted by the Commission, and if such acceptance is not subsequently withdrawn by the Commission pursuant to the provisions of § 2.34 of the Commission's Rules, the Commission may, without further notice to proposed respondent, (1) issue its complaint corresponding in form and substance with the draft of complaint here attached and its decision containing the following order to cease and desist in disposition of the proceeding, and (2) make information public in respect thereto. When so entered, the order to cease and desist shall have the same force and effect and may be altered, modified or set aside in the same manner and within the same time provided by statute for other orders. The order shall become final upon service. Delivery by the U.S. Postal Service of the complaint and decision containing the agreed-to order to proposed respondent's address as stated in this agreement shall constitute service. Proposed respondent waives any right he may have to any other manner of service. The complaint may be used in construing the terms of the order, and no agreement, understanding, representation, or interpretation not contained in the order or the agreement may be used to vary or contradict the terms of the order.

7. Proposed respondent has read the proposed complaint and order contemplated hereby. He understands that once the order has been issued, he will be required to file one or more compliance reports showing that he has fully complied with the order. Proposed respondent further understands that he may be liable for civil penalties in the amount provided by law for each violation of the order after it becomes final.

Order

For purposes of this order, the following definitions shall apply:

A. "Credit Profile" means any written, oral or other communication of information by a consumer reporting agency bearing on a person's creditworthiness, credit standing, credit capacity, character, general reputation, personal characteristics or mode of living that is used or expected to be used or collected in whole or in part for the purpose of establishing the person's eligibility for credit;

B. "Credit Improvement Service(s)" means any service to improve a person's credit profile by removing negative information appearing in a credit profile, changing the rating of such information from negative to positive, or otherwise enhancing said credit profile in return for the payment of money; and

C. "Credit Card Procurement Service(s)" means any serve to obtain a credit care on behalf of any person in return for the payment of money.

I

It is ordered that respondent Peter S. Everts, individually and as a former employee of Credit Establishing Bureau, formerly a partnership, his successors and assigns, and his officers, agents representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit improvement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they seek or obtain any credit profile or will perform any credit improvement service for any person;

2. Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in any credit profile or to change any rating of such information from negative to positive;

3. That they can or will improve the credit profile or any person regardless of the accuracy or date of the information appearing in the credit profile; or

4. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

C. Participating in any dispute or encouraging any person to engage in any dispute with any consumer reporting agency, pursuant to procedures authorized by section 611 of the Fair Credit Reporting Act, 15 U.S.C. 1681i, over the accuracy or completeness of any item of information in any credit profile when they know or have reason to know, from information provided by the client or otherwise, that the item of information in the credit profile is accurate and complete.

II

It is further ordered that respondent Peter S. Everts, his successors and assigns, and his officers, agents, representatives and employees, directly or through any corporate or other device, in connection with the advertising, solicitation, offering for sale, sale or performance of any credit care procurement service in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Misrepresenting, directly or by implication:

1. That they can or will obtain a credit card or other extension of credit on an unsecured or any other basis;

2. That they have any connection with any bank, credit card issuer or any other entity through which they can or will arrange for the issuance of credit cards or for the extension of credit;

3. That they can or will perform services for any person that will contribute in any way to that person's ability to obtain a credit card;

4. The likelihood of any person's obtaining a credit card through their services; or

5. That they will refund in whole or in part any fee paid by any person and the conditions upon which they will do so.

B. Offering to any person, directly or by implication, any money-back or satisfaction guarantee unless with each such offer the identity of the guarantor and all the terms and conditions of the guarantee are clearly and prominently disclosed and unless they promptly and fully honor each such guarantee offered.

III

It is further ordered that respondent Peter S. Everts shall maintain and, upon request, make available to the Federal Trade Commission for inspection and copying all records and documents relating to any credit improvement service or credit card procurement service that he offers to any person for at least three (3) years from the date of such offer, including but not limited to:

1. Copies of any advertising and promotional material disseminated to any person;

2. Copies of any contracts, disclosure statements or other documents furnished to any person;

3. Copies of any material offering, directly or by implication, any money-back or satisfaction guarantee in connection with the purchase of such services;

4. Copies of any request for a refund from any person, any correspondence or other records relating to such request, and documentation sufficient to show the date, manner, amount, and recipient of any refund made; and

5. Copies of documents and records sufficient to show that, in the ordinary course of business, respondent performs the services that he represents, directly or by implication, that he can or will perform.

IV

It is further ordered that respondent Peter S. Everts and his successors and assigns distribute a copy of this order to any present or future officers, agents, representatives and employees having advertising, sales, or managerial responsibilities with respect to the subject matter of this order and that respondent and his successors and assigns secure from each such person a signed statement acknowledging receipt of said order.

V

It is further ordered that respondent Peter S. Everts promptly notify the Federal Trade Commission of the discontinuance of his present business or employment and of his affiliation with any new business or employment whose activities include credit improvement services or credit card procurement services. Such notice shall include the respondent's new business address and a statement of the nature of the business or employment in which the respondent is newly engaged as well as a description of respondent's duties and responsibilities in connection with the business or employment.

VI

It is further ordered that respondent shall, within sixty (60) days after the date of service upon him of this order, file with the Commission a report, in writing, setting forth in detail the manner and form in which he has complied with this order, and that respondent shall file such supplemental reports as the Commission subsequently requests.

Analysis of Proposed Consent Orders To Aid Public Comment

The Federal Trade Commission has provisionally accepted agreements to proposed consent orders from George Tannous, Steven M. Hull, John C. Anderson, Victor J. Hakim, James F. Herndon, Jr., and Peter S. Everts, individually and as former partners or employees of a partnership, formerly trading and doing business as Credit Establishment Bureau (CEB).

The proposed consent orders have been placed on the public record for sixty (60) days for receipt of comments by interested persons. Comments received during this period will become part of the public record. After sixty (60) days, the Commission will again review the agreements and the comments received and will decide whether it should withdraw from the agreements or make the proposed orders final.

The proposed complaints allege that respondents violated Section 5 of the Federal Trade Commission Act, 15 U.S.C. 45, by:

- Misrepresenting that CEB obtained credit profiles and performed credit improvement services for all clients.
- Misrepresenting that the Fair Credit Reporting Act enabled CEB to remove adverse information in clients' credit profiles or to improve their credit ratings regardless of the accuracy or date of the adverse information.
- Misrepresenting that CEB had improved the credit profiles of many clients.
- Misrepresenting that CEB regularly obtained Master or Visa credit cards on an unsecured basis regardless of clients' prior credit histories.
- Misrepresenting that CEB had an established connection with a local bank through which it regularly arranged for the issuance of credit cards on an unsecured basis.
- Misrepresenting that CEB performed services that contributed substantially to its clients' ability to obtain credit cards.
- Misrepresenting that there was good reason to believe that CEB's clients would obtain credit cards through its services.
- Misrepresenting that CEB provided refunds to clients whose credit profiles were not improved or who did not obtain a credit card through its services.

The proposed orders prohibit respondents from misrepresenting:

- That they will obtain credit profiles or perform credit improvement services.
- Any right or remedy available under the Fair Credit Reporting Act, 15 U.S.C. 1681 *et seq.*, including the ability to remove adverse information in credit profiles or to improve credit ratings.
- That they will improve credit profiles regardless of the accuracy or date of the information in the profiles.
- That they will obtain credit cards or other extensions of credit on an unsecured or any other basis.
- That they have any connection with a bank, credit card issuer, or any other entity through which they arrange for the issuance of credit cards or the extension of credit.
- That they will perform services that will contribute in any way to their clients' ability to obtain credit cards.
- The likelihood of any person's obtaining a credit card through their services.
- That they will refund any fee paid by any person for credit improvement or credit card procurement services and the conditions upon which they will do so.

The proposed orders also require respondents George Tannous and Steven M. Hull to pay for broadcasting public service announcements over two radio stations and publishing them in one newspaper in Detroit, Michigan, where CEB formerly did business, for six weeks. These announcements will provide consumers with information about their rights under the Fair Credit Reporting Act and alert them to false claims that may be made in connection with the sale of credit improvement or credit card procurement services.

The purpose of this analysis is to facilitate public comment on the proposed orders. It is not intended to constitute an official interpretation of the agreements and proposed orders or to modify in any way their terms.

Emily H. Rock,

Secretary.

[FR Doc. 86-449 Filed 1-8-86; 8:45 am]

BILLING CODE 6750-01-M

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16 CFR Part 453

Trade Regulation Rule; Funeral Industry Practices

AGENCY: Federal Trade Commission.

ACTION: Extension of period for public comment on petition by State of Texas for statewide exemption from the Commission's Trade Regulation Rule Concerning Funeral Industry Practices.

SUMMARY: The Federal Trade Commission published a notice in the **Federal Register** on November 6, 1985, requesting public comment on the petition by the State of Texas for exemption form the Commission's Trade Regulation Rule Concerning Funeral Industry Practices, 16 CFR Part 453. To facilitate thorough public consideration and comment, the Commission has extended for 21 days the period of time during which public comments will be accepted.

DATE: Public comment will be accepted until January 27, 1986.

ADDRESS: Comments should be captioned: "Texas Petition for Statewide Exemption from the Funeral Rule, FTC File 215–46," and should be submitted to: Office of the Secretary, Federal Trade Commission, 6th and Pennsylvania Avenue NW., Washington, D.C. 20580.

FOR FURTHER INFORMATION CONTACT: Copies of the petition can be obtained from the Public Reference Room (202/523–3598), Room 130, Federal Trade Commisson, 6th and Pennsylvania Avenue NW., Washington, DC 20580.

Inquiries about this notice can be addressed to: Raouf M. Abdullah (202/376–2891), Mark Brown (202/376–2894), or Lee J. Plave (202/376–2805), Attorneys, Division of Enforcement, Bureau of Consumer Protection, Federal Trade Commission, Washington, DC 20580.

SUPPLEMENTARY INFORMATION: On February 21, 1984, the Texas State Board of Morticians (the "Board") filed a petition requesting a statewide exemption (the "Petition") under the provisions of § 453.9 of the Commission's Trade Regulation Rule Concerning Funeral Industry Practices (the "Rule" or "Funeral Rule"), 16 CFR Part 453. The Board supplemented the Petition on six occasions since that date.[1]

On November 6, 1985, the Commission published a notice in the **Federal Register**, requesting public comment on the Petition. 50 FR 46271 (Nov. 6, 1985). The notice stated that public comment on the Petition would be accepted until January 6, 1986. *Id.* In accordance with the procedures announced in staff's State Exemption Guidelines, 50 FR 12521 (Mar. 29, 1985), letters were sent to the Governor and Attorney General of Texas, requesting their comments on the Petition. *Id.* at 12525.

To facilitate through public consideration and comment, the Commission has extended for 21 days the period of time during which public comments will be accepted, until January 27, 1985.

List of Subjects in 16 CFR Part 453

Funerals, Trade Practices.

By direction of the Commission.

Benjamin I. Berman,

Acting Secretary.

[FR Doc. 86–409 Filed 1–8–86; 8:45 am]

BILLING CODE 6750–01–M

[1] The Petition and the Board's supplemental filings have been placed on the public record for the Funeral Rule and are identified as Documents XXVII–2 –XXVII–7 and XXVII–13 in FTC File No. 215–46.

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Social Security Administration

20 CFR Parts 404 and 416

Federal Old-Age, Survivors, and Disability Insurance; Supplemental Security Income for the Aged, Blind, and Disabled; Personal Appearance Demonstration Projects

Correction

In FR Doc. 85–30668 beginning on page 53120, in the issue of Friday, December 27, 1985, make the following corrections:

1. On page 53120, in the second column, in the second line from the bottom, "and" should read "are".

2. On page 53122:

a. In the first column, in the twentieth line of the third complete paragraph, "expect" should read "except";

b. In the last line of the same paragraph, "in" should read "to";

c. In the second column, in the nineteenth line of the second complete paragraph, "§§ 404.91" should read "§§ 404.911"; and

d. In the third column, in the fourth line of the fourth complete paragraph, "or" should read "of".

3. On page 53123, in the second column, in the fourteenth line from the bottom, "be" should read "by".

4. On page 53126, in the second column, the third line of (g)(3) should read "either on the date of your interview or at".

BILLING CODE 1505–01–M

DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT

Office of the Assistant Secretary for Public and Indian Housing

24 CFR Parts 964 and 968

[Docket No. R–86–1265; FR–2033]

Tenant Participation and Management in Public and Indian Housing Projects; Eligibility for Comprehensive Improvement Assistance Program Funds

AGENCY: Assistant Secretary for Public and Indian Housing, HUD.

ACTION: Proposed rule.

SUMMARY: The Department is proposing to codify its policy of encouraging public housing agencies (including Indian housing authorities) to foster tenant participation and to contract with tenant management corporations to perform appropriate functions in the management of public (or Indian) housing. In addition, the Department proposes to amend its regulations on the Comprehensive Improvement Assistance Program (CIAP) to clarify that the cost of providing technical assistance to tenant management corporations is an eligible category of CIAP funding, as part of eligible management improvements. This proposed rule is intended to encourage the use of tenant management where it offers the potential to improve the operation of public housing and to benefit tenants. Improved management can result in cost savings to the public housing agencies and the Department and can improve significantly the quality of life for those residing in public housing.

DATE: *Comment due date:* Comments on this proposed rule must be submitted by March 10, 1986.

ADDRESSES: HUD invites interested persons to submit comments to the Office of General Counsel, Rules Docket Clerk, Room 10276, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410–0500. Comments should refer to the docket number and title indicated in the heading of this document. A copy of each comment submitted will be available for public inspection and copying during regular business hours at

this address. Comments on the information collection requirement contained in this rule (which include the docket number and title) should be submitted both to the HUD Rules Docket Clerk at the above address and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503, Attention: HUD Desk Officer.

FOR FURTHER INFORMATION CONTACT: Janice D. Rattley, Project Management Division, Office of Public and Indian Housing, Room 4122, Department of Housing and Urban Development, 451 Seventh Street, SW., Washington, DC 20410-5000; telephone (202) 755-1800. (This is not a toll-free number.)

SUPPLEMENTARY INFORMATION:

Background

The United States Housing Act of 1937 (42 U.S.C. 1437) (the Act) authorizes the Department to assist public housing agencies (PHAs) in the development and operation of lower income public housing in the United States. Section 6(c)(4)(C) of the Act also authorizes the Secretary of the Department to prescribe regulations to promote sound management practices, including:

> the establishment of effective tenant management relationships designed to assure that satisfactory standards of tenant security and project maintenance are formulated and that the public housing agency (together with tenant councils where they exist) enforces those standards fully and effectively.

Section 3(c)(2) of the Act authorizes funding for tenant organizations involved in the management of the public housing project, by including in the definition of "operation" "the financing of tenant programs and services for families residing in lower income housing projects, particularly where there is maximum feasible participation of the tenants in the development and operation of such tenant programs and services." Tenant programs and services are defined to include "the development and maintenance of tenant organizations which participate in the management of lower income projects, the training of tenants to manage and operate such projects and the utilization of their services in project management and operation." (The Department makes annual contributions to PHAs for the operation of public housing projects subject to the availability of operating subsidy funds authorized under section 9 of the Act.)

Section 14 of the Act provides that one purpose of the Comprehensive Improvement Assistance Program (CIAP) is to upgrade the management and operation of existing public housing projects, to assure that such projects continue to be available to serve lower income families. Therefore, costs of implementing management improvements through tenant management are eligible for funding as part of comprehensive modernization under CIAP.

PHAs (which include Indian housing authorities for purposes of this rule) should encourage participation by residents of public housing projects in decisions affecting the operation of their projects. Each locality must determine for itself the appropriate level of tenant participation, but the Department advocates cooperation between a PHA and its tenants to the maximum extent practical.

This Proposed Rule

1. General Overview

The Department believes that good PHA-tenant relationships are the key to the success of well-run public housing projects, and that public housing (including the PHA and the residents) would benefit from increased participation by residents. In the proposed new Part 964, the Department states clearly its strong support for the establishment of effective tenant-PHA relationships that will contribute to efficient and economical project operations and satisfy tenant needs. These tenant-PHA relationships may include such actions as the PHA recognizing a tenant organization (TO), developing an ongoing process of consultation between tenants and the PHA, or the PHA contracting with a tenant management corporation (TMC) to provide tenant services or to perform project management functions.

The rule proposes to codify many existing policies of the Department concerning tenant participation and tenant management of public housing. The proposal presents for the first time, in rule form, a set of guidelines, policies and requirements designed to systematically encourage tenant participation. The proposed rule contains a new Part 964, with one general subpart (A), containing definitions for the part and separate subparts for tenant participation (Subpart B) and for tenant management (Subpart C).

The rule proposes to amend existing Comprehensive Improvement Assistance Program regulations in Part 968 to make it clear that CIAP funding is available to provide technical assistance for tenant management corporations participating in the management of public housing projects, as a part of eligible management improvements under the CIAP program.

2. Tenant Participation

The proposed rule encourages tenant participation, but leaves it up to the PHA and tenants in each locality to work out the specific elements of a participation process. The Department has not proposed elaborate procedural rules, in recognition that local conditions and preferences vary greatly.

HUD encourages each PHA to survey its tenants to determine whether there is tenant interest in a greater voice in decisions affecting the management of their housing. PHAs should foster tenant participation by providing guidance, training or education in areas needed or requested by the residents, including a request to establish a Tenant Organization. Under this rule, PHAs would be required to notify tenants of any PHA policies and procedures regarding recognition of tenant organizations, including such things as requirements for establishing a representative tenants organization. The PHA should assist tenants in holding elections to select the governing board. A PHA also would be expressly authorized to provide technical assistance to a recognized Tenant Organization (TO) and to provide financial assistance to the organization in meeting its administrative costs.

A TO is defined in the regulation as an incorporated or unincorporated nonprofit organization that represents the tenants of a particular housing project or group of housing projects, which in some cases may be a PHA-wide tenant organization. The principal characteristic of a TO is that its decisions are made by a board and the board is elected by the tenants it represents. A TO would be the vehicle for tenant participation in working with a PHA on an ongoing basis in the development and operation of tenant programs and services.

3. Tenant Management

The Department encourages PHAs to contract with tenants to provide appropriate tenant services or to perform management functions. The decision to provide the opportunity for tenant management of a project is at the discretion of the PHA. However, the Department encourages tenant management of public housing, because it can result in significant economic and social benefits, such as reducing the cost of operating public housing, reducing vandalism, and increasing the stake residents have in their housing. Tenant

management can increase rent collections and lower vacancy rates.

The proposal requires that tenants establish a tenant management corporation (TMC) before entering into a contract with a PHA. The TMC must be approved by the recognized TO, if one exists. A TMC and TO may be one and the same organization, as long as the definitional elements of each are met. A TMC must be incorporated under the laws of the jurisdiction within which it contracts to work. It must also be representative of the tenant population or populations it is serving.

The potential functions a TMC could perform are many and varied. It is possible for a PHA to contract with the TMC to perform a single function, such as rent collection, or to contract with the TMC to perform a broader range of management activities. Any area in which the PHA functions is potentially and appropriate for contracting, whether it be in the area of rental and occupancy functions, maintenance, financial management, or security. The PHA and TMC should analyze the PHA's and the project's needs and assess the TMC's capabilities and contract for those functions appropriate for the particular situation.

The principal limitation on contracting with a TMC is the pre-existing, non-delegable responsibility the PHA has under its Annual Contributions Contract (ACC) with HUD, the Act and State law. The ACC commits the Department to provide financial assistance and the PHA to comply with HUD requirements for the development and operation of a public housing project. Under the ACC, the PHA must ensure that overall PHA operation complies with applicable Federal, State and local requirements. This contractual obligation continues, even if the PHA contracts with the TMC for some or all management functions. Actions taken by the TMC must be consistent with the obligations the PHA has to HUD under the ACC or under HUD regulations and requirements. The PHA must establish a review process to ensure that functions are carried out in accordance with the PHA's legal requirements. (For example, procurement must follow applicable competitive bidding rules, and determinations of tenant eligibility and rent levels must be subject to verification by the PHA and, ultimately, by HUD).

While there is no requirement for HUD approval of a management contract entered into between a PHA and a TMC, if such an agreement is entered into the Department would require that certain minimum provisions be part of the Management Contract. These minimum provisions are designed to assure that the PHA meets its pre-existing responsibilities and to provide an objective reference document for the PHA and the TMC. They include:

1. That TMC activities and expenditures be consistent with the requirements of applicable Federal, State and local law and regulations, the ACC, and PHA policies, including those pertaining to employee fidelity bonds, access to project books and records, accounting and audit;

2. That the TMC submit to the PHA an annual budget or cost estimate covering activities under its contract with the PHA, identifying proposed activities and estimated costs associated with activities (if the scope of the work contracted for makes this appropriate);

3. That the PHA periodically (not less than annually) review the TMC's performance to ensure that work complies with all applicable requirements and meets agreed upon standards of preformance. (The method of review and criteria used to judge performance should be specified in the Management Contract.)

4. That the PHA and the TMC each has the right to take all necessary and appropriate actions to remedy any breach of the contract by the other party, including the right to terminate the contract for cause.

5. Any agreement with respect to financial incentives (discussed below).

The PHA may (at its discretion and subject to the availability of funds) provide financial and technical assistance to tenants interested in establishing a TMC and providing appropriate tenant services or participating in the management of public housing. The PHA may train tenants in management skills to get the TMC established, drawing upon the PHA's own resources or those available through private or public agencies.

A Management Contract may provide reasonsable financial incentives for improved management of the project or program. The incentives may allow the TMC to retain and use all or a portion of the savings in operating expenses, or increases in income, realized as a direct result of TMC actions. Such savings or increases might be achieved, for example, through reduced utilities consumption, increased rent collections, or more efficient conduct of project management functions. The PHA would agree to financial incentives for improved management at TMC-managed projects as an exercise of its management discretion under the Performance Funding System (PFS) to determine the level of operating funds spent at each individual project within the total operating funds available to the PHA. The existence of such incentives in a Management Contract would not alter the calculation of operating subsidies payable to the PHA Under the PFS regulations at 24 CFR Part 990. Additional operating funds provided to a TMC as a result of financial incentives included in a Management Contract may be used only for eligible operating expenses.

The Department recognizes that there are many active TOs and TMCs already in existence. Some tenant organizations represent a single project while others represent tenants in the entire jurisdiction of the PHA. This proposal is not intended to negate any pre-existing arrangements that have been worked out between a PHA and a TO or TMC. Management Contracts which currently do not meet the requirements of the proposed rule will not be required to be modified until their first renewal following the effective date of the final rule.

4. Comprehensive Improvement Assistance Program Funds

To further encourage the development of TMCs, the Department is proposing to amend its Comprehensive Improvement Assistance Program regulations in 24 CFR Part 968, to provide that PHAs may use CIAP funds to assist TMCs in the development or improvement of their management capabilities as a part of management improvements under comprehensive modernization.

Other Matters

National Environmental Policy Act. A Finding of No Significant Impact with respect to the environment has been made in accordance with HUD regulations in 24 CFR Part 50, which implement section 102(2)(C) of the National Environmental Policy Act (42 U.S.C. 4321–4347). The Finding is available for public inspection during regular business hours in the Office of the Rules Docket Clerk, Room 10276, 451 Seventh Street, SW., Washington, DC 20410–0500.

Executive Order 12291. This rule would not constitute a major rule as that term is defined in section 1(b) of the Executive Order on Federal Regulation issued by the President on February 17, 1981. Analysis of the rule indicates that it would not: (1) Have an annual effect on the economy of $100 million or more; (2) cause a major increase in costs or prices for consumers, individual industries, Federal, State or local government agencies, or geographic regions; or (3) have a significant adverse effect on competition, employment,

investment, productivity, innovation, or on the ability of United states-based enterprises to compete with foreign-based enterprises in domestic or export markets.

Regulatory Flexibility Act. As required by section 605(b) of the Regulatory Flexibility Act (5 U.S.C. 601), the Undersigned hereby certifies that this rule does not have a significant economic impact on a substantial number of small entities. This rule proposes Departmental policy and does not prescribe specific action. While publication of the policy is new, a PHA has always been able to encourage and facilitate tenant participation in public housing. This rule would be voluntary and accordingly would be used only by those PHAs and tenants who consider implementation of such a policy to be advantageous.

Paperwork Reduction Act. The information collection requirement contained in this rule has been submitted ot the Office of Management and Budget for review under the provisions of the Paperwork Reduction Act of 1980 (44 U.S.C. 3501–3520). No person may be subjected to a penalty for failure to comply with the information collection requirement until it has been approved and assigned an OMB control number. The OMB control number, after it has been assigned, will be announced in the final rule or by separate notice in the **Federal Register.**

Semiannual Agenda. This rule was listed as item number 962 in the Department's October 29, 1985, Semiannual Regulatory Agenda (50 FR 44166, 44209), published in accordance with Executive Order 12291 and the Regulatory Flexibility Act.

Catalog of Federal Domestic Assistance Program Numbers. The applicable Catalog of Federal Domestic Assistance Program numbers are: Public and Indian Housing—14.850; Public and Indian Housing—Comprehensive Improvement Assistance Program—14.852.

List of Subjects

24 CFR Part 964

Public and Indian housing.

24 CFR Part 968

Grant program: housing and community development, Indians, Loan programs: housing and community development, Public housing, Reporting and recordkeeping requirements.

Accordingly, 24 CFR Chapter IX is proposed to be amended as follows:

1. Title 24 is proposed to be amended by adding a new Part 964, as set forth below:

PART 964—TENANT PARTICIPATION AND MANAGEMENT IN PUBLIC AND INDIAN HOUSING

Subpart A—General Provisions

Subpart B—Tenant Participation

Subpart C—Tenant Management

Authority: Secs. 6, 9, and 14, United States Housing Act of 1937 (42 U.S.C. 1437d, 1437g, 1437*l*); sec. 7(d), Department of Housing and Urban Development Act (42 U.S.C. 3535(d)).

Subpart A—General Provisions

§ 964.1 Purpose.

The purpose of this part is to recognize the importance of involvement of tenants in creating a positive living environment and in contributing to the successful operation of public housing. Accordingly, this part includes Department policies, guidelines and requirements applicable to tenant participation in the management of public housing and tenant management of public housing.

§ 964.3 Applicability and scope.

(a) The policies and procedures contained in this part apply to any public housing agency (PHA) that has a Public Housing Annual Contributions Contract (ACC) with the Department. (All references to PHAs include Indian housing authorities).

(b) The Department recognizes that there are many active tenant organizations and tenant management corporations already in existence. Some tenant organizations represent a single project while others represent tenants in the entire jurisdiction of the PHA. This rule is not intended to negate any pre-existing arrangements that have been worked out between a PHA and a tenant organization or tenant management corporation. Current management contracts which do not meet the requirements of Subpart C of this part need not be modified until their first renewal following the effective date of this part.

§ 964.5 Relation to other requirements.

This part is intended to be consistent with other regulations regarding tenant participation in specific aspects of public housing management. To the extent any provision in this part conflicts with any tenant participation provision in any other part of this chapter, the other provision controls. This part generally is consistent with previous HUD instructions and guidelines on various aspects of tenant participation in public housing. To the extent this part and previous guidelines or instructions conflict, the provisions in this part control.

§ 964.7 Definitions.

In addition to the definitions contained in Part 941 of this chapter, this part uses the following terms with the following meanings:

Management: All activities for which the PHA is responsible to HUD under the ACC, within the definition of "operation" under the Act and the ACC, including tenant programs and services.

Management Contract. A written agreement between a Tenant Management Corporation (TMC) and a PHA providing for the undertaking by the TMC of one or more management activities.

Tenant Management: The performance of management activities for one or more projects by a Tenant Management Corporation under a Management Contract.

Tenant Management Corporation (TMC): An incorporated, nonprofit organization, approved by the Tenant Organization (where one exists), that enters into a Management Contract with a PHA. A TMC also may serve as a Tenant Organization, so long as it meets the definition of a Tenant Organization. At a minimum, however, the TMC must have representatives of the Tenant Organization (where one exists) or the tenants (where no TO exists) on the TMC governing board.

Tenant Organization (TO): An incorporated or unincorporated nonprofit organization, recognized by the PHA, that represents the tenants of a particular housing project or group of housing projects, which in some cases may be a PHA-wide tenant organization. A TO is governed by a board democratically elected by the tenants of the project or projects it represents.

Tenant Participation: A process of consultation between tenants and the PHA concerning matters affecting the management of public housing, as a

means of providing tenants with information about PHA plans and decisions and affording them opportunities to make comments and recommendations, on an advisory basis, about those plans and decisions.

§ 964.9 HUD role in activities under this part.

The form and extent of tenant participation and tenant management are local decisions to be made by a PHA and its tenants. HUD will promote tenant participation and tenant manangement and provide additional guidance as necessary and appropriate. HUD is not obligated to intervene in disputes between PHAs and tenants, particularly when the dispute concerns a matter of local discretion as provided in section 2 of the United States Housing Act of 1937 (e.g., the legitimacy of a particular tenant organization).

Subpart B—Tenant Participation

§ 964.15 HUD policy on tenant participation.

It is HUD's policy to encourage tenant participation in the management of all public housing, as may be found appropriate by PHAs and tenants for their particular local circumstances. HUD encourages PHAs and tenants to work together to determine the most appropriate ways to foster constructive relationships, particularly through tenant organizations. TOs are generally the best vehicle for achieving effective tenant participation on a regular, sustained basis.

§ 964.17 Tenant participation requirements.

The following are requirements for implementing HUD's policy on tenant participation, as expressed in § 964.15:

(a) A PHA shall provide the tenants or any tenant organization with current information concerning the PHA's policies on tenant participation, including guidance on formation of a TO and procedures for recognition of a TO.

(b) A PHA shall consult with tenants or tenant organizations if they exist, to determine the extent to which tenants desire to participate in the manangement of their housing and the specific methods which may be mutually agreeable to the PHA and the tenants.

(c) When requested by tenants, a PHA shall provide appropriate guidance to tenants to assist them in establishing and maintaining a TO.

§ 964.19 Tenant participation guidelines.

The following are guidelines for implementing HUD's policy on tenant participation, as expressed in § 964.15:

(a) Tenants and the PHA each should identify appropriate roles and responsibilities for creating and sustaining constructive tenant participation. Tenants should have the primary responsibility for determining their goals and method of operating. A PHA should be receptive to any reasonable request by tenants or tenant organizations to participate.

(b) A Tenants Organization (TO) may request that it be recognized as the official tenant organization representing the tenants in meetings with the PHA or others, or other occasions appropriate for representation of tenants. A PHA should grant formal recognition of a TO under the following conditions:

(1) The tenant organization makes a request for recognition;

(2) Notice of the request and opportunity to be heard is given to all tenants in the project or projects to be represented by the TO; and

(3) The tenant organization demonstrates that:

(i) The tenant organization is representative of the tenants it purports to represent. A tenant organization may represent tenants in more than one project. In this case, tenants from each project must be fairly represented;

(ii) The tenant organization has adopted written procedures that provide for specific officers to be elected on a regular basis (but at least once every three years); and

(iii) The tenant organization has a democratically elected governing board.

(c) At a minimum, the PHA and TO should put in writing their understanding concerning the elements of their relationship. If such an agreement includes contracting for the TO to perform any of the functions for which the PHA is responsible to HUD under the ACC, the provisions of Subpart C of this part apply.

§ 964.21 Funding tenant participation.

(a) The PHA may, at its discretion and subject to availability of funds, provide reasonable in-kind and cash assistance for tenant participation activities. Such assistance will be considered an eligible operating expense of a PHA, subject to HUD approval of the PHA's operating budgets. Eligible tenant participation costs may include, in addition to noncash contributions such as technical assistance, space, office furniture and duplicating services, funding for the administrative costs of the tenant organization.

(b) Cash contributions to a TO may be made only under a written agreement between the PHA and TO, which includes a budget acceptable to the PHA. The agreement must require the TO to account to the PHA for use of the funds and permit the PHA to inspect and audit the TO's financial records related to the agreement.

(c) PHAs are encouraged to coordinate their contributions with available funding from other private and public agencies.

Subpart C—Tenant Management

§ 964.25 HUD policy on tenant management.

It is HUD's policy to encourage tenant management where it is feasible. HUD encourages PHAs, tenants and TOs to explore the various functions involved in project management to identify appropriate opportunities for contracting with a TMC. Potential benefits of tenant management of public housing include improved quality of life and resident satisfaction and other social and economic benefits to tenants, the PHA and HUD.

§ 964.27 Tenant management guidelines.

A decision to enter into a management contract with a TMC (see § 964.29) as well as the scope of the contract, are at the discretion of the PHA. However, PHAs should be supportive of tenant interest in forming a TMC to contract with the PHA for tenant management and work with tenants to determine the feasibility of tenant management.

§ 964.29 Tenant management requirements.

The following requirements apply when a PHA and tenants are interested in providing for some level of tenant management in their project:

(a) *Tenant Management Corporation.* Tenants interested in contracting with a PHA shall establish a Tenant Management Corporation, with the following characteristics:

(1) The TMC shall be incorporated under the laws of the applicable jurisdiction.

(2) A TMC may be established by more than one TO, so long as each TO approves the establishment of the TMC and has representation on the TMC Board of Directors.

(3) The TMC shall have an elected Board of Directors and the bylaws shall provide for inclusion on the Board of Directors of representatives of each TO involved in establishing the TMC or, where no TO exists, representatives of each project served by the TMC.

(4) The TMC shall be approved by the TO, if one exists. The TMC may serve as both the TO and TMC, so long as the TMC includes the elements of a TO—

(b) *Management Contract: scope.* A Management Contract between the PHA and TMC is required for tenant management. The PHA and the TMC may agree to the TMC's performance of any or all management functions for which the PHA is responsible to HUD under the ACC or any other functions not inconsistent with the ACC and applicable laws and regulations. Before entering into a Management Contract the PHA shall determine that the TMC has the capability for satisfactory performance of all management functions covered by the Management Contract. The ACC provisions on competitive bidding and prior written HUD approval of contracts do not apply to the PHA's decision to contract with a TMC. However, an information copy of any Management Contract shall be sent upon execution to the appropriate HUD Field Office.

(c) *Management Contract: contents.* At a minimum, the Management Contract shall contain provisions to satisfy the following requirements:

(1) TMC activities and expenditures shall be consistent with the requirements of applicable Federal, State and local law and regulations, the ACC and PHA policies, including those pertaining to employee fidelity bonds, access to project books and records, accounting and audit.

(2) The TMC shall submit to the PHA an annual budget or cost estimate covering activities under its contract with the PHA, identifying proposed activities and estimated costs associated with activities (if the scope of the work contracted for makes this appropriate).

(3) The PHA shall review periodically (not less than annually) the TMC's performance to ensure that work complies with all applicable requirements and meets agreed upon standards of performance. (The method of review and criteria used to judge performance should be specified in the management contract.)

(4) The PHA and the TMC each has the right to take all necessary and appropriate actions to remedy any breach of the contract by the other party, including the right to terminate the contract for cause.

(5) Agreement with respect to financial incentives, if applicable (see § 964.33(b)).

(d) *Prohibited activities.* A PHA may not contract for assumption by the TMC of the PHA's underlying responsibilities to HUD under the ACC. The PHA shall ensure that the overall operation of its projects is in compliance with all applicable Federal, State and local requirements. Activities performed by the TMC under the management contract to which such requirements apply shall be monitored by the PHA.

§ 964.31 Continued PHA responsibility to HUD.

A Management Contract between the PHA and a TMC does not impair the respective rights and responsibilities of the PHA and HUD under the ACC. The PHA remains responsible to HUD for ensuring that the management of its projects, including management functions contracted out to a TMC, is in compliance with all applicable HUD requirements.

§ 964.33 PHA financial support for tenant management.

(a) The PHA may, in its discretion and subject to the availability of funds, provide reasonable in-kind and cash contributions to a TMC. Such assistance may involve technical assistance to the TMC, including training or organizational development. Such assistance also may include helping the TMC obtain services or training provided by other public or private agencies in support of tenant management.

(b) A Management Contract may provide reasonable financial incentives for improved management of the function or project by the TMC. Such incentives may permit the retention and use for the TMC-managed project or projects of all or a portion of the savings in operating expenses, or increases in income, realized as a direct result of improved management attributable to the TMC. The PHA would agree to financial incentives for improved management at TMC-managed projects as an exercise of its management discretion under the Performance Funding System (Part 990 of this chapter) to determine the level of operating funds spent at each individual project within the total operating funds available to the PHA. The existence of such incentives in a Management Contract would not alter the calculation of operating subsidies payable to the PHA under the PFS regulations in Part 990 of this chapter. Such funds may be used only for eligible operating expenses, and the TMC shall be required to manage and account for them to the PHA in the same manner as for other operating funds. Financial incentives provided to the TMC are subject to HUD review and approval to the extent that they are part of the PHA's operating budget.

§ 964.35 HUD financial support for tenant management.

In addition to or in lieu of PHA operating funds, Comprehensive Improvement Assistance Program (CIAP) funds may be used to assist TMCs to develop, improve or strengthen their management capabilities as a part of management improvements under comprehensive modernization. PHAs should request such funding under the established CIAP application process contained in Part 968 of this chapter.

PART 968—COMPREHENSIVE IMPROVEMENT ASSISTANCE PROGRAM

2. The authority citation for Part 968 is proposed to be revised as set forth below:

Authority: Secs. 6 and 14, United States Housing Act of 1937 (42 U.S.C. 1437d, 14371); sec. 7(d), Department of Housing and Urban Development Act (42 U.S.C. 3535(d)).

3. Section 968.4 is proposed to be amended by adding a new paragraph (h) to read as follows:

§ 968.4 Eligible costs.

* * * * *

(h) *Tenant Management Corporations.* Eligible modernization costs include providing funds to assist Tenant Management Corporations (TMCs) as defined in § 964.7 of this chapter to develop their management capabilities in connection with correction of identified management problems that are PHA-wide or project specific in nature, for which the TMC has contracted to perform for the PHA. (See Part 964 of this chapter for information on the establishment and functions of Tenant Management Corporations.) Such funding is subject to the limitations indicated in paragraph (b) of this section.

Dated: January 3, 1986.

Warrent T. Lindquist,

Assistant Secretary for Public and Indian Housing.

[FR Doc. 86-498 Filed 1-8-86; 8:45 am]

BILLING CODE 4210-33-M

DEPARTMENT OF THE TREASURY

Internal Revenue Service

26 CFR Part 1

[LR-59-85]

Information Reporting of Allowances, or Reimbursements, or Charges for Travel and Other Expenses of Public Employees and Certain Other Persons; Notice of Proposed Rulemaking

AGENCY: Internal Revenue Service, Treasury.

ACTION: Notice of proposed rulemaking.

SUMMARY: This document contains proposed regulations governing information returns required to be filed by public sector employers and by payors with respect to persons in the service of an international organization regarding allowances or reimbursements provided for traveling or other bona fide ordinary and necessary expenses, including an allowance for meals and lodging or a per diem allowance in lieu of subsistence. This action is necessary to clarify existing regulations with respect to information reporting. These regulations affect employers, employees, certain third-party paying agents, and payors with respect to persons in the service of an international organization.

DATES: The regulations are proposed to be effective January 1, 1986, and would apply to information returns required to be filed for calendar years after 1985. Written comments must be delivered or mailed by March 10, 1986.

ADDRESS: Send comments to: Commissioner of Internal Revenue, Attention: CC:LR:T (LR-59-95), Washington, DC 20224.

FOR FURTHER INFORMATION CONTACT: Renay France of the Legislation and Regulations Division, Office of Chief Counsel, Internal Revenue, Service, 1111 Constitution Avenue, NW., Washington, DC 20224 (Attention: CC:LR:T). Telephone 202-566-3829 (not a toll-free number).

SUPPLEMENTARY INFORMATION:

Background

This document contains proposed amendments to the Income Tax Regulations (26 CFR Part 1) under section 6041(a) of the Internal Revenue Code of 1954. The amendments would clarify the Internal Revenue Service's position with respect to amounts provided to employees and certain other persons as allowances or reimbursements for traveling or certain other business expenses. This clarification is necessary because some employers and payors appear to be either unaware of, or failing to comply with, the Service's position.

Explanation of Provisions

The proposed amendments would delete present § 1.6041-3(j) to make clear that all employers, including the United States, a State, Territory or a political subdivision thereof, and the District of Columbia, are required to report amounts provided to persons in the military or civil service as allowances, reimbursements, or charges for traveling and other business expenses, including an allowance for meals and lodging or a per diem allowance in lieu of subsistence, except to the extent that such persons are required to and do account to the employer for such expenses within the meaning of § 1.162-17(b)(4).

Similarly, the amendments would delete § 1.6041-3(n) to make clear that allowances, reimbursements, or charges for traveling and other business expenses, including an allowance for meals and lodging or a per diem allowance in lieu of subsistence, provided to persons in the service of an international organization, as defined in section 7701(a)(18), are subject to reporting except to the extent that such persons are required to and do account to the international organization for such expenses within the meaning of § 1.162-17(b)(4).

These proposed amendments would make clear that payments of this character are subject to § 1.6041-3(i), which provides that no information return is required with respect to advances, reimbursements, or charges for traveling and other business expenses of an employee to the extent that the employee is required to account (within the meaning of the term "account" as set forth in § 1.162-17(b)(4)) and does so account to the employer for such expenses.

Non-Applicability of Executive Order 12291

The Commissioner of Internal Revenue has determined that this proposed rule is not a major rule as defined in Executive Order 12291 and that a regulatory impact, analysis, therefore, is not required.

Regulatory Flexibility Analysis

It is hereby certified that this rule will not have a significant impact on a substantial number of small entities because the number of significantly affected small entities is insubstantial.

Comments and Regulations for a Public Hearing

Before adopting these proposed regulations consideration will be given to any written comments that are submitted (preferably eight copies) to the Commissioner of Internal Revenue. All comments will be available for public inspection and copying. A public hearing will be held upon written request to the Commissioner by any person who has submitted written comments. If a public hearing is held, notice of the time and place will be published in the **Federal Register.**

Drafting Information

The principal author of these proposed regulations is Renay France of the Legislation and Regulations Division of the Office of Chief Counsel, Internal Revenue Service. However, personnel from other offices of the Internal Revenue Service and Treasury Department participated in developing the regulations, both on matters of substance and style.

List of Subjects in 26 CFR Part 1

Income taxes, Administrative practice and procedure, Filing requirements.

Proposed Amendments to the Regulations

The proposed amendments to 26 CFR Part 1 are as follows:

PART 1—[AMENDED]

1. The authority for Part 1 is amended by adding the following citation:

Authority: 26 U.S.C. 7805. * * * Section 1.6041-3 also issued under 26 U.S.C. 6041(a).

§ 1.6041-3 [Amended]

2. Section 1.6041-3 is amended as follows:

1. Paragraph (j) is removed.
2. Paragraph (k) is redesignated as new paragraph (j).
3. Paragraph (*l*) is redesignated as new paragraph (k).
4. Paragraph (m) is redesignated as new paragraph (*l*).
5. Paragraph (n) is removed.
6. Paragraph (o) is redesignated as new paragraph (m).
7. Paragraph (p) is redesignated as new paragraph (n).
8. Paragraph (q) is redesignated as new paragraph (o).

Roscoe L. Egger, Jr.,

Commissioner of Internal Revenue.

[FR Doc. 86-491 Filed 1-8-86; 8:45 am]

BILLING CODE 4830-01-M

DEPARTMENT OF JUSTICE

28 CFR Part 16

[AAG/A Order No. 1-86]

Exemption of Records Systems Under the Privacy Act

AGENCY: Department of Justice.

ACTION: Proposed rule.

SUMMARY: The Department of Justice gives notice that the proposed regulations published on April 7, 1983, to amend Title 28 of the Code of Federal Regulations, Part 16, Subpart E, "Exemption of Records Systems Under the Privacy Act" are being revised. The regulations are being revised: (1) To clarify that the Department's Freedom of Information Act and Privacy Act (FOIA/PA) systems are exempt only to the extent that they contain law enforcement- or investigative-type information and (2) to remove exemptions and other proposed changes which were offered to achieve clarity and consistency with reorganizations but which, for administrative reasons, are now being withdrawn or republished as a separate proposed rule.

DATE: Submit comments by February 10, 1986.

ADDRESS: Acting Assistant Director, General Services Staff, Justice Management Division, Department of Justice, Room 6312, 10th and Constitution Avenue NW., Washington, D.C. 20530.

FOR FURTHER INFORMATION CONTACT: J. Michael Clark, (202) 633-4414.

SUPPLEMENTARY INFORMATION: On April 7, 1983, the Department issued proposed regulations to amend certain sections of 28 CFR Part 16, Subpart E, to provide additional specificity as to the statutory authority for exempting certain systems of records; to remove those systems of records which were no longer maintained; to incorporate clarifying language consistent with that published for certain systems of records in the **Federal Register**; to rename certain systems of records to more accurately describe the records; to redesignate other systems of records under a new 28 CFR section to accomplish consistency with reorganizations; and to make editorial changes.

In addition, to protect the identities of confidential sources and to ensure the unhampered collection of information for investigative and evaluative purposes concerning the subject's candidacy for the position of attorney, the Department proposed to revise § 16.71 to exempt a system of records entitled "Miscellaneous Attorney Personnel Records System (JUSTICE/DAG-011)" from subsections (d)(1) and (e)(1) of the Privacy Act.

To protect ongoing Department of Justice investigations, the privacy of third parties, and the identity of confidential sources involved in such investigations, the Department also proposed to exempt a system of records entitled "Freedom of Information and Privacy Appeals Index (JUSTICE/OLP-001)" from subsections (d)(1), (2), (3), and (4), (e)(1), (2) and (5), and (g) of the Privacy Act and to establish a new section, § 16.72, for this system of records.

A section by section explanation of these proposals throughout Part 16 was provided under "Supplementary Information" in the regulations issued April 7, 1983. These proposals remain unchanged except that, pursuant to oral comments received from the Office of Management and Budget, those sections relating to exemption of the Department's FOIA/PA systems are further revised to clarify that records in these systems are exempt only to the extent that they contain investigatory-law enforcement-type information. Further, for administrative reasons, the revision of §§ 16.71 and 16.88 and the addition of § 16.72, as proposed on April 7, are withdrawn from these proposed regulations and published as a separate proposed rule; in addition, the proposed change to § 16.92 is withdrawn.

This order relates to individuals rather than small business entities. Nevertheless, pursuant to the requirements of the Regulatory Flexibility Act, 5 U.S.C. 601-612, it is hereby stated that the order will not have "a significant economic impact on a substantial number of small entities."

List of Subjects in 28 CFR Part 16:

Administrative practice and procedure, Courts, Freedom of information, Privacy, and Sunshine Act.

Pursuant to the authority vested in the Attorney General by 5 U.S.C. 552a and delegated to me by Attorney General Order No. 793-78, the Department proposes to amend the regulations published in the **Federal Register** on April 7, 1983 (48 FR 15160) as described above and as set forth below.

Dated: November 27, 1985.

W. Lawrence Wallace,

Assistant Attorney General for Administration.

1. The authority for Part 16 continues to read as follows:

Authority: 28 U.S.C. 509, 510; 5 U.S.C. 301, 552, 552a; 31 U.S.C. 483a unless otherwise noted.

§ 16.73 [Redesignated as § 16.74]

1a. Section 16.73 is redesignated as § 16.74.

2. Section 16.76 is amended by revising the undesignated paragraphs following (a)(1) and (c)(1); by revising paragraph (b); by adding a sentence to the end of paragraph (d)(1); by removing paragraph (g)(1) and redesignating paragraph (g)(2) as (g)(1); and by adding paragraph (h).

§ 16.76 Exemption of Justice Management Division Systems.

(a) * * *

(1) * * *

This exemption applies only to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a(j)(2).

(b) Exemption from subsection (d) is justified for the following reasons:

(1) Pub. L. 91-513 (Controlled Substances Act), Sec. 404(b) states that the nonpublic record "shall be retained by the Department of Justice solely for the purpose of use by the courts in determining whether or not, in subsequent proceedings, such person qualifies under this subsection."

(2) Information in this system consists of arrest records, including those of co-defendants. The records include reports of informants and investigations. Therefore, access could disclose investigative techniques, reveal the identity of confidential sources, and invade the privacy of third parties.

(c) * * *

(1) * * *

This exemption applies only to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a (j)(2) and (k)(5).

(d) Exemption from subsection (d) is justified for the following reason:

(1) * * * Access may also reveal information relating to actual or potential criminal investigations.

* * * * *

(h) Consistent with the legislative purpose of the Privacy Act of 1974, the Justice Management Division will grant access to non-exempt material in FOIA/PA records. Exemptions will apply only to the extent that other correspondence or internal memoranda retained with the request file contain investigatory material for law enforcement purposes.

3. Section 16.81 is amended by revising paragraphs (a), (b)(11), (d), and (e).

§ 16.81 Exemption of United States Attorneys Systems—Limited Access.

(a) The following systems of records are exempt from 5 U.S.C. 552a(c) (3) and

(4), (d), (e) (1), (2) and (3), (e)(4) (G) and (H), (e) (5) and (8), (f), and (g):

(1) Citizen Complaint Files (JUSTICE/USA-003).

(2) Civil Case Files (JUSTICE/USA-005).

(3) Consumer Complaints (JUSTICE/USA-006).

(4) Criminal Case Files (JUSTICE/USA-007).

(5) Kline-District of Columbia and Maryland-Stock and Land Fraud Interrelationship Filing System (JUSTICE/USA-009).

(6) Major Crimes Division Investigative Files (JUSTICE/USA-010).

(7) Prosecutor's Management Information System (PROMIS) (JUSTICE/USA-011).

(8) United States Attorney, District of Columbia Superior Court Division, Criminal Files (JUSTICE/USA-013).

(9) Pre-trial Diversion Program Files (JUSTICE/USA-014).

These exemptions apply to the extent that information in these systems is subject to exemption pursuant to U.S.C. 552a(j)(2), (k)(1) and (k)(2).

(b) * * *

(11) From subsection (g) because these systems of records are compiled for law enforcement purposes and have been exempted from the access provisions of subsections (d) and (f).

* * * * *

(d) The following system of records is exempt from 5 U.S.C. 552a(c) (3) and (4), (d), (e)(1), (2) and (3), (e)(4) (G) and (H), (e)(5) and (8), (f), and (g):

(1) Freedom of Information Act/Privacy Act files (JUSTICE/USA-008)

These exemptions apply to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a(j)(2), (k)(1) and (k)(2).

(e) Because this system contains Department of Justice civil and criminal law enforcement, investigatory records, exemptions from the particular subsections are justified for the following reasons:

(1) From subsection (c)(3) because the release of the disclosure accounting would permit the subject of a criminal investigation and/or civil case or matter under investigation, in litigation, or under regulatory or administrative review or action to obtain valuable information concerning the nature of that investigation, case or matter, and present a serious impediment to law enforcement or civil legal activities.

(2) From subsection (c)(4) because an exemption is being claimed for subsection (d) of the Act (Access to Records), rendering this subsection inapplicable to the extent that this system of records is exempted from subsection (d).

(3) From subsection (d) because access to the records contained in these systems would inform the subject of a criminal or civil investigation, matter or case of the existence of such, and provide the subject with information that might enable him to avoid detection, apprehension or legal obligations, and present a serious impediment to law enforcement and other civil remedies. Amendment of the records would interfere with ongoing criminal law enforcement proceedings and impose an impossible administrative burden by requiring criminal investigations to be continuously reinvestigated.

(4) From subsection (e)(1) because in the course of criminal investigations and/or civil investigations, cases or matters, the United States Attorneys often obtain information concerning the violation of laws or civil obligations other than those relating to an active case or matter. In the interests of effective law enforcement and civil litigation, it is necessary that the United States Attorneys retain this information since it can aid in estbalishing patterns of activity and provide valuable leads for other agencies and future cases that may be brought within the United States Attorneys' offices.

(5) From subsection (e)(2) because to collect information to the greatest extent possible from the subject individual of a criminal investigation or prosecution would present a serious impediment to law enforcement in that the subject of the investigation would be placed on notice of the existence of the investigation and would therefore be able to avoid detection, apprehension, or legal obligations and duties.

(6) From subsection (e)(3) because to provide individuals supplying information with a form stating the requirements of subsection (e)(3) would constitute a serious impediment to law enforcement in that it could compromise the existence of a confidential investigation, reveal the identity of confidential sources of information, and endanger the life and physical safety of confidential informants.

(7) From subsections (e)(4) (G) and (H) because this system of records is exempt from the individual access provisions of subsection (d) and the rules provisions of subsection (f).

(8) From subsection (e)(5) because in the collection of information for law enforcement purposes it is impossible to determine in advance what information is accurate, relevant, timely, and complete. With the passage of time, seemingly irrelevant or untimely information may acquire new significance as further investigation brings new details to light and the accuracy of such information can only be determined in a court of law. The restrictions of subsection (e)(5) would inhibit the ability of trained investigators and intelligence analysts to exercise their judgment in reporting on investigations and impede the development of intelligence necessary for effective law enforcement.

(9) From subsection (e)(8) because the individual notice requirements of subsection (e)(8) could present a serious impediment to law enforcement as this could interfere with the United States Attorneys' ability to issue subpoenas and could reveal investigative techniques and procedures.

(10) From subsection (f) because this system has been exempted from the individual access provisions of subsection (d).

(11) From subsection (g) because the records in this system are generally compiled for law enforcement purposes and are exempt from the access provisions of subsections (d) and (f), rendering subsection (g) inapplicable.

4. Section 16.85 is amended by revising paragraph (a).

§ 16.85 Exemption of U.S. Parole Commission Systems—Limited access.

(a) The following systems of records are exempt from 5 U.S.C. 552a(c) (3) and (4), (d), (e) (2) and (3), (e)(4) (G) and (H), (e)(8), (f) and (g):

(1) Docket Scheduling and Control System (JUSTICE/PRC-001).

(2) Inmate and Supervision Files System (JUSTICE/PRC-003).

(3) Labor and Pension Case, Legal File, and General Correspondence System (JUSTICE/PRC-004).

(4) Statistical, Educational and Developmental System (JUSTICE/PRC-006).

(5) Workload Record, Decision Result, and Annual Report System (JUSTICE/PRC-007).

These exemptions apply only to the extent that information in these systems is subject to exemptions pursuant to 5 U.S.C. 552a(j)(2).

* * * * *

5. Section 16.90 is amended by revising paragraphs (e) and (f) as follows:

§ 16.90 Exemption of Civil Rights Division Systems—Limited Access.

* * * * *

(e) The following system of records is exempt from 5 U.S.C. 552a(c)(3), (d), and (g):

(1) Freedom of Information/Privacy Act Records (JUSTICE/CRT-010).

These exemptions apply to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a (j)(2) and (k)(2).

(f) Because this system contains Department of Justice civil and criminal law enforcement, investigatory records, exemptions from the particular subsections are justified for the following reasons:

(1) From subsection (c)(3) because the release of the disclosure accounting may enable the subject of an investigation to gain valuable information concerning the nature and scope of the investigation and seriously hamper law enforcement efforts.

(2) From subsection (d) because access to records in this system would compromise ongoing investigations and reveal investigative techniques. In addition, certain of these records may be subject to protective orders entered by Federal courts to protect their confidentiality, and many are copies of documents which are the property of State agencies and were obtained under express or implied promises to strictly protect their confidentiality. This system also contains investigatory material compiled by the Equal Opportunity Commission pursuant to its authority under 42 U.S.C. 2000e-8. Provisions of 42 U.S.C. 2000e-5(b), 42 U.S.C. 2000e-8(e), and 44 U.S.C. 3508 make it unlawful to make public in any manner whatsoever any information obtained by the commission pursuant to the authority. Amendment of the records would interfere with ongoing criminal law enforcement proceedings and impose an impossible administrative burden by requiring criminal investigations to be continuously reinvestigated.

(3) From subsection (g) because exemption from subsection (d) will render the provisions on suits to enforce subsection (d) inapplicable.

6. Section 16.91 is amended by revising paragraphs (q) and (r).

§ 16.91 Exemption of Criminal Division Systems—Limited Access.

* * * * *

(q) The following system of records is exempt from 5 U.S.C. 552a(c) (3) and (4), (d), (e)(1), (2) and (3), (e)(4) (G), (H) and (I), (e)(5) and (8), (f), and (g):

(1) Freedom of Information/Privacy Act Records (JUSTICE/CRM-024)

These exemptions apply to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a (j)(2), (k)(1), and (k)(2).

(r) Because this system contains Department of Justice civil and criminal law enforcement, investigatory records, it is exempted for the reasons set forth from the following provisions of 5 U.S.C. 552a:

(1) (c)(3). The release of the disclosure accounting would present a serious impediment to law enforcement by permitting the subject of an investigation of an actual or potential criminal, civil, or regulatory violation to determine whether he is the subject of investigation, or to obtain valuable information concerning the nature of that investigation and the information obtained, or to identify witnesses and informants.

(2)(c)(4). Since an exemption is being claimed for subsection (d) of the Act (Access to Records), this subsection is inapplicable to the extent that this system of records is exempted from subsection (d).

(3) (d). Access to records contained in this system would enable the subject of an investigation of an actual or potential criminal or civil case or regulatory violation to determine whether he or she is the subject of investigation, to obtain valuable information concerning the nature and scope of the investigation, and information or evidence obtained as to his/her activities, to identify witnesses and informants, or to avoid detection or apprehension. Such results could prevent the successful completion of the investigation, endanger the physical safety of witnesses or informants, lead to the improper influencing of witnesses, the destruction of evidence, or the fabrication of testimony, and thereby present a serious impediment to effective law enforcement. Amendment of the records would interfere with ongoing criminal law enforcement proceedings and impose an impossible administrative burden by requiring criminal investigations to be continuously reinvestigated.

(4) (e)(1). In the course of criminal or other law enforcement investigations, cases, and matters, the Criminal Division will occasionally obtain information concerning actual or potential violations of law that are not strictly within its statutory or other authority, or it may compile information in the course of an investigation which may not be relevant to a specific prosecution. In the interests of effective law enforcement, it is necessary to retain such information since it can aid in establishing patterns of criminal activity and can provide valuable leads for Federal and other law enforcement agencies.

(5) (e)(2). To collect information to the greatest extent practicable from the subject individual of a criminal investigation or prosecution would present a serious impediment to law enforcement. The nature of criminal and other investigative activities is such that vital information about an individual can only be obtained from other persons who are familiar with such individual and his/her activities. In such investigations it is not feasible to rely upon information furnished by the individual concerning his own activities.

(6) (e)(3). To provide individuals supplying information with a form stating the requirements of subsection (e)(3) would constitute a serious impediment to law enforcement in that it could compromise the existence of a confidential investigation or reveal the identity of witnesses or confidential informants.

(7) (e)(4) (G) and (H). These subsections are inapplicable to the extent that this system is exempt from the access provisions of subsection (d) and the rules provisions of subsection (f).

(8) (e)(4)(I). The categories of sources of the records in this system have been published in the Federal Register in broad generic terms in the belief that this is all that subsection (e)(4)(I) of the Act requires. In the event, however, that this subsection should be interpreted to require more detail as to the identity of sources of the records in this system, exemption from this provision is necessary to protect the confidentiality of the sources of criminal and other law enforcement information. Such exemption is further necessary to protect the privacy and physical safety of witnesses and informants.

(9) (e)(5). In the collection of information for criminal law enforcement purposes it is impossible to determine in advance what information is accurate, relevant, timely, and complete. With the passage of time, seemingly irrelevant or untimely information may acquire new significance as further investigation brings new details to light and the accuracy of such information can often only be determined in a court of law. The restrictions of subsection (e)(5) would inhibit the ability of trained investigators, intelligence analysts, and government attorneys in exercising their judgment in reporting on information and investigations and impede the development of criminal or other intelligence necessary for effective law enforcement.

(10) (e)(8). The individual notice requirements of subsection (e)(8) could present a serious impediment to law enforcement as this could interfere with the ability to issue warrants or subpoenas and could reveal investigative techniques, procedures, or evidence.

(11) (f). This subsection is inapplicable to the extent that this system is exempt from the access provisions of subsection (d).

(12) (g). Because some of the records in this system contain information which was compiled for law enforcement purposes and have been exempted from the access provisions of subsection (d), subsection (g) is inapplicable.

* * * * *

7. Section 16.93 is amended by revising paragraphs (e) and (f).

§ 16.93 Exemption of Tax Division Systems—Limited Access.

* * * * *

(e) The following system of records is exempt from 5 U.S.C. 552a (c)(3), (c)(4), (d), (e)(1), (e)(2), (e)(3), (e)(4)(G), (e)(4)(H), (e)(4)(I), (e)(5), and (8), (f), and (g).

(1) Freedom of Information—Privacy Act Request Files (JUSTICE/TAX-004)

These exemptions apply to the extent that information in this system is subject

to exemption pursuant to 5 U.S.C. 552a (j)(2) and (k)(2).

(f) Because this system contains Department of Justice civil and criminal law enforcement, investigatory records, it is exempted for the reasons set forth from the following provisions of 5 U.S.C. 552a:

(1) (c)(3). The release of the disclosure accounting would present a serious impediment to law enforcement by permitting the subject of a investigation of an actual or potential criminal, civil, or regulatory violation to determine whether he is the subject of investigation, or to obtain valuable information concerning the nature of that investigation and the information obtained, or to identify witnesses and informants.

(2) (c)(4). Since an exemption is being claimed for subsection (d) of the Act (Access to Records), this subsection is inapplicable to the extent that this system of records is exempted from subsection (d).

(3) (d). Access to records contained in this system would inform the subject of an actual or potential criminal tax investigation of the existence of that investigation, of the nature and scope of the investigation, of the information and evidence obtained as to his or her activities, and of the identity of witnesses or informants. Such access would, accordingly, provide information that could enable the subject to avoid detection, apprehension, and prosecution. This result, therefore, would constitute a serious impediment to effective law enforcement not only because it would prevent the successful completion of the investigation but also because it could endanger the physical safety of witnesses or informants, lead to the improper influencing of witnesses, the destruction of evidence, or the fabrication of testimony. Amendment of the records would interfere with ongoing criminal law enforcement proceedings and imposes an impossible administrative burden by requiring criminal investigations to be continuously reinvestigated.

(4) (e)(1). In the course of criminal tax and related law enforcement investigations, cases, and matters, the Tax Division will occasionally obtain information concerning actual or potential violations of law that may not be technically within its statutory or other authority, or it may compile information in the course of an investigation which may not be relevant to a specific prosecution. In the interests of effective law enforcement, it is necessary to retain some or all of such information since it can aid in establishing patterns of criminal activity and can provide valuable leads for Federal and other law enforcement agencies.

(5) (e)(2). To collect information to the greatest extent practicable from the subject individual of a criminal investigation or prosecution would present a serious impediment to law enforcement because the subject of the investigation or prosecution would be placed on notice as to the existence of the investigation and would therefore be able to avoid detection or apprehension, improperly influence witnesses, destroy evidence, or fabricate testimony.

(6) (e)(3). To provide individuals supplying information with a form which includes the information required by subsection (e)(3) would constitute a serious impediment to law enforcement, i.e., it could compromise the existence of a confidential investigation or reveal the identity of witnesses or confidential informants.

(7) (e)(4) (G) and (H). These subsections are inapplicable to the extent that this system is exempt from the access provisions of subsection (d) and the rules provisions of subsection (f).

(8) (e)(4)(I). The categories of sources of the records in this system have been published in the **Federal Register** in broad generic terms in the belief that this is all that subsection (e)(4)(I) of the Act requires. In the event, however, that this subsection should be interpreted to require more detail as to the identity of sources of the records in this system, exemption from this provision is necessary to protect the confidentiality of the sources of criminal tax and related law enforcement information. Such exemption is further necessary to protect the privacy and physical safety of witnesses and informants.

(9) (e)(5). In the collection of information for criminal tax enforcement purposes it is impossible to determine in advance what information is accurate, relevant, timely, and complete. With the passage of time, seemingly irrelevant or untimely information may acquire new significance as further investigation brings new details to light. Furthermore, the accuracy of such information can often only be determined in a court of law. The restrictions of subsection (e)(5) would inhibit the ability of government attorneys in exercising their judgement in reporting on information and investigations and impede the development of criminal tax information and related data necessary for effective law enforcement.

(10) (e)(8). The individual notice requirements of subsection (e)(8) could present a serious impediment to law enforcement as this could interfere with the ability to issue warrants or subpoenas and could reveal investigative techniques, procedures, or evidence.

(11)(f). This subsection is inapplicable to the extent that this system is exempt from the access provisions of subsection (d).

(12) (g). Because the records in this system are generally compiled for law enforcement purposes and are exempt from the access provisions of subsection (d), subsection (g) is inapplicable.

8. Section 16.96 is amended by revising paragraph (g).

§ 16.96 Exemption of Federal Bureau of Investigation Systems—Limited access.

* * * * *

(g) The following system of records is exempt from 5 U.S.C. 552a(c) (3) and (4), (d), (e)(1), (2) and (3), (e)(4) (G) and (H), (e)(8), (f), and (g): National Crime Information Center (NCIC) (JUSTICE/FBI-001). This exemption applies only to the extent that information in the system is subject to exemption pursuant to 5 U.S.C. 552a(j)(2) and (k)(3).

* * * * *

§ 16.97 [Amended]

9. Section 16.97, paragraph (a)(8), is amended by removing the word "Tax" and inserting the word "Tort." Further, paragraph (c), last sentence, is amended by removing the quotation marks.

10. Section 16.100 is amended by revising the section heading and the first sentence of paragraph (a)(1).

§ 16.100 Exemption of Office of Justice Programs—Limited access.

(a) * * *

(1) The Civil Rights Investigative System (JUSTICE/OJP-008). * * *

* * * * *

11. Section 16.103 is amended by revising the section heading and paragraph (a)(1) as follows:

§ 16.103 Exemption of the INTERPOL-United States National Central Bureau (INTERPOL-USNCB) System.

(a) * * *

(1) The INTERPOL-United States National Central Bureau (INTERPOL-USNCB) (Department of Justice) INTERPOL-USNCB Records System (JUSTICE/INTERPOL-001). This exemption applies only to the extent that information in this system is subject to exemption pursuant to 5 U.S.C. 552a(j)(2), (k) (2), and (k) (5).

* * * * *

[FR Doc. 86-429 Filed 1-8-86; 8:45 am]
BILLING CODE 4410-01-M

DEPARTMENT OF THE INTERIOR

Office of Surface Mining Reclamation and Enforcement

30 CFR Part 914

Permanent State Regulatory Program of Indiana

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM), Interior.

ACTION: Proposed rule.

SUMMARY: OSM is announcing procedures for the public comment period and for a public hearing on the substantive adequacy of a proposed program amendment to the Indiana Permanent Regulatory Program (hereinafter referred to as the Indiana program) received by OSM pursuant to the Surface Mining Control and Reclamation Act of 1977 (SMCRA).

The proposed amendment submitted by the State on December 10, 1985, would modify the Indiana program requirements regarding conduct of administrative adjudication act

hearings. OSM is also announcing receipt of a non-substantive amendment to 310 IAC 12-5-148 regarding soil replacement standards for prime farmlands that was inadvertently omitted from an earlier submission of program amendments.

This document sets forth the times and locations that the Indiana program and proposed amendment are available for public inspection, the comment period during which interested persons may submit written comments on the proposed amendment and information pertinent to the public hearing.

DATE: Written comments relating to Indiana's proposed modification of its program not received on or before 4:00 p.m. on February 10, 1986, will not necessarily be considered in the Director's decision to approve or disapprove the proposed program modifications.

If requested, a public hearing will be held on February 3, 1986, beginning at 10:00 a.m. at the location shown below under "ADDRESSES."

ADDRESSES: Written comments should be mailed or hand-delivered to: Mr. Richard D. Rieke, Director, Indianapolis Field Office, Office of Surface Mining Reclamation and Enforcement, Federal Building and U.S. Courthouse, Room 522, 46 East Ohio Street, Indianapolis, Indiana 46204; Telephone: (317) 269-2600.

If a public hearing is held, its location will be at: OSM Indianapolis Field Office, Federal Building and U.S. Courthouse, Room 522, 46 East Ohio Street, Indianapolis, Indiana; Telephone: (317) 269-2600.

FOR FURTHER INFORMATION CONTACT: Mr. Richard D. Rieke, Director, Indianapolis Field Office, Office of Surface Mining Reclamation and Enforcement, Federal Building and U.S. Courthouse, Room 522, 46 East Ohio Street, Indianapolis, Indiana 46204; Telephone: (317) 269-2600.

SUPPLEMENTARY INFORMATION

I. Public Comment Procedures

Availability of Copies

Copies of the Indiana program, the proposed amendment, and a listing of any scheduled public meetings and all written comments received in response to this notice will be available for review at the OSM offices and the Office of State Regulatory Authority listed below, Monday through Friday, 8:00 a.m. to 4:00 p.m., excluding holidays.

Office of Surface Mining Reclamation and Enforcement, Room 5124, 1100 L Street, NW., Washington, DC 20240

Office of Surface Mining Reclamation and Enforcement, Federal Building and U.S. Courthouse, Room 522, 46 East Ohio Street, Indianapolis, Indiana

Indiana Department of Natural Resources, 608 State Office Building, Indianapolis, Indiana 46204

Pursuant to 30 CFR 732.17(h)(2)(ii), each requestor may receive, free of charge, one single copy of the proposed amendment by contacting OSM's Indianapolis Field Office listed under "ADDRESSES."

Written Comments

Written comments should be specific, pertain only to the issues proposed in this rulemaking, and include explanations in support of the commenter's recommendations. Comments received after the time indicated under "DATES" or at locations other than Indianapolis, Indiana, will not necessarily be considered and included in the Administrative Record for the final rulemaking.

Public Hearing

Persons wishing to comment at the public hearing should contact the person listed under "FOR FURTHER INFORMATION CONTACT" by the close of business January 29, 1986. If no one requests to comment at the public hearing, the hearing will not be held.

If only one person requests to comment, a public meeting, rather than a public hearing, may be held and the results of the meeting included in the Administrative Record.

Filing of a written statement at the time of the hearing is requested and will greatly assist the transcriber. Submission of written statements in advance of the hearing will allow OSM officials to prepare appropriate questions.

The public hearing will continue on the specific date until all persons scheduled to comment have been heard. Persons in the audience who have not been scheduled to comment and wish to do so will be heard following those scheduled. The hearing will end after all persons scheduled to comment and persons present in the audience who wish to comment, have been heard.

Public Meeting

Persons wishing to meet with OSM representatives to discuss the proposed amendment may request a meeting at the OSM office listed in "ADDRESSES" by contacting the person listed under "FOR FURTHER INFORMATION CONTACT."

All such meetings are open to the public and, if possible, notices of meetings will be posted in advance in the Administrative Record. A written summary of each public meeting will be made a part of the Administrative Record.

II. Discussion of the Proposed Amendment

Information regarding the general background on the Indiana State Program, including the Secretary's Findings, the disposition of comments and a detailed explanation of the conditions of approval of the Indiana program can be found in the July 26, 1982, **Federal Register** (47 FR 32071-32108).

On December 10, 1985, the Director, Indiana Department of Natural Resources, submitted to OSM pursuant to 30 CFR 732.17, a proposed State program amendment for approval (Administrative Record No. IND 447). The proposed amendment to the Indiana program would modify requirements in the procedural rules for the conduct of administrative adjudication act hearings.

The amendment was submitted to satisfy requirements set forth under 30 CFR 914.16(c), and also contains some further revisions to the rule.

By a **Federal Register** notice dated May 16, 1985, OSM required Indiana (at 30 CFR 914.16(c)) to submit by July 15, 1985, for OSM approval, certain amendments to Indiana's administrative adjudication act requirements (50 FR 20413). The requirements are:

1. an amendment to 310 IAC 0.5-1-14(a) to allow intervention by a person who has an interest which is or may be adversely affected by the outcome of the proceedings;

2. an opinion from the Attorney General or an amendment to 310 IAC 0.5-1-16 to assure that an award may be made against the State; and

3. an amendment to 310 IAC 0.5-1-16(a) to delete the phrase that allows consideration of whether the result of a hearing would have been obtained without participation of the person seeking the award, in determining whether to make an award for costs and expenses.

Indiana responded by submitting in June 1985, draft proposed rules, an Attorney General opinion, and a schedule for a statutory amendment necessary to address the OSM requirements. Indiana requested a preliminary review by OSM. On July 8, 1985, Indiana submitted preliminarily adopted rules for OSM's further review and comment.

On December 10, 1985, the State submitted the regulation changes for formal consideration as a program

amendment. The State has also indicated that the Attorney General opinion submitted in June 1985 should be considered a part of the formal amendment. The State has indicated that the statutory amendment necessary to address part of the required amendment at 30 CFR 914.16(c) is expected to be submitted to the Natural Resources Legislative Advisory Committee in the summer of 1986 and will, if passed, go into effect by September 1, 1986. OSM will solicit public comment on the statutory changes when they are submitted formally as program amendments.

A brief description of the proposed modifications and cites follows.

1. Indiana proposes to amend 310 IAC 0.5–1–1 to delete the definition of "hearing officer."

2. Indiana proposes to delete the term "hearing officer" and substitute the term "administrative law judge." 310 IAC 0.5–1–2, 0.5–1–3, 0.5–1–4, 0.5–1–5, 0.5–1–8, 0.5–1–9, 0.5–1–10, 0.5–1–11, 0.5–1–12, 0.5–1–13, 0.5–1–15.

3. Indiana proposes to amend 310 IAC 0.5–1–9 to clarify what provisions control filing of a response to an amended claim.

4. Indiana proposes to amend 310 IAC 0.5–1–16 to clarify requirements for awards for expenses and attorney fees and requirements to pay the cost of a court reporter if the person requesting a hearing fails to appear at the hearing.

5. Indiana proposes to add 310 IAC 0.5–1–17 to establish requirements for employing a court reporter and for obtaining transcripts.

6. Indiana proposes to add 310 IAC 0.5–1–18 to provide for governing of the conduct of a hearing by the administrative law judge.

7. Indiana proposes to add 310 IAC 0.5–1–19 to establish joinder provisions.

8. Indiana has submitted an opinion from the Office of the Attorney General that advises that IC 13–4.1–11–9 and 310 IAC 0.5–1–16 waive the government's immunity regarding an award of costs and expenses against the Indiana Department of Natural Resources arising pursuant to IC 13–4.1.

This notice of proposed rulemaking also announces receipt of an amendment to 310 IAC 12–5–148 to delete part of the rule's title and to change cross-references in the rules to reflect other amendments. This rule was inadvertently omitted from the State's December 7, 1984 amendment package which was approved by the Director on May 15, 1985 (50 FR 20206).

Therefore, the Director, OSM, is seeking public comment on the adequacy of the proposed amendments. Comments should specifically address the issue of whether the proposed amendments are in accordance with SMCRA and are no less effective than its implementing regulations.

III. Procedural Matters

1. Compliance With the National Environmental Policy Act

The Secretary has determined that, pursuant to section 702(d) of SMCRA, 30 U.S.C. 1292(d), no environmental impact statement need be prepared on this rulemaking.

2. Executive Order No. 12291 and the Regulatory Flexibility Act

On August 28, 1981, the Office of Management and Budget (OMB) granted OSM an exemption from sections 3, 4, 7, and 8 of Executive Order 12291 for actions directly related to approval or conditional approval of State regulatory programs. Therefore, this action is exempt from preparation of a Regulatory Impact Analysis and regulatory review of OMB.

The Department of the Interior has determined that this rule would not have a significant economic effect on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*).

This rule would not impose any new requirements; rather, it would ensure that existing requirements established by SMCRA and the Federal rules will be met by the State.

3. Paperwork Reduction Act

This rule does not contain information collection requirements which require approval by the Office of Management and Budget under 44 U.S.C. 3507.

List of Subjects in 30 CFR Part 914

Coal mining, Intergovernmental relations, Surface mining, Underground mining.

Dated: January 2, 1986.

James W. Workman,

Deputy Director, Operations and Technical Services.

[FR Doc. 86–464 Filed 1–8–86; 8:45 am]

BILLING CODE 4310-05-M

DEPARTMENT OF TRANSPORTATION

Coast Guard

33 CFR Part 110

[CGD8–85–21]

Anchorage Ground; Galveston Harbor, Bolivar Roads Channel, Texas

AGENCY: Coast Guard, DOT.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Coast Guard is considering amending the anchorage regulations for Galveston Harbor by enlarging the permanent anchorage called Bolivar Roads and setting aside part of the anchorage for deep-draft vessels only. This action is necessary to provide sheltered anchorage space for deep-draft vessels ~~only~~ and create additional anchorage space for shallow-draft vessels.

DATE: Comments must be received on or before February 24, 1986.

ADDRESS: Comments should be mailed to Commander, Eighth Coast Guard District (mps), Hale Boggs Federal Building, 500 Camp St., New Orleans, LA 70130–3396. The comments and other materials referenced in this notice will be available for inspection or copying in Rm. 1341 at the above address. Normal office hours are between 7:45 a.m. and 4:15 p.m., Monday through Friday, except holidays. Comments may also be hand delivered to this address.

FOR FURTHER INFORMATION CONTACT: LTJG K.D. Christopher, project officer, Commander (mps), Eighth Coast Guard District, 500 Camp St., New Orleans, LA 70130–3396, Tel: (504) 589–6901.

SUPPLEMENTARY INFORMATION: Interested persons are invited to participate in this rulemaking by submitting written views, data, or arguments. Persons submitting comments should include their names and addresses, identify this notice (CGD8–85–21) and the specific section of the proposal to which their comments apply, and give the reasons for each comment. Receipt of comments will be acknowledged if a stamped self-addressed postcard or envelope is enclosed.

These regulations may be changed in light of comments received. All comments received before the expiration of the comment period will be considered before final action is taken on this proposal. No public hearing is planned, but one may be held if written requests for a hearing are received and it is determined that the opportunity to make oral presentations will aid the rulemaking process.

Drafting Information

The drafters of this notice are LTJG K.D. Christopher, project officer, Eighth Coast Guard District Marine Safety Division and LCDR J. Vallone, project attorney, Eighth Coast Guard District Legal Office.

Discussion of Proposed Regulations

The Coast Guard has received a recommendation from the Houston/

Galveston Navigation Safety Advisory Committee to enlarge and change anchorage regulations for the Bolivar Roads Anchorage.

The Houston/Galveston Navigation Safety Advisory Committee is a Federally sponsored committee, composed of members of the maritime community and those interested in the maritime environment of the Houston/Galveston area. The committee reviews problems regarding navigational safety and makes recommendations to the Coast Guard. Their recommendation stated: "The Coast Guard should consider rulemaking to permit no anchoring of shallow draft-vessels in the Bolivar Roads Anchorage Area 110.197; and, a new anchorage for shallow-draft vessels be delineated in Bolivar Roads, west of the existing anchorage as defined in 33 CFR 110.197."

The Coast Guard believes that the Bolivar Roads Anchorage, as presently defined, should be reserved for vessels with drafts ranging from 22 to 32 feet because it is the only sheltered deep-draft anchorage in the area. The other deep-draft anchorages are located in the Gulf of Mexico and therefore exposed. To allow anchorage space for shallow-draft vessels, it is proposed that the Bolivar Roads Anchorage be extended to the west.

Economic Assessment and Certification

These proposed regulations are considered to be non-major under Executive Order 12291 on Federal Regulation and non-significant under Department of Transportation regulatory policies and procedures (44 FR 11034; February 26, 1979). The economic impact of this proposal is expected to be so minimal that a full regulatory evaluation is unnecessary. The added length is not expected to have any significant effect on navigation and therefore it is determined that the impact will be minimal. It is believed, however, that any economic impacts provided by this regulation are expected to be positive as the lengthening of this anchorage should facilitate the maritime industry.

Since the impact of this proposal is expected to be minimal, the Coast Guard certifies that if adopted, it will not have a significant impact on a substantial number of small entities.

List of Subjects in 33 CFR Part 110

Anchorage grounds.

PART 110—[AMENDED]

Proposed Regulations

In consideration of the foregoing the Coast Guard proposes to amend Part 110 of Title 33, Code of Federal Regulations, by revising § 110.197 as follows:

1. The authority citation for Part 110 continues to read as follows:

Authority: 33 U.S.C. 471, 2030, 2035, and 2071; 49 CFR 1.46 and 33 CFR 1.05-1(g).

2. Section 110.197 is revised to read as follows:

§ 110.197 Galveston Harbor, Bolivar Roads Channel, Texas.

(a) *The Anchorage area.* The area in Bolivar Roads bounded by the north channel edge extending west from Buoy "10", latitude 29°20'48" N., longitude 94°42'54" W.; thence to Buoy "12", latitude 29°20'43" N., longitude 94°44'46.5" W.; thence to Buoy "16", latitude 29°19'37" N., longitude 94°46'08" W.; thence 017°T to a point, latitude 29°21'00" N., longitude 94°46'00" W.; thence 077°T to Buoy "B", latitude 29°21'18" N., longitude 94°44'30" W.; thence 98°T to Buoy "A", latitude 29°21'06" N., longitude 94°42'54" W.; thence 180° to the point of beginning.

(b) *The regulations.* (1) The anchorage area is for the temporary use of vessels of all types, but especially for naval and merchant vessels awaiting weather and other conditions favorable to the resumption of their voyages.

(2) Except when stress of weather makes sailing impractical or hazardous, vessels shall not anchor in the anchorage area for periods exceeding 48 hours unless expressly authorized by the Captain of the Port to anchor for such longer periods.

(3) No vessel with a draft of less than 22 feet may occupy this anchorage eastward of a line between Buoy "B" and Buoy "12" without the prior approval of the Captain of the Port.

(4) Vessels shall not anchor so as to obstruct the passage of other vesels proceeding to or from available anchorage spaces.

(5) Anchors shall not be placed in the channel and no portion of the hull or rigging of any anchored vessel shall extend outside the limits of the anchorage area.

(6) Vessels using spuds for anchors shall anchor as close to shore as practicable, having due regard for the provisions in paragraph (b)(3) of this section.

(7) Fixed moorings, piles or stakes, and floats or buoys for marking anchorages or moorings in place, are prohibited.

(8) Whenever the maritime or commercial interests of the United States so require, the Captain of the Port, or his authorized representative, is hereby empowered to shift the position of any vessel anchored or moored within the anchorage area.

Dated: December 18, 1985.

Clyde T. Lusk, Jr.,

Rear Admiral, Coast Guard, Commander, Eight Coast Guard District.

[FR Doc. 86-469 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-14-M

VETERANS ADMINISTRATION

38 CFR Part 17

Medical Care for Veterans Receiving Vocational Training under 38 U.S.C. chapter 15

AGENCY: Veterans Administration.

ACTION: Proposed regulations.

SUMMARY: The Veterans Administration proposes to add two new regulatory provisions which are necessary to implement provisions of the Veterans' Benefits Improvement Act of 1984 (Pub. L. 98-543). The first regulation would establish that certain new pension recipients participating in a temporary program of vocational training authorized by 38 U.S.C. chapter 15 are eligible for hospital care, nursing home care, and medical services during the period in which they are participating in the vocational training program. The second regulation provides that any veteran whose pension is terminated during the "program period" by reason of increased income from work or training performed or undertaken by the veteran shall retain, for 3 years, eligibility for health care benefits as if the pension had not been terminated. The term "program period" means the period from February 1, 1985 through January 31, 1989.

DATES: Comments must be received on or before February 10, 1986.

ADDRESSES: Interested persons are invited to submit written comments, suggestions, or objections to the Administrator of Veterans Affairs (271A), Veterans Administration, 810 Vermont Avenue, NW, Washington, DC 20420. All written comments received will be available for public inspection only in the Veterans Services Unit, room 132 of the above address, between the hours of 8 a.m. to 4:30 p.m., Monday through Friday (except holidays) until February 25, 1986.

SUPPLEMENTARY INFORMATION: These regulations will implement the provisions of section 301 of Public Law 98-543. That section first authorized creation of a temporary program of vocational training for certain new VA

pension recipients. Veterans who participate in the temporary vocational training program would be eligible, during their training program, to receive health care benefits similar to those now provided to veterans receiving vocational training under chapter 31 of title 38. They could receive hospital care, nursing home care and outpatient medical services, including fee basis medical or dental care if the VA is incapable of providing the required medical care economically because of geographical inaccessibility or because of the unavailability of the required services at VA facilities.

Section 301 also provides that, in certain cases, a veteran whose pension is terminated solely by reason of income from work or training shall retain, for 3 years, eligibility for hospital care, nursing home care and medical services for which the veteran would otherwise have been eligible if the pension had not been terminated. In the case of pension recipients who pursue vocational training under the chapter 15 program, the 3 year retention of health care eligibility may be granted at any time the veteran loses pension due to excessive income from work or training performed or undertaken by the veteran. If, however, the veteran did not pursue training under the temporary program, the 3 year retention of health care eligibility may be granted only if the pension was so terminated during the period February 1, 1985 through January 31, 1989. This 3 year extension may only be invoked one time. The term "terminated by reason of income from work or training" means terminated as a result of the veteran's receipt of earnings from activity performed by the veteran for remuneration or gain, but only if the veteran's annual income from sources other than such earnings would, taken alone, not result in the termination of the veteran's pension.

These proposed regulations are considered nonmajor under the criteria of Executive Order 12291, Federal Regulation. They will not have an annual effect on the economy of $100 million or more; will not result in major increases in costs for consumers, individual industries, Federal, State or local government agencies, or geographic regions, nor will they have significant adverse effects on competition, employment, investment, productivity, innovation, or on the ability of the United States-based enterprises to compete with foreign-based enterprises in domestic or export markets.

The Administrator hereby certifies that these proposed regulations, if promulgated, will not have a significant economic impact on a substantial number of small entities as they are defined in the Regulatory Flexibility Act, 5 U.S.C. 601–612. These proposed regulations concern the provisions of medical care to veteran who are undergoing a program of vocational training, 38 U.S.C. chapter 15. Any economic impact on small entities would be small because of the minimal part of their overall operation and income which this activity represents.

Catalog of Federal Domestic Assistance Number: 64.011.

List of Subjects in 38 CFR Part 17

Alcoholism, Claims, Dental health, Drug abuse, Foreign relations, Government contracts, Grants programs-health, Health care, Health facilities, Health professions, Medical devices, Medical research, Mental health programs, Nursing homes, Philippines, Veterans.

Approved: December 6, 1985.

By direction of the Administrator.

Everett Alvarez, Jr.,

Deputy Administrator.

PART 17—[AMENDED]

38 CFR Part 17, MEDICAL, is amended by adding a new center heading and new §§ 17.56 and 17.56a to read as follows:

VOCATIONAL TRAINING AND HEALTH-CARE ELIGIBILITY PROTECTION FOR PENSION RECIPIENTS

§ 17.56 Medical care for veterans receiving vocational training under 38 U.S.C. chapter 15.

Hospital care, nursing home care and medical services may be provided to any veteran who is participating in a vocational training program under 38 U.S.C. chapter 15.

(a) For purposes of determining eligibility for this medical benefit, the term "participating in a vocational training program under 38 U.S.C. chapter 15" means the same as the term "participating in a rehabilitation program under 38 U.S.C. chapter 31" as defined in § 17.48(g). Eligibility for such medical care will continue only while the veteran is participating in the vocational training program.

(b) The term "hospital care and medical services" means class V dental care, priority III medical services, nursing home care and non-VA hospital care and/or fee medical/dental care if the VA is unable to provide the required medical care economically at VA or other government facilities because of geographic inaccessibility or because of the unavailability of the required services at VA facilities.

(38 U.S.C. 524, 525, 1516; Pub. L. 98–543)

§ 17.56a Protection of health-care eligibility.

Any veteran whose entitlement to VA pension is terminated by reason of income from work or training shall, subject to paragraph (a) and (b) of this section, retain for 3 years after the termination, the eligibility for hospital care, nursing home care and medical services (not including dental) which the veteran otherwise would have had if the pension had not been terminated as a result of the veteran's receipt of earnings from activity performed for remuneration of gain by the veteran but only if the veteran's annual income from sources other than such earnings would, taken alone, not result in the termination of the veteran's pension.

(a) A veteran who participates in a vocational training program under 38 U.S.C. chapter 15 is eligible for the one-time 3 year retention of hospital care, nursing home care and medical services benefits at any time that the veteran's pension is terminated by reason of income from the veteran's employment.

(b) A veteran who does not participate in a vocational training program under 38 U.S.C. chapter 15 is eligible for the one-time 3 year retention of hospital care and medical services benefits only if the veteran's pension is terminated by reason of income from the veteran's employment during the period February 1, 1985 through January 31, 1989.

(38 U.S.C. 524, 525, 1516; Pub. L. 98–543)

[FR Doc. 475 Filed 1–8–86; 8:45 am]

BILLING CODE 8320-01-M

POSTAL SERVICE

39 CFR Part 111

Third-Class Bulk Rate Merchandise Samples

AGENCY: Postal Service.

ACTION: Proposed rule.

SUMMARY: This proposed rule would amend postal regulations pertaining to merchandise samples to make it clear that detached address cards may be used to deliver merchandise samples on all types of carrier routes. Existing regulations governing the mailing of third-class bulk rate merchandise samples with detached address cards

refer only to city delivery routes, which may lead to the inference that mailing of such samples is not permitted on other types of routes, such as rural routes. It is a principal purpose of this proposal to change existing regulations to state definitely that merchandise samples with detached address cards are not restricted to city delievery routes. In addition, a new provision would be added that when a portion of a merchandise sample mailing must be or may be prepared using detached address cards, the remaining portion which does not meet the general distribution test may, at the mailer's option, be prepared with detached address cards. Certain other minor and editorial changes are also made to make the third-class bulk rate merchandise sample regulations consistent with other merchandise sample regulations.

DATE: Comments must be received on or before February 10, 1986.

ADDRESS: Written comments should be mailed or delivered to the Office of Mail Classification, Rates and Classification Department, Room 8430, 475 L'Enfant Plaza West SW., Washington, DC 20260-5371. Copies of all written comments will be available for inspection and photocopying between 9:00 a.m. and 4:00 p.m., Monday through Friday, in Room 8430, at the above address.

FOR FURTHER INFORMATION CONTACT: Ernest J. Collins, (202) 245-4749.

SUPPLEMENTARY INFORMATION: On May 5, 1981 the Postal Service published in the **Federal Register** (46 FR 25109) a proposed rule dealing basically with the same subject as here, but with minor differences. For various reasons no final rule was ever adopted. In the meantime, changes have been made to other merchandise sample rules, which are being incorporated in the rules dealt with here, and mailing practices have been started by some mailers that are not strictly sanctioned by the rules. Moreover, not all mailers are aware of these changes and these practices and the reaction of the Postal Service to them. It is the intention of this rulemaking to set the record straight in this area and to seek the comments of the public before taking any final action.

Accordingly, although exempt from the requirements of the Administrative Procedure Act (5 U.S.C. 553 (b), (c)) regarding proposed rulemaking by 39 U.S.C. 410(a), the Postal Service invites public comments on the following proposed amendments of the Domestic Mail Manual, which is incorporated by reference in the Code of Federal Regulations. See 39 CFR 111.1.

List of Subjects in 39 CFR Part 111

Postal Service.

PART 111—[AMENDED]

1. The authority citation for 39 CFR Part 111 is revised to read as follows:

Authority: 5 U.S.C. 552(a); 39 U.S.C. 101, 401, 404, 407, 408, 3001-3011, 3201-3219, 3403-3405, 3621, 5001; 42 U.S.C. 1973cc-13, 1973cc-14.

PART 664—MERCHANDISE SAMPLES

2. In 664, revise and renumber 664.1 and revise 664.22 to read as follows:

664 Merchandise Samples.

664.1 General

.11 City Delivery Routes. Merchandise samples which exceed 5 inches in width (height) or ¼ of an inch in thickness, or which are nonuniform in thickness, mailed at bulk third-class rates for general distribution on city delivery routes must be prepared by the mailer in accordance with 664.2-664.4. For purpose of this section, GENERAL DISTRIBUTION means distribution of samples to at least 25 percent of the addresses in a 5-digit Zip Code delivery area.

.12 Other Types of Routes (Such as Rural). Mailers who wish to use detached address cards with merchandise samples of (of the kind described in .11 above) intended for general distribution on other types of routes, such as rural routes, must be prepared in accordance with 664.2-664.4.

.13 Optional Preparation of Residual Samples. When a portion of a merchandise sample mailing must or may be prepared with detached address cards under 664.11 or 664.12, that portion of the mailing for distribution to less than 25 percent of the addresses in a 5-digit ZIP Code delivery area may, at the mailer's option, also be prepared in accordance with 664.2-664.4.

664.2 Address Cards

* * * * *

.22 The recipient's address, the mailer's return address, and the words, "Postal Service regulations require that the address card be delivered together with its accompanying postage paid sample. If you should receive this card without its accompanying sample, please notify your local postmaster," must be placed on the address card. The brand name, color coding, or other identifying symobls must also be placed on the address card to clearly associate it with the accompanying sample.

An appropriate amendment to 39 CFR 111.3 to reflect these changes will be published if the proposal is adopted.

W. Allen Sanders,

Associate General Counsel, Office of General Law and Administration.

[FR Doc. 86-468 Filed 1-8-86; 8:45 am]

BILLING CODE 7710-12-M

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

49 CFR Part 571

Federal Motor Vehicle Safety Standards; Denial of Petition for Rulemaking Fail-Safe Brake Corporation

AGENCY: National Highway Traffic Safety Administration (NHTSA), DOT.

ACTION: Denial of petition for rulemaking.

SUMMARY: This notice denies a petition submitted by the Fail-Safe Brake Corporation (Fail-Safe) to initiate a rulemaking proceeding to require that an "Automatic Safety Brake" be installed on all school buses equipped with hydraulic brakes. The Fail-Safe braking device would be automatically activated by sensors to produce a controlled braking application when any of three conditions occurred: (1) The driver leaves his or her seat; (2) the school bus has been stationary for four seconds; and (3) either of two doors on a school bus are not closed.

Since the agency is unable to conclude that the safety benefits of the automatic safety brake are sufficient to warrant requiring the device on school buses, the petition is denied.

FOR FURTHER INFORMATION CONTACT: Mr. James Clements, Crash Avoidance Division, Office of Vehicle Safety Standards, National Highway Traffic Safety Administration, 400 Seventh Street, SW., Washington, DC 20590. Telephone (202) 426-1714.

SUPPLEMENTARY INFORMATION: This notice denies a petition submitted by the Fail-Safe Brake Corporation (Fail-Safe) to initiate a rulemaking proceeding to require that an "automatic safety brake" be installed on all school buses equipped with hydraulic brakes. On February 11, 1985 (50 FR 5646), NHTSA denied a petition filed by the same company requesting the agency to require the installation of the automatic safety brake on emergency and delivery vehicles, vehicles equipped with air bags, transit buses, and school buses.

NHTSA denied the petition because the benefits of such a requirement would be minimal and the costs substantial.

The present petition of June 6, 1985, was limited to school bus application. Fail-Safe argued that requiring the automatic safety brake system on school buses would be consistent with the Motor Vehicle and Schoolbus Safety Amendments of 1974, Pub. L. 93-492, which directed NHTSA to issue minimum performance standards for school buses and items of school bus equipment. The automatic brake would be installed between the master cylinder and the vacuum booster of the school bus brake system. Fail-Safe states that the initial cost of the system would be $84.40 per school bus, covering parts, assembly, and freight.

The Fail-Safe braking device would be automatically activated by sensors to produce a controlled braking application when any of three conditions occurred: (1) The driver leaves his or her seat (sensor located in the seat; the system would be released when the seat is occupied and the accelerator pressed); (2) the school bus has been stationary for four seconds (activation by a "speed" sensor; release would occur when the accelerator is pressed); or, (3) either of the two doors on a school bus are not closed (sensors located at the doors; the system would be released when the doors are closed).

Fail-Safe believed that its automatic safety brake would reduce the likelihood of school bus accidents and the severity of injuries on school buses. The petitioner argued that school buses should have an automatic safety brake that would "back-up" the driver if the driver were to be subject to sudden physical disability, attack by another person or flying insects, or distraction by student passengers.

After reviewing the petition, the agency has concluded that the safety benefits of an automatic safety brake are too limited to justify such a requirement for school buses. Fail-Safe did not show that its device would provide substantial, quantifiable, safety benefits. The petitions attached a three-year School Bus Accident Statistical Report of publicly-owned school buses in the state of Florida (July 1, 1981 to June 30, 1984), and asserted that the automatic safety brake could have prevented 592 of those accidents. NHTSA has reviewed those data and does not concur with Fail-Safe's contention. Apparently, the petitioner obtained the 592 figure by simply adding the number of accidents recorded in the categories of "Loading or Unloading," "Stopped at Railroad," "Stopped at Intersection or in Traffic," and "Other Vehicle Hit in Rear." There is no support for the assertion that any or all of those accidents might have been prevented by use of the Fail-Safe braking device. Further, the agency believes that the 592 figure presented by the petitioner might be misleading, in that some of the accidents appear to have been reported in more than one category and were double-counted.

One primary purpose of the Fail-Safe brake would be to stop a vehicle if the driver were to fall from or otherwise leave his or her seat. However, the likelihood of a driver leaving his or her seat while operating the school bus is extremely remote. Federal regulations require the installation of a safety belt for the driver's position in all school buses (49 CFR 571.208). The agency encourages the use of the belt by school bus drivers, based upon the substantial safety benefits associated with safety belt use, and most states require school bus drivers to wear their belts. Since it is likely that a school bus driver would be wearing a safety belt when operating the vehicle and would not be dislodged from his or her seat, much of the claimed benefits of the Fail-Safe device would be offset since the seat sensor would not activate the brakes.[1]

The petitioner argued that an automatic safety brake that is activated when the school bus is stationary for four seconds would greatly reduce or eliminate injury to and death of school children walking in front or behind the bus. While the agency agrees that continuing efforts to reduce the number of injuries and deaths occurring immediately outside of the school bus are desirable, it is questionable whether the Fail-Safe device would achieve this goal. Currently, a school bus driver would apply the brakes when unloading or loading passengers and would not touch the accelerator until it is safe to proceed. Fail-Safe's device would add little or no benefit since it is deactivated when the accelerator is utilized.

Fail-Safe's device would automatically activate the brakes if either of two doors on a school bus were not tightly closed and would not release the brakes until the doors were closed. The petitioner believed that its device would increase school bus safety by preventing a school bus from proceeding if a child were caught in a door. NHTSA is not aware of any data indicating that this type of accident is likely to occur. In any event, the agency is concerned that there might be instances where an automatic braking device operating in the above manner would not enhance safety. For example, some states require school bus operators to stop at railroad grade crossings and check for oncoming trains by opening the school bus doors. It would not be desirable to require school buses to have an automatic braking device that could be activated in situations where driver-controlled braking and accleration are crucial (e.g., near railroad crossings). Further, roadway conditions vary, and brake application must adjust to wet and dry surfaces and their varying degrees of friction. The Fail-Safe system, in removing a driver's braking control under certain conditions, applies the brakes in a predetermined manner, regardless of roadway conditions. This could result in wheel lockup and loss of vehicle control.

In support of its petition, Fail-Safe included testimonials from users of its device who recounted their experiences with the automatic safety brake. The agency believes that, while there may be instances where the device could be of assistance to a school bus driver, it is difficult to assess the extent to which an automatic braking device would reduce the currently low numbers of school bus accidents. A broader cross-section of experience is needed to justify the imposition of this requirement on every school bus manufactured or sold in this country. The costs associated with such a requirement would be $84.40, according to the petitioner. The agency does not believe that those costs should be imposed on purchasers of school buses when the benefits of the Fail-Safe device have not been proven. Furthermore, schools and school districts might want to consider other alternative investments to improve their pupil transportation programs, such as acquiring special school bus mirrors or mandating driver educational programs. Each of those efforts compete for limited funds, and NHTSA believes that it should be left to the schools or school districts to decide how their funds for school bus safety should be allocated.

For the reasons stated above, the Fail-Safe petition is denied. The agency notes that this denial, in itself, does not preclude the voluntary installation of the Fail-Safe device on school buses. A school or school bus operator can choose to have the automatic safety brake installed on its school buses. However, NHTSA reminds alterers of new vehicles of their responsibility under 49 CFR Part 567.7 to certify that

[1] In its petition, Fail-Safe argued that "Attempts to legislate seat belt wearing has proven unsuccessful." This assertion is mistaken for two reasons. More and more states are enacting belt usage laws. (To date, 16 states and the District of Columbia have enacted mandatory use laws.) Further, as stated above, most states do require school bus drivers to wear their safety belts.

the altered vehicle continues to comply with all applicable Federal motor vehicle safety standards, including FMVSS No. 105, *Hydraulic Brake Systems*. Manufacturers, distributors, dealers, and motor vehicle repair businesses installing the Fail-Safe system on used school buses are cautioned to take care so as not to render inoperative the vehicle's compliance with Standard No. 105 or any other applicable safety standard.

List of Subjects in 49 CFR Part 571

Imports, Motor vehicle safety, Motor vehicles.

(Secs. 103, 119, Pub. L. 89-563, 80 Stat. 718 (15 U.S.C. 1392, 1407); delegations of authority at 40 CFR 1.50 and 501.8)

Issued on January 6, 1986.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 86-494 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-59-M

DEPARTMENT OF THE INTERIOR

Fish and Wildlife Service

50 CFR Part 17

Endangered and Threatened Wildlife and Plants; Findings on Pending Petitions and Description of Progress on Listing Actions

AGENCY: Fish and Wildlife Service, Interior.

ACTION: Notice of findings on pending petitions and description of progress on listing actions.

SUMMARY: The Service announces its findings on pending petitions to add to and revise the lists of Endangered and Threatened Wildlife to add to and revise the Lists of Endangered and Threatened Wildlife and Plants. These findings must be made within one year of either the date of receipt of such a petition or of a previous positive finding. The Service also describes its progress in revising the lists during the period from October 1, 1984, to September 30, 1985.

DATE: The findings announced in this notice were made on or before October 11, 1985. The description of the Service's progress in revising the lists is current as of October 1, 1985.

FOR FURTHER INFORMATION CONTACT: Mr. John L. Spinks, Jr., Chief, Office of Endangered Species, U.S. Fish and Wildlife Service, 500 Broyhill Building, Washington, D.C. 20240 (703/235-2771 or FTS 235-2771).

SUPPLEMENTARY INFORMATION:

Background

Section 4(b)(3)(B) of the Endangered Species Act of 1973, as amended in 1982 (16 U.S.C. 1531 *et seq.*, hereafter called "the Act"), requires that, for any petition to revise the Lists of Endangered and Threatened Wildlife and Plants that contains substantial scientific or commercial information, a finding be made on the merits within 12 months of the date of receipt of the petition. Provisions of the Endangered Species Act Amendments of 1982 (hereafter called "Amendments") required that petitions pending on the date of enactment of the Amendments be treated as having been filed on that date, i.e., October 13, 1982. Section 4(b)(3)(C)((i) of the Act requires that any petition for which a 12-month finding of "warranted but precluded" is made should be treated as having been resubmitted, with substantial scientific or commercial information that the petitioned action may be warranted, on the date of such a finding, i.e. requiring an additional finding to be made within 12 months. This notice reports findings made on or before October 11, 1985, in respect to pending petitions for which such additional findings were due, and describes the Service's progress in revising the Lists of Endangered and Threatened Wildlife and Plants during the third year following the enactment of the Amendments.

The petitions for which findings are reported here have all received initial (90-day) findings by the Service that they presented substantial scientific or commercial information indicating that the petitioned action may be warranted. Some of these determinations were made and announced in the **Federal Register** before the enactment of the Amendments. A series of such determinations was announced in the **Federal Register** of February 15, 1983 (48 FR 6752). The remainder of the initial findings for petitions considered here were announced in the **Federal Register** on January 16, 1984 (49 FR 1919), on December 18, 1984 (49 FR 49118), or on April 2, 1985 (50 FR 13054).

All species of plants involved in these petition findings were listed individually in a comprehensive notice of review for plants first published in the **Federal Register** on December 15, 1980 (45 FR 82480), and most recently updated as a notice of review published September 27, 1985 (50 FR 39526). The animal species mentioned below, but not listed individually, were listed individually in the first announcement of 12-month petition findings published in the **Federal Register** on January 20, 1984 (49 FR 2485), and again in the second annual announcement published on May 10, 1985 (50 FR 19761).

Findings

Section 4(b)(3)(B) of the Act requires that the Service make one of the following 12-month findings on each petition presenting substantial information: (i) The petitioned action is not warranted; (ii) the petitioned action is warranted and will be proposed promptly; or (iii) the petitioned action is warranted but precluded by other efforts to revise the lists, and expeditious progress is being made in listing and delisting species. Petitioned actions found to be warranted are the subjects of proposals that will be published promptly or have already been published in the **Federal Register**. Therefore only findings of "not warranted" and "warranted but precluded" for pending petitions are reported here.

"Not warranted" and "warranted but precluded" findings for pending plant petitions are announced in this notice by categories; their application to individual taxa is published in a notice of review for plants published September 27, 1985 (50 FR 39526). The plant notice category number opposite the name of each taxon that is the subject of a pending petition indicates the Service's finding on that taxon. Findings of "not warranted" on the petitioned action are hereby reported by the designation of subcategories 3A, 3B, or 3C for such taxa. Findings of "warranted but precluded" are hereby reported by the designation of category 1,1*,1**,2, 2*, or 2** for such subject taxa. The complete definitions of these category numbers are described on pages 39526 and 39527 in the 1985 general plant notice of review (50 FR 39526).

A total of 119 plant species placed in categories 1 or 2 in the 1980 notice or the 1983 supplement were found not to warrant listing, as noted in the most recent plant notice. Of those, 8 were named in the petition notice of May 10, 1985 (50 FR 19761), together with two taxa: *Arabis* sp. nov. ined. (Gray Knolls, Uintah Co., Utah), and *Sphaeralcea caespitosa*, that were mentioned as "not warranted" for listing, but were subsequently returned to category 2 for the current notice. A total of 25 other plant taxa that were considered as category 3A, 3B, or 3C in the 1983 supplement are placed in category 1 or 2 in the current notice, as a result of improved status information or an increase in documented threats.

The Service's 12-month findings of "not warranted" and "warranted but

precluded" on pending animal petitions are presented in Table 1. Petitioned actions that are found not to be warranted are indicated by the word "No" in the "Warranted?" column. The word "Yes" indicates petitions to list, delist, or reclassify species for which the principal findings are "warranted but precluded" from immediate proposal by other efforts to revise the lists. A "Yes" qualified with an asterisk signifies that at least some taxa mentioned in the petition have been individually found to be not warranted for listing, as described below, in previous petition notices, or in notices of review.

TABLE 1.—LIST OF ANIMAL PETITION FINDINGS ANNOUNCED IN THIS NOTICE

Description	Petitioner	Date received	Warranted?
6 species of sponges.	Mr. Ronald M. Cowden.	June 17, 1974	Yes[1]
45 species of cave crustaceans.	National Speleological Society.	Sept. 9, 1974	Yes[1]
6 species of cave amphipod crustaceans.	Dr. John Holsinger.	July 12, 1974	Yes
Uncompahgre fritillary butterfly.	Dr. Lawrence F. Gall.	Nov. 5, 1979	Yes
Columbia River tiger beetle.	Mr. Gary Shook.	Dec. 15, 1979	Yes
Shoshone sculpin.	Dr. Peter A. Bowler.	Dec. 3, 1979	Yes
Bonneville cutthroat trout.	Desert Fishes Council.	Oct. 23, 1979	Yes
Silver rice rat.	Center for Action on Endangered Species.	Mar. 12, 1980	Yes
Bliss Rapids snail.	Dr. Peter A. Bowler.	Feb. 7, 1980	Yes
19 U.S. and 60 foreign species of birds.	International Council for Bird Preservation.	Nov. 24, 1980	Yes[1]
Weist's sphinx moth.	Dr. Karolis Bagdonas.	Jan. 26, 1981	Yes
Guam rufous-fronted fantail.	Hon. Paul M. Calvo, Governor of Guam.	Dec. 23, 1981	Yes
San Francisco tree lupine moth.	Drs. R.A. Arnold and J.A. Powell.	Dec. 21, 1982	No
Orangefin madtom and Roanoke logperch.	Mr. Noel M. Burkhead.	Oct. 6, 1983	Yes
Woodland caribou in Montana.	Mr. Douglas H. Chadwick.	July 2, 1984	Yes
Ceour d'Alene salamander.	Mr. Thomas P. Koenings.	July 17, 1984	No
Gopher tortoise, western populations.	Drs. R. Lohoefener and L. Lohmeier.	July 17, 1984	Yes
2 tiger beetles in west Texas.	W.D. Sumlin, III and C.D. Nagano.	July 24, 1984	Yes
American alligator in South Carolina.	South Carolina Wildlife and Marine Resources Department.	July 27, 1984	Yes
Spiny river snail.	American Malacological Union.	Aug. 13, 1984	Yes

[1] Petitions for which the requested action is considered warranted for all taxa except for certain ones that have been specified in previous petition notices and/or current comprehensive notices of review.

Individual findings for four taxa of birds among the 19 U.S. taxa included in the November 24, 1980, petition from the International Council for Bird Preservation have been changed during the past year by new data, and for those four the requested action is now considered to be "not warranted". They are: Palau Nicobar pigeon (*Caloenas nicobarica pelewensis*), Mariana fruit dove (*Ptilinopus roseicapillus*), Truk monarch (*Metabolus rugensis*), and Palau blue-faced parrotfinch (*Erythrura trichroa pelewensis*). These bring to seven the taxa included in that petition for which listing is not considered warranted. The requested action has been determined to be "warranted but precluded" for the remaining taxa included in the petition, excepting four U.S. taxa that have been proposed and listed as endangered. Readers should refer to a notice of review for 58 foreign bird species published on May 12, 1981 (46 FR 26464), for the names of the foreign species pending for consideration at the time of passage of the Amendments.

The Service's 1984 findings on the petition to list the orangefin madtom (*Noturus gilberti*) and the Roanoke logperch (*Percina rex*) were accidentally omitted from mention in the petition notice of May 10, 1985 (50 FR 19761), but were cited in a subsequent notice on July 18, 1985 (50 FR 29238). The current finding on that petition is that the action requested is warranted but precluded by pending proposals to add other species to the Lists of Endangered and Threatened Wildlife and Plants.

A finding of "not warranted" for the 1982 petition from Drs. Richard A. Arnold and Jerry A. Powell to list the San Francisco tree lupine moth as a threatened species was made by the Service on October 11, 1985. The finding is based on results of a status survey by David Wagner. This study documented the range of the nominate form *Grapholita edwardsiana* to extend in California from Bolinas Lagon, Marin County, south to Salmon Creek, Monterey County, and east into the Berkley Hills. Although many colonies of the moth's foodplant, *lupinus arboreus*, have been adversely affected by development, sand dune stabilization, and introduction of exotic plants, some activities such as road construction have apparently benefitted the foodplant and presumably the moth. The category indicated by this information for the next comprehensive invertebrate notice of review is 3C, signifying a species that is no longer under active consideration by the Service for listing. This determination will be strengthened if the closely related *Grapholita lana* is shown to be synonymous with *G. Edwardsiana*, as available data suggest. The range of nominate *G. lana* extends from British Columbia through Washington and Oregon to southern California.

The Service was petitioned July 2, 1984, by Mr. Douglas H. Chadwick to list the woodland caribou (*Rangifer tarandus caribou* in Montana as endangered. At present, such status is restricted to the southern Selkirk Mountain herd of woodland caribou, which is found only in Idaho, Washington, and British Columbia. Mr. Chadwick provided evidence that caribou, probably members of another herd, also occur, at least on occasion, in northwestern Montana. The petitioner noted that caribou habitat in Montana has been substantially reduced through human activities. Additional status survey work is necessary to determine if there is a population of woodland caribau in northwestern Montana, to establish what relationship, if any, this possible population may have with a Candian herd to the north, and to evaluate potential caribou habitat to determine if it could support a population now or in the future. The caribou in Montana will be maintained as a category 2 species pending completion of these studies. On July 2, 1985, the Service made a finding of "warranted but precluded" in respect to this petition. Additional data are being gathered and expeditious progress is being made to list other higher-priority species.

The Service was petitioned July 17, 1984, by Thomas P. Koenings to list the Coeur d'Alene salamander, *Plethodon vandykei*, in Montana and Idaho as an

endangered species. A brief report on the status, distribution, and threats to the species was submitted with the petition. The report was accepted as sustantial information that the requested action may be warranted. An intitial positive finding was made on October 17, 1984, and reported in the **Federal Register** for December 12, 1984 (49 FR 49118). Review of the petition report by several biologists knowledgeable about the habitat requirements and distribution of this species has produced information, however, that contradicts assertions of the report, particulary in respect to any deterioration or loss of haibitat or populations. The best information presently available to the Service indicates that the Coeur D'Alene salamander is not now threatened or endangered. On July 26, 1985, the Service made the finding that the action requested by this petition is not warranted by the available information. Additional status survey work with this species has been undertaken by the Idaho Nature Conservancy Natural Heritage Program with logistical support from the Nezperce National Forest. Some possibility exists that future discoveries will require a reappraisal of its status.

The Service was petitoned July 17, 1984, by Dr. Ren Lohoefener and Dr. Lynne Lohmeier to list the western populations of the gopher tortoise, *Gopherus polyphemus*, as endangered. On July 26, 1985, the Service made a 12-month finding that the requested action is warranted, nothing, however, that the best scientific and commercial information available indicates the western population of the gopher tortoise is likely to become endangered within the foreseeable future, a status of threatened rather than endangered. An immediate proposed rule to implement the listing action requested is precluded by pending proposals to add other species to the Lists of Endangered and Threatened Wildlife and Plants.

The Service was petitioned July 24, 1984, by W. D. Sumlin, III and Christopher D. Nagano to list Barbara Anne's tiger beetle, *Cicindella politula barbaraannae*, and the Guadaloupe Mountains tiger bettle, *Cicindella politula* ssp., of Texas as endangered. The Service has conducted a status review of the information available regarding the biology, distribution, and threats to these two beetles. On July 26, 1985, it made a 12-month finding that the requested action is warranted. An immediate proposed rule to implement the requested action is precluded by pending proposals to add other species to the Lists of Endangered and Threatened Wildlife and Plants.

In a petition dated July 27, 1984, and received August 15, 1984, the Service was requested by the South Carolina Wildlife and Marine Resources Department to delist the American alligator, *Alligator mississippiensis*, in South Carolina and to treat it as threatened due to similarity of appearance to other endangered crocodilians. At present, the alligator is classified as endangered in some parts of South Carolina and threatened in other parts of the State. Current data indicate that good numbers of alligators are present in productive habitats, and populations are generally productive and well distributed throughout available habitats. The Service has already recognized the recovered status of the American alligator in a majority of its occupied range (12,000,000 acres or 84%) through delisting and treating as threatened due to similarity of appearance in Louisiana, Texas, and Florida. On August 15, 1985, the Service made the finding that the action requested by this petition is warranted on the basis of information available at this time. An immediate proposed rule to implement the requested action is precluded by pending proposals to add other species to the Lists of Endangered and Threatened Wildlife and Plants.

In a petition dated August 13, 1984, and received August 22, 1984, the Service was requested by the American Malacological Union to list the spiny river snail (*Io fluvialis*) as an endangered or threatened species. The range of the spiny river snail has apparently been reduced from much of the Tennessee River system to three tributary rivers, the Nolichukey River in Tennessee, the Clinch River in Virginia and Tennessee, and the Powell River in Virginia and Tennessee. It has been reintroduced into the North Fork Holston River, but has evidently failed there in several years to establish a self-reproducing population. The species was proposed for listing in 1977 (42 FR 2507) but the proposed rule was withdrawn for procedural reasons in 1979. Additional data have been collected subsequently, including a detailed survey by Dr. Richard Neves of the Service's Cooperative Fisheries Unit at Virginia Tech University and the data submitted with the subject petition from the American Malacological Union. The Nolichukey River population is extremely small and is imminently threatened by residue from mica mining that has nearly filled Davy Crockett Lake, a reservoir that is immediately upstream from the habitat. The Powell River population has been greatly reduced by sedimentation and acid mine drainage from coal mining. The Clinch River holds the only populations not facing immediate major threats, although local extirpation has been documented from sewage treatment plant effluents and industrial waste spills. The Service, on August 23, 1985, found that the action requested in this petition is warranted but precluded by pending proposals to add other species to the Lists of Endangered and Threatened Wildlife and Plants.

Progress in Revision of the Lists

Section 4(b)(3)(B)(iii) of the Act states that petitioned actions may be found to be warranted but precluded by other listing actions when it is also found that the Service is making expeditious progress in revising the lists. The Service's progress in revising the lists in the year following October 12, 1984, the cutoff date of the previous report, is described in this section of the present notice. For simplification in reporting, the 12-month period described actually coincides with the 1985 fiscal year; activity during the last 12 days preceding the anniversary of the Amendments will be described in a subsequent notice. The described activities prevented immediate action in the "warranted but precluded" petitioned actions.

The Service's progress in revising the lists during fiscal 1985 is represented by the publication in **Federal Register** of final listing (56), delisting (4), and reclassification (1) actions on 61 species, and proposed listing actions on 46 species. The number of species affected by each type of listing action published during this period is presented in Table 2.

TABLE 2.—LISTING ACTIONS DURING THE PERIOD OCT. 1, 1984, THROUGH SEPT. 30, 1985

Type of action	Number of species affected
Final endangered status with critical habitat	18
Final endangered status	18
Final threatened status with critical habitat	10
Final threatened status	10
Final change from threatened to threatened due to similarity of appearance	1
Final removal from lists	4
Proposed endangered status with critical habitat	2
Proposed threatened status with critical habitat	4
Proposed endangered status	36
Proposed threatened status	4

As of October 1, 1985, the Service's Washington Office of Endangered Species was also reviewing documents that would propose or make final listing actions on 41 species. The type of action and numbers of affected species are

given in Table 3.

TABLE 3.—POSSIBLE LISTING ACTIONS FOR WHICH THE SERVICE WAS REVIEWING DRAFT DOCUMENTS ON OCT. 1, 1985

Type of action	Number of species affected
Final endangered status with critical habitat	2
Final endangered status	9
Final threatened status with critical habitat	4
Final threatened status	2
Final designation of critical habitat	1
Proposed endangered with critical habitat	2
Proposed threatened with critical habitat	2
Proposed endangered status	11
Proposed threatened status	7
Proposed change from endangered to threatened status	1

The general plant and animal notices of review are important tools for gathering data on species that are candidates for listing and for informing interested parties on the Service's general views on the status of present and past candidate species. A general notice on vertebrate animals was published on September 18, 1985 (50 FR 37958). A general notice on plants was published on September 27, 1985 (50 FR 39526). A general notice on invertebrate animals is in preparation.

The Service also funded status surveys for 141 species during the 1985 fiscal year. These surveys are designed to gather any additional data needed to make a determination on whether the subject species are eligible for protection under the Act.

Author

This notice was prepared by Dr. George Drewry, Office of Endangered Species, U.S. Fish and Wildlife Service, Washington, DC 20240 (703/235-1975 or FTS 235-1975).

Authority

The authority for this action is the Endangered Species Act (16 U.S.C. 1531 *et seq.;* Pub. L. 93-205, 87 Stat. 884; Pub. L. 94-359, 90 Stat. 911; Pub. L. 95-632, 92 Stat. 3751; Pub. L. 96-159, 93 Stat. 1225; Pub. L. 97-304, 96 Stat. 1411).

List of Subjects in 50 CFR Part 17

Endangered and threatened wildlife, Fish, Marine mammals, Plants (agriculture).

Dated: December 30, 1985.

P. Daniel Smith,

Assistant Secretary for Fish and Wildlife and Parks.

[FR Doc. 86-448 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-55-M

Notices

Federal Register
Vol. 51, No. 6
Thursday, January 9, 1986

This section of the FEDERAL REGISTER contains documents other than rules or proposed rules that are applicable to the public. Notices of hearings and investigations, committee meetings, agency decisions and rulings, delegations of authority, filing of petitions and applications and agency statements of organization and functions are examples of documents appearing in this section.

DEPARTMENT OF AGRICULTURE

Agribusiness Promotion Council; Meeting

Notice is hereby given that the USDA Agribusiness Promotion Council, advisory committee to the Secretary of Agriculture on matters pertaining to the Caribbean Basin, will meet from 1:00 p.m. to 5:00 p.m. on Wednesday, January 22, 1986, and from 8:30 a.m. to 4:00 p.m. on Thursday, January 23, 1986. The meeting will commence in room 3056–South Building, U.S. Department of Agriculture, 14th & Independence Ave., SW., Washington, D.C. for welcoming remarks. Break-out meetings on "Investment Climate and Finance", "Transportation and Infrastructure", and "Technology and Information Transfer" will be held from 1:30 to 5:00 p.m. in room 107–A Administration Building, 3056 South Building, and 5056 South Building, respectively. The agenda for these sessions includes: (1) Discussion among members as to definition and parameters of the topic with regard to the Caribbean Basin; (2) briefings by USDA, other US government, and Caribbean Basin representatives, and others about the topic; (3) development of recommendations by members.

The meeting will resume at 8:30 a.m. on Thursday, January 23, with break-out sessions according to sub-regional areas: "Upper Central America" will meet in Room 107–A Administration Building, "Lower Central America" will meet in Room 104–A Administration Building; "Western Caribbean and Belize" will meet in Room 5056 South Building; and "Eastern Caribbean" will meet in Room 3056 South Building.

The agenda for these sessions will include: (1) Background briefings on each country in the sub-region, and opportunities and obstacles for agricultural investment and international trade; (2) reports from the issue groups on how those issues pertain to each country within the sub-region; and (3) discussion and development of recommendations for activities to promote agricultural investment and international trade for the subject countries.

The Council will meet in plenary session in Room 104–A Administration Building at 1:30 p.m. Co-chairmen Mr. M.D. McVay and Under Secretary Daniel G. Amstutz will preside. The committees will report its recommendations for consideration for approval by the Council.

Comments may be submitted to Dr. Joan S. Wallace, Administrator of the Office of International Cooperation and Development, up to Noon on January 17, 1986. Further information may be obtained by calling Private Sector Relations, Office of International Cooperation and Development, (202) 475–4191.

Howard S. Marks,
Associate Administrator, OICD.

[FR Doc. 86–437 Filed 1–8–86; 8:45 am]

BILLING CODE 3410–DP–M

Animal and Plant Health Inspection Service

[Docket No. 85–363]

Availability of a Draft Supplement to the Environmental Impact Statement on the Rangeland Grasshopper Cooperative Management Program

AGENCY: Animal and Plant Health Inspection Service, USDA.

ACTION: Notice of availability; request for comment.

SUMMARY: This document provides notice of the availability of a draft supplement to the Final Environmental Impact Statement (FEIS) on the Rangeland Grasshopper Cooperative Management Program, as supplemented 1986, (USDA–APHIS–DEIS–85–02). The FEIS addresses the environmental impact of cooperative control measures for grasshoppers and Mormon crickets on Western rangeland. The draft supplement to the FEIS has been prepared by the Animal and Plant Health Inspection Service, United States Department of Agriculture (USDA), and it presents new substantive information on issues of concern. The draft supplement to the FEIS was sent to the Environmental Protection Agency (EPA) on January 9, 1986, by USDA pursuant to section 102(2)(C) of the National Environmental Policy Act of 1969.

DATES: Written comments concerning the draft supplement to the FEIS must be received on or before February 24, 1986.

ADDRESSES: Submit written comments concerning the draft supplement to the FEIS to Charles H. Bare, Field Operations Support Staff, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, Room 663, Federal Building, 6505 Belcrest Road, Hyattsville, MD 20782. Comments should state that they are in response to Docket Number 85–363. Written comments received may be inspected at Room 663 of the Federal Building between 8 a.m. and 4:30 p.m., Monday through Friday, except holidays.

Copies of the draft supplement to the FEIS are available by mail except from locations designated by an asterisk.

Copies may be inspected at any of the following locations:

Plant Protection and Quarantine, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, Room 302–E, Administration Building, 14th & Independence Avenue, NW., Washington, DC 20250

Plant Protection and Quarantine, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, Room 633, Federal Building, 6505 Belcrest Road, Hyattsville, MD 20782

Plant Protection and Quarantine*, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, 7100 West 44th Avenue, Suite 102, Wheat Ridge, CO 80033

Plant Protection and Quarantine*, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, 83 Scripps Drive, Second Floor, Sacramento, CA 95825

Plant Protection and Quarantine*, Animal and Plant Health Inspection Service, U.S. Department of Agriculture, 2100 Boca Chica Boulevard, Suite 400, Brownsville, TX 78521

FOR FUTHER INFORMATION CONTACT: Charles H. Bare, Staff Officer, Field Operations Support Staff, Plant Protection and Quarantine, APHIS, USDA, Room 663, Federal Building, 6505

Belcrest Road, Hyattsville, MD 20782, (301) 436-8295.

SUPPLEMENTARY INFORMATION:

Background

Grasshoppers and Mormon crickets are destructive native pests on rangeland, forage, and crops mainly in the States west of the Mississippi River. Infestations are often of such an extent as to be beyond the capability of individuals to handle. Additionally, the migratory and widespread nature of the pests makes coordination of cooperative control efforts across State boundaries essential. Therefore, the Department has, in conjunction with cooperating State Departments of Agriculture, provided direct supervision and leadership of grasshopper control programs. In 1979 widespread grasshopper infestations and subsquent Federal-State-rancher cooperation control programs were the basis for extensive public and cooperative involvement.

Grasshoppers and Mormon crickets have been serious pests of agriculture for hundreds of years. Problems caused by them have proved especially severe on rangeland in the Western United States, where the Federal Government has been involved since the 1870's in providing assistance to affected producers.

Grasshoppers and Mormon cricket populations have the potential for sudden increases when conditions, such as warm and dry weather, are favorable. During severe outbreaks, most native vegetation on affected rangeland may be devoured if effective control methods are not applied.

The U.S. Department of Agriculture's Animal and Plant Health Inspection Service (APHIS) is currently involved in helping to contol grasshoppers and Mormom crickets on Western rangeland. APHIS participates with Western States and landowners in carrying out surveys to determine where economically damaging infestations are likely to occur and, upon request, in providing financial and technical assistance for treatment.

As a result of an administrative review of the July 1980 final EIS, grasshopper cooperative management, new substantive information on issues of concern were identified. A draft supplement to this document entitled, "Draft Environmental Impact Statement on the Rangeland Grasshopper Cooperative Management Program, as supplemented 1986" was prepared to address these issues.

Copies of the draft supplement are available upon request. (See **"ADDRESSES"**.)

Done at Washington, D.C., this 7th day of January 1986.

Harvey L. Ford,

Deputy Administrator, Plant Protection and Quarantine Animal and Plant Health Inspection Service.

[FR Doc. 86-593 Filed 1-8-86; 8:45 am]

BILLING CODE 3410-34-M

Forest Service

Unit Selections for the 1989-94 Operating Period of the Ketchikan Pulp Co. 50 Year Timber Sale, Tongass National Forest, Ketchikan Area; Intent To Prepare an Environmental Impact Statement

The Department of Agriculture, Forest Service, will prepare an Environmental Impact Statement for the selection of harvest units, roads and associated timber harvesting facilities for the 1989-94 Operating Period of the Ketchikan Pulp Company 50 Year Timber Sale on the Ketchikan Area of the Tongass National Forest.

Overall guidance for the selection of units will be provided by the Alaska Regional Guides, The Tongass Land Management Plan, and the 1984-89 Operating Period Environmental Impact Statement.

A range of alternative harvest patterns will be examined to determine which combination of units best balances resource needs among competing resources while still meeting the contract requirements of providing Ketchikan Pulp Company with up to 960 million board feet of timber for harvest during the 1989-94 Operating Period. One alternative will be to not select additional timber for harvest.

Federal, State and local agencies, potential affected parties and interested individuals or organizations who may be interested in or affected by the decision will be invited to participate in the scoping process. This process will include:

1. Identification of those issues to be addressed.

2. Identification of issues to be analyzed in depth.

3. Elimination of insignificant issues or those which have been covered by a previous environmental review.

The Fish and Wildlife Service of the Department of the Interior and the National Marine Fisheries Service of the Department of Commerce will be invited to participate as cooperating agencies to evaluate potential impacts on threatened and endangered species habitat if any such species are found to exist within the project area.

The Army Corp of Engineers will be invited to participate as a cooperating agency to evaluate potential impacts of terminal transfer facilities on marine habitat and to evaluate potential impacts on wetlands and floodplains.

Michael A. Barton, Regional Forester, Region 10, Box 1628, Juneau, Alaska 99801 is the Responsible Official.

The analysis is expected to take about two years to complete. The Draft Environmental Impact Statement should be available for public review by August 1987. The Final Environmental Impact Statement is scheduled to be completed in February, 1988.

Written comments and suggestions concerning the analysis should be sent to Win Green, Forest Supervisor, Tongass National Forest, Ketchikan, Alaska 99901 by March 15, 1986.

Questions about the proposed action and Environmental Impact Statement should be directed to Dale J. Thompson, Team Leader, Federal Building, Tongass National Forest, Ketchikan, Alaska 99901, Phone (907) 225-3101.

Dated: December 27, 1985.

David L. Hessel,

Acting Regional Forester.

[FR Doc. 86-423 Filed 1-8-86; 8:45 am]

BILLING CODE 3410-11-M

ARCHITECTURAL AND TRANSPORTATION BARRIERS COMPLIANCE BOARD

Information Collection Submitted to the Office of Management and Budget for Review Under the Paperwork Reduction Act

AGENCY: Architectural and Transportation Barriers Compliance Board (ATBCB).

ACTION: Notice.

The proposal for the collection of information listed below has been submitted to the Office of Management and Budget for approval under the provisions for the Paperwork Reduction Act (44 U.S.C. Chapter 35). Copies of the proposed collection of information and related forms and explanatory material may be obtained by contacting the Board's clearance officer at the phone number listed below. Comments and suggestions on the requirement should be made within 30 days directly to the Board clearance officer and to the Office of Management and Budget Architectural and Transportation Barriers Compliance Board Desk Officer, Washington, DC 20503; telephone 202-395-7316.

Title: 29 U.S.C. 792 Alarms Systems and Handicapped Persons

Abstract: Section 502(b)(7) of P.L. 95–602 requires the Board to establish minimum guidelines and requirements for accessible design. The information in this collection will be used by the Board's contractor, Applied Concepts Corporation, to advise the Board on alarms sections of the Board's Minimum Guidelines and Requirements.

Board Form Number: None.

Frequency: One-time.

Description of Respondents: Nonprofit Institutions.

Annual Responses: 1,000.

Annual Burden Hours: 1,000.

Board Clearance Officer: Frank Bowe 202–472–2700.

Dated: Decmeber 30, 1985.

Debra Fischer,

Acting Executive Director.

[FR Doc. 86–434 Filed 1–8–86; 8:45 am]

BILLING CODE 6820-SP-M

Information Collection Submitted to the Office of Management and Budget for Review Under the Paperwork Reduction Act

AGENCY: Architectural and Transportation Barriers Compliance Board (ATBCB).

ACTION: Notice.

The proposal for the collection of information listed below has been submitted to the Office of Management and Budget for approval under the provisions for the Paperwork Reduction Act (44 U.S.C. Chapter 35). Copies of the proposed collection of information and related forms and explanatory material may be obtained by contacting the Board's clearance officer at the phone number listed below. Comments and suggestions on the requirement should be made within 30 days directly to the Board clearance officer and to the Office of Management and Budget Architectural and Transportation Barriers Compliance Board Desk Officer, Washington, DC 20503; telephone 202–395–7316.

Title: 29 U.S.C. 792 Hand Anthropometrics Subject Pool Interview

Abstract: Section 502(b)(7) of Pub. L. 95–602 requires the Board to establish minimum guidelines and requirements for accessible design. The information in this collection will be used by the Board's contractor, State University of New York at Buffalo, to advise the Board on hand-anthropometrics sections of the Board's Minimum Guidelines and Requirements.

Board Form Number: None.

Frequency: One-time.

Description of Respondents: Disabled Individuals.

Annual Responses: 200.

Annual Burden Hours: 200.

Board Clearance Officer: Frank Boew, 202–472–2700.

Dated December 30, 1985.

Debra Fischer,

Acting Executive Director.

[FR Doc. 86–436 Filed 1–8–86; 8:45 am]

BILLING CODE 6820-SP-M

COMMISSION ON CIVIL RIGHTS

Maryland Advisory Committee; Agenda and Notice of Public Meeting

Notice is hereby given, pursuant to the provisions of the Rules and Regulations of the U.S. Commission on Civil Rights, that a meeting will convene at 9:00 a.m. and adjourn at 6:30 p.m., on January 30, 1986, at the Omni International Hotel, 101 West Fayette Street, Baltimore, Maryland. The purpose of the meeting is to hold a community forum on civil rights issues in special education and programs for the gifted and talented in Maryland Schools.

Persons desiring additional information, or planning a presentation to the Committee, should contact Committee Chairperson, Lorretta Johnson or John Binkley, Director of the Mid-Atlantic Regional Office at (202) 254–6717, (TDD 202/254–5461). Hearing impaired persons who will attend the meeting and require the services of a sign language interpreter, should contact the Regional Office at least five (5) working days before the scheduled date of the meeting.

The meeting will be conducted pursuant to the provisions of the rules and regulations of the Commission.

Dated at Washington, DC, January 5, 1986.

Bert Silver,

Assistant Staff Director for Regional Programs.

[FR Doc. 86–476 Filed 1–8–86; 8:45 am]

BILLING CODE 6335-01-M

DEPARTMENT OF COMMERCE

Agency Form Under Review by the Office of Management and Budget

DOC has submitted to OMB for clearance the following proposal for collection of information under the provisions of the Paperwork Reduction Act (44 U.S.C. Chapter 35).

Agency: International Trade Administration.

Title: Investment Casting Industry.

Form number: Agency—ITA—9052; OMB–N/A.

Type of request: New collection.

Burden: 250 respondents; 1,685 reporting hours.

Needs and uses: Information to be collected from 250 Investment Casters in the defense subcontractor base will be used for mobilization and economic analysis. The purpose of this review is to identify subcontractor defense production capability problems and recommend corrective options.

Affected public: Businesses or other for-profit institutions; small businesses or organizations.

Frequency: One time only.

Respondent's obligation: Mandatory.

OMB desk officer: Sheri Fox, 395–3785.

Copies of the above information collection proposal can be obtained by calling or writing DOC Clearance Officer, Edward Michals, (202) 377–4217, Department of Commerce, Room 6622, 14th and Constitution Avenue, NW., Washington, DC 20230.

Written comments and recommendations for the proposed information collection should be sent to Sheri Fox, OMB Desk Officer, Room 3235, New Executive Office Building, Washington, DC 20503.

Dated: December 31, 1985.

Linda Engelmeier,

Management Analyst, Information Management Division, Office of Information Resources Management.

[FR Doc. 86–480 Filed 1–8–86; 8:45 am]

BILLING CODE 3510-CW-M

Office of the Secretary

[Docket No. 51217–5217]

Recommendations for Implementation of National Metric Policy

AGENCY: Office of the Under Secretary for Economic Affairs, Commerce.

ACTION: Notice.

SUMMARY: This Notice is published to inform interested parties of the availability of recommendations intended to assist Government agencies in the introduction and use of metric units of measure, when appropriate, in regulations, data requests, and recordkeeping. These recommendations were prepared by the Metrication Operating Committee (MOC) on behalf of the Interagency Committee on Metric Policy (ICMP).

The recommendations augment the Metric Conversion Policy for Federal Agencies published in the Federal Register on July 5, 1985. Metric transition in the United States is

voluntary, and the pace of metric transition and degree of metric use vary widely among the organizations and individuals served by specific Federal activities. Recognizing this variability, the ICMP intends these recommendations to be used only as general guidelines for the selection and use of measurement units so as to accommodate the needs of all concerned.

Comments are welcome on a continuing basis. To offer comments or to request further information, please contact: G.T. Underwood, Director, Office of Metric Programs, Room H4082, U.S. Department of Commerce, Washington, DC 20230; Phone (202) 377-0944.

Dated: January 2, 1986.

D. Bruce Merrifield,

Acting Under Secretary for Economic Affairs and Chairman, ICMP.

Office of Metric Programs, Office of Productivity, Technology and Innovation, U.S. Department of Commerce

November 15, 1985

Recommendations for Government Implementation of National Metric Policy

Table of Contents

I. Purpose and Scope

The primary purpose of these recommendations is to assist Government Agencies in the introduction and use of metric [1] units of measure, where appropriate, in regulations, data requests recordkeeping requirements, and reporting requirements. Although the document is intended for Federal Agency use, it also may be helpful to non-Federal Agencies and legislative bodies or their staff.

II. Background

The policy of the United States, as stated by Congress in the Metric Conversion Act of 1975,[2] is to coordinate and plan the increasing use of the metric system in the United States. The Interagency Committee on Metric Policy (ICMP) [3] recommends that Federal Agencies support the goals of the national metric policy by ensuring:

—That any of their regulations or requirements that are measurement-sensitive [4] will accommodate the voluntary transition to use of the metric system; and

—That the metric measurement expressions used are both meaningful and practical.

Following recommendations of the ICMP, the Secretary of Commerce has provided a general set of procedures [5] for Federal Agencies to use in accommodating the transition to the metric system on a voluntary basis by the Federal Government, State and local governments, and the private sector.

III. Reference Documents

Appendix A contains a bibliography of authoritative reference documents. This includes documents listing officially recognized metric and inch-pound [6] units, and recognized standards for use of these units. Other pertinent references include the Metric Conversion Act of 1975, "Metric Conversion Policy for Federal Agencies",[7] and "Use of Metric System Measurement in Federal Product Descriptions".[8]

IV. Agency Responsibilities

A. Agencies should be sensitive to the stage of transition to the metric system of all parties affected by their planned actions, because various industries and sectors of the economy differ widely in the timing of their transition to use of metric measurement. The recommendations that follow are advisory and procedural only. They are not intended to encroach upon Agency authority over substantive issues involving measurement.

Depending on the extent of use of metric units by affected parties, an Agency might:

(1) Choose to accept use of both inch-pound and metric units. (For example, this might be done where Agency missions and communications are enhanced by the presence of metric units.)

(2) Continue exclusive use of inch-pound units. (For example, this might be done where metric units are not yet in use at all for a particular subject matter.)

(3) Provide for primary use of metric units. (For example, this might be done where an industry already uses metric units exclusively or has clearly indicated a decision to do so.)

B. Agencies should be aware that the acceptability of particular measurement units to a given industry or sector may not be apparent. Therefore, it is important to ensure adequate opportunity for comments by any affected industries, as well as the general public, on proposed changes in measurement units to be used. **Federal Register** notices, press releases, or the like might be used for this purpose.

C. When agencies introduce optional or primary use of metric units, they should consider the need to define clearly the policies, procedures and conventions involved and the identification and removal of any other barriers. Common understanding of ground rules is key to successful implementation of the change.

V. Practical and Meaningful Measurement Expressions

A. Conversion factors, rounding, and other elements of metric system usage should be based on latest editions of the documents listed in Appendix A. Whenever possible, Federal Agencies should use the units recommended in Federal Standard 376A. "Preferred Metric Units for General Use by the Federal Government." (See Appendix A.)

B. Agencies will often benefit from the experience of counterpart agencies in

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[1] Metric System (SI)—The metric system is the International System of Units (from the French "Le Systeme International d'Unites"), as interpreted or modified for use in the United States by the Secretary of Commerce.

[2] Metric Conversion Act of 1975 (Pub. L. 94-168, 89 Stat. 1007;

[3] The ICMP is a committee composed of senior representatives of the 38 member Federal Agencies that assist in formulating Federal metric policies in consultation with the private sector.

[4] Measurement-Sensitive—A "measurement-sensitive" law, regulation, recordkeeping requirement or reporting requirement is one whose application or meaning depends substantially on some measured quantity. Examples include mandatory product or performance criteria or standards such as emissions levels and size or weight limitations. The mere presence of dimensions or measurement terms does not necessarily make an item "measurement-sensitive".

[5] A document entitled "Recommended Federal Agency Procedures for Implementing National Metric Policy," dated January 2, 1985, was sent by the Secretary of Commerce to heads of Departments and Agencies by letter dated January 29, 1985. OMB endorsement of this document to clearance officers and regulatory contacts followed on February 6, 1985.

[6] Inch-Pound Units—This term includes but is not limited to units based upon the inch and the pound commonly used in the United States and defined by the National Bureau of Standards. Note that inch-pound units have the same names in other countries may differ in magnitude.

[7] Metric Conversion Policy for Federal Agencies 15 CFR Part 19.

[8] GSA Office of Acquisition, Policy Final Rule 41 CFR Part 101-29.

other countries where the metric system has been or is being adopted. Agencies in Canada,[9] for example, have already resolved many of the problems that may also arise in the U.S. transition.

C. Common sense, based on the knowledge and experience of each agency, should be the most important determinant in choosing practical and meaningful values, more precisely called "magnitudes", for the particular purposes involved. A variety of processes can be used for selecting magnitudes in one measurement system in place of those of another. The following discussion presents some typical approaches and examples, not as rules or restrictions, but merely to illustrate factors agencies may need to consider:

1. *Size Substitution:* This involves the simple replacement of a standard inch-pound size with an accepted metric size for a particular purpose. Examples of size substitution might be: taxing, selling, or packaging liquids by the "liter" for liquids instead of by the pint or quart (as for soft drinks), or instead of by the gallon (as for gasoline), or the choice of square meters instead of square yards (as for textiles). That is usually done to conform to international practice; that is, to adopt certain internationally recognized standards or conventions for trade and communication.

2. *Direct Mathematical Conversion:* This process is used to obtain change in measurement system only—without altering magnitude. The metric magnitude equivalent to an inch-pound magnitude is determined by multiplying by the appropriate conversion factor. The result is then normally rounded in a manner that reflects the precision of the original inch-pound value. In direct mathematical conversion, the primary concern is degree of precision. Expressions in the new system should have the same degree of precision as that of the value from which the conversion is made.[10]

3. *Adaptive conversion:* This process aims at changing from a magnitude in one system to a magnitude in another that is *reasonably equivalent.* Above all, this process should result in conversion to magnitudes that are meaningful and practical in application. Judgments in this process are often subjective and may require balancing of competing interests.

Various approaches to selection of metric magnitudes follow:

(a) Net content quantities are often shown in both inch-pound and metric. The converted quantity, often shown parenthetically, is typically rounded to an appropriate degree of precision. The following table illustrates some possible approaches using varing degrees of precision:[11]

	Examples		
	1 lb	5 lb	10 lb
More precise...	454 g	2.27 kg	4.54 kg
Common approximations.	450 g	2.3 kg	4.5 kg
Metric size substitutions.	500 g	2.5 kg	5 kg

(b) The speed limit on the nation's interstate highway network, 55 miles per hour, is a magnitude imposed by law. A precise metric equivalent is 88.154 kilometers per hour. A "direct mathematical conversion" (restricted by the 55 mph statutory maximum) would yield 88 kilometers per hour (or the even more awkward magnitude of 88.5 kilometers per hour). "Adaptive conversion" might yield the more practical and meaningful speed limit of 90 kilometers per hour, as widely chosen by Canadian provinces.

(c) Contracts for drilling water wells often require sampling geologic materials at specific depth intervals, usually 10 feet. Because these drilling depths are not measured precisely, it would not seem practical to convert contract specifications to metric intervals of 3.05 meters unless other factors were overriding. A practical and meaningful conversion for this purpose might be 3-meter intervals.

(d) A Federal Communications Commission rule in 1983 included a requirement that "two new classes of stations, classes C1 and C2, with expected service ranges of 72 kilometers (45 miles) and 52 kilometers (32 miles), respectively, will be allowed to operate in Zone II." Note that instead of a direct mathematical conversion, a practical and meaningful degree of precision was chosen that satisfied the Agency's purposes.

(e) A regulation on liquid measurement states: "On a retail device with a designed maximum discharge rate of 25 gallons per minute [100 L/min] or greater, the maximum and minimum discharge rates shall be marked on an exterior surface of the device and shall be visible after installation." [12] A practical and meaningful "adaptive conversion" satisfied the Agency's purposes, avoiding a more precise but less practical magnitude such as 96 L/min.

(f) The maximum truck body width allowed under the Surface Transportation Assistance Act of 1982 is 102 inches. A question arose whether trucks manufactured to the common European truck width of 2.6 meters (102.36 inches) would be allowed on U.S. highways. Common sense prevailed over unnecessary precision in this ruling; the Federal Highway Administration determined the 2.6 meter truck width to be acceptable.

(g) EPA regulation: Title 40, § 57.404 (a)(3) specifies: "The sampling point for monitoring emissions shall be in the duct at the centroid of the cross section of the smoke stack if the cross sectional area is less than 50 ft^2 (4.645 m^2) or at a point no closer to the wall than 3 ft (0.914 m) if the cross sectional area is 50 ft^2 (4.645 m^2) or more." In this case, circumstances dictated precise conversion, since comparability between new and historical data was desired. Rounded or "adaptive" metric magnitude substitution for this specification would have been inappropriate, because change of the

[9] For general assistance contact: Measurement Information Division, Communications Branch, Bureau of Policy Coordination, Consumer and Corporate Affairs Canada, Ottawa, Canada K1S 5G8.

[10] Often overlooked in conversion is the need to allow for differences in the absolute size of the measurement units involved. For example, 36 inches would normally be converted to 91 centimeters, not 91.44 centimeters, or to 914 millimeters, not 914.4 millimeters. For detail see Fed. Std. No. 376A section 4.5.

[11] An exception to conventional rounding practices may be observed on certain grocery and other consumer items, where the converted quantity is rounded down to avoid overstatement of contents. This practice, which is still recommended by the National Conference on Weights and Measures, calls for dropping all digits of the converted quantity beyond the first three digits where converted metric units are also displayed. The Federal Trade Commission recommends and the Food and Drug Administration requires direct mathematical conversion with rounding procedures such as those set forth in Federal Standard 376A.

[12] A recommended regulation adopted by the National Conference on Weight and Measures.

RECOMMENDATIONS FOR GOVERNMENT IMPLEMENTATION OF NATIONAL METRIC POLICY

1. American National Standard ANSI/IEEE Std 268—Standard Metric Practice (as revised). (Copies may be obtained from the Institute of Electrical and Electronics Engineers (IEEE), 345 East 47th Street, New York, NY 10017.)

2. ASTM E 380—Standard for Metric Practice (as revised). (Copies may be obtained from the ASTM, 1916 Race Street, Philadelphia, PA 19103.)

3. ANMC-85-1—Metric Editorial Guide (Fourth edition revised), April 1985. (Copies may be obtained from the American National Metric Council (ANMC), 1010 Vermont Avenue, NW., Suite 320-21, Washington, DC 20005.)

4. Federal Standard 376A—Preferred Metric Units for General Use by the Federal Government. Date: July 8, 1980. (Copies may be obtained from General Services Administration, Specifications Section, Room 6039, 7th and D Streets, SW., Washington, DC 20407.)

data sampling point could have changed measurement results.

4. Occasionally, product names may contain nominal dimensions. Such commercial designations are generally not true measurements and therefore should not be translated arbitrarily to metric. For example, the "two by four", a nominal description of common lumber, is not actually 2" × 4" in cross section. Translation to metric units could therefore be seriously misleading.

VI. Data Requests, Recordkeeping, and Reports

It is often necessary to keep historical and current data comparable and consistent in precision, when some of the data are in inch-pound and some are in metric.

A. *Reports and Questionnaires*—Each Agency should decide what units will be used in reports it generates or requires from the private sector. Whenever the Agency receives data in one system of units but reports it in another, it is recommended that the Agency assume the burden of making the needed conversion. When metric transition is underway, overlap periods may be specifically allowed.

Forms can be designed in a variety of ways to provide respondents with options as to which units they use. Dual columns, rows, or pages might be used when choice of units by the respondent is permitted. Alternative versions of the questionnaire (i.e., inch-pound and metric versions) might be provided.

B. *Records*—During a transition from one measurement system to another, units from both systems must be accommodated. Agencies may encounter a wide variety of problems during such time and should plan how they will identify, co-mingle, convert, and ultimately standardize the recording of data. A typical problem arises in collecting and storing temperature data. Where no decimal value has been used for data recorded in Fahrenheit (e.g., 93 °F), reports in Celsius might use increments of 0.5 °C to keep approximately the same degree of precision. This is warranted because the Celsius degree is 1.8 times larger than the Fahrenheit degree. (NOTE: An expression containing one digit to the right of the decimal point suggests an accuracy of (±0.1). Such precision is not intended in this case and should be disclaimed if necessary.)

C. *Recording—ADP Considerations*—Metric conversion, particularly during a period of transition, may require special computer software considerations. Special protocols are needed to allow for the recording, processing, and display of information in desired units. Also, the duration of dual system maintenance, and any need to convert historical data should be considered. Such problems should be discussed by the metric coordinator and the responsible computer and statistical services personnel. The metric coordinator should also keep these parties informed of proposed metric conversions in the Agency. Assistance on data processing issues is available through the American National Metric Council. (see Appendix A, item 3.)

VII. Assistance

Assistance in interpreting or implementing these recommendations, or in determining practical and meaningful metric values, is available from the Office of Metric Programs of the Department of Commerce. Information on the status of metric conversion for a given industry sector might be obtained from relevant trade associations or the American National Metric Council (ANMC), 1010 Vermont Avenue, NW., Suite 320–21, Washington, DC 20005, an organization involved in planning for metric conversion in the private sector.

Ref:

Office of Metric Programs, Room 4082—Hoover Building, U.S. Department of Commerce, Washington, DC 20230, (202) 377–0944.

[FR Doc. 86–433 Filed 1–9–86; 8:45 am]

BILLING CODE 3510–16–M

Bureau of the Census

Service Annual Survey, Determination

In accordance with Title 13, United States Code, sections 182, 224, and 224, and due Notice of Consideration having been published December 3, 1985 (50 FR 49593), I have determined that data covering 1985 operating receipts of selected service industries are needed to provide a sound statistical basis for the formation of policy by various governmental agencies and that these data also apply to a variety of public and business needs. This survey yields data on annual operating receipts for 1985 for selected service industries. These data are not available publicly from nongovernmental or other governmental sources on a continuing basis.

The Census Bureau will require a selected sample of firms operating service establishments in the United States (with receipts size determining the probability of selection) to report on the 1985 Service Annual Survey. The sample will provide, with measurable reliability, statistics on operating receipts for these industries.

We will furnish report forms to the firms covered by this survey and will require their submission within 15 days after receipt. We will provide copies of the forms upon written request to the Director, Bureau of the Census, Washington, DC 20233.

I have directed, therefore, that an annual survey be conducted for the purpose of collecting these data.

Dated: January 6, 1986.

John G. Keane,

Director, Bureau of the Census.

[FR Doc. 86–477 Filed 1–8–86; 8:45 am]

BILLING CODE 3510–07–M

International Trade Administration

[C–122–504]

Suspension of Countervailing Duty Investigation; Certain Red Raspberries From Canada

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: The Department of Commerce had decided to suspend the countervailing duty investigation involving certain red raspberries from Canada. The basis for the suspension is an agreement to offset or eliminate completely all benefits provided by the governments of Canada and of the Province of British Columbia, which we find to constitute subsidies on exports of certain red raspberries to the United States.

EFFECTIVE DATE: January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Mary Martin or Roy Malmrose, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, D.C. 20230; telephone: (202) 377–2830 or 377–8320.

SUPPLEMENTARY INFORMATION: On July 18, 1985, we received a petition in proper form from the Washington Red Raspberry Commission, the Red Raspberry Committee of Oregon Caneberry Commission, the Red Raspberry Committee of the Northwest Food Processors Association, the Red Raspberry Member Group of the American Frozen Food Institute, Rader Farms, Ron Roberts, Shuksan Frozen Foods, Inc., the Washington Red Raspberry Growers' Association and the North Willamette Horticultural Society, on behalf of domestic producers of red

raspberries packed in bulk containers and suitable for further processing.

In compliance with the filing requirements of our regulations (19 CFR 355.26), the petition alleges that producers or exporters of certain red raspberries in Canada directly or indirectly receive benefits which constitute subsidies within the meaning of section 701 of the Tariff Act of 1930, as amended (the Act), and that these imports materially injure, or threaten material injury to, a U.S. industry. We found that the petition contained sufficient grounds upon which to initiate a countervailing duty investigation and on August 6, 1985, we initiated this investigation (50 FR 32461).

Since Canada is a "country under the Agreement" within the meaning of section 701(b) of the Act, an injury determination is required for this investigation. Therefore, we notified the ITC of our initiation. On September 3, 1985, the ITC determined that there is a reasonable indication that these imports materially injure, or threaten material injury to, a U.S. industry.

On September 11, 1985, we received a timely exclusion request from Mukhtiar & Sons Packers Ltd. pursuant to our regulations (19 CFR 355.38). We also received a statement from the British Columbia provincial government certifying that no benefits were provided to Mukhtiar & Sons Packers Ltd. under the Farm Income Plan.

We presented a questionaire concerning the allegations to the government of Canada in Washinton, D.C. on August 12, 1985. On September 12, 1985, we received responses to our questionnaire from the government of Canada and eleven packers of red raspberries.

On September 24, 1985, petitioners filed an amendment to their petition alleging the existence of critical circumstances.

We issued an affirmative preliminary determination on October 11, 1985 (50 FR 42574). We preliminarily determined that there was reason to believe or suspect that certain benefits which constitute subsidies within the meaning of the Act are being provided to producers or exporters in Canada of certain red raspberries. We preliminarily determined that the estimated net subsidy was 0.99 percent *ad valorem* for certain red raspberries. The program preliminarily determined to bestow countervailable benefits was the British Columbia Farm Income Plan.

We directed the U.S. Customs Service to suspend liquidation of all entries of certain red raspberries from Canada that are entered, or withdrawn from warehouse, for consumption and to require a cash deposit or the posting of a bond on entries of these products in the amount equal to the estimated net subsidy. We conducted verification of the questionnaire response from the government and packers of red raspberries in Canada from October 15 through October 22, 1985.

On November 13, 1985, petitioners submitted allegations of three new subsidy available to producers or exporters of raspberries in Canada.

Our notice of preliminary determination gave interested parties an opportunity to submit oral and written views. We held a public hearing on November 15, 1985. Both petitioners and respondents submitted comments on this proceeding.

On November 26, 1985, we initiated a proposed suspension agreement with respect to certain red raspberries from Canada. Petitioners have had 30 days in which to submit comments regarding the proposed suspension agreement on certain red raspberries. Their comments have been received and taken into consideration.

Scope of the Investigation

The products covered by this investigation are fresh and frozen red raspberries packed in bulk and suitable for further processing. Fresh red raspberries are currently classified under item numbers 146.5400 and 146.5600 of the *Tariff Schedules of the United States, Annotated* (TSUSA) and frozen raspberries under item number 146.7400.

Changes Since the Preliminary Determination

As indicated in the Case History section of this notice, petitioners submitted three new subsidy program allegations after the preliminary determination and after verification. Due to the lateness of the submission, we were unable to obtain verified information regarding the countervailability of these additional programs. Based on the best information available, a description of the programs tardily alleged follows:

A. Industrial and Regional Development Program (IRDP)

Petitioners allege that a raspberry processor received an IRDP grant in 1984. IRDP is administered by the Department of Regional and Industrial Expansion (DRIE). In 1983, DRIE was created, incorporating the activities of the Department of Regional Economic Expansion (DREE) and of the Department of Industry, Trade, and Commerce. At this time, several programs of DREE were modified and incorporated into IRDP. IRDP's purpose is to increase industrial development and improve the overall economic climate by providing funds for new facilities or for the expansion or modernization of existing facilities. All regions of Canada are divided into four tiers based on the economic development of the region. The amount of assistance available differs for each tier, with the greatest amount going to the most economically disadvantaged tier.

The major component of the IRDP is the Regional Development Incentive Program (RDIP). RDIP was determined to be countervailable in "Final Negative Countervailing Duty Determinations; Certain Softwood Products from Canada" (48 Fed. Reg. 24159) because it was limited to companies within specific regions. Because we believe this program may be countervailable, we specifically provided for it in the Suspension Agreement.

B. Federal Financing Assistance

Petitioners allege that the Federal Government provided a raspberry processor with financing to help process the 1983 raspberry crop. The financing took the form of a purchase and resale program. We do not know the general program under which this assistance was given. We also do not know the terms of the assistance provided such as the rate of interest charged, the length of the loan, the repayment schedule and the collateral provided. It is questionable whether the financing was related to the products under investigation. Therefore, because of the imprecise nature of the allegation and its tardiness, we have not considered this allegation for purposes of the Agreement. However, as appropriate, we will consider this allegation in any section 751 administrative review of the Agreement that may occur.

C. Lower Mainland Horticultural Improvement Association

Petitioners allege that the above association provided grants to conduct horticultural research. Among the grants listed in the information submitted, three could conceivably benefit the raspberry industry. However, we do not have detailed information regarding the eligibility for such grants, the date of receipt and the purpose of all the research projects funded. We also do not know if the results of the research funded are available to the general public. Therefore, because of the imprecise nature of the allegation and its tardiness, we have not considered this allegation for purposes of the

Agreement. However, as appropriate, we will consider this allegation in any section 751 administrative review of the Agreement that may occur.

Petitioners' Comments

Comment 1

Petitioners contend that the Department violated section 704(e) of the Act, because petitioners did not receive a copy of the proposed suspension agreement 30 days before suspension of the investigation.

DOC Position

On November 26, 1985, 30 days prior to suspension of this investigation, the petitioners were notified that a proposed agreement was initialled by the Government of Canada and the Department. A copy of the agreement was made available to petitioners at the time. Petitioners, however, declined receipt of the document that day. A copy of the proposed agreement was delivered to the petitioners on November 27, 1985.

Comment 2

Petitioners also contend that, since the Department failed to attach copies of the Order-in-Council and the letter from the British Columbia government to the copy of the proposed agreement that they received, the Department further violated statutory and regulatory procedures. Petitioners maintain that these documents are substantial parts of the Suspension Agreement (the Agreement), and their omission constitutes a failure to provide petitioners with a complete copy of the proposed agreement in a timely manner.

DOC Position

The Order-in-Council and the referenced letter are not parts of, nor do they affect, the provisions of the Agreement. They were supplied by the Government of Canada merely as evidence that the FIP program was terminated, which is the primary, although not exclusive, basis of the Agreement. The Department required the Government of Canada to agree to furnish these documents as a condition for entering into the Agreement.

The complete terms under which this investigation is suspended are contained in the Agreement, a copy of which was made available to petitioners, in draft form, in full compliance with statutory and regulatory procedures. The petitioners were delivered a copy of the Order-in-Council and letter as soon as possible after we received them.

Comment 3

Petitioners contend that, although the Agreement indicates that the FIP has been terminated, it does not ensure that the program will not be reinstituted in the future.

DOC Position

We have made an addition to section II.A. of the Agreement to dispel this concern of the petitioners.

Comment 4

Petitioners argue that at least some of the Wage Subsidy Programs are countervailable, under the standard adopted by the Court of International Trade in *Cabot Corp.* v. *United States*, Slip Op. 85–102 (October 4, 1985). The Department has failed to require the respondents to eliminate or offset the benefits of this program. Accordingly, the petitioners contend that the Agreement does not eliminate or offset completely all subsidy programs, as required by section 704(b) of the Act.

DOC Position

The Wage Subsidy Programs were preliminarily found to be non-countervailable, because they appeared not to be limited to a specific enterprise or industry, or group of enterprises or industries. We have not subsequently received any information that the program is so limited, and we verified that it benefits a wide array of industries and companies. As a result, we do not consider it to be a subsidy, and we did not require the Government of Canada to eliminate or offset the benefits of this program.

In view of the decision in *Carlisle Tire and Rubber Co.* v. *United States*, 564 F. Supp. 834 (C.I.T. 1983), in which the Court of International Trade approved the Department's standard for finding that benefits are generally available, we are not following the standard adopted in *Cabot*.

Comment 5

Petitioners state that the Agreement does not require respondents to offset the benefits that petitioners discovered after the preliminary determination, and that were included in petitioners' letter to the Department of November 13, 1985. Petitioners argue that these benefits should be considered countervailable using the best information available, and respondents should be required to offset them in the Agreement.

DOC Position

Section II.C. of the Agreement requires respondents to repay within 90 days of a final determination any grant that benefits the subject merchandise that has been found countervailable in that determination. The IRDP program was specifically included in this subsection. Section II.B. of the Agreement provides that the provision of subsidies may result in termination of the Agreement. Subsidies are defined as benefits from programs that have been found countervailable in a final determination regarding a Canadian product.

Petitioner has the right to request a continuation of the investigation, pursuant to section 704(g) of the Act, which would consider petitioners' late allegations regarding the three programs. That determination could decide whether the benefits must be repaid, unless an earlier final determination had already done so. Based upon the opportunity for a final determination in this investigation and the limited information presently available for an assessment of the character and receipt of the alleged benefits, we find that the Agreement adequately ensures that all subsidies have been eliminated.

Comment 6

Petitioners state that section II.C. of the Agreement could be read as requiring producers and exporters to refund only that portion of a subsidy received within 90 days of a determination that the subsidy is countervailable.

DOC Position

We agree. We have rewritten this language in the Agreement to address this concern. Further, the Department always intended that the *full* benefit applicable to the subject merchandise should be refunded within 90 days of a determination, regardless of when that benefit was actually received.

Comment 7

Petitioners are concerned that the Agreement makes no provision for the refund of benefits under programs that are found to be countervailable by the courts.

DOC Position

We feel that the definition of "subsidies" in section II.B. of the Agreement is adequate. If a court overturns the Department's decision in a final determination regarding the countervailability of a program, the Department makes a new determination based upon the decision, unless the decision is appealed. The new determination would then have the same effect upon the Agreement as any other final determination, which

obviates the necessity for the special provision suggested by petitioners.

Comment 8

The petitioners contend that the producers and exporters of the subject merchandise should be made parties to the Agreement.

DOC Position

Petitioners recognize that the Act authorizes the Department to enter into a suspension agreement with either the government of the country from which the subject merchandise is exported, or the producers and exporters of the subject merchandise. Frequently, suspension agreements are based upon the participation of both the producers and exporters, and the foreign government. In this investigation, however, we do not believe that the participation of the producers and exporters in the Agreement was necessary. Two factors in this decision are the termination of the FIP program by the government of British Columbia, which was the only program preliminarily found to be countervailable, and the large numbers of growers of red raspberries. If, at a future date, we find that the participation of producers and exporters is required for the proper implementation of the Agreement, we may choose to renegotiate the Agreement to include them as parties.

Comment 9

Petitioners maintain that section II.A.(1) fails to ensure that FIP benefits will not be paid out between April 1, 1985 and the effective date of the Agreement.

DOC Position

Section 704(B)(1) of the Act requires only that suspension agreements eliminate or offset the net subsidy within 6 months after suspension of the investigation. This Agreement accomplishes more than what is required under the statute, and prohibits the receipt of countervailable benefits as of the date of publication of the Agreement in the **Federal Register**. Furthermore, there is evidence in the record that no FIP benefits have been received during the referenced period.

Comment 10

Petitioners argue that the Government of Canada should require recipients to refund, with interest, "any benefits" rather than "grants" as described in section II.C. of the Agreement, under the terms of that section.

DOC Position

The Agreement as written provides a greater safeguard against the provision of benefits other than grants than would the amendment that petitioners propose. Section II.B. provides that the provision of subsidies may result in termination of the Agreement.

Comment 11

The petitioners contend that the Government of Canada should be required to: (1) Notify the Department in writing whenever any producers or exporters qualify for, apply for, or receive a new benefit which is, or is likely to be, a countervailable benefit; (2) notify all relevant federal and provinical ministries as to the Agreement; (3) notify the producers and exporters as to the definition of a subsidy; (4) ensure that producers and exporters supply all the necessary information the Department deems necessary to verify compliance; (5) allow for verification to monitor the Agreement; (6) provide periodic certification that no benefits were received by producers and exporters; and (7) include in its certification of compliance a statement that it has conferred with the relevant federal and provincial officials to determine whether any benefits have been received under programs administered by those officials.

DOC Position

Section III of the Agreement provides for extensive monitoring procedures. We consider the provisions in section III adequate to ensure compliance with the Agreement. Furthermore, the Government of Canada has stated that it intends to provide copies of the Agreement to members of the raspberry industry and to the government of the Province of British Columbia.

Respondent's Comments

Comment 1

Respondents argue that the Department should not consider the three late allegations submitted by the petitioners. The allegations were submitted too late to allow the Department to investigate them and the bases of the allegations, three newspaper articles, provide insufficient information upon which to make a determination. Further, respondents note that the IRDP program, alleged to be used, is not the same as the RDIP program found to be countervailable in the past. They state that there is substantial evidence that IRDP is neither limited to a specific enterprise or industry or group of enterprises or industries, nor is it limited to specific regions. Therfore, it should be found not to be countervailable.

DOC Position

We agree that the allegations were submitted too late to determine whether the benefits were countervailable for purposes of the Agreement. See also "DOC Position" in response to Petitioners Comment 5.

Suspension of Investigation

The Department has consulted with the petitioners and has considered their comments submitted with respect to the proposed suspension agreement. We have determined that the Agreement will eliminate or offset completely the amount of the estimated net subsidy with respect to the subject merchandise exported directly or indirectly to the United States, that the Agreement can be monitored effectively and that the Agreement is in the public interest. Therefore, we find that the criteria for suspension of an investigation pursuant to section 704 of the Act have been met. The terms and conditions of the Agreement are set forth in Appendix A to this notice.

Pursuant to section 704(f)(2)(A) of the Act, the suspension of liquidation of all entries of certain red raspberries from Canada entered or withdrawn from warehouse, for consumption, effective October 11, 1985, as directed in our notice of "Preliminary Affirmative Countervailing Duty Determination: Certain Red Raspberries from Canada," (50 FR 42574) is hereby terminated. Any cash deposit on entries of certain red raspberries from Canada pursuant to that preliminary affirmative determination shall be refunded and any bonds shall be released.

Notwithstanding the Agreement, the Department will continue the investigation, if we receive such a request in accordance with section 704(g) of the Act within 20 days after the date of publication of this notice.

This notice is published pursuant to section 704(f)(1)(A) of the Act (19 U.S.C. 1671(c)(f)(1)(A)).

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

December 26, 1985.

Appendix A—Suspension Agreement

Pursuant to the provisions of section 704(b)(1) of the Tariff Act of 1930 ("the Act") and § 355.31(a) of the Department of Commerce Regulations, the Department of Commerce ("the Department") and the Government of Canada ("Canada"), enter into the following Suspension Agreement ("the Agreement"), on the basis that the

Government of the Province of British Columbia ("British Columbia") has terminated the British Columbia Raspberry Growers' Farm Income Plan. On the basis of the foregoing, the Department shall suspend its countervailing duty investigation initiated on August 6, 1985 (50 FR 32461) with respect to certain red raspberries from Canada subject to the terms and conditions set forth below.

I. Scope of the Agreement

The Agreement applies to "certain red raspberries" defined as fresh and frozen red raspberries packed in bulk and suitable for further processing.

II. Basis of the Agreement

A. Canada certifies, by virtue of a letter from British Columbia's Minister of Food and Agriculture to Canada's Minister for International Trade and by copy of British Columbia's Order-in-Council both of which are attached to this agreement, that; (1) British Columbia has terminated the British Columbia Raspberry Growers' Farm Income Plan, and therefore no benefits will be paid as of the effective day of this Agreement, to growers, producers or exporters of certain red raspberries under the British Columbia Farm Income Insurance Act; and (2) British Columbia does not intend to provide such a scheme to growers, producers or exporters of certain red raspberries in the future. Canada recognizes that the provision of benefits under the British Columbia Raspberry Growers' Farm Income Plan on the production or shipment of certain red raspberries exported, directly or indirectly, from Canada to the United States may result in termination of this Agreement and the resumption of the investigation pursuant to the provisions of section 704(i)(1) of the Act.

B. Canada recognizes that the provision of subsidies by Canada on the production or shipment of certain red raspberries exported, directly or indirectly, from Canada to the United States may result in termination of this Agreement and resumption of the investigation pursuant to the provisions of section 704(i)(1) of the Act. Subsidies are those benefits which have been found or are likely to be found countervailable in any investigation of a Canadian product, in any final determination in this investigation, or in any review of a Canadian product under section 751 of the Act, including countervailable benefits which may apply to both certain red raspberries and other products or exports to other destinations to the extent that such benefits cannot be segregated as applying solely to such other products or exports.

C. Canada recognizes that: (1) If grants provided under the Industrial Regional Development Program (IRDP) or any other program are determined by the Department to be countervailable subsidies in any investigation or review under section 751 of the Act, and (2) if any portion of such grants has benefited the production or exportation of certain red raspberries, and (3) the growers, producers or exporters of the subject product exported to the United States fail to refund with interest, within 90 days of the final determination in the investigation or 751 review, that portion received under said grant, then this Agreement will terminate and section 704(i)(1) of the Act will apply.

D. Canada shall notify the Department in writing of any new benefit which is, or is likely to be, a countervailable benefit on shipments of the subject products exported, directly or indirectly, from Canada to the United States, including countervailable benefits which may apply to both certain red raspberries and other products or exports to other destinations to the extent such subsidies cannot be segregated as applying solely to such other products or exports.

E. If any program under which benefits have been received in the past, and which is included in this Agreement, is found not to constitute a subsidy under the Act in the notice of suspension of investigation, the final determination or the final results of administrative review of this Agreement under section 751 of the Act in this proceeding, then the elimination of the benefits under that program will no longer be required.

III. Monitoring of the Agreement

A. Canada agrees to supply information and documentation (consistent with Canadian law and regulations) which the Department deems necessary to demonstrate that there is full compliance with the terms of this Agreement.

B. Canada agrees to permit such verification and data collection (consistent with Canadian law and regulations) as deemed necessary by the Department in order to monitor this Agreement.

C. Canada agrees to provide a periodic certification that it continues to be in compliance with the terms of the Agreement. Certification will be provided within 45 days from the end of each calendar year beginning with the year ending December 31, 1986.

D. Canada agrees to notify the Department if it alters its position with respect to any of the terms of this Agreement.

IV. General Provisions

A. In entering into this Agreement, Canada does not admit that any of the programs alleged or investigated constitute counteravailable benefits within the meaning of the Act or the GATT Subsidies Code.

B. The provisions of section 704(i)(1) of the Act shall apply if: (1) Canada withdraws from this Agreement; or (2) the Department determines that the Agreement is being or has been violated or no longer meets the requirements of section 704 of the Act.

C. The Department will terminate this suspended investigation after review under section 751 of the Act, whenever the conditions set forth in § 355.42 of the Commerce regulations (or any successor to this regulation) are satisfied.

V. Effective Date

The effective date of this Agreement is the date of its publication in the **Federal Register**.

Signed on this 20 day of December, 1985 for: The Government of Canada.

Pierre Gosselin

I have determined pursuant to section 704(b) of the Act that the provisions of Section II, completely eliminate the subsidies that the Government of Canada is providing with respect to certain red raspberries exported, directly or indirectly, from Canada to the United States. Furthermore, I have determined that suspension of the investigation is in the public interest, that the provisions of Section III, ensure that this Agreement can be monitored effectively, and that this agreement meets the requirements of section 704(d) of the Act.

Signed on this 20 day of December, 1985 for: The Government of the United States of America.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

November 7, 1985.

Honourable James Kelleher,

Minister of International Trade, Agriculture Canada, 930 Carling Avenue, Ottawa, Canada

Dear Mr. Kelleher:

RE: United States Countervailing Duty Case Certain Red Raspberries From Canada

By virtue of the Order-in-Council attached, the Government of British Columbia has terminated the British Columbia Raspberry Growers' Farm Income Plan.

We are taking this action with the understanding that a suspension agreement under provision of the United States Tariff Act of 1930, in regard to the current countervailing duty case pertaining to certain red raspberries from Canada, will be concluded with the United States of America.

It is our firm intention not to provide such a scheme to growers or processors of red raspberries in future.

Please convey this information to the appropriate United States authorities at the earliest possible date as I understand, to be most effective, it should be in their hands at least one week before the deadline of November 26, 1985.

Yours very truly,

s/H.W. Schroeder,

Minister of Agriculture and Food.

Province of British Columbia Order of the Lieutenant Governor in Council

Order-in-Council No. 2104, Approved and Ordered Nov. 13, 1985.

s/Robert G. Rogers,

Lieutenant Governor.

Executive Council Chambers, Victoria, Nov. 13, 1985:

On the recommendation of the undersigned, the Lieutenant Governor, by and with the advice and consent of the Executive Council, orders that Schedule B10 of the Farm Income Program Regulation (B.C. Reg. 394/79) is repealed.

s/H.W. Schroeder,
Minister of Agriculture and Food.
s/W. R. Bennett,
President Member of the Executive Council.

[C-122-507]

Preliminary Affirmative Countervailing Duty Determination; Certain Fresh Atlantic Groundfish From Canada

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: We preliminarily determine that certain benefits which constitute subsidies within the meaning of the countervailing duty law are being provided to producers or exporters in Canada of certain fresh Atlantic groundfish as described in the "Scope of Investigation" section of this notice. The estimated net subsidy is 6.85 percent *ad valorem.*

We have notified the U.S International Trade Commission (ITC) of our determination. We are directing the U.S. Customs Service to suspend liquidation of all entries of certain fresh Atlantic groundfish from Canada that are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice, and to require a cash deposit or bond on entries of this product in the amount equal to the estimated net subsidy.

If this investigation proceeds normally, we will make our final determination by March 18, 1986.

EFFECTIVE DATE: January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Gary Taverman or Mary Martin, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue, NW., Washington, DC 20230; telephone: (202) 377-0161 or 377-2830.

SUPPLEMENTARY INFORMATION:

Based upon our investigation, we preliminarily determine that there is reason to believe or suspect that certain benefits which constitute subsidies within the meaning of section 701 of the Tariff Act of 1930, as amended (the Act), are being provided to producers or exporters in Canada of certain fresh Atlantic groundfish (groundfish). For purposes of this investigation, the following programs are found to confer subsidies:

A. Federal Programs

1. Fishing Vessel Assistance Program.
2. Agricultural and Rural Development Agreements.
3. Department of Fisheries and Oceans Promotions Branch.
4. Economic and Regional Development Agreements Program and General Development Agreements Program.
5. Assistance for the Construction of Icemaking and Fish Chilling Facilities.
6. Fishing Vessel Insurance Plan.
7. Certain Types of Investment Tax Credits.
8. Program for Export Market Development.
9. Regional Development Incentive Program.
10. Industrial and Regional Development Program.
11. Fisheries Improvement Loan Program.
12. Government Equity Infusions.

B. Provincial Programs

1. New Brunswick: Loans from the Fisheries Development Board.
2. New Brunswick: Fish Unloading Systems and Icemaking Programs.
3. New Brunswick: Insurance Premium Prepayment Program.
4. Newfoundland: Grants for Purchasing and Constructing Boats.
5. Newfoundland: Grants for Rebuilding and Repair of Fishing and Coastal Vessels.
6. Newfoundland: Loans from the Fisheries Loan Board.
7. Newfoundland: Loan Guarantees from the Fisheries Loan Board.
8. Nova Scotia: Fishing Vessel Construction Program.
9. Nova Scotia: Loans from the Fisheries Loan Board.
10. Nova Scotia: Industrial Development Division Grants.
11. P.E.I.: Fishing Vessel Subsidy Program.
12. P.E.I.: Near and Offshore Vessel Assistance Program.
13. P.E.I.: Engine Conversion Program.
14. P.E.I.: Commercial Fisherman's Investment Incentive Program.
15. P.E.I.: Assistance for the Construction of Icemaking and Fish Chilling Facilities.
16. Quebec: Vessel Construction Assistance Program.
17. Quebec: Gear Subsidy Program.
18. Quebec: Insurance Premium Subsidy Program.
19. Quebec: Tax Abatement Program.

We determine the estimated net subsidy to be 6.85 percent *ad valorem.*

Case History

On August 5, 1985, we received a petition from the North Atlantic Fisheries Task Force on behalf of the United States groundfish industry which harvests and produces for sale Atlantic groundfish in fresh form. The North Atlantic Fisheries Task Force is an unincorporated association representing fishermen, fishermen's cooperatives, and processors located in the northeastern United States. A majority of the members of the Task Force are producers, wholesalers, or trade or business associations whose members are producers or wholesalers of groundfish.

In compliance with the filing requirements of § 355.26 of the Commerce Regulations (19 CFR 355.26), the petition alleged that producers or exporters in Canada of groundfish receive, directly or indirectly, benefits which constitute subsidies within the meaning of section 701 of the Act. On August 26, 1985, we initiated a countervailing duty investigation (50 FR 35281).

Since Canada is a "country under the Agreement" within the meaning of section 701(b) of the Act, title VII of the Act applies to this investigation, and the ITC is required to determine whether imports of the subject merchandise from Canada materially injure, or threaten material injury to, a U.S. industry. On September 19, 1985, the ITC determined that there is a reasonable indication that an industry in the United States is materially injured by reason of imports from Canada of certain fresh whole Atlantic groundfish. At the same time, it determined that there is a reasonable indication that an industry in the United States is threatened with material injury by reason of imports of certain fresh Atlantic groundfish fillets from Canada (50 FR 38904).

We presented a questionnaire concerning the allegations to the government of Canada in Washington, DC, on September 9, 1985. On November 8, 1985 we received a response to our questionnaire containing information submitted by the government of Canada, the governments of the Provinces of New Brunswick, Newfoundland, Nova Scotia, Prince Edward Island, and Quebec, and three Canadian firms (Fishery Products International Limited, National Sea Products Limited, and United Maritime Fishermen Co-op). Supplementary information was received throughout November and December 1985.

On October 7, 1985, based upon a request made by the petitioner and in accordance with section 703(c)(1)(A) of the Act, we postponed the deadline date for the preliminary determination to no later than January 2, 1986 (50 FR 41921).

In accordance with § 355.38 of the Commerce Regulations, several Canadian firms claiming not to have benefited from subsidies applied for

exclusion from any possible countervailing duty order. On October 8, 1985, we informed representatives of the Canadian government of the applications, and requested questionnaire responses from each of the firms applying for exclusion. We also informed the Canadian officials that for the exclusion requests to be considered, the Department would require that both the federal and the appropriate provincial governments submit formal certifications attesting to the non-receipt of benefits by those firms in question. Both the questionnaire responses and government certifications were due no later than November 8, 1985. Responses to the questionnaire were received during the period November 8–15, 1985. However, in a letter dated November 6, 1985, the Canadian government informed the Department that it was not feasible for the federal and certain provincial governments to comply with the certification requirement. On November 27, 1985, we notified the Canadian government that, due to the volume of requests for exclusion and the difficulty of verifying the responses of firms requesting exclusion, the current policy of the Import Administration is to accept and verify exclusion requests in countervailing duty investigations only if the respondent government provides certification that the firm or firms are not receiving subsidies. Given that we had not previously denied an exclusion request on the basis of a government's refusal or inability to provide certification, we extended the certification deadline until December 6, 1985, to allow the Canadian federal and the appropriate provincial governments to comply with this requirement. However, we stated that if the certifications were not received by that date, the exclusion requests would not be considered. On December 4, 1985, the Canadian government notified the Department that it would be unable to provide the certifications. Therefore, the requests for exclusion have been denied.

Standing Issue

In our notice of initiation, we stated that because the Department had received telephone calls and telexes from certain domestic processors objecting to the petition, we would examine the question of whether the petition was filed "on behalf of" a U.S. industry, as required by section 702(b)(1) of the Act. As we have previously stated, neither the Act nor the Commerce Regulations require a petitioner to establish affirmatively that it has the support of a majority of a particular industry. The Department relies on petitioner's representation that it has, in fact, filed on behalf of the domestic industry, until it is affirmatively shown that this is not the case.

We have since confirmed that almost all of the firms that had expressed opposition import the subject merchandise from Canada. For the purpose of determining standing, we are excluding from consideration as part of the domestic industry those domestic products or wholesalers which are also importers of the subject merchandise. The opposition of these producers or wholesalers to the petition logically stems from their position as importers because, if the investigation results in an order, they will be liable for payment of countervailing duties. For these reasons, it is appropriate to exercise our discretion to exclude importers in addressing the standing issue. We find that petitioner has filed "on behalf of" a U.S. industry.

In its preliminary determination, the ITC found two like products, whole fresh groundfish and fresh groundfish fillets. On December 27, 1985, we received a submission from the Taskforce for the Survival of American Fishermen, Processing Plants and Jobs, a group claiming to account for a major proportion of groundfish fillets produced in the United States, and a significant amount of domestic landings of whole groundfish. The group has stated its opposition to the investigation of filleted *and* whole groundfish, but it is opposed to terminating the investigation just on groundfish fillets. The group has provided no information on the volume of domestic landings that it accounts for, nor has it provided sufficient evidence that it accounts for a major proportion of the domestic whole groundfish industry. Accordingly, we continue to believe that it has not been affirmatively demonstrated that the petition was not filed on behalf of the domestic industry.

Scope of the Investigation

The product covered by this investigation is certain fresh Atlantic groundfish, which covers fresh whole and fresh fillets of Atlantic groundfish, including cod, haddock, pollock, hake, and flatfish (including flounder and sole). These species are generally referred to collectively as "groundfish" because they live on or near the seabed. The term "fresh" includes fish that are chilled, but excludes fish that have been frozen. Whole fish include fish which are whole, or processed by removal of heads, viscera, fins, or any combination thereof, but not otherwise processed. Fillets (including fish steaks) include fish, other than frozen blocks, which are otherwise processed (whether or not heads, viscera, fins, scales, or any combination thereof have been removed). These products are currently provided for in items 110.1585, 110.1593, 110.3560, 110.5000, 110.5545, 110.5565, and 110.7033 of the *Tariff Schedules of the United States Annotated (TSUSA)*.

Analysis of Programs

Throughout this notice, we refer to certain general principles applied to the facts of the current investigation. These principles are described in the "Subsidies Appendix" attached to the notice of "Cold-Rolled Carbon Steel Flat-Rolled Products from Argentina: Final Affirmative Countervailing Duty Determination and Countervailing Duty Order," which was published in the April 26, 1984, issue of the **Federal Register** (49 FR 18006).

Consistent with our practice in preliminary determinations, when a response to an allegation denies the existence of a program, receipt of benefits under a program, or eligibility of a company or industry under a program, and the Department has no persuasive evidence showing that the response is incorrect, we accept the response for purposes of the preliminary determination. All such responses are subject to verification. If the response cannot be supported at verification, and the program is otherwise countervailable, the program will be considered a subsidy in the final determination.,

For purposes of this preliminary determination, the period for which we are measuring subsidization ("the review period") is the government of Canada's 1985 fiscal year (April 1, 1984–March 31, 1985).

With respect to the calculations of benefits from grant programs, we allocated grants for fishing vessels over 18 years (the average useful life of vessels, barges, tugs, and similar water transportation equipment), for private wharves and slipways over 16 years (the average useful life of ship and boat building dry docks and land improvements), and for all other assets over 12 years (the average useful life of assets used in the manufacture of food and other sundry products). We used as the discount rate the long-term corporate bond rate in Canada, as published by the Bank of Canada.

All dollar amounts referred to represent Canadian dollars.

Based on our analysis of the petition and the responses to our questionnaire, we preliminarily determine the following:

I. Programs Preliminarily Determined to Confer Subsidies

We preliminarily determine that subsidies are being provided to producers or exporters in Canada of groundfish under the following programs:

A. Federal Programs

1. *Fishing Vessel Assistance Program.* Under the administration of the Economic Programs Branch of the Department of Fisheries and Oceans (DFO), the government of Canada operated the Fishing Vessel Assistance Program. The response indicates that the program terminated in March 1985. This program provided grants to any provincial agency, Canadian corporation or resident citizen to construct, modify or convert and re-equip fishing vessels. All construction, modifications, or conversions were to be done in Canada.

The regulations for this program authorized funding of up to 60 percent of the cost of constructing a vessel, to a miximum of $750,000. The funding limit for modification or conversion of a vessel was $400,000 dollars. However, during our review period, financial assistance was limited to 25 percent of the cost of construction of a vessel, not to exceed $125,000 for steel hull vessels or $100,000 for other vessels. Grants for modifications or conversions could not exceed 25 percent of the vessel's replacement cost.

Because grants under this program were limited to vessels used by professional fishermen, we preliminarily determine that they were limited to a specific enterprises or industry, or group of enterprise or industries, within the meaning of section 771(5)(B) of the Act, and are countervailable.

We recognize that this program terminated in 1985. However, using our grants methodology, grants bestowed under this program from 1967 through 1984 confer benefits during the review period. To calculate the benefit from this program, we allocated the grants over 18 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.743 percent *ad valorem.*

2. *Agricultural and Rural Development Agreements (ARDA).* Under the administration of the Department of Regional Economic Expansion (DREE), the government of Canada operated the ARDA. The program began in 1961 and ended in 1982. The ARDA agreements, between the federal and provincial governments, were designed to promote economic development and to alleviate conditions of social and economic disadvantage in certain rural areas. Because the benefits under ARDA appear to be limited to companies located within certain regions in Canada, we preliminarily determine that the program is countervailable.

According to the response, one ARDA grant was given to a groundfish processor in the Atlantic region. We recognize that this program terminated in 1982. However, using our grant methodology, the grant bestowed under this program in 1975 confers a benefit during the review period. To calculate the benefit from this program, we allocated the grant over 12 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.002 percent *ad valorem.*

3. *Department of Fisheries and Oceans (DFO) Promotions Branch.* The marketing services of DFO are responsibility of the Marketing Directorate. The Directorate has two branches: the Market Intelligence and Industry Services Branch, and the Promotions Branch. The Market Intelligence and Industry Services Branch is discussed in section II.A.2 of this notice. The function of the Promotions Branch is to promote fish products generically. Specifically, the Promotions Branch has run advertising campaigns, published and distributed promotional materials, developed and tested new recipes, organized an educational program for retailers, and funded attendance at fairs and exhibitions, including "Boston Seafood '85." The majority of the Promotions Branch's activities are directed at the Canadian domestic market. However, attendance of the Boston fair provided a benefit to exporters of fish to the United States during the review period. Because attendance at the Boston fair benefited only exports to the United States, we preliminarily determine that the expenses incurred for attending the fair are countervailable.

Because the DFO assistance covered costs normally expensed in the year incurred, we treated the funds disbursed as a grant expensed in the year of receipt. Applying the grant methodology and dividing by the value of exports of fish and shellfish from Canada to the United States during the review period, we calculated an estimated subsidy of 0.001 percent ad valorem.

4. *Economic and Regional Development Agreements Program (ERDAP) and General Development Agreements Program (GDAP).* The predecessor program to the ERDAP was the General Development Agreements Program (GDAP). The GDAP begain in 1973 under the authority of the DREE. The program, which ended in 1985, was succeeded by the ERDAP which is presently administered by the Department of Regional Industrial Expansion. Under both GDAP and ERDAP, agreements between the federal and provincial governments are negotiated which identify potential areas of economic development in which the federal and provincial governments can work together. Pursuant to the general agreements, subsidiary agreements are negotiated that fund specific projects. Currently, ten Economic and Regional Development Agreements and eighty-three subsidiary agreements are in effect.

According to the response, the fishing industry has benefited from subsidiary agreements under both GDAP and ERDAP. Specifically, under ERDAP, three subsidiary agreements targeted at the development of the fishing industry in Nova Scotia, New Brunswick and Prince Edward Island are currently in effect. Because the subsidiary agreements provide benefits which appear to be limited to companies in specific regions in Canada, we preliminarily determine both the GDAP and the ERDAP to be countervailable.

To calculate the benefit from these programs, we allocated the grants received over 12 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.283 percent *ad valorem.*

5. *Assistance for the Construction of Icemaking and Fish Chilling Facilities.* Under the administration of the Inspection Branch of the DFO, this program provided grants for the construction and equipping of commercial ice-making facilities in amounts up to 50 percent of a project's cost, with a ceiling of $25,000. In 1977, the ceiling was raised to $50,000. The program began in 1973 and terminated in 1980.

Because this program was limited to a specific enterprise or industry, or group of enterprises or industries, we preliminarily determine it to be countervailable. We recognize that this program terminated in 1980. However, using our grant methodology, grants bestowed between 1974 and 1980 confer benefits during the review period. To calculate the benefit from this program, we are allocating the grants over 12 years. Applying the grant methodology

and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.060 percent *ad valorem*.

6. *Fishing Vessel Insurance Plan.* Established in 1953 and administered by the Economic Programs Branch of the DFO, the Fishing Vessel Insurance Plan insures fishermen against abnormal losses. The Plan covers losses or damage caused by perils at sea, accidents in loading, discharging or handling cargo, accidents occurring on dry-docks, explosions on shipboard, and the negligence of master, officers, crew or pilots, provided that any loss or damage has not resulted from lack of due diligence. The premium rates are established as a percentage of the appraised and insured value of the hull and machinery. They are adjusted annually by taking the sum of indemnities paid in the preceding five-year period and dividing by the sum of the total insured value at the end of each of the preceding five years. The government of Canada states that the program is administered in such a way that premiums received cover indemnity costs.

To determine whether this program is countervailable we are required to determine whether (a) the program is limited in scope to certain enterprises or industries, and (b) the premiums charged are at preferential rates. The provision of benefits under this program is limited to fishing vessels and, therefore, is limited to a specific enterprise or industry, or group of enterprises or industries. To determine whether the premiums charged under this program to fishermen are preferential, we would normally compare the premiums to those charged for identical or similar insurance. Since that information was not provided in the response, we are employing the standards applied when analyzing and export insurance program. We determine a government-operated export insurance program to confer countervailable benefits when the premiums charged under the program are inadequate to cover long-term operating costs and losses of the program. According to the annual reports for this program for the last five years, in each of those years, the premiums have not covered the indemnities paid or the administrative expenses incurred in the operation of the program. Therefore, we preliminarily determine this program to be countervailable.

To calculate the benefit under this program, we took the difference between premiums collected and the sum of net indemnities paid and administrative expenses of the program. Dividing that amount by the total value of all landings in Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.187 percent *ad valorem*.

7. *Certain Types of Investment Tax Credits (ITC).* There are four categories of ITCs in Canada: two are directed at encouraging capital investment in certain regions of the country; one is designed to stimulate scientific research; and the fourth is aimed at promoting the purchase of certain types of transportation equipment. The first category of ITCs is for investment in "qualified property," such as new plant and equipment used for manufacturing or processing. The basic ITC for investment in qualified property is seven percent. An additional three or thirteen percent is available for qualified property used in certain regions. The second category of ITCs is for investment in "certified property." The distinguishing factor between "certified property" and "qualified property" is that the former must be located in prescribed regions categorized by high levels of unemployment and low per capita income. The third category of ITCs is for scientific research. Eligible expenditures under this category include the cost of capital equipment used for scientific research and expenses attributable to scientific research. A basic twenty percent ITC rate is available for qualifying scientific research exepnditures. For small Canadian-controlled private corporations, the rate is thirty-five percent. For all other corporations, the rate is thirty percent, if the expenditure is made in certain regions. The fourth category of ITCs is for investment in "qualified transportation equipment." Fishing vessels are not considered qualified transportation equipment.

Because the basic seven percent rate for "qualified property" is not limited to a specific industry or region, we preliminarily determine it to be not countervailable. However, because the additional rates of three and thirteen percent for qualified property are limited to companies within certain regions, we preliminarily determine those additional benefits to be countervailable. The fifty percent ITC rate for "certified property" is limited to specific regions. Thus, we preliminarily determine that the additional benefit above the basic rate of seven percent is countervailable. According to the response, it appears that the fishing industry did not benefit from scientific research ITCs; therefore, we preliminarily determine that these ITCs were not used. The ITC for transportation equipment is not available for investment in fishing vessels. Consequently, we preliminarily determine that this ITC category was not used.

Our standard methodology to calculate the benefit from a tax program would be to consider the benefit to be the amount of tax credits claimed on the tax return filed during the review period. However, because the response contains tax information only through 1983, we are using, as best information available, those tax credits claimed in 1983. Dividing the amount of countervailable ITC's by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.166 percent *ad valorem*.

8. *Program for Export Market Development (PEMD).* PEMD is administered by the Department of External Affairs and is available to all businesses in the manufacturing or service sectors which export. PEMD facilitates the development of export markets for Canadian products by sharing with the companies the costs of travel, per diem allowances and some special expenses. PEMD assistance is in the form of interest-free loans with repayment terms which depend on the success of the export promotion activity. If sales result from the export promotion, the funds must be repaid at a rate of two percent of sales generated for a period of three years up to the amount of assistance provided. Since 1983, Canadian producers received fourteen loans for attendance at U.S. seafood trade shows.

The purpose of PEMD assistance is to stimulate exports; therefore, we preliminarily determine that assistance provided under the program confers benefits which constitute export subsidies. The response provides no evidence demonstrating that these loans have been repaid. Therefore, we treated the funds disbursed as grants. Because PEMD assistance covered costs normally expensed in the year incurred, we expensed them in the year of receipt. Moreover, since the response provided no information on when the PEMD assistance was provided, we are assuming that all the assistance was provided during the review period. Applying the grant methodology and dividing by the value of exports of fish and shellfish from Canada to the United States during the review period, we calculated an estimated subsidy of 0.005 percent *ad valorem*.

9. *Regional Development Incentive Program (RDIP).* The RDIP, which was the predecessor of the Industrial and Regional Development Program (discussed later in this notice), was administered by the DREE for the purpose of creating stable employment opportunities in areas of Canada where employment and economic opportunities were chronically low. The program provided development incentives (usually grants) to manufacturers whose capital investment projects for establishing new facilities or expanding or modernizing existing facilities would create jobs and economic opportunities in areas designated as economically disadvantaged. The use of subjective criteria left the designation of eligible areas to the discretion of national and provincial DREE ministers.

The prime criterion for DREE approval of a proposed project was the likelihood that the project would provide economic opportunities and social adjustment. Projects which would proceed without RDIP assistance were ineligible. Because the benefits were limited to companies located within specific regions, we preliminarily determine that grants provided through the RDIP program of DREE are countervailable.

Although the program was terminated in 1983, RDIP grants were still provided to the fishing industry through 1985. To calculate the benefits from RDIP, we allocated the grants over 12 years. Applying the grant methodology, and dividing by the value of all landings in Atlantic Canada of the subject merchandise during the review period, we calculated an estimated subsidy of 2.102 percent *ad valorem.*

10. *Industrial and Regional Development Program (IRDP).* Under the administration of the Department of Regional and Industrial Expansion (DRIE), the IRDP was established as the successor to the RDIP discussed earlier in this notice. Its purpose is to increase industrial development and improve the overall economic climate in Canada by providing funds for new facilities or for the expansion or modernization of existing facilities.

Each of Canada's 260 census districts is classified into one of four tiers on the basis of economic development of the region. The most economically disadvantaged five percent of the population is included in Tier IV; the districts in which the next fifteen percent of the population in terms of economic disparity resides are classified as Tier III; the districts in which the next thirty percent of the population in terms of economic disparity resides are classified as Tier II; and the districts in which the remaining fifty percent of the population resides are classified as Tier I. Those districts classified as Tier IV receive the highest share of assistance under IRDP (as a percentage of assistance per approved project), and those in Tier I the lowest.

Despite the fact that the criteria for assignment to a tier may be neutral, the level of benefits varies from region to region. Therefore, we preliminarily determine that this program provides regional subsidies and is countervailable.

IRDP grants have been provided to the fishing industry. To calculate the benefits from this program, we allocated the total value of IRDP grants received in each year over 12 years because information in the response did not enable us to distinguish between those grants received in Tier I from those received in the other 3 tiers. Applying the grant methodology, and dividing by the value of all landings in Atlantic Canada of the subject merchandise during the review period, we calculated an estimated net subsidy of 0.034 percent *ad valorem.*

11. *Fisheries Improvement Loan Program (FILP).* The FILP, established in 1955 under the Fisheries Improvement Loans Act, is currently administered by the Economic Programs Branch of the DFO in accordance with the Fisheries Improvement Loans Regulations. Under the program, the Minister of Fisheries and Oceans guarantees loans that chartered banks and other designated commercial lenders make to fishermen for fisheries improvement projects. These projects include the purchase, construction and repair or alteration of fishing vessels, equipment, water supply systems, or other structures related to a primary fishing enterprise. The maximum amount of guaranteed loans that a borrower may have outstanding is $150,000. The interest rate charged on loans guaranteed by the government is set at the prime lending rate of the lending bank plus one percent. These rates are varible, and are tied to the prime lending rate of the bank. The maximum term of any loan is set at fifteen years. There are apparently no fees charged for the guarantees.

Respondents contend that because loans under this program are provided on terms similar to those found under the Farm Improvement Loans Act, the loans to the fishing industry should not be considered limited to a specific industry. We disagree.

There is no evidence that loans under the farm program or the fishing program are linked in any way to an overall government lending policy to provide loans and loan guarantees on comparable terms to the various qualifying groups. Thus, we must look at each of these programs separately.

Loans under the farm loan program were found to be not countervailable in the *Final Affirmative Countervailing Duty Determination: Live Swine and Fresh, Chilled and Frozen Pork Products from Canada* (50 FR 25097) because they were available on similar terms to all industries in the agricultural sector. In contrast, loans under the FLIP are limited to one specific industry, the fishing industry.

in addition to determining whether the FILP is limited to a specific industry, we must also determine whether the provision of benefits under the program is on terms inconsistent with commercial considerations.

With respect to the loan guarantees, according to the response, there are no private commercial sources for loan guarantees in Canada. the response does, however, provide information on the fees charged for loan guarantees under other federal programs. Under the Enterprise Development Program, private lenders pay the government a fee of one percent per annum on the outstanding balance of loans guaranteed under that program. We are using, as best information available, the guarantee fee charged under the Enterprise Development Program as our benchmark to determine whether loan guarantees provided under the Fisheries Loan Program are made on a commercial basis. As stated earlier, there are apparently no fees charged on loan guarantees under the Fisheries Loan Program. Therefore, we preliminarily determine that loan guarantees provided under this program are countervailable because they are limited to the fishing industry and are made on terms inconsistent with commercial considerations. To calculate a benefit under this program, we took the difference between our benchmark guarantee fee (one percent) and the charge for guarantee fees under this program (zero). We applied the difference to the amount of loans outstanding during the review period. Dividing the result by the value of all landings in Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.030 percent *ad valorem* for loan guarantees provided under this program.

With respect to loans under this program, if commercial banks want their loans guaranteed by the federal government, they must charge an interest rate of prime plus one percent. We must now determine whether the interest rate mandated by the government provides an additional

benefit to fishermen. To make that determination, we compared the interest rate provided to fishermen under the Fisheries Loan Program to an alternative commercial interest rate which fishermen would have had to pay absent this program. In this case, we have chosen as the benchmark interest rate the 90-day prime corporate paper rate, as reported by the Bank of Canada. Comparing the benchmark to the interest rate charged under the program, we preliminarily determine that rates charged under the FILP are not made on terms inconsistent with commercial considerations. We, therefore, preliminarily determine that loans made under this program are not countervailable.

12. *Government Equity Infusions.* Petitioner alleges that the government of Canada made equity infusions into National Sea Products, Fishery Products International Limited and United Maritime Fishermen Co-op. Petitioner further alleges that these equity infusions may have been on terms inconsistent with commercial considerations.

According to the response, the government of Canada and the Province of Nova Scotia made equity investments in National Sea Products Limited (NSP). The government of Canada and the Province of Newfoundland made equity investments in Fishery Products International Limited (FPIL). No equity was purchased by the federal or provincial governments in United Maritime Fishermen Co-op. Therefore, we are limiting our review to NSP and FPIL.

The provision of equity by the government of Canada and the provinces of Newfoundland and Nova Scotia was part of the restructuring of several major harvesters and processors into NSP and FPIL. The three major companies involved in the restructuring of FPIL were Fisheries Products Ltd., The Lake Group Limited, and John Penny and Sons, Limited, of Newfoundland. The restructuring of NSP involved primarily NSP itself and the acquisition of certain assets from H.B. Nickerson & Sons Ltd. The restructuring of these firms and the creation of NSP and FPIL occurred in 1983 and 1984, respectively. During the late 1970's, the five major companies rapidly increased their debt, principally through loans from commercial banks. By the early 1980's, with a downturn in the industry, the position of the companies became an items of concern to the commercial banks, and subsequently to the federal government, because their especially high debt-to-equity ratios began to affect the economic underpinnings of the companies and the Atlantic Canada fishing industry. In 1983, the federal government established a restructuring team in response to the depressed economic conditions of the industry. The federal restructuring team determined that the financial structure of the major companies was ill-suited to the economic conditions which faced the fishing industry, and that the principal challenge to the companies was to increase shareholders' equity to ensure the companies' economic viability. They also believed that liquidation would result in extremely serious disruptions to employment and financial institutions in Atlantic Canada. The government of Canada states that, based on the long-term prospects of this industry and the financial forecasts prepared for NSP and FPIL, equity participation by the government appeared to be a sound investment.

We have consistently held that government provision of equity does not *per se* confer a subsidy. Government equity infusions bestow countervailable benefits only when they occur on terms inconsistent with commercial considerations. Therefore, we must determine whether the government equity infusions made at the time of each of these reorganizations were consistent with commercial considerations. To make these determinations, we analyzed (a) the companies' financial statements, (b) the financial forecasts submitted by the government of Canada, and (c) the terms of the equity infusions between the government of Canada, the provinces of Nova Scotia and Newfoundland, and NSP and FPIL.

With respect to FPIL, we preliminarily determine that it was unequityworthy at the time of its organization. Our preliminary determination rests primarily on the poor financial conditions of the companies merged into FPIL during 1981 through 1983. These companies, viewed generally, had low profits or lost money on their operations in these years (even prior to the payment of interest expenses). The information on the record in this investigation does not provide objective support for any expectations of improvement in the business environment for the restructured company. The primary source of projected future operations presented by respondent consists of incomplete portions of a study performed by an independent consulting firm. Portions of this study that were made available to the Department, labeled Annexes E through G, do not support the conclusions attributed to the consulting firm in the response. In addition, critical assumptions necessary for such a financial forecast are not addressed, or are addressed in only the most conclusory manner. And, even though a private investor exchanged debt for an equivalent amount of equity in FPIL at the time of the government's infusion, we do not consider that transaction to be an appropriate gauge by which to measure the reasonableness of the government's infusion because at the time it seems that the one private investor's only chance for recouping the money it had already loaned to FPIL was to help it reorganize. Therefore, based upon our analysis, we preliminarily determine that equity infusions in 1983 by the government of Canada and the Province of Newfoundland into FPIL were made on terms inconsistent with commercial considerations.

We also preliminarily determine that equity infusions in 1984 by the government of Canada and the Province of Nova Scotia into NSP were made on terms inconsistent with commercial considerations. The equity infusions in NSP by the governments of Canada and Nova Scotia consisted of the purchase of preferred shares, including "second preferred shares." A private investor purchased second preferred shares in combination with a larger amount of common stock. The government of Canada argues that the price paid for the second preferred shares was consistent with commercial considerations because there was a private investor willing to purchase them at the same price. For purposes of this preliminary determination, we find that it is not possible to determine the actual value placed on each portion of this transaction by the private investor. Our determination is not based on whether NSP is equityworthy in general. Rather, analysis of these preferred shares indicates that the expected return on them is below that which would be required by a private investor. Therefore, investment in this preferred stock was inconsistent with commercial considerations Thus, we preliminarily determine that these infusions confer benefits which constitute a subsidy.

To calculate the benefit of these equity infusions, we followed our normal rate of return shortfall methodology. For NSP, the benchmark rate of return was arrived at by using the actual return for another class of preferred stock purchased at the same time by a private investor. For FPIL, the benchmark rate of return was the national average rate of return on

equity. Using that methodology, adding the benefits from the two equity infusions, and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 2.188 percent *ad valorem*.

B. Provincial Programs

1. *New Brunswick: Loans from the Fisheries Development Board (NBFDB).* In accordance with the Fisheries Development Act of 1977, the NBFDB provides financial asistance for such things as the construction of new fishing vessels, purchase of used boats, repairs and conversions, insurance premiums, and equipment purchases. The Board also administers a fish chilling grant program to assist in providing fish chilling facilities either for boats or plants.

Applicants for financial assistance must be bona fide fishermen and residents of the province. Fishing companies must be incorporated provincially or federally. Pursuant to New Brunswick Regulation 84-166 (July 16, 1984) under the Fisheries Development Act, eligible applicants can receive direct loans up to 25 years in duration, the amount not to exceed $25,000 per application at the provincial lending rate less five percent, with a minimum annual rate of seven and one-half percent. Exceptions are those instances where the Minister determines that the borrower's net worth is sufficient to support a smaller interest incentive. In this case the annual interest rate shall be one and one-half percent below the provincial lending rate per annum.

Interest rates are guaranteed for a period of three years, after which time they may be adjusted if the new provincial lending rate differs by more than one percent from the rate secured at the time the loan was granted. A service fee is required in an amount equal to 0.5 percent of the principal outstanding on all guaranteed loans on the date of issue, and annually thereafter on each anniversary of the date of issue for the outstanding principal amount. In addition, the Minister may share a portion of the cost of interest on outstanding financial assistance approved on or before December 6, 1979, by reimbursing up to 50 percent of the cost of interest on loans made for new or used vessels, or up to 25 percent for various equipment and vessel repairs.

Respondents contend that because loans under the NBFDB are provided on terms similar to those charged on loans provided by the New Brunswick Farm Adjustment Board, loans under this program are not limited to a specific enterprise or industry, or group of enterprises or industries. We disagree.

There is no evidence that loans under the farm and fishing programs are linked in any way to an overall provincial lending policy to provide loans on comparable terms to the various qualifying groups. Thus, we must look at each of these programs separately. Loans under the Farm Adjustment Board program were found to be not countervailable in *Swine, supra*, because they were available on similar terms to all industries in the agricultural sector. In contrast, loans under the NBFDB are limited to one specific industry, the fishing industry. Comparing the benchmark interest rate (*i.e.*, the 90-day prime corporate paper rate) to the interest rate charged under this program, we also preliminarily determine that these loans were made on terms inconsistent with commercial considerations.

To calculate the benefit from this program, because these are variable-rate long-term loans, we took the difference between the short-term commercial benchmark and the interest rate in effect during the review period and applied that difference to the amount of principal outstanding on these loans during the review period. Dividing the result by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.028 percent *ad valorem* for loans provided under this program.

2. *New Brunswick: Fish Unloading Systems and Icemaking Program (FUSIP).* The New Brunswick Department of Fisheries, through the NBFDB, administers this fish chilling grant program under the authority of the Fisheries Development Act of 1977 and New Brunswick Regulation 84-166. This is the only fish chilling assistance program available in New Brunswick. According to the response, neither the Fish Unloading Systems and Icemaking Facilities Board nor a program we referred to in our notice of initiation as "Assistance for Icemaking and Fish Chilling Facilities" exists.

FUSIP provides grants for fish chilling facilities for both boats and plants to improve the quality of landed fish and fish products. Eligible applicants include both owners of fishing vessels and fish processing facilities. Assistance is provided on the basis of 50 percent of the total cost of the ice chilling facility or equipment up to a maximum of $15,000 per application.

Because benefits under this program are available exclusively to the fishing industry, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. In order to calculate the benefit from this program, we allocated the grants received in fiscal years 1980 through 1985 over 12 years. Applying our grant methodology and dividing the benefit from grants received by the value of all landings in Atlantic Canada of fish and shellfish, we calculated an estimated subsidy of 0.006 percent *ad valorem*.

3. *New Brunswick: Insurance Premium Prepayment Program.* Petitioner alleged that the Province of New Brunswick provides assistance in defraying the cost of vessel equipment insurance to fishermen. In its response, the Canadian Government indicates that there is no specific program of this type but that short-term loans are available through the NBFDB to pay for insurance premiums.

These loans, which are provided in accordance with the Fisheries Development Act of 1977 and Regulation 84-166, are available on terms identical to those available for long/term loans described under the NBFDB above. The only difference is that loans are required to be repaid in one year or less, compared to the long-term limit of up to 25 years.

Because loans under this program are available exclusively to fishermen, and are provided on terms inconsistent with commercial considerations, we preliminarily determine that benefits under this program are countervailable. To calculate the benefit from this program, we used our methodology for short-term loans. For our benchmark, we used the 90-day prime corporate paper rate. Dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.004 percent *ad valorem*.

4. *Newfoundland: Grants for Purchasing and Constructing Boats.* Under the direction of the Fisheries Loan Board (FLB), an agency in the Ministry of Fisheries, and pursuant to the Fishing Ships (Bounties) Act of 1970, the government of Newfoundland operates two programs that provide grants for purchasing and constructing fishing vessels—the Fishing Ship Bounty Program and the Small Fishing Boat Bounty Program. (This and the following program were referred to in our notice of initiation as the Newfoundland Fishing Vessel Assistance Plan). Grants are provided to fishermen for the construction and purchase of fishing vessels subject to stringent technical standards including: a) that the

applicant be a resident of Newfoundland; b) that the vessel be newly built in Newfoundland and be used primarily in the fishing industry; and c) that the vessel be built or purchased in accordance with permits requiring compliance with technical specifications. Fishing vessels between 35 and 65 feet qualify for grants under the Fishing Ships Bounty Program; vessels less than 35 feet qualify under the Small Boat Bounty Program. The right to receive the bounty accrues upon completion of the ship and final survey, although advances may be authorized upon intermediate surveys. Those who receive bounties undertake to use the vessel primarily in fishing for a period of five years.

Because benefits under these programs are available only for certain vessels used by professional fishermen, we preliminarily determine that these programs are limited to a specific enterprise or industry, or group of enterprises or industries, and are countervailable.

To calculate the benefit from these programs, we allocated the grants received in fiscal years 1967 through 1985 over 18 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.143 percent *ad valorem*.

5. *Newfoundland: Grants for the Rebuilding and Repair of Fishing and Coastal Vessels (RRFCV).* Under the direction of the FLB and pursuant to the Fishing and Coastal Vessels Rebuilding and Repairs Act of 1970, the government of Newfoundland operates the RRFCV. This program provides grants for the reconstruction of ships measuring 35 feet or more, covering up to 35 percent of approved costs of repair or rebuilding. Any work approved by the FLB must be performed in Newfoundland shipyards. To be eligible, a ship owner must be a resident of Newfoundland for at least a year. As in the grant programs for new construction of ships, rebuilding and repair must meet the technical specifications laid down by the regulations. The RRFCV provides grants for both fishing vessels and commercial vessels that are engaged in coastal trade.

Because benefits under this program are provided only for commercial vessels used by two specific industries—commercial fishing and coastal transport, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable.

To calculate the benefit from this program, we allocated the grants received in fiscal years 1967 through 1985 over 18 years. Because the response provided no breakdown of grants for fishing vessels and coastal vessels, we are assuming that 100 percent of the grants were for fishing vessels. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.003 percent *ad valorem*.

6. *Newfoundland: Loans from the Fisheries Loan Board.* Under the direction of the FLB and pursuant to the Fisheries Loan Act of 1970, the government of Newfoundland provides long-term loans for the development and improvement of the fishing industry. Fishermen who are residents of Newfoundland that have had fishing experience during the previous two seasons and earned 75 percent of their income from the harvesting industry during the previous two seasons are eligible. The loans are given for the purchase, construction and repair of ships measuring up to 65 feet, the purchase of new engines and fishing gear, the construction of plants and purchase of plant equipment, and for other types of capital expenditures. Interest rates, which are set by regulation, are fixed for the term of the loan. The current interest rate charged is tied to the prime rate charged by the Bank of Montreal less three percent. Maximum terms of repayment range from 10 years for equipment to 20 years for steel ships; down payments equaling 10 to 15 percent of the loan amount are required. The maximum loan amount is $50,000.

Respondents contend that, because loans under this program are provided on terms similar to those charged on loans provided by the Newfoundland Farm Loan Board, loans under this program are not limited to a specific enterprise or industry, or group of enterprises or industries. We disagree.

There is no evidence that loans under the farm and fishing programs are linked in any way to an overall provincial lending policy to provide loans on comparable terms to the various qualifying groups. Thus, we must look at each of these programs separately. Loans under the Farm Loan Board program were found to be not countervailable in *Swine, supra,* because they were available on similar terms to all industries in the agricultural sector. In contrast, loans under the Fishing Loan Board program are limited to one specific industry, the fishing industry. Comparing the benchmark interest rate (which, because these are long-term fixed-rate loans, is in this case the long-term corporate bond rate published by the Bank of Canada) to the interest rate charged under this program, we also preliminarily determine that these loans were made on terms inconsistent with commercial considerations.

To calculate the benefit, we used the long-term loan methodology outlined in the Subsidies Appendix. Dividing the benefit by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.158 percent *ad valorem*.

7. *Newfoundland: Loan Guarantees from the FLB.* In addition to providing loans, the FLB also guarantees 20 percent of the aggregate amount of chartered banks' term loans to fishermen for the purchase or construction of fishing vessels. There apparently is no charge for the guarantees. Because these loan guarantees are provided at no charge and exclusively to the fishing industry, we preliminarily determine that they are limited to a specific enterprise or industry, or group of enterprises or industries, and are provided on terms inconsistent with commercial considerations; hence, they are countervailable.

To calculate the benefit from this program, we used as a benchmark guarantee fee the one charged by the federal government under the Enterprise Development Program. Information has not been provided showing the aggregate value of loans from chartered banks guranteed under this program. Therefore, we are using, as the best information available, the value of the FLB loans provided during the review period. Taking 20 percent of that amount, multiplying by the average guarantee fee of one percent, and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.001 percent *ad valorem*.

8. *Nova Scotia: Fishing Vessels Construction Program (FVCP).* The Fishing Vessel Construction Program (FVCP) was a grant program administered under the authority of the Industrial Development Division of the Department of Fisheries for Nova Scotia (DFNS). The FVCP was designed to assist individuals, companies, and associations in the fishing industry to construct and operate fishing vessels. The DFNS assessed applications for assistance on the basis of the

contribution that construction and operation of the vessels would have on the fishing industry of Nova Scotia. Vessels eligible for assistance had to be operated as fishing boats, have a length not exceeding 04 feet, 11 inches and be built and registered in Canada. Eligible applicants had to agree to keep their vessels registered in Canada and engage in fishing for five years. Depending on the size of the vessel and the availability of federal subsidies, the amount of the FVCP grant ranged from 0 to 35 percent of the vessel's cost. The FVCP was in effect from November 22, 1977, through March 31, 1980.

Because benefits under this program were available only for certain vessels used by professional fisherman, we preliminarily determine that this program was limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable.

We recognize that this program terminated in 1980. However, using our grant methodology, grants bestowed from 1977 through 1980 confer benefits during the review period. To calculate the benefit from this program, we allocated the grants received in fiscal years 1977 through 1980 over 18 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.015 percent *ad valorem*.

9. *Nova Scotia: Loans from the Fisheries Loan Board (NSFLB).* The NSFLB, established by the Fisheries Development Act (FDA), administers a loan program designed to make loans and loan guarantees to professional fishermen in order to encourage, sustain, improve and develop the fishing industry of Nova Scotia. Under the regulations pursuant to the FDA, loans are to be made to professional fishermen for the purpose of building, purchasing, or upgrading boats, developing aquaculture, and assisting the fishing industry generally. In fact, loans made by the NSFLB over the past twelve years appear to have been used primarily for the purchase or upgrading of fishing vessels. To be eligible for a loan from the NSFLB, a professional fisherman must have at least two years commercial fishing experience within the last five years and be engaged primarily in commercial fishing. Interest rates on approved loans are eight percent on the first $150,000, eleven percent on the second $150,000, and the current government borrowing rate for loans over $300,000. They are fixed for the term of the loan. Depending on whether the loan in used to upgrade or to purchase vessels, the repayment periods for the loans ranges between five and twelve years. Security of 20 percent for each loan in required.

Respondents contend that, because loans under the NSFLB are provided on terms similar to those charged on loans provided by the Nova Scotia Farm Loan Board, loans under this program are not limited to a specific enterprise or industry, or group of enterprises or industries. We disagree.

There is no evidence that loans under the farm and fishing programs are linked in any way to an overall provincial lending policy to provide loans on comparable terms to the various qualifying groups. Thus, we must look at each of these programs separately. Loans provided by the Farm Loan Board program were found to be not countervailable in *Swine, supra*, because they were available on similar terms to all industries in the agricultural sector. In contrast, loans under the NSFLB are limited to one specific industry, the fishing industry. Comparing the benchmark interest rate (which, because these are long-term fixed-rate loans, is in this case the long-term corporate bond rate published by the Bank of Canada) to the interest rate charged under this program, we also preliminarily determine that these loans were made on terms inconsistent with commercial considerations.

To calculate the benefit, we used the long-term loan methodology outlined in the Subsidies Appendix. Dividing the benefit by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.363 percent *ad valorem*.

10. *Nova Scotia: Industrial Development Division Grants (IDDG).* The Industrial Development Division (IDD) of the Nova Scotia Department of Fisheries administers assistance programs designed as incentives for development of the fishing industry of Nova Scotia. Grants may be provided on a 50 percent cost-sharing basis to a maximum of $15,000 per location per fiscal year. An applicant must be a licensed commercial fisherman, processing company, or fishermen's organization. Eight separate programs affecting the fishing industry in Nova Scotia are currently administered by the IDD. (These include three programs referred to individually in our notice of initiation—Icemaking and Fish Chilling Facilities, Gutting Machine, and Plant Development Programs). Each program is designed to encourage technological innovations and to improve the quality of the fishing industry as a whole. The following is a list of the programs and the general purpose of each:

- *IDD Safety Program.* Technical and financial assistance is provided to improve safety on board vessels and in processing plants.
- *IDD Quality Improvement Program.* Technical and financial assistance is available for equipment onboard and in plants that will improve the quality of fish and fish products. Equipment eligible for grants includes: fiberglass or plastic containers, onboard insulation and refrigeration, gutting machines, and plant development.
- *IDD Increased Productivity Program.* Technical and financial assistance is available to improve productivity and efficiency of fish harvesting and fish plant operations. Unloading equipment, bait sheds, and deck equipment are examples of some items covered by this program.
- *IDD Harbor Facilities Program.* Assistance in construcing and improving private harbor facilities is available under this program. Private wharves, gear sheds, slipways and haulouts are included under this program.
- *IDD Infrastructure Program.* Financial assistance is provided to enable processing plants and private wharves to hook into fresh water supplies and electrical services.
- *IDD Fleet Development Program.* Under this program assistance for developing improved vessel design is provided.
- *IDD Technology Development for Fishing Vessels Program.* Under this program assistance for the development of onboard equipment is available. Equipment used to harvest less commonly harvested species and fuel economy equipment are included under the program.
- *IDD Technology Development for Fishing Gear Program.* This program is designed to assist the professional fisherman to purchase safer, more efficient fishing gear.

Because each of the IDD programs outlined above apparently provides assistance exclusively for the fishing industry, we preliminarily determine that these programs are limited to a specific enterprise or industry, or group of enterprises or industries and are countervailable. In order to calculate the benefit from these programs we allocated the grants received during in fiscal years 1977–1985 over 12 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated

an estimated subsidy of 0.187 percent *ad valorem*.

11. *P.E.I.: Fishing Vessel Subsidy Program (FVSP).* Under recommendation of the P.E.I. Treasury Board, the P.E.I. Minister of Fisheries in 1978 established the FVSP. This program, which provided grants for the acquisition of new vessels, was, in effect from 1978 to 1984. Participation in the program was open to all P.E.I. individuals, partnerships or firms engaged in fishing who had not participated in either the Federal or Provincial Vessel Subsidy Programs during the last previous eight years. Vessel size was limited to between 30 and 75 feet and only those vessels constructed in P.E.I. shipyards were eligible. Participating fishermen received a payment equal to 15 percent of the total cost to the new vessel and engine plus all other new fixed equipment required on board the vessel, up to a maximum of $3,500.

Because benefits under this program were available only to certain vessels used by professional fisherman, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. We recognize that this program terminated in 1984. However, using our grant methodology, grants bestowed from 1978 through 1984 confer benefits during the review period. To calculate the benefits, we allocated the grants received in fiscal years 1978 through 1984 over 18 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.015 percent *ad valorem*.

12. *P.E.I.: Near and Offshore Vessel Assistance Program (NOVAP).* The NOVAP was established in 1982. Similar to the vessel subsidy program described above, NOVAP provides grants for offshore vessels as well as near-shore vessels. The level of assistance for near-shore vessels varies according to capital costs and the weight and length of the vessel. Fishermen must agree to provide catch and other data and keep the vessel in the P.E.I. fishing industry for a period of 10 years. Payment of the grant is made to the vessel owner upon satisfactory inspection by the DFL and presentation of paid receipts for the eligible amounts.

Because benefits under this program are available only for certain vessels used by professional fishermen, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. To calculate the benefit, we allocated the grants received in fiscal years 1983 through 1985 over 18 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.004 percent *ad valorem*.

13. *P.E.I.: Engine Conversion Program.* The Engine Conversion Program provides grants to fishermen to help defray the initial costs of conversion from gasoline to diesel engines. Participation is voluntary and is available to all P.E.I. fishermen with a commercial fishing license and who own vessels powered by gasoline engines. Only one diesel engine conversion grant will be made per commercial fishing vessel over the life of the vessel, and, as of May 21, 1982, only those diesel engines purchased from P.E.I. suppliers were eligible for assistance.

The assistance covers 25 percent of the capital cost to a maximum of $2,500 for new diesel engines installed in existing vessels with gasoline engines. The applicant must certify that the diesel engine and related equipment will be used for commercial fishing for a minimum of 5 years. Payment of the grant is made to the applicant upon presentation of paid receipts for the eligible equipment and a satisfactory inspection by the DFL.

Because benefits under this program are available only for vessels used by professional fishermen, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. In order to calculate the benefit from this program, we allocated the grants received in fiscal years 1982 through 1985 over 12 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.006 percent *ad valorem*.

14. *P.E.I.: Commercial Fisherman's Investment Incentive Program (CFIIP).* The CFIIP, which was created in 1983, provides interest reduction grants to all P.E.I. fishermen who are holders of bona fide fishing permits. Eligible projects include new or used capital asset purchases, acquisition of fishing enterprises and fishing privileges, repairs to capital items and working capital loans.

Interest reduction grants are paid on loans secured from recognized commercial lending institutions. Upon securing the loan, the fisherman is eligible to apply for an interest rebate of up to four percent per annum if the lending rate is at or above twelve percent, the four percentage points to be reduced when the grant reduces the interest rate below eight percent (*i.e.*, if the loan secured has an interest rate of eleven percent, then eligibility is limited to three percent, which reduces the rate to the subscribed minimum of eight percent). Eligibility is limited to the life of the loan or the first five years, whichever is less. The maximum aggregate of loans to individual fishing enterprises cannot exceed $30,000 at any one time. The grant is paid to the fisherman upon receipt of an itemized statement from the recognized lending institution along with the certification that the borrower has paid the amount of interest due.

Because benefits under this program are available only to commercial fishermen, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. Dividing the interest reduction grants received during the review period by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.003 percent *ad valorem*.

15. *P.E.I.: Assistance for the Construction of Icemaking and Fish Chilling Facilities (ACIFCF).* This program, established in 1973 and administered by the DFL, provided financial assistance for the construction of storage rooms,the purchase of ice makers, temperature control equipment, and for associated installation costs. The program was terminated on March 31, 1983. The program was available to all inshore facilities located within P.E.I. and was designed to supplement the federal program under the Fisheries and Marine Service of the Department of the Environment. Originally, the level of assistance was equal to 35 percent of the cost of required construction, equipping or modification of ice making and refrigeration facilities. In 1980, it was increased to 75 percent of the total cost (up to a maximum of $75,000).

Because benefits under this program were available only to inshore fish processing facilities used by the fishing industry, we preliminarily determine that benefits under this program were limited to a specific enterprise or industry, or group of enterprise or industries, and are countervailable. We recognize that this program terminated in 1983. However, using our grant methodology, grants bestowed from 1974 through the program's termination confer benefits during the review period. To calculate the benefit from this program, we allocated the grants

received by processing companies that have exported to the United States over 12 years. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.001 percent *ad valorem*.

16. *Quebec: Vessel Construction Assistance Program (VCAP).* Under the direction of the Ministry of Agriculture, Fisheries and Food (MAFF), the government of Quebec operates the VCAP. This program, which was established in 1972 and originally administered by the Ministry of Industry, Commerce and Tourism, provides grants to professional fishermen to reimburse a portion of the cost of a boat. Only boats measuring between 25 and 35 feet that are constructed with materials from Quebec and equipped with storage containers which correspond to the regulations of the Quebec Standards Bureau qualify under the VCAP. If the fishermen sells the boat within 5 years without MAFF authorization, a prorated portion of the grant must be repaid.

Because benefits under this program are available only for certain vessels used by professional fishermen, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. To calculate the benefit from this program, we allocated the grants received in fiscal years 1981 through 1985 over 18 years. The response indicates that grants were first provided under this program in 1972; however, no information on the grants bestowed from 1972 through 1980 was available. Therefore, for each of those years we used as the best information available the average value of the grants bestowed during the period 1981–1985, and allocated those grants over 18 years as well. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.034 percent *ad valorem*.

17. *Quebec: Gear Subsidy Program (GSP).* Under the direction of MAFF, the government of Quebec operates the GSP. This program, which was established in 1972 and originally administered by the Ministry of Industry, Commerce and Tourism, provides grants to professional fishermen to reimburse 25 percent of the purchase price of hooks, leaders, lines and metallic shellfish traps. To be eligible for this program, fishermen must purchase materials from Quebec suppliers for the construction of the gear.

Because benefits under this program are available only for gear used by professional fishermen, we preliminarily determine that this program is limited to a specific enterprise or industry, or group of enterprises or industries, and is countervailable. In order to calculate the benefit from this program, we allocated the grants received in fiscal years 1981 through 1985 over 12 years. The response indicates that grants were first provided under this program in 1972; however, no information on the grants bestowed from 1972 through 1980 was available. Therefore, for each of those years we used as the best information available the average value of the grants bestowed during the period fiscal 1981–1985, and allocated those grants over 12 years as well. Applying the grant methodology and dividing by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.028 percent *ad valorem*.

18. *Quebec: Insurance Premium Subsidy Program (IPSP).* Under the direction of MAFF, the government of Quebec operates the IPSP. This program, established in 1981, provides reimbursements to eligible participants equal to 50 percent of the cost of fishing vessel insurance. The response indicates that benefits are available to professional harvesters who own fishing vessels, and to fishing corporations whose members conduct fishing operations. If the harvester transfers or sells the boat or if the insurance is prematurely cancelled, a prorated portion of the grant must be repaid to MAFF.

Respondents contend that benefits provided under the IPSP do not constitute countervailable subsidies because there is no preferential treatment of the fishing industry. They claim that the fishing industry is considered just one of the "agro-alimentary" industries overseen by MAFF, and that programs providing similar benefits are available for 58 crops.

The programs referred to by the respondents are administered by the Regie des Assurances Agricoles du Quebec (the Regie), in accordance with the Crop Insurance Act. Under that Act, the government of Quebec may issue regulations establishing insurance schemes for mixed farming and commercial crops. Funding for the insurance schemes is provided jointly by the government of Quebec and the participating farmers on an equal basis. Only those crops for which specific regulations have been enacted are covered by an insurance scheme run by the Regie; coverage is not available for all crops, nor is it available to other industries in the agriculture sector (*i.e.*, livestock). By definition, benefits under the Crop Insurance Act are limited to a specific group of industries.

Similarly, under the IPSP, benefits are limited exclusively to the fishing industry. There is no evidence that this program is part of a broader government of Quebec policy to provide comparable benefits to all industries in the "agro-industrial" sector. In fact, the response does not contain any laws, regulations, government policy papers, brochures, or any other official literature describing this program, its terms, or criteria for participation. Therefore, we preliminarily determine this program to be limited to a specific enterprise or industry, or group of enterprises or industries, and countervailable. Dividing the value of the premium reimbursements to the fishing industry during the review period by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.044 percent *ad valorem*.

19. *Quebec: Tax Abatement Program (TAP).* Under the direction of the Fonds de Reliance Industrielle and in accordance with Chapter S–34 of the Act Respecting Fiscal Incentives to Industrial Development (Nov., 1980), the government of Quebec operates the TAP. This program is available to those manufacturing businesses not engaged in initial processing operations in a resource-based industry and those not located in metropolitan Montreal. It provides certificates allowing a firm to deduct from taxes payable 25 percent of the value of allowable capital investments, or a maximum of 50 percent of the year's income taxes due, up to a limit of $500,000. This program was terminated in 1981. However, firms participating in the program while it was in effect had the option to claim their earned tax credits during the 5 years following the issuance of the certificates.

Because tax credits under this program appear to be: (a) Available only to certain manufacturing industries and, (b) not available to industries located in metropolitan Montreal, we preliminarily determine this program to be limited to a specific enterprise or industry, or group of enterprises or industries, and a regional subsidy, and hence countervailable. The response indicates that no tax credits were granted to the fishing industry during the review period. However, tax credits granted to

the fishing industry in 1980, 1981, and 1982 could have been claimed during the review period. Since there is no information indicating when, in fact, the credits were used, we are assuming that all available credits were used during the review period. Dividing the value of the available credits by the value of all landings in Atlantic Canada of fish and shellfish during the review period, we calculated an estimated subsidy of 0.007 percent *ad valorem*.

II. Programs Preliminary Determined Not To Confer Subsidies

A. Federal Programs

1. *Atlantic Fisheries Management Program.* The Atlantic Fisheries Management Program is a federal program for the conservation and restoration of the fisheries' resources. The program's functions include: setting total allowable catches, licensing fisheries and vessels, administering biological conservation measures, managing fleet quotas, performing research and surveillance and monitoring domestic and foreign fleets. The program does not provide any financial assistance to the groundfish industry. Research under the program falls into three general categories: resource assessment, aquaculture and resource development, and habitat assessment. The results of the research are published in technical and scientific journals and are all publicly available.

Because no financial assistance is provided under the program and because the research results under the program are publicly available, we preliminarily determine that the program is not countervailable.

2. *Department of Fisheries and Oceans (DFO) Marketing Intelligence and Industry Service Branch.* As previously discussed in section I.A.3 the Marketing Intelligence and Industry Services Branch (MIIS) is part of DFO's Marketing Directorate. MIIS provides market analysis, market research, market forecasts and policy advice to DFO management. Its reports are used by the DFO, government agencies, industry, universities, international organizations, bankers, and the general public. Because MIIS provides no financial assistance to the groundfish industry and because its market reports are publicly available, we preliminarily determine that no countervailable benefits are provided under MIIS.

3. *Enterprise Development Program (EDP).* EDP was established in 1977 and ended in 1983. It was administered by the Federal Department of Industry, Trade and Commerce. The purpose of EDP was to increase productivity in the manufacturing and processing sectors through the encouragement of innovations in the production process. EDP provided loans and grants to manufacturers (individuals, firms or corporations engaged in a manufacturing or processing activity) and term loan insurance to banks lending to manufacturers or processors.

According to the response, the groundfish industry received both grants and term loan insurance, but no loans. However, in *Certain Softwood Products from Canada* (48 FR 24159) we determined that term loan insurance and grants provided under EDP were not limited to a specific enterprise or industry, or group of enterprises or industries. Therefore, we preliminarily determine that assistance given to the groundfish industry under this program is not countervailable.

4. *Import Duty Remission for Machinery Program.* Petitioner alleges that fishermen and processors have import duties remitted on machinery not available from Canadian manufacturers, and that this program may be administered in such a manner as to *de facto* limit the program to a specific industry or group of industries. The response from the government of Canada states that this program is governed by the Financial Administration Act and was established in 1968. The Machinery Program covers machines such as metal working machinery, construction equipment, and general purpose machinery such as hydraulic pumps and pulp, paper and plastics machinery. The remission of duty is authorized by the Governor-in-Council on the recommendation of the Minister of Regional Industrial Expansion. The Machinery and Equipment Advisory Board (CMEAB) advises the Minister on the eligibility of imported machines for remission of duty. To qualify for approval, the remission of duty must be in the public interest and reasonably equivalent machinery must not be available in Canada. The government of Canada states that only applications for machinery that was available for production in Canada were rejected. Since all applications covering machinery not available in Canada were approved, we can find no evidence of governmental discretion in the administration of this program and, therefore, no *de facto* limitation on use of the program. Since the types of machinery eligible for remission of import duties are available for use to a wide range of industries, we preliminarily determine that this program is not countervailable because it is not limited to a specific enterprise or industry, or groups of enterprises or industries within Canada.

5. *Special Recovery Capital Projects Program.* The Special Recovery Capital Projects Program (SRCPP) was established on April 19, 1983 and terminated on April 10, 1985. SRCPP was an anti-recession public works program with a budget of 2.4 billion dollars. Funds from this program were used to initiate or accelerate construction of capital projects of federal departments and agencies and Crown Corporations of Canada. The program was implemented by Treasury Board circulars and the Minister of State for Economic and Regional Development and had overall responsibility for SRCPP. The Minister chaired the Cabinet Committee on Economic and Regional Development. The Cabinet was advised by the Special Recovery Capital Projects Board on which projects to approve. The Board was composed of the deputy heads of the major participating federal departments. The government of Canada stated that there were two established criteria for SRCPP which guided the selection of which projects to fund: SRCPP should contribute to balanced growth with projects planned for all parts of the country, and SRCPP approved projects should expand and improve upon essential infrastructure facilities. Also, all selected projects were expected to be started by October 31, 1983.

SRCPP funds were provided to projects within six broad groupings: transportation facilities, shipbuilding for Coast Guard vessels, research and training facilities, advanced technology procurement, land and tourism development, and resource development. Projects which received SRCPP funds included airport terminal buildings, runways, highways, railroad stations, subways, deep water ports, small craft harbors, sewage treatment facilities, water bombing aircraft, historical building restoration, and clothing for the armed forces. Fish unloading systems and ice making facilities, bait storage depots, and marine service centers also received financing within the grouping of resource development. Projects also classified as resource development included livestock facilities and irrigation works. Resource development projects were designed to alleviate constraints on the development of resources in the forestry, fishing and agricultural sectors of Canada.

The types of facilities which received SRCPP funds are wide-ranging. There is also a wide array of industries which benefit from such projects. A review of

the capital projects receiving SRCPP funding and the Treasury Board circulars provides no evidence of targeting to selected industries or regions. The response also states that the projects receiving SRCPP financing were planned in all parts of the country. During verification we will more closely examine the criteria used in project selection to ensure that location is not a criterion. Since the program is not limited to a specific enterprise or industry or a group of enterprises or industries, we preliminarily determine that SRCPP is not countervailable.

6. *Small Craft Harbor Program.* In 1973, the management of Canada's commercial fishing and recreational harbors was consolidated within the DFO by the Fishing and Recreational Harbours Act. Under this program, the Small Craft Harbours Directorate within the DFO has the responsibility for operating and maintaining over two thousand small craft harbors which range from modern active facilities to minor installations serving isolated communities. The program provides for harbor maintenance projects such as breakwater protection, dredging, wharves, launching facilities and other related services. The program also provides harbor services such as lighting of harbor approaches and the provision of fire-fighting equipment.

We regard the development and maintenance of a country's road, rail, air and water transportation networks as a legitimate public function of government. The provision and maintenance of such a system, when made available on equal terms to any potential user, is not limited to a specific industry or group of industries. Canada's maintenance of its harbors not only benefits commercial fishermen, but also recreational boaters and any industry in the country which exports or imports goods and materials by sea; therefore, we preliminarily determine this program not to be countervailable.

B. Provincial Programs

1. *New Brunswick: Marketing and Promotion Activities.* Petitioner alleges that the New Brunswick Department of Commerce and Development offers four separate programs to fish processors to assist in the development, marketing and export activities of the Province. According to the response, New Brunswick administers only three programs relating to promotion and marketing. These are trade services, marketing services and production services. Technical/Marketing Assistance was eliminated at the end of 1983 and its functions have been absorbed by the production services section. There are no provincial rules or regulations that specifically provide for the various marketing and export programs; all are activities performed by the Department of Commerce and Technology under the direction of its Minister and the Deputy Administrator of the Department. Funding for the programs is authorized by the Financial Administration Act of October, 1984.

Participation in these programs is voluntary and open to all manufacturers or processors established or willing to establish in New Brunswick. None of the three programs is designed to deal exclusively with export promotion, and, according to the response, of the three programs available, the only one utilized by producers of groundfish was trade services.

Under the trade services program, the personnel of the Department of Commerce and Development research and investigate possible trade shows and missions which might be of use to manufactures and processors of any product in the province. These activities are available for both export and domestic marketing. The Department agrees to share some of the costs (usually 50 percent) involved in taking part in the trade shows if the manufacturer can show that he is financially solvent, has the production capability to supply a product, and will follow-up on any trade leads uncovered. The manufacturer must be a resident of the province of New Brunswick.

According to the response, in fiscal 1984–85, less than 4 percent of the total monies allocated was expended on the promotion of the subject merchandise; the balance was expended on the promotion of trade services for all other sectors in New Brunswick. Therefore, based on the response, we preliminarily determine that benefits provided under this program are not limited to a specific enterprise or industry, or group of enterprises or industries, and are not countervailable.

2. *Newfoundland: Exemptions from Sales and Gasoline Taxes.* Under the direction of the Tax Administration Branch of the Ministry of Finance, the government of Newfoundland offers exemptions from the application of the Retail Seles Tax Act and the Gas Tax Act, both enacted in 1978. The sales tax applies a flat rate of 12 percent on the consumption of tangible personal property. Its purpose is to tax only the final consumer of retail products. Pursuant to this purpose, the regulations enumerate specific exemptions in all areas of commercial production, including production of primary products: agriculture, fish, forestry, and minerals; and manufacturing and processing. Vessels or boats purchased by commerical fishermen, farm equipment and supplies, all productive capital equipment purchased for use in manufacturing and all tangible personal property to be processed, fabricated, or manufactured for purpose of resale, are exempt.

The gas tax is an *ad valorem* tax based on 22 percent of the average retail price for fuel and is used to provide funds for highway repair. Exemptions apply to all uses of gas that are not related to the use of a motor vehicle on a public roadway including motorized farm equipment used for agricultural purposes, tractors and power saws used in commercial cutting and harvesting of logs, boats used in fishing, and equipment used in manufacturing plants. Therefore, based on the response, we preliminarily determine that benefits provided under these programs are not limited to a specific enterprise or industry, or group of enterprises or industries, and are not countervailable. At verification, we will carefully examine the *de facto* distribution of benefits under this program.

3. *Newfoundland: Newfoundland and Labrador Development Corporation (NLDC).* Under the direction of the Ministry of Finance, the government of Newfoundland operates the NLDC. This program was established in 1974 to promote small- and medium-sized businesses, and provides loans and equity investments to all commercial sectors. Besides fishing, the NLDC has assisted enterprises in manufacuring, mining, forestry, services, agriculture, and tourism. Loans are made at the provincial lending rate. The maximum repayment period is 15 years. Repayment is determined according to the useful economic life of the asset. The NLDC also offers business and technical information on an informal basis in response to anyone's inquiries. Until March 1984, the program received partial federal contribution. Since then it has been solely under provincial responsibility.

Based on the response, we preliminarily determine that benefits provided under this program are not limited to an enterprise or industry, or group of enterprises or industries, and are not countervailable. At verification, we will carefully examine the *de facto* distribution of benefits under this program.

4. *Newfoundland: Rural Development Loan Program (RDLP).* Under the direction of the Rural Development Authority and pursuant to the Newfoundland Department of Rural

Development Act of 1973, the government of Newfoundland operates the RDLP. The Rural Development Authority is comprised of three ministers: The Minister of Rural Development, the Minister of Forestry and Agriculture and the Minister of Fisheries, and three to five other appointed members. The RDLP promotes the development of small industries and rural enterprises by providing loans to both emerging and existing businesses. "Rural" is interpreted to embrace all of Newfoundland including St. Johns, the capital of Newfoundland. Loans are at fixed interest rates for a maximum of $250,000. Maximum repayment periods are five years for new equipment and three years for used equipment, and security is required. The regulations authorize loans for many purposes including the purchase and repair of equipment; the purchase, construction and renovation of buildings; land purchases; and working capital needs. The only producers specifically excluded from the program are fish harvesters who already receive loans from the FLB. Otherwise, loans are provided in primary resource production, manufacturing, processing, services and tourism. Any Newfoundland business is eligible if the applicant demonstrates equity of at least 10 percent of the value of its existing fixed assets and is able to provide a cash input of at least 10 percent of the submitted capital costs. Therefore, based on the response, we preliminarily determine that benefits provided under this program are not limited to a specific enterprise or industry, or group of enterprises or industries, and are not countervailable. At verification, we will carefully examine the *de facto* use of this program.

5. *Newfoundland: Loan Deficiency Guarantee Program.* The government of Newfoundland's Ministry of Finance, pursuant to the Crown Guarantee and Loan Act of 1973, has guaranteed short-term working capital loans to eligible fishing companies since 1977. The response indicates that, since 1981, guarantees have been provided to a variety of industries including fishing, mining, agricultural, pulpwood harvesting and saw milling. All loans that are guaranteed must be secured, and a guarantee fee of between 0.5 and 1.0 percent is charged. Because the guarantees provided under this program appear not to be limited to a specific enterprise or industry, or group of enterprises or industries, we preliminarily determine that they are not countervailable. At verification, we will carefully examine the *de facto* distribution of benefits under this program.

6. *Newfoundland: Market Development Information Service.* This service, offered by the support services branch of the Newfoundland Department of Fisheries, provides information on all aspects of the fishing industry to anyone who inquires. The response indicates that the information is used not only by the Canadian fishing industry, but by U.S. buyers and processors as well. As such, we preliminarily determine that the services provided under this program are not limited to a specific enterprise or industry, or group of enterprises or industries, and are not countervailable.

7. *Nova Scotia: Market Development Assistance.* Under the Marketing Development Division of the Department of Fisheries, the Market Development Service (MDS) operates to increase consumer awareness (both domestically and worldwide) of seafood products through the use of mall displays, cooking demonstrations and seminars, and distribution of recipe pamphlets and other promotional material. According to the response, any individual or corporation, domestic or foreign, can receive information from the MDS. As such, we preliminarily determine that the services provided under this program are not limited to a specific enterprise or industry, or group of enterprises or industries, and are not countervailable.

III. Programs Preliminarily Determined Not To Be Used

A. Federal Programs

1. *Community-Based Industrial Adjustment Program (CIAP).* CIAP was started in 1981 and ended in 1984. The program was one part of the Industrial and Labor Adjustment Program which was administered by the Department of Industry, Trade and Commerce. The objective of CIAP was to encourage businesses to undertake capital projects in certain designated communities affected by serious industrial dislocations. CIAP financial assistance took the form of grants of up to 75 percent of the consulting costs associated with CIAP projects or loans to cover capital costs and preproduction expenses.

According to the response, no groundfish harvesters or fresh fish processors benefitted from CIAP assistance. Therefore, we preliminarily determine that this program was not used.

B. Provincial Programs

1. *New Brunswick: Winterization of Fish Plants Program.* Petitioner alleged that this program provides financial assistance to winterize fish plants. According to the response there are no laws or regulations relating to this program. In 1979, the then existing Fish Inspection Branch of the Department of Fisheries conducted such a program but only one plant was involved and it did not process groundfish. Therefore, for purposes of this preliminary determination, we find this program not to be used.

2. *Newfoundland: Secondary Processing Interest Subsidy Program (SPISP).* Under the direction of the Ministry of Fisheries, the government of Newfoundland operates the SPISP. This program was initiated in 1978 to provide interest subsidies to secondary processors of fish for the purchase of machinery and equipment. The program is designed to encourage increased production of fish products processed beyond the whole and filleting stage of processing. According to the response, benefits are not available to producers and exporters of whole and filleted fresh groundfish. Therefore, for purposes of this preliminarily determination, we find this program not to be used.

3. *Quebec: Technological Assistance Service for Business Program (TASBP).* Under the direction of MAFF, the government of Quebec operates the TASBP. This service, which the response indicates is available to all companies or individuals in industries related to the processing, distribution, and research and development of food products, provides financial assistance, up to 50 percent of total costs, for the development of new products and methods. This service also provides technological counselling to the firms in all sections of the food industry. According to the response, none of the merchandise subject to this investigation benefitted from financial assistance under this program. Therefore, for purposes of this preliminarly determination, we find this program not to be used.

4. *Quebec: Aide a la Promotion des Exportations (APEX).* Under the direction of the Ministry of Foreign Trade, the government of Quebec operates the APEX. Established in 1972 by the Ministry of Industry, Commerce and Tourism, this program provides grants to cover partial expenses for new export market development programs and attendance at trade fairs. According to the response, benefits under this program have not been provided to any

exporters to the United States of the subject merchandise during the review period. Therefore, we preliminarily determine that this program was not used.

IV. Programs for which additional Information Is Needed

A. Federal Programs

1. *Federal Assistance for Bait Services Program.* The Bait Services Program was begun by the Dominion of Newfoundland before it joined Canada as a province in 1949. The federal government agreed to take over this program as a condition of Newfoundland becoming part of Canada. The program is presently being administered by the federal DFO. The bait service program provides fishermen with a source of bait independent of the local processors. The price charged to fishermen represents the cost of purchasing, processing and storing the bait. According to the response, the prices charged by the Bait Service are exactly the same as those charged by the two largest processors: Fisheries Products International and National Sea Products.

2. *Unemployment Benefits for Fishermen under the Unemployment Insurance Act of 1971.* Petitioner alleges that, in addition to the federal unemployment insurance available to Canadian workers, the federal Department of Employment and Immigration administers a subprogram which provides benefits specifically to and exclusively for fishermen, and that the bulk of the benefits under this program go toward providing seasonal benefits to fishermen.

According to the response, this program is administered by the Canada Employment and Immigration Commission under the Unemployment Insurance Act of 1971. Under section 146 of the Unemployment Insurance Act, the Commission has the authority to establish and operate a scheme of unemployment insurance for self-employed persons engaged in fishing. Fishermen who are employed under a contract of service fall within the general provisions of the Unemployment Insurance Act. A fisherman who is eligible for benefits under section 146 is not eligible for any other unemployment benefits. Altantic fishermen are eligible for unemployment benefits from November 1 to May 15 because, due to inclement weather, they are unable to fish during that period.

The government of Canada states that benefits available to fishermen under section 146 and benefits available to general claimants under the Unemployment Insurance Act are similar. Employer contributors are fixed at the same rate, which is presently 3.29 percent of insurable earnings with maximum weekly insurable earning of $460. All employees, including fishermen, pay the same percentage of their insurable earning which is 2.35 percent. The rate of weekly benefit payable to all claimants is an amount equal to 60 percent of their average weekly insurable earnings in qualifying weeks, except that if 15 or more weeks in the qualifying period are devoted to fishing, the claimant may base his average weekly insurable earnings on the 10 insured fishing weeks with the highest insurable earnings. Of November 7, 1985, petitioners presented new information which provides details of additional government funds to the unemployment insurance program for fishermen in Atlantic Canada. We need more information on the unemployment insurance program in Canada and on these additional funds being provided to the fishermen before we can make a determination of whether this program is counteravailable. Therefore, we will be seeking additional information during our verification.

V. Programs Preliminarily Determined to be Terminated

A. P.E.I.: Fish Box Pool Program

To promote improved quality of fish and efficient fish handling in the inshore facility, the DFL implemented the Fish Box Pool Program on April 28, 1976, by providing loans to assist the fish buyer in purchasing plastic tote or fish boxes used in storing and transporting catches. According to the response, all loans under this program had been repaid prior to the review period.

B. Quebec: Societe de Developement Industriel (SDI) Expansion Program

Under this program, the government of Quebec provided grants and interest cost reimbursements to Quebec firms which increased direct exports by 25 percent over those of the previous year. The response indicates that grants were provided in 1980 and 1981 to one firm that exported fresh fish to the United States. Because these grants were for interest reimbursements, using our grant methodology, we allocate them to the year of receipt. Therefore, becuase no benefits were provided during the review period, and because the program was cancelled in 1981, we preliminarily determine that this program has been terminated.

VI. Programs Preliminarily Determined Not To Exist

A. New Brunswick: Fish Chilling Assistance Program

This is a program of the federal government. *See* section I A. 4. of this notice.

B. Newfoundland: Bait Services Program

This is a program of the federal government. *See* section IV.A.1 of this notice.

C. Newfoundland: Production Machinery and Processing Technology Program

The response indicates that this program, alleged by petitioners to provide financial and technical assistance for the design of plant layouts and the development and acquisition of machinery, is the same as the Secondary Processing Industry Subsidy Program. *See* section III.B.2 of this notice.

D. P.E.I. Fish Chilling Assistance Program

This is a program of the federal government. *See* section I A. 4. of this notice.

E. P.E.I. Fishermen's Holding Unit Program

This is a program of the federal government. *See* section I A. 4. of this notice.

F. Quebec: Joint Federal—Provincial Development Program

Petitioner alleged that, in 1983–84, the DFO established a five-year program to revitalize the fishing industry in Quebec. According to the response, no such project exists.

Verification

In accordance with section 776(a) of the Act, we will verify the information used in making our final determination.

Suspension of Liquidation

In accordance with section 703(d) of the Act, we are directing the U.S. Customs Service to suspend liquidation of all entries of certain fresh Atlantic groundfish from Canada which are entered, or withdrawn from warehouse, for consumption on or after the date of publication of this notice in the **Federal Register** and to require a cash deposit or bond for each such entry in the amount of 6.85 percent *ad valorem*. This suspension will remain in effect until further notice.

ITC Notification

In accordance with section 703(f) of the Act, we will notify the ITC of our determination. In addition, we are making available to the ITC all non-privileged and non-confidential information relating to this investigation. We will allow the ITC access to all privileged and confidential information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under an administrative protective order, without the written consent of the Deputy Assistant Secretary for Import Administration.

The ITC will determine whether these imports materially injure, or threaten material injury to, a U.S. industry within 120 days after the Department makes its preliminary affirmative determination or 45 days after its final affirmative determination, whichever is later.

Public comment

In accordance with § 355.35 of our regulations, we will hold a public hearing, if requested, to afford interested parties an opportunity to comment on this preliminary determination at 1:00 p.m. on February 18, 1986, at the U.S. Department of Commerce, Room 6802, 14th Street and Constitution Avenue, NW., Washington, DC 20230. Individuals who wish to participate in the hearing must submit a request to the Deputy Assistant Secretary for Import Administration, Room B-099, at the above address with in 10 days of the publication of this notice.

Request for a hearing should contain: (1) The party's name, address, and telephone number; (2) the number of participants; (3) the reason for attending; and (4) a list of the issues to be discussed. In addition, at least 10 copies of pre-hearing briefs must be submitted to the Deputy Assistant Secretary by February 10, 1986. Oral presentations will be limited to issues raised in the briefs.

In accordance with 19 CFR 355.33(d) and 19 CFR 355.34, written views will be considered if received not less than 30 days before the final determination or, if a hearing is held, within 7 days after the hearing transcript is available.

This notice is published pursuant to section 703(f) of the Act (19 U.S.C. 1671b(f)).

Dated: January 2, 1986.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

[FR Doc. 86-431 Filed 1-8-86; 8:45 am]

BILLING CODE 3510-DS-M

[A-570-503]

Certain Steel Wire Nails From the People's Republic of China; Preliminary Determination of Sales at Less Than Fair Value

AGENCY: Import Administration, International Trade Administration, Commerce.

ACTION: Notice.

SUMMARY: We preliminarily determine that certain steel wire nails (nails) from the People's Republic of China (PRC) are being, or are likely to be, sold in the United States at less than fair value. We have notified the U.S. International Trade Commission (ITC) of our determination, and have directed the U.S. Customs Service to suspend the liquidation of all entries of the subject merchandise as described in the "Suspension of Liquidation" section of the notice. If this investigation proceeds normally, we will make a final determination by March 18, 1986.

EFFECTIVE DATE: January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Arthur J. Simonetti or Charles E. Wilson, Office of Investigations, Import Administration, International Trade Administration, U.S. Department of Commerce, 14th Street and Constitution Avenue NW., Washington, DC 20230; Telephone: (202) 377-4929 or (202) 377-5288.

SUPPLEMENTARY INFORMATION:

Preliminary Determination

Based upon our investigation, we preliminarily determine that nails from the PRC are being, or are likely to be, sold in the United States at less than fair value, as provided in section 733 of the Tariff Act of 1930, as amended (the Act). We have preliminarily determined the weighted-average margin of sales at less than fair value to be 8.01 percent.

If this investigation proceeds normally, we will make a final determination by March 18, 1986.

Case History

On June 5, 1985, we received a petition from Atlantic Steel Company, Atlas Steel & Wire Corporation, Continental Steel Corporation, Dickson Weatherproof Nail Co., Florida Wire & Nail Co., Keystone Steel & Wire Company, Northwestern Steel & Wire Co., Virginia Wire & Fabric Company, and Wire Products Company, filed on behalf of the domestic producers of nails. In compliance with the filing requirements of § 353.36 of the Commerce Regulations (19 CFR 353.36), the petitioners alleged that imports of nails from the PRC are being, or are likely to be, sold in the United States at less than fair value within the meaning of the Act, and that these imports materially injure, or threaten material injury to, a United States industry. After reveiwing the petition, we determined that it contained sufficient grounds upon which to initiate an antidumping duty investigation. We notified the ITC of our action and initiated such an investigation on June 25, 1985 (50 FR 27479). On July 31, 1985, the ITC determined that there is a reasonable indication that imports of nails are materially injuring a U.S. industry (50 FR 31057).

On July 5, 1985, a questionnaire was sent to China National Metals and Minerals Import and Export Corporation (China Minmetals), and on August 12, 1985, we received China Minmetals's response. China Minmetals submitted a supplemental response on August 22, 1985. On November 6, 1985, the preliminary determination was extended at the request of the petitioner.

As discussed under the "Foreign Market Value" section of this notice, we have preliminarily determined that the PRC is a state-controlled-economy country for the purpose of this investigation.

Scope of Investigation

The products covered by this investigation are certain steel wire nails from the PRC. These nails are: one-piece steel wire nails as currently provided for in the *Tariff Schedules of the United States* (TSUS) under item numbers 646.25 and 646.26, and similar steel wire nails of one-piece construction, whether at, over or under .065 inch in diameter as provided for in item number 646.3040; two-piece steel wire nails provided for in item number 646.32; and steel wire nails with lead heads provided for in item number 646.36.

Because Minmetals accounted for all exports of this merchandise to the United States, we limited our investigation to that firm. We investigated approximately 70 percent of sales of nails for the period January 1, 1985, through June 30, 1985.

Fair Value Comparison

To determine whether sales in the United States of the subject merchandise were made at less than fair value, we compared the United States price with the foreign market value.

United States Price

As provided in section 772 of the Act, we calculated the purchase price of nails based on the F.O.B., or C.I.F. price to unrelated United States purchasers

shown in the response submitted by China Minmetals. We made deductions, where appropriate, for foreign inland freight and insurance and ocean freight. We will develop information for our final determination which will allow us to value yuan-denominated charges in a non-state-controlled economy country at a comparable level of economic development.

Foreign Market Value

In accordance with section 773(c) of the Act, we used prices of nails imported into the United States from South Korea and Israel as the basis for foreign market value.

Petitioners alleged that the PRC is a state-controlled-economy country and that sales of the subject merchandise from that country do not permit a determination of foreign market value under section 773(a). After an analysis of the PRC economy, and consideration of the briefs submitted by the parties, we have preliminarily concluded that the PRC is a state-controlled-economy country for the purpose of this investigation. Central to our decision on this issue is the fact that that central government of the PRC controls the prices and levels of production of nail or steel products as well as the internal pricing of the factors of production.

As a result, section 773(c) of the Act requires us to use either the prices of or the constructed value of such or similar merchandise in a "non-state-controlled-economy" country. Our regulations establish a preference for foreign market value based upon sales prices. They further stipulate that, to the extent possible, we should determine sales prices on the basis of prices in a "non-state-controlled-economy" country at a stage of economic development comparable to the state-controlled-economy country.

After an analysis of countries producing wire nails, we determined that Egypt, India, Indonesia, Morocco, Pakistan, Philippines, Sri Lanka, and Thailand were the countries at the most comparable stages of economic development and it would, therefore, be appropriate to base foreign market value on their prices. However, the Indian Embassy has advised us that the companies which we contacted in India will not provide data for this investigation, and the companies contacted in Egypt, Indonesia, Morocco, Pakistan, Philippines, Sri Lanka, and Thailand have not responded.

Lacking information from countries at a level of economic development comparable to that of the PRC, we have based foreign market value on the prices of imports into the U.S. Of the countries exporting nails to the United States, South Korea and Israel were at the most comparable level of economic development to the PRC. Therefore, we based foreign market value on the simple average ex-mill price of nails from South Korea and Israel for export to unrelated purchasers in the United States. We gathered simple average price information from special steel summary invoice (SSSI) statistics, which was the best information available. We made deductions for inland freight and for ocean freight. We made comparisons of merchandise based upon product subgroups selected by Department of Commerce industry experts.

Verification

We will verify all data used in reaching the final determination in this investigation.

Suspension of Liquidation

In accordance with section 733(d) of the Act, we are directing the United States Customs Service to suspend liquidation of all entries of nails from the PRC that are entered or withdrawn from warehouse, for consumption, on or after the date of publication of this notice in the **Federal Register.** The Customs Service shall require a cash deposit or the posting of a bond equal to the estimated weighted-average amount by which the foreign market value of the merchandise subject to this investigation exceeded the United States price, which was 8.01 percent of the ex-factory value. This suspension of liquidation will remain in effect until further notice.

ITC Notification

In accordance with section 733(f) of the Act, we will notify the ITC of our determination. In addition, we are making available to the ITC all nonprivileged and nonconfidential information relating to this investigation. We will allow the ITC access to all privileged and confidential information in our files, provided the ITC confirms that it will not disclose such information, either publicly or under an administrative protective order, without the consent of the Deputy Assistant Secretary for Import Administration.

The ITC will determine whether these imports materially injure, or threaten material injury to, a U.S. industry before no later than 120 days after we make our preliminary affirmative determination, or 45 days after we make our final determination.

Public Comment

In accordance with § 353.47 of our regulations (19 CFR 353.47), if requested, we will hold a public hearing to afford interested parties and opportunity to comment on this preliminary determination at 10:00 a.m., on February 12, 1986, at the U.S. Department of Commerce, Room 3708, 14th Street and Constitution Avenue NW., Washington, DC 20230. Individuals who wish to participate in the hearing must submit a request to the Deputy Assistant Secretary for Import Administration, Room 3099B, at the above address within 10 days of this notice's publication. Requests should contain: (1) The party's name, address, and telephone number; (2) the number of participants; (3) the reason for attending; and (4) a list of the issues to be discussed. In addition, prehearing briefs in at least 10 copies must be submitted to the Deputy Assistant Secretary by February 7, 1986. Oral presentations will be limited to issues raised in the briefs. All written views should be filed in accordance with 19 CFR 353.46, within 30 days of publication of this notice, at the above address in at least 10 copies.

Dated: January 2, 1986.

Gilbert B. Kaplan,

Deputy Assistant Secretary for Import Administration.

[FR Doc. 86-435 Filed 1-8-86; 8:45 am]

BILLING CODE 3510-DS-M

COMMITTEE FOR THE IMPLEMENTATION OF TEXTILE AGREEMENTS

Adjustment of Import Limits for Certain Cotton Textile Products Produced or Manufactured in Peru

Correction

In FR Doc. 85-30472, beginning on page 52827 in the issue of Thursday, December 26, 1985, make the following correction:

On page 52828, first column, in the last line of the table, "14,931,500" should read "14,391,500".

BILLING CODE 1505-01-M

DEPARTMENT OF EDUCATION

Proposed Information Collection Requests

AGENCY: Department of Education.

ACTION: Notice of proposed information collection requests.

SUMMARY: The Director, Information Resources Management Service invites comments on the proposed information collection requests as required by the Paperwork Reduction Act of 1980.

DATES: Interested persons are invited to submit comments on or before February 10, 1986.

ADDRESSES: Written comments should be addressed to the Office of Information and Regulatory Affairs, Attention: Desk Officer, Department of Education, Office of Management and Budget, 726 Jackson Place, NW., Room 3208, New Executive Office Building, Washington, DC 20503. Requests for copies of the proposed information collection requests should be addressed to Margaret B. Webster, Department of Education, 400 Maryland Avenue, SW., Room 4074, Switzer Building, Washington, DC 20202.

FOR FURTHER INFORMATION CONTACT: Margaret B. Webster (202) 426-7304.

SUPPLEMENTARY INFORMATION: Section 3517 of the Paperwork Reduction Act of 1980 (44 U.S.C. Chapter 35) requires that the Office of Management and Budget (OMB) provide interested Federal agencies and the public an early opportunity to comment on information collection requests. OMB may amend or waive the requirement for public consultation to the extent that public participation in the approval process would defeat the purpose of the information collection, violate State or Federal law, or substantially interfere with any agency's ability to perform its statutory obligations.

The Director, Information Resources Management Service publishes this notice containing proposed information collection requests prior to the submission of these requests to OMB. Each proposed information collection, grouped by office, contains the following: (1) Type of review requested, e.g., new, revision, extension, existing or reinstatement; (2) Title; (3) Agency form number (if any); (4) Frequency of the collection; (5) The affected public; (6) Reporting burden; and/or (7) Recordkeeping burden; and (8) Abstract. OMB invites public comment at the address specified above. Copies of the requests are available from Margaret Webster at the address specified above.

Dated: January 6, 1986.

George P. Sotos,

Director, Information Resources, Management Service.

Office of Postsecondary Education

Type of Review Requested: New.
Title: Verification Worksheet for the Pell Grant Program.
Agency Form Number: E40-13P.
Frequency: On occasion.
Affected Public: Individuals or households; Businesses or other for profit; Non-profit institutions; Small businesses or organizations.

Reporting Burden
Responses: 2,550,000.
Burden Hours: 204,000.

Recordkeeping Burden
Recordkeepers: 8000.
Burden Hours: 76,480.

ABSTRACT: The Verification Worksheet for the Pell Grant Program will assist in identifying and reducing errors in student application data and will reduce cost to the Federal government. This worksheet was developed in response to requests from the financial aid community and will be used by financial aid officers to simplify the verification process.

Office of Postsecondary Education

Type of Review Requested: Extension.
Title: Institutional Payment Summary (IPS) and IPS Batch Report.
Agency Form Number: ED 255-3b (IPS) and ED 255-3c (IPS Batch Report).
Frequency: Four to six times per year.
Affected Public: Non-profit and for-profit institutions of higher education.

Reporting Burden
Responses: 78,000.
Burden Hours: 97,500.

Recordkeeping Burden
Recordkeepers: 5,200.
Burden Hours: 2,600.

ABSTRACT: The Institutional Payment Summary (IPS) is used by institutions of higher education to report cumulative payment data for the students receiving Pell Grants at the institution. Adjustments to an institution's Pell Grant funding level will be made based on the information contained on this form and the Student Aid Reports (SARs) that accompany the IPS. The IPS Batch Report is a report from the Department to the institution that summarizes the payment documents received by the Department.

Office of Postsecondary Education

Type of Review Requested: Revision.
Title: Fiscal Operations Report and Application to Participate in the National Direct Student Loan, Supplemental Educational Opportunity Grants and College Work-Study Programs.
Agency Form Number: ED 646-1.
Frequency: Annually.
Affected Public: State or local governments; Non-profit institutions.

Reporting Burden
Responses: 5,300.
Burden Hours: 199,227.

Recordkeeping Burden
Recordkeepers: 5,300.
Burden Hours: 424.

ABSTRACT: Federal regulations require an institution to apply and subsequently report the expenditures for the campus-based programs on an annual basis. The data collected are needed to calculate the need of the reporting institutions annually.

Office of Postsecondary Education

Type of Review Requested: Extension.
Title: Summary Data Sheet/Listing Form for Schools Serving Low-Income Students for Teacher Cancellation Benefits under the National Direct Student Loan Program.
Agency Form Number: ED 1269, 1269-1.
Frequency: Annually.
Affected Public: Individuals or households; State or local governments; Federal agencies or employees; Non-profit institutions.

Reporting Burden
Responses: 57.
Burden Hours: 1,140.

Recordkeeping Burden
Recordkeepers: 57.
Burden Hours: 4.56.

ABSTRACT: The Department uses the summary data sheet/listing form to request information from State educational agencies concerning elementary and secondary schools serving low-income students. This information will be used by the Department to compile and publish an official directory of these schools. Teachers at the schools listed in the directory are eligible for cancellation of their National Direct Student Loans.

Office of Vocational and Adult Education

Type of Review Requested: New.
Title: Performance Report for State Administered Vocational Education.
Agency Form Number: C30-2P.
Frequency: Annually.
Affected Public: State or local governments.

Reporting Burden
Responses: 53.
Burden Hours: 2,544.

Recordkeeping Burden
Recordkeepers: 53.
Burden Hours: 8,480.

ABSTRACT: This report is needed to assist the Department in monitoring a State's administration of vocational education State grants. It will provide information needed by Congress to assess the programs' impact on youth and adults.

Office of Elementary and Secondary Education

Type of Review Requested: Revision.
Title: Application Form for Grants under Indian Education Programs.
Agency Form Number: ED 736, 736-1.
Frequency: Annually.
Affected Public: State and local governments, non-profit institutions, and small businesses.

Reporting Burden
Responses: 1,500.
Burden Hours: 45,500.

Recordkeeping Burden
Recordkeepers: 0.
Burden Hours: 0.

ABSTRACT: This form is used to apply for grants under the programs authorized by the Indian Education Act, Pub. L. 92-318, as amended.

Office of the Assistant Secretary for Educational Research and Improvement

Type of Review Requested: New.
Title: Survey of Access of Handicapped Students to Vocational Education.
Agency Form Number: G50-17P.
Frequency: One time survey.
Affected Public: Individuals or households; State or local governments.

Reporting Burden
Responses: 120.
Burden Hours: 20.

Recordkeeping Burden
Recordkeepers: 0.
Burden Hours: 0.

ABSTRACT: The purpose of this survey is to collect information on access by handicapped secondary school students to the vocational education programs contained in the Carl D. Perkins Vocational Education Act, Pub. L. 98-524.

Office of Educational Research and Improvement

Type of Review Requested: New.
Title: Fast Response Survey System—Oversight Experience under Chapter 1 of the Education Consolidation and Improvement Act.
Agency Form Number: ED 2379-24.
Frequency: Non-recurring.
Affected Public: State or local governments.

Reporting Burden
Responses: 700.
Burden Hours: 350.

Recordkeeping Burden
Recordkeepers: 0.
Burden Hours: 0.

ABSTRACT: The National Institute of Education (NIE) requested this study on school districts' oversight experience under Chapter 1 of the Education Consolidation and Improvement Act (20 U.S.C. 3801-3808). The information will be used by the Office of Educational Research and Improvement in a Congressionally mandated report on Chapter 1 programs (see 20 U.S.C. 3808).

[FR Doc. 86-467 Filed 1-8-86; 8:45 am]

BILLING CODE 4000-01-M

Office of Elementary and Secondary Education

Law-Related Education Program

AGENCY: Department of Education.

ACTION: Application Notice for New Awards under the Law-Related Education Program for Fiscal Year 1986.

Programmatic and Fiscal Information

Applications are invited for new awards under the Law-Related Education Program.

The purpose of the Law-Related Education Program is to enable non-lawyers, including children, youth, and adults, to be more informed citizens concerning the law, the legal process, the legal system, and the fundamental principles and values upon which these are based.

Eligible applicants are State educational agencies, local educational agencies, and other public and nonprofit private agencies, organizations, and institutions.

Law-related education may include a variety of learning approaches in subject areas such as: Fundamental legal doctrines and the principles on which they are based; the Bill of Rights and other aspects of constitutional law; the role of law in a democratic society both past and present; the Federal, State, and local lawmaking process; examination in a general or theoretical way of how the law is developed and administered by Federal, State, or local governments; the administration of the criminal, civil, and juvenile justice systems; and issues of justice, authority, freedom, enforcement, and punishment.

In fiscal year 1986, the Secretary has selected for priority: (1) Projects that develop, test, demonstrate, and disseminate new approaches or techniques in law-related education, as described in § 241.10(c) of the regulations on Law-Related Education and (2) projects that support the institutionalization of existing model law-related education programs in elementary and secondary school classrooms as described in § 241.10(a) of the regulations.

In addition to the points awarded under the selection criteria listed in § 241.31, the Secretary will award up to 20 additional points to applications that address the priority for new approaches, and up to 10 additional points for applications that address the priority for institutionalization.

The Secretary particularly invites applications for projects that would develop curricula that emphasize the fundamental principles on which the legal system is based, and foster student character development by encouraging such qualities as informed respect for the law and an understanding of the rights and duties of American citizenship. Character development begins at home, but the American people agree that schools also have an important role to play in helping children to develop reliable standards of right and wrong. The Secretary believes that law-related education projects can assist in this affort, and encourages projects that address student responsibilities as well as student rights.

In addition to projects designed to build student character, the Secretary also invites applications that propose to provide elementary and secondary school teachers and administrators with law-related education, including education about the legal principles that effect the maintenance of safe and orderly schools. These projects would increase teacher's and school administrators understanding of and respect for our system of law and legal institutions. This knowledge would better enable them, both through classroom instruction and in their other contacts with students, to motivate students to understand and respect the law. When teachers and principals are unclear about their legal rights and responsibilities, they may be hampered in their ability to maintain an atmosphere conducive to learning, may act in violation of students' rigths, and may convey to students inaccurate information about the law. The Secretary therefore encourages law-related adult education projects to help teachers and administrators: (1) Become aware of constitutional and statutory rules relevant to keeping order in schools, (2) understand the legal and moral principles on which these are based, (3) adhere to these rules in their contacts with students, and (4) communicate to students these rules and their basis.

Applications meeting the invitational priorities in the prior two paragraphs do not receive any competitive preference over other applications.

The appropriation for this program for fiscal year 1986 is $2,000,000. It is planned that these funds will be used to support two national projects and an

estimated 26 additional State-wide, regional, and system-wide projects.

It is estimated that awards for a Nation-wide project that serves 7 or more States would be at a level of $100,000–$150,000, awards for State-wide projects would be at a level of $50,000–$100,000, awards for regional projects would be at a level of $25,000–$75,000, and awards for system-wide projects would be at a level of $10,000–$50,000.

Approximately 10 percent of the available funds will be reserved for contracts for specific activities in law-related education outside of this grant competition. If the Secretary decides not to award any contract, the 10 percent will be added to the available funds for grants.

Projects supported under this program will be for a period of one year.

These estimates do not bind the U.S. Department of Education to a specific number of grants or to the amount of any grant, unless that amount is otherwise specified by statute or regulations.

Closing Date for Transmittal of Applications

Applications for new awards must be mailed or hand delivered on or before March 7, 1986.

Applications sent by mail must be addressed to the U.S. Department of Education, Application Control Center, Attention: (CFDA No. 84.123), 400 Maryland Avenue, SW., Washington, DC 20202.

Each late applicant will be notified that its application will not be considered.

Applications that are hand delivered must be taken to the U.S. Department of Education, Application Control Center, Room 3633, Regional Office Building #3, 7th and D Streets, SW., Washington, DC.

The Application Control Center will accept hand-delivered applications between 8:00 a.m. and 4:30 p.m. (Washington, DC time) daily, except Saturdays, Sundays, and Federal holidays.

Applicable Regulations

Regulations applicable to this program include the following:

(a) The regulations governing the Law-Related Education Program in 34 CFR Part 241.

(b) The Education Department General Administrative Regulations (EDGAR) in 34 CFR Parts 74, 75, 77, 78, and 79.

Intergovernmental Review

This program is subject to the requirements of Executive Order 12372 and the regulations in 34 CFR Part 79. The objective of Executive Order 12372 is to foster an intergovernmental partnership and a strengthened federalism by relying on processes developed by State and local governments for coordination and review of proposed Federal financial assistance.

Immediately upon receipt of this notice, applicants that are governmental entities, including local educational agencies, must contact the appropriate State single point of contact to find out about, and to comply with, the State's process under the Executive Order. Applicants proposing to perform activities in more than one State should contact, immediately upon receipt of this notice, the single point of contact for each State and follow the procedures established in those States under the Executive Order. A list containing the single point of contact for each State is included in the application package for this program.

In States that have not established a process or chosen this program for review, State, areawide, regional, and local entities may submit comments directly to the Department.

All comments from State single points of contact and all comments from State, areawide, regional, and local entities must be mailed or hand delivered by May 6, 1986 to the following address:

The Secretary, U.S. Department of Education, Room 4181, (CFDA No. 84.123), 400 Maryland Avenue, SW., Washington, DC 20202.

Please note that the above address is not the same address as the one to which the applicant submits its completed application. Do not send applications to the above address.

Application Forms

Application forms and program information packages are expected to be available by January 21, 1986. These may be obtained by writing to the Law-Related Education Program, U.S. Department of Education, 400 Maryland Avenue, SW., Room 2025, FOB–6, Washington, DC 20202.

Further Information

For further information contact Jack A. Simms, U.S. Department of Education, 400 Maryland Avenue, SW., Room 2023, FOB–6, Washington, DC 20202. Telephone (202) 472–7960.

(20 U.S.C. 3651)

(Catalog of Federal Domestic Assistance Number 84.123, Law-Related Education Program)

[FR Doc. 86–603 Filed 1–8–86; 8:45 am]

BILLING CODE 4000-01-M

DEPARTMENT OF ENERGY

Federal Energy Regulatory Commission

[Project No. 9545–000, et al.]

Hydroelectric Applications (Town of Hotchkiss, et al.); Applications Filed With the Commission

Take notice that the following hydroelectric applications have been filed with the Federal Energy Regulatory Commission and are available for public inspection:

1 a. Type of Application: Conduit Exemption.

b. Project No.: 9545–000.

c. Date Filed: October 11, 1985.

d. Applicant: Town of Hotchkiss and Hotchkiss Hydropower Corporation.

e. Name of Project: Hotchkiss.

f. Location: On Leroux Creek, near the Town of Hotchkiss, in Delta County, Colorado.

g. Filed Pursuant to: Section 30 of the Federal Power Act, 16 U.S.C. 823(a).

h. Contact Person:

Mr. John R. Neill, Town of Hotchkiss, P.O. Box 368, Hotchkiss, CO 81419

Mr. Gerald E. Bergmann, Hotchkiss Hydropower Corp., Suite 205, Village Plaza, Glenwood Springs, CO 81601, (303) 945–8676.

i. Comment Date: February 3, 1986.

j. Description of Project: The proposed project would utilize flows currently diverted at Leroux Creek into a 5-mile-long portion of Highline Ditch, thence, diverted at Highland Ditch into the Town of Hotchkiss' 8-inch-diameter, 2,900-foot-long raw water municipal pipeline. The proposed project would consist of an 8-inch-diameter, 1,250-foot-long penstock and a powerhouse containing a single 60 kW Pelton turbine-generator unit with an estimated average annual generation of 0.185 GWh. A 750-foot-long, 12.7-kV transmission line would interconnect the project to an existing Delta-Montrose Electric Association line.

k. This notice also consists of the following standard paragraphs: A3, A9, B, C, and D3b.

2 a. Type of Application: License.

b. Project No.: P–8844–000.

c. Date Filed: December 28, 1984.

d. Applicant: Norman H. Fenton.

e. Name of Project: Three Rivers.

f. Location: On Three Rivers in Yamhill County, Oregon.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)–825(r).

h. Contact Person: Norman H. Fenton, 3510 SW Vesta, Portland, OR 97219.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would consist of: (1) A 5-foot-high wood diversion dam with a concrete intake at elevation 826 feet; (2) a 1,700-foot-long, 30-inch-diameter penstock and a 3,800-foot-long, 24-inch-diameter penstock; (3) a powerhouse containing 3 generating units with a combined capacity of 388 kW and an average annual generation of 1.3 GWh; (4) a tailrace with a 15-foot-by-8-foot-by-10-foot containment tank and a 50-foot-long, 36-inch-diameter culvert pipe; and (5) a 2.2-mile-long, 12-kV transmission line to the Bonneville Power Administration's HEBO Substation. The estimated cost of the project is $300,000.

k. Purpose of Project: Project power would be sold.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C, and D1.

3. a. Type of Application: Preliminary Permit.

b. Project No.: 9396–000.

c. Date Filed: August 7, 1985.

d. Applicant: McCallum Hydro Enterprises.

e. Name of Project: Housatonic Wire Company Dam Project.

f. Location: On the Little River, in the Town of Seymour, New Haven County, Connecticut.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)–825(r).

h. Contact Person: Mr. Donald Szarmach, McCallum Hydro Enterprises, 805 Housatonic Avenue, Bridgeport, CT 06604.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would consist of: (1) The existing 75-foot-long, 19-foot-high stone masonry concrete Housatonic Wire Company Dam; (2) 18-inch-high flashboards; (3) an impoundment having a surface area of 8.65 acres, a storage capacity of 47.11 acre-feet, and normal water surface elevation of 130.7 feet msl; (4) an existing intake structure; (5) an existing 270-foot-long; 24-inch-diameter iron penstock; (6) an existing powerhouse containing a new generating unit with an installed capacity of 100 kW; (7) an existing tailrace; (8) a 600-foot-long, 13-kV transmission line; and (9) appurtenant facilities. The Applicant estimates the average annual generation would be 384,384 kWh. The existing dam and project facilities are owned by the Housatonic Wire Company Inc. and The State of Connecticut Department of Fish and Wildlife.

k. Purpose of Project: The project energy generated would be utilized by the tenants at the factory and the surplus energy produced would be sold to the Connecticut Light and Power Company.

l. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C, and D2.

m. Proposed Scope and Cost of Studies under Permit: A preliminary permit, if issued, does not authorize construction. The Applicant seeks issuance of a preliminary permit for a period of 36 months, during which time the Applicant would perform studies to determine the feasibility of the project. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates the cost of the studies under permit would be $5,250.

4. a. Type of Application: Preliminary Permit.

b. Project No.: 9540–000.

c. Date Filed: October 9, 1985.

d. Applicant: Gaiawatt Associates.

e. Name of Project: Lower Whitewater Project.

f. Location: On the Millers River, in the Town of Athol, Worcester County, Massachusetts.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)–825(r).

h. Contact Person: Robert Evans King, Gaiawatt Associates, 170 Barretts Mill Rd., Concord, MA 07142.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would consist of: (1) An existing 90-foot-long, 5-foot-high concrete dam; (2) an impoundment having a surface area of 2 acre-feet with negligible storage and normal water surface elevation of 557 feet msl; (3) an existing 550-foot-long, 4-foot-deep, and 20-foot-wide power canal; (4) an existing powerhouse containing one rehabilitated existing generating unit and one new generating unit with a total installed capacity of 350 kW; (5) an existing 30-foot-long, 20-footwide, and 5-foot-deep tailrace; (6) a new 1,300-foot-long, 12-kV tranmission line; and (7) appurtenant facilities. The Applicant estimates the average annual generation would be 1,970,000 kWh. The existing dam and project facilities are owned by UTD Corporation/Union Butterfield Division of Litton Industries.

k. Purpose of Project: All project energy generated would be sold to the Massachusetts Electric Company.

l. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C, and D2.

m. Proposed Scope and Cost of Studies under Permit: A preliminary permit, if issued, does not authorize construction. The Applicant seeks issuane of a preliminary permit for a period of 36 months, during which time the Applicant would perform studies to determine the feasibility of the project. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates the cost of the studies under permit would be $30,000.

5. a. Type of Application: Preliminary Permit.

b. Project No.: 9416–000.

c. Date Filed: August 23, 1985.

d. Applicant: Independence Creek Associates.

e. Name of Project: Independence Creek Hydroelectric Project.

f. Location: On Independence Creek, near Independence City, within Inyo National Forest, in Inyo County, California (In Sections 20, 21, 27 & 28 of T13S, R34E, MDB&M).

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)–825(r).

h. Contact Person: Mr. Jordan R. Walker, 484 East 300 North, Manti, UT 84642.

i. Comment Date: February 10, 1986.

j. Description of Project: The proposed project would consist of: (1) A 5-foot-high, 20-foot-long diversion structure at elevation 7,900 feet; (2) a 10,600-foot-long, 36-inch-diameter penstock; (3) a powerhouse with a total installed capacity of 4,950 kW operating under a head of 3,400 feet; and (4) a 5,000-foot-long, 55-kV transmission line to connect to an existing Southern California Edison Company (SCE) transmission line. The project's estimated average annual generation of 12.14 GWh will be sold to SCE.

k. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C, and D2.

6 a. Type of Application: Minor License.

b. Project No.: 9424–000.

c. Date Filed: September 4, 1985.

d. Applicant: Selkirk Hydro.

e. Name of Project: Cascade Creek.

f. Location: On lands administered by the U.S. Forest Service and the Bureau of Land Management, on Cascade Creek, in Boundary County, Idaho.

g. Filed Pursuant to: Federal Power Act 16 U.S.C. 725(a)–825(r).

h. Contact Person: William Kindt, 8555 S. Sagle Rd., Sagle, ID 83860.

i. Comment Date: February 10, 1986.

j. Description of Project: The proposed project would consist of: (1) A 4-foot-high concrete dam at elevation 3,275 feet; (2) a 7,300-foot-long, 18-inch-diameter penstock (3) a powerhouse containing 3 generating units with a combined capacity of 900 kW and a average annual generation of 3.547 GWh; and (4) a 500-foot-long, 24.9-kV

underground transmission line that would connect to Northern Lights, Inc. distribution line. The cost of the project would be $900,000.

k. Purpose of Project: Project power would be sold.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C, and D1.

7 a. Type of Application: Preliminary Permit.

b. Project No.: P-9597-000.

c. Date Filed: November 1, 1985.

d. Applicant: Hazard Creek Conservationists.

e. Name of Project: Hazard Creek.

f. Location: On Hazard Creek in the Nez Perce National Forest near New Meadows, Idaho County, Idaho.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Louis Roseman, 1350 New York Avenue, #600, Washington, DC 20005.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would consist of: (1) A 6-foot-high diversion dam at elevation 4,200 feet; (2) a 7,500-foot-long, 42-inch-diameter penstock; (3) a powerhouse containing one generating unit with a total rated capacity of 2,470 kW; and (4) an 8,500-foot-long transmission line. Applicant estimates the average annual energy production to be 8.5 GWh.

A preliminary permit does not authorize construction. Applicant seeks issuance of a preliminary permit for a term of 36 months during which it would conduct engineering and environmental feasibility studies and prepare an FERC license application at a cost of $145,000. No new roads would be constructed or drilling conducted during the feasibility study.

k. Purpose of Project: The proposed power produced is to be sold to the local power company.

l. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C, and D2.

8 a. Type of Application: Preliminary Permit.

b. Project No: 9364-000.

c. Date Filed: July 29, 1985.

d. Applicant: Western Montana Electric Generating & Transmission Cooperative, Inc.

e. Name of Project: Painted Rocks.

f. Location: In Bitterroot National Forest, at the State of Montana's Painted Rocks Dam, on the West Fork of the Bitterroot River in Ravalli County, Montana.

g. Filed Pursuant to: Federal Power Act 16 U.S.C. 725(a)-825(r).

h. Contact Person: James A. Sewell, James A. Sewell & Associates, P.O. Box 160, Newport, WA 99156.

i. Comment Date: February 5, 1986.

j. Description of Project: The existing project facilities at the site consist of: (1) A 143-foot-high rockfill embankment dam; (2) a 160-foot-wide spillway; (3) a 30-foot-high intake tower; (4) a 580-foot-long, 10-foot-diameter concrete conduit; and (5) a 655-acre reservoir with a capacity of 45,000 acre-feet at a normal maximum surface elevation of 4467.5 feet. In addition the project would consist of the following proposed facilities; (1) Lining the outlet conduit from the outlet gates to the discharge point with a 85-inch-diameter penstock; (2) a bifurcation 45 feet upstream of the discharge point; (3) a 72-inch-diameter penstock from the bifurcation to the powerhouse at the toe of the dam; (4) a powerhouse containing 2 generating units with a capacity of 5 MW and an annual average generation of 13.5 GWh; and (5) upgrading an existing transmission line.

A preliminary permit does not authorize construction. Applicant seeks issuance of a preliminary permit for a term of 24 months during which it would conduct engineering and environmental feasibility studies and prepare an FERC license application at a cost of $68,000. No new roads would be constructed of drilling during the feasibility study.

k. Purpose of Project: Project power would be used by the members of the cooperative.

l. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C, and D2.

9 a. Type of Application: Preliminary Permit.

b. Project No.: P-9598-000.

c. Date Filed: November 1, 1985.

d. Applicant: Hard Creek Conservationists.

e. Name of Project: Hard Creek Hydroelectric Project.

f. Location: In the Nez Perce National Forest near New Meadows, Idaho County, Idaho.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Louis Rosenman, Esq., 1350 New York Avenue, # 600, Washington, DC 20005.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would consist of: (1) A 6-foot-high diversion dam at elevation 6,000 feet; (2) a 5,000-foot-long, 42-inch-diameter penstock; (3) a powerhouse containing one generating unit with a rated capacity of 1,310 kW; and (4) a 30-foot-long tailrace; and (5) a 7,250-foot-long transmission line. Applicant estimates the average annual energy production to be 4.2 GWh.

A preliminary permit does not authorize construction. Applicant seeks issuance of a preliminary permit for a term of 36 months during which it would conduct engineering and environmental feasibility studies and prepare an FERC license application at a cost of $145,000. No new roads would be constructed or drilling conducted during the feasibility study.

k. Purpose of Project: The proposed power produced is to be sold to the local power company.

l. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C, and D2.

10 a. Type of Application: License.

b. Project No.: P-7383-006.

c. Date Filed: April 5, 1985.

d. Applicant: Renewable Resources Development.

e. Name of Project: Allison Creek.

f. Location: In Nezperce National Forest on Allison Creek in Idaho County, Idaho.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Carl Myers, Myers Engineering Company, 750 Warm Springs Avenue, Boise, ID 83712.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would consist of: (1) A 3-foot-high concrete check structure on the West Fork of Allison Creek at elevation 2,890 feet; (2) 3,380-feet of 16-inch-diameter penstock from this diversion to the bifurcation; (3) a 3-foot-high concrete check structure on Allison Creek at elevation 2860 feet; (4) 4,320 feet of 18-inch-diameter penstock from this diversion to the bifurcation; (5) 13,200 feet of 24-inch-diameter penstock from the bifurcation to the powerhouse; (6) a powerhouse containing one generating unit with a capacity of 2,033 kW and an average annual generation of 6,535,600 kWh; and (7) 800 feet of 34.5-kV buried transmission with the new 34.5-kV that will go to a substation in Riggins. Estimated cost of the project would be $2,343,000.

k. Purpose of Project: Project power would be sold.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C, and D1.

11 a. Type of Application: Preliminary Permit.

b. Project No.: 9592-000.

c. Date Filed: November 1, 1985.

d. Applicant: Blackstone Mill Renovation Associates.

e. Name of Project: Saranac.

f. Location: On the Blackstone River in Worchester County, Massachusetts, and Providence County, Rhode Island.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Louis Rosenman, 1350 New York Avenue NW., # 600, Washington, DC 20005.

i. Comment Date: February 10, 1986.

j. Competing Application: Project No. 9577-000, Date Filed: November 1, 1985.

k. Description of Project: The proposed project would consist of: (1) An existing 17-foot-high and 120-foot-long masonry dam; (2) a reservoir with negligible storage capacity; (3) existing head gates at the southern side of the dam; (4) an existing 2,000-foot-long canal; (5) a small pool; (6) a new powerhouse with a total installed capacity of 900 kW; (7) an existing tailrace; (8) a new transmission line 200 feet long; and (9) other appurtenances. All existing facilities are owned by the C&C Chemical Company. Applicant estimates an average annual generation of 3,835,600 kWh.

l. Purpose of Project: Project energy would be sold to a local utility.

m. This notice also consists of the following standard paragraphs: A8, B, C, and D2.

n. Proposed Scope of Studies under Permit: A preliminary permit if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 3 years during which time Applicant would investigate project design alternatives, financial feasibility, environmental effects of project construction and operations, and project power potential. Depending upon the outcome of studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates the cost of the studies under the permit would be $145,000.

12 a. Type of Application: Preliminary Permit.

b. Project No.: 8560-001.

c. Date Filed: November 8, 1985.

d. Applicant: Huntington Hydro Associates.

e. Name of Project: Huntington Dam.

f. Location: On the Wabash River in Huntington County, Indiana.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. David M. Coombe, Synergics, Inc., 410 Severn Avenue, Suite 409, Annapolis, MD 21403.

i. Comment Date: February 3, 1986.

j. Competing Application: Project No. *8569*, Date Filed *August 31, 1984*. Due Date: *January 24, 1986*.

k. Description of Project: The Applicant would utilize an existing dam and lands under the administration of the U.S. Army Corps of Engineers. The proposed project would consist of: (1) A proposed 250-foot-long, 9-foot-diameter bifurcated penstock; (2) a proposed powerhouse containing two generating units rated at 1,550 kW each; (3) a proposed tailrace; (4) a proposed transmission line; and (5) appurtenant facilities. The estimated average annual generation is 19,500,000 kWh. Power generated at the project would be sold to the Indiana and Michigan Electric Company.

l. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 36 months during which time Applicant would investigate project design alternatives, financial feasibility, environmental effects of project construction and operation, and project power potential. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates that the cost of the studies under permit would be $30,000.

m. This notice also consists of the following standard paragraphs: A8, B, C, & D2.

13 a. Type of Application: Preliminary Permit.

b. Project No.: 9518-000.

c. Date Filed: October 2, 1985.

d. Applicant: Calaveras County Water District.

e. Name of Project: Upper Mokelumne River Multipurpose Water Development Project.

f. Location: On Middle Fork Mokelumne River, South Fork Mokelumne River and Mokelumne River, near Rail Road Flat, in Calaveras County, California (In Sections 12, 13, 15, 16, 17, 18, 21, 22, 23, 26, 34 and 35 of T6N, R13E, MDB&M).

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Steve Felte, General Manager, Calaveras County Water District, 427 East St. Charles Street, San Andreas, CA 95247, (209) 754-3543.

i. Comment Date: February 7, 1986.

j. Competing Application: Project No. 9412, Date Filed: August 20, 1985. Due Date: January 27, 1986.

k. Description of Project: The proposed project would consist of: (1) A 50-foot-high, 120-foot-long Upper Mokelumne Diversion Dam located across South Fork Mokelumne River at elevation 2,000 feet msl; (2) a 20-foot-high, 100-foot-long diversion dam located across Middle Fork Mokelumne River at elevation 2,500 feet msl; (3) a 3,000-foot-long, 8-foot-diameter tunnel connecting the Middle Fork Mokelumne River to the Upper Mokelumne Reservoir; (4) a 6-foot-diameter, 9-mile-long diversion pipeline; (5) a 5-foot-diameter, 4,000-foot-long penstock; (6) a powerhouse with a total installed capacity of 12 MW operating under a head of 1,250 feet; and (7) a 1-mile-long, 230-kV transmission line interconnecting the project to an existing Pacific Gas and Electric Company (PG&E) line. The project's estimated average annual generation of 36 GWh will be sold to PG&E.

A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit to investigate project design alternatives, financial feasibility, environmental effects of project construction and operation, and project power potential. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for development. Applicant estimates that the cost of the studies under permit would be $600,000.

1. This notice also consists of the following standard paragraphs: A8, B, C, and D2.

14 a. Type of Application: Preliminary Permit.

b. Project No.: 8559-001.

c. Date Filed: November 8, 1984.

d. Applicant: Patoka Hydro Associates.

e. Name of Project: Patoka Dam.

f. Location: On the Patoka River in Dubois County, Indiana.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. David M. Coombe, Synergics, Inc., 410 Severn Avenue, Suite 409, Annapolis, MD 21403.

i. Comment Date: February 3, 1986.

j. Competing Application: Project No. 8570, Date Filed: August 31, 1984, Due Date: January 24, 1986.

k. Description of Project: The Applicant would utilize an existing dam and lands administered by the U.S. Army Corps of Engineers. The proposed project would consist of: (1) Two proposed 80-foot-long and 6-foot-diameter penstocks; (2) a proposed powerhouse containing two generating units rated at 425 kW each; (3) a proposed tailrace; (4) a proposed transmission line; and (5) appurtenant facilities.

The estimated average annual generation is 5,100,000 kWh. Power generated at the project would be sold to the Indiana and Michigan Electric Company.

l. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 36 months during which time Applicant

would investigate project design alternatives, financial feasibility, environmental effects of project construction and operation, and project power potential. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates that the cost of the studies under permit would be $30,000.

m. This notice also consists of the following standard paragraphs: A8, B, C & D2.

15 a. Type of Application: Preliminary Permit.

b. Project No.: 9157-000.

c. Date Filed: May 1, 1985.

d. Applicant: Huntington Associates.

e. Name of Project: Huntington Dam.

f. Location: On the Wabash River in Huntington County, Indiana.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Thomas Forbes, P.O. Box 421, Mercer Island, Washington, WA 98040.

i. Comment Date: February 3, 1986.

j. Competing Application: Project No. 8569, Date Filed: August 31, 1984, Due Date: January 24, 1986.

k. Description of Project: The Applicant would utilize an existing dam and lands administered by the U.S. Army Corps of Engineers. The proposed project would consist of: (1) A proposed steel penstock; (2) a proposed powerhouse containing two generating units with a total rated capacity of 5,200-kW; (3) a proposed tailrace; (4) a proposed transmission line; and (5) appurtenant facilities.

The estimated average annual energy output for the project is 13,600,000 kWh. Power produced at the project would be sold to the town of Huntington.

l. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 36 months during which time Applicant would investigate project design alternatives, financial feasibility, environmental effects of project construction and operation, and project power potential. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates that the cost of the studies under permit would be $125,000.

m. This notice also consists of the following standard paragraphs: A8, B, C, and D2.

16 a. Type of Application: Preliminary Permit.

b. Project No.: 9144-000.

c. Date Filed: May 1, 1985.

d. Applicant: Ellsworth Associates.

e. Name of Project: Patoka Dam.

f. Location: On the Patoka River in Dubois County, Indiana.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Thomas Forbes, P.O. Box 421, Mercer Island, Washington, WA 98040.

i. Comment Date: February 3, 1986.

j. Competing Application: Project No. 8570, Date Filed: August 31, 1984, Due Date: January 24, 1986.

k. Description of Project: The Applicant would utilize an existing dam and lands administered by the U.S. Army Corps of Engineers. The proposed project would consist of: (1) A proposed penstock that would be connected to the existing outlet conduit and two smaller penstocks which enters the proposed powerhouse; (2) a proposed powerhouse containing two generating units with a total rated capacity of 2.5 MW; (3) a proposed tailrace; (4) a proposed 161-kV transmission line; and (5) appurtenant facilities.

The estimated average annual energy output is 5.0 GWh. Power produced at the project would be sold to the Indiana Statewide Rural Cooperative.

l. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. The term of the proposed preliminary permit is 36 months. The work proposed under the preliminary permit would include economic analysis, preparation of preliminary engineering plans, and a study of environmental impacts. Based on results of these studies Applicant would decide whether to proceed with more detailed studies, and the preparation of an application for license to construct and operate the project. Applicant estimates that the cost of the work to be performed under the preliminary permit would be $125,000.

m. This notice also consists of the following standard paragraphs: A8, B, C, & D2.

17. a. Type of Application: Preliminary Permit.

b. Project No.: 8558-001.

c. Date Filed: November 8, 1985.

d. Applicant: Harden Dam Associates.

e. Name of Project: Harden Dam.

f. Location: On the Big Raccoon Creek in Parke County, Indiana.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. David M. Coombe, Synergics, Inc., 410 Severn Avenue, Suite 409, Annapolis, MD 21403.

i. Comment Date: February 7, 1986.

j. Competing Application: Project No. *8571*, Date Filed *August 31, 1984* Due Date: *January 27, 1986.*

k. Description of Project: The Applicant would utilize an existing dam and lands administered by the U.S. Army Corps of Engineers. The proposed project would consist of: (1) A proposed 150-foot-long, 7-foot-diameter penstock; (2) a proposed powerhouse containing one generating unit rated at 1,000 kW; (3) a proposed tailrace; (4) a proposed transmission line; and (5) appurtenant facilities. The estimated average annual generation is 6,400 kWh. Power produced at the project would be sold to the Indiana and Michigan Electric Company.

l. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 36 months during which time Applicant would investigate project design alternatives, financial feasibility, environmental effects of project construction and operation, and project power potential. Depending upon the outcome of the studies, the Applicant would decide whether to proceed with an application for FERC license. Applicant estimates that the cost of the studies under permit would be $30,000.

m. This notice also consists of the following standard paragraphs: A8, B, C, & D2.

18. a. Type of Application: Preliminary Permit.

b. Project No.: 9514-000.

c. Date Filed: October 1, 1985.

d. Applicant: Municipal Energy Agency of Nebraska.

e. Name of Project: Harlan County Dam.

f. Location: Republican River, Harlan County, Nebraska.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. H. Steve Wacker, Executive Director, Municipal Energy Agency of Nebraska, P.O. Box 95124, 1335 L Street, Lincoln, NE 68509.

i. Comment Date: February 7, 1986.

j. Competing Application: Project No. 9381-000, Date Filed August 1, 1985.

k. Description of Project: The proposed would utilize the existing U.S. Army Corps of Engineers' Harlan County Dam and would consist of: (1) A proposed 9-foot-diameter penstock about 150 feet long; (2) a proposed powerhouse containing a single generating unit with a capacity of 2.4 MW; (3) a proposed flow discharge pipe from the powerhouse to the spillway area; (4) a proposed 69-kV transmission line, approximately 3 miles in length; and (5) appurtenant facilities. The estimated average annual generation is 5.5 GWh.

l. Purpose of Project: The project power would be utilized by the Applicant to supply the demand of its member municipalities' systems.

m. This notice also consists of the following standard paragraphs: A8, A9, B, C & D2.

n. Proposed Scope of Studies under Permit: A preliminary permit, if issued, does not authorize construction. Applicant seeks issuance of a preliminary permit for a period of 36 months during which time it would prepare studies of the hydraulic, construction, economic, environmental, historic and recreational aspects of the project. Depending on the outcome of the studies, the Applicant would prepare an application for an FERC license. Applicant estimates the cost of the studies under the permit would be $30,000.

19. a. Type of Application: Preliminary Permit.

b. Project No.: 9544-000.

c. Date Filed: October 11, 1985.

d. Applicant: Alaska Power Authority.

e. Name of Project: Tazimina River Hydroelectric Project.

f. Location: On the Tazimina River near Iliamna, Alaska.

g. Filed Pursuant to: Federal Power Act 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Robert D. Heath, Executive Director, Alaska Power Authority, 334 West 5th Avenue, Anchorage, Alaska 99501.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed run-of-river project would consist of: (1) A streambank intake at elevation 580 feet; (2) a 1,400-foot-long penstock; (3) a powerhouse containing two generating units with a total rated capacity of 1400 kW; (4) a 12-foot-long tailrace; and (5) a 6.5-mile long transmission line. Applicant estimates the average annual energy production to be 5,700 MWh.

A preliminary permit does not authorize construction. Applicant seeks issuance of a preliminary permit for a term of 36 months during which it would conduct engineering and environmental feasibility studies and prepare an FERC license application at a cost of $3,060,000. No new roads would be constructed or drilling conducted during the feasibility study.

k. Purpose of Project: The proposed power produced is to be sold to I-N-N Electric Cooperative.

l. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C and D2.

20 a. Type of Application: Preliminary Permit.

b. Project No.: 9400-000.

c. Date Filed: August 8, 1985.

d. Applicant: Mr. Dale L.R. Lucas.

e. Name of Project: Bass Lake Flume.

f. Location: On an existing Man-Made Flume in Madera County, California; within Sierra National Forest.

g. Filed Pursuant to: Federal Power Act, 16 U.S.C. 791(a)-825(r).

h. Contact Person: Mr. Dale L.R. Lucas, 36600 Orange Grove Ave., Madera, CA 93638.

i. Comment Date: February 7, 1986.

j. Description of Project: The proposed project would utilize an existing water conveyance flume, carrying water diverted from Sand Creek to Bass Lake, owned by Pacific Gas and Electric Company (PG&E) and consists of: (1) An intake box at the terminus of the flume; (2) a 24-inch-diameter, 835-foot-long penstock; (3) a powerhouse with total installed capacity of 100 kw; and (40 a 900-foot-long, 12.5-kV transmission line connecting with an existing transmission line of Pacific Gas and Electric Company (PG&E). The power generated by the project would be sold to PG&E.

k. This notice also consists of the following standard paragraphs: A5, A7, A9, B, C and D2.

21 a. Type of Application: Exemption (5MW or Less).

b. Project No.: 7560-001.

c. Date Filed: October 1, 1985.

d. Applicant: City of Austin Electric Utility Department.

e. Name of Project: Longhorn Dam Hydroelectric Project.

f. Location: On the Colorado River in Austin, Travis County, Texas.

g. Filed Pursuant to: Section 408 of the Energy Security Act of 1980, 16 U.S.C. 2705 and 2708 *as amended*.

h. Contact Person: Mr. John Moore, Director, Electric Utility, City of Austin, 1524 South IH-35, Suite 225, Austin, TX 78704.

i. Comment Date: February 14, 1986.

j. Description of Project: The proposed project would consist of: (1) The existing 506-foot-long, concrete-gravity Longhorn Dam; (2) an existing 480-acre reservoir having a storage capacity of 4,500 acre-feet at an elevation of 428 feet MSL; (3) a new powerhouse containing eight generating units for a total installed capacity of 3,100 kW; (4) a proposed 12.47-kv transmission line approximately 3,700 feet long; and (5) appurtenant facilities. The Applicant estimates that the average annual energy would be 12.2 GWh. All project energy would be used by the Cith of Austin. The Applicant owns the dam and all appurtenant facilities for the development of this hydroelectric project.

k. Purpose of Exemption: An exemption, if issued, gives the Exemptee priority of control, development, and operation of the project under the terms of exemption from licensing, and protects the Exemptee from the permit or license applicants that would seek to take or develop the project.

l. This notice also consists of the following standard paragraphs: A3, A9, B, C, and D3a.

A3. Development Application—Any qualified development applicant desiring to file a competing application nust submit to the Commission, on or before the specified comment date for the particular application, a competing development application, or a notice of intent to file such an application. Submission of a timely notice of intent allows an interested person to file the competing development application no later than 120 days after the specified comment date for the particular application. Applications for preliminary permit will not be accepted in response to this notice.

A4. Development Application—Public notice of the filing of the initial development application, which has already been given, established the due date for filing competing applications or notices of intent. In accordance with the Commission's regulations, any competing development applications or notices of intent to file competing development applications must be filed in response to and in compliance with the public notice of the intial development application. No competing applications or notices of intent may be filed in response to this notice.

A5. Preliminary Permit—Anyone desiring to file a competing application for preliminary permit for a proposed project must submit the competing application itself, or a notice of intent to file such an application, to the Commission on or before the specified comment date for the particular application (see 18 CFR 4.36 (1985)). Submission of a timely notice of intent allows an interested person to file the competing preliminary permit application no later than 30 days after the specified comment date for the particular application.

A competing preliminary permit application must conform with 18 CFR 4.30(b)(1) and (9) and 4.36.

Preliminary Permit—Any qualified development applicant desiring to file a competing development application must submit to the Commission, on or before the specified comment date for the particular application, either a competing development application or a notice of intent to file such an application. Submission of a timely

notice of intent to file a development application allows an interested person to file the competing application no later than 120 days after the specified comment date for the particular application.

A competing license application must conform with 18 CFR 4.30(b)(1) and (9) and 4.36.

A8. Preliminary Permit—Public notice of the filing of the initial preliminary permit application, which has already been given, established the due data for filing competing preliminary permit and development applications or notices of intent. Any competing preliminary permit or development application, or notice of intent to file a competing preliminary permit or development application, must be filed in response to and in compliance with the public notice of the initial preliminary permit application. No competing applications or notices of intent to file competing applications may be filed in response to this notice.

A competing license application must conform with 18 CFR 4.30(b) (1) and (9) and 4.36.

A9. Notice of intent—A notice of intent must specify the exact name, business address, and telephone number of the prospective applicant, include an unequivocal statement of intent to submit, if such an application may be filed, either (1) a preliminary permit application or (2) a development application (specify which type of application), and be served on the applicant(s) named in this public notice.

B. *Comments, Protests, or Motions to Intervene*—anyone may submit comments, a protest, or a motion to intervene in accordance with the requirements of the Rules of Practice and Procedure, 18 C.F.R. §§ 385.210, .211, .214. In determining the appropriate action to take, the Commission will consider all protests or other comments filed, but only those who file a motion to intervene in accordance with the Commission's Rules may become a party to the proceeding. Any comments, protests, or motions to intervene must be received on or before the specified comment date for the particular application.

C. *Filing and Service of Responsive Documents*—Any filings must bear in all capital letters the title "COMMENTS", "NOTICE OF INTENT TO FILE COMPETING APPLICATION", "COMPETING APPLICATION", "PROTEST" or "MOTION TO INTERVENE", as applicable, and the project Number of the particular application to which the filing is in response. Any of the above named documents must be filed by providing the orignal and the number of copies required by the Commision's regulations to: Kenneth F. Plumb, Secretary, Federal Energy Regulatory Commission, 825 North Capitol Street NE, Washington, DC 20426. An additional copy must be sent to: Mr. Fred E. Springer, Director, Division of Project Management, Federal Energy Regulatory Commission, Room 203–RB, at the above address. A copy of any notice of intent, competing application or motion to intervene must also be served upon each representative of the Applicant specified in the particular application.

D1. *Agency Comments*—Federal, State, and local agencies that receive this notice through direct mailing from the Commission are requested to provide comments pursuant to the Federal Power Act, the Fish and wildlife Coordination Act, the Endangered Species Act, the National Historic Preservation Act, the Historical and Archeological Preservation Act, the National Environmental Policy Act, Pub. L. No. 88–29, and other applicable statutes. No other formal requests for comments will be made.

Comments should be confined to substantive issues relevant to the issuance of a license. A copy of the application may be obtained directly from the Applicant. If an agency does not file comments with the Commission within the time set for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be set to the Applicants representatives.

D2. *Agency Comments*—Federal, State, and local agencies are invited to file comments on the described application. (A copy of the application may be obtained by agencies directly from the Applicant.) If an agency does not file comments within the time specified for filing comments, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

D3 a. *Agency Comments*—The U.S. Fish and Wildlife Service and the State Fish and Game agency(ies) are requested, for the purposes set forth in Section 408 of the Energy Security Act of 1980, to file within 60 days from the date of issuance of this notice appropriate terms and conditions to protect any fish and wildlife resources or to otherwise carry out the provisions of the Fish and Wildlife Coordination Act. General comments concerning the project and its resources are requested; however, specific terms and conditions to be included as a condition of exemption must be clearly identified in the agency letter. If an agency does not file terms and conditions within this time period, that agency will be presumed to have none. Other Federal, State, and local agencies are requested to provide any comments they may have in accordance with their duties and responsibilities. No other formal requests for comments will be made. Comments should be confined to substantive issues relevant to the granting of an exemption. If an agency does not file comments within 60 days from the date of issuance of this notice, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

D3 b. *Agency Comments*—The U.S. Fish and Wildlife Service and the State Fish and Game agency(ies) are requested, for the purposes set forth in Section 30 of the Federal Power Act, to file within 45 days from the date of issuance of this notice appropriate terms and conditions to protect any fish and wildlife resources or otherwise carry out the provisions of the Fish and Wildlife Coordination Act. General comments concerning the project and its resources are requested; however, specific terms and conditions to be included as a condition of exemption must be clearly identified in the agency letter. If an agency does not file terms and conditions within this time period, that agency will be presumed to have none. Other Federal, State, and local agencies are requested to provide comments they may have in accordance with their duties and responsibilities. No other formal requests for comments will be made. Comments should be confined to substantive issues relevant to the granting of an exemption. If an agency does not file comments within 45 days from the date of issuance of this notice, it will be presumed to have no comments. One copy of an agency's comments must also be sent to the Applicant's representatives.

Dated: January 3, 1986.

Kenneth F. Plumb,

Secretary.

[FR Doc. 86–408 Filed 1–8–86; 8:45 am]

BILLING CODE 6716–01–M

Office of Hearings and Appeals

Implementation of Special Refund Procedures

Correction

In FR Doc. 85–31010 beginning on page 56 in the issue of Thursday, January 2, 1986, make the following correction:

On page 57, second column, first complete paragraph, fifth line from the

bottom, "$208,448,000" should read "$308,448,000".

BILLING CODE 1505-01-M

ENVIRONMENTAL PROTECTION AGENCY

[OW-FRL-2951-9]

Ocean Dumping Permit Program

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of change in the date of the Ocean City, Maryland, public hearing to receive comments on EPA's tentative determination to issue a research permit for the incineration of chemical wastes at sea.

SUMMARY: On December 16, 1985, EPA published in the **Federal Register** (50 FR 51360 et seq.) a tentative determination to issue a research permit to Chemical Waste Management, Inc., Oak Brook, Illinois, for the *Vulcanus II* to transport and incinerate materials as authorized by the Marine Protection, Research, and Sanctuaries Act of 1972, as amended, and announced public hearings to receive comments on this determination.

DATE: The new date for the Ocean City, Maryland, public hearing is January 27, 1986. The hearing will be held at the Sheraton Hotel, 10100 Ocean Highway. Registration will begin at 8:00 a.m., and the hearing will begin at 9:00. Dates and times of the other public hearings remain the same.

FOR FURTHER INFORMATION CONTACT: David P. Redford, Office of Marine and estauarine Protection (WH-556M), EPA, Washington, DC, 20460, (202) 755-9231.

Dated: January 3, 1986.

Lawrence J. Jensen,

Assistant Administrator for Water.

[FR Doc. 86-461 Filed 1-8-86; 8:45 am]

BILLING CODE 6560-50-M

FEDERAL COMMUNICATIONS COMMISSION

Channel 41 Limited Partnership, et al., Hearing Designation Order

In re Applications of MM Docket No. 85-391:

	File No.
Channel 41 Limited Partnership.	BPCT-850607KM
California Minority Broadcasting, Inc.	BPCT-850724KJ
KFG '85	BPCT-850725KF
Robles Communications Inc.	BPCT-850725KQ
Buenaventura Communications.	BPCT-850725KR
Ventura 41 Television Associates.	BPCT-850725KS
Costa de Oro Broadcasting Corporation.	BPCT-850725KT

For Construction Permit, Ventura, California.

Hearing Designation Order

Adopted: December 19, 1985.
Released: January 2, 1986.
By the Chief, Video Services Division.

1. The Commission, by the Chief, Video Services Division, acting pursuant to delegated authority, has before it the above-captioned mutually exclusive applications of Channel 41 Limited Partnership (CLP), California Minority Broadcasters, Inc. (Minority), KFG '85 (KFG), Robles Communications, Inc. (Robles), Buenaventura Communications (Buenaventura), Ventura 41 Television Associates (Associates), and Costa de Oro Broadcasting Corporation (Costa) for authority to construct a new commercial television station on Channel 41, Ventura, California.

2. In MM Docket 85-251, the Commission proposes to substitute channel 57 for channel 41 in Ventura, California. If that change is made before the resolution of this comparative hearing, then each applicant will be required to amend its application to specify channel 57. If MM Docket 85-251 has not been resolved when this comparative hearing is concluded, the grant of any of the competing applications will be subject to the outcome of MM Docket No. 85-251.

3. Section 73.2080(c) of the Commissions Rules requires applicants employing at least five persons full-time to file a proposal with the Commission designed to provide equal employment opportunities. CLP indicates that it will employ five or more full-time employees, but it has not submitted an EEO program. Accordingly, CLP will be required to submit a copy of its EEO program to the presiding Administrative Law Judge, within 20 days after this Order is released.

4. Buenaventura indicated that it is a limited partnership. The applicant has identified the general partner; however, none of the limited partners have been disclosed. Section 73.3514(a) of the Commission's Rules requires an applicant to provide all information called for by FCC forms, unless the information is inapplicable. However, in *Attribution of Ownership Interests*, 97 FCC 2d 997 (1984), *recon. granted in part*, 58 RR 2d 604 (1985), the Commission stated that, henceforth, limited partnership interests were not attributable for purposes of the multiple ownership rules if the applicant certifies that the limited partners will "not be involved in any material respect in the management or operation of" the proposed station, 97 FCC 2d at 1023. The Commission defined the degree of noninvolvement in paragraphs 48-50 of the June 24 decision on reconsideration. Further, the Commission directed that Form 301, among others, be amended to conform to the new attribution standards, 97 FCC 2d at 1034. Although changes in the form have not yet been made, there is now no need to provide information as to the limited partners if Buenaventura can submit the necessasry certification and showing that its limited partnership interest will be sold only to individuals or entities that are sufficiently insulted. If the certification or showing is not appropriate, of course, the necessary information as to them would have to be filed as an amendment. Further, the Commission retained the cross-interest policy as to other attributable media interests in the same area. *Id.* at 1030. Accordingly, Buenaventura will be required either to state that its limited partners have or will have no other media interests subject to the cross-interest policy or identify the limited partners with such interests, identify the other local media and state the nature and extent of the ownership interest.

5. Walter F. Ulloa, a general partner of Associates, is employed as an account executive and local sales manger of Station KMEX-TV, Los Angeles, California. There would be a Grade B overlap of the proposed Ventura station and Station KMEX-TV. Therefore, Mr. Ulloa's position with KMEX-TV violate the Commission's cross-interest policy. However, Associates has stated that Mr. Ulloa will terminate his position at KMEX-TV if Associates is the successful applicant for Channel 41. Accordingly, based on Associates representation, if it is the successful applicant, the construction permit shall be subject to an appropriate condition.

6. The effective radiated visual power, antenna height above average terrain and other technical data submitted by each applicant indicate that there would be a significant difference in the size of the area and population that each proposes to serve. Consequently, the area and population which would be within the predicted 64 dBu (Grade B) contour, together with the availability of other television service of Grade B or greater intensity, will be considered under the standard comparative issue

for the purpose of determining whether a comparative preference should accrue to any of the applicants.

7. No determination has been reached that the tower heights and locations proposed by KFG and Robles would not each constitute a hazard to air navigation. Accordingly, an issue regarding this matter will be specified.

8. On June 26, 1985, the Commission issued a Public Notice (Mimeo No. 5421) requiring all applicants for new broadcast stations to clarify that they have obtained reasonable assurance that their specified transmitter sites will be available to them. Neither CLP nor Robles has submitted such a certification. Accordingly, CLP and Robles will each be given 20 days from the date of release of this Order to file such a certification, in the form required by the Commission, with the presiding Administrative Law Judge. If either applicant cannot make the certification, it shall so advise the Administrative Law Judge who shall then specify an appropriate issue.

9. Section 73.685(f) of the Commission's is Rules requires an applicant proposing to use a directional antenna to include a tabulation of relative field pattern, oriented so that 0° corresponds to True north and tabulated at least every 10° plus any minima or maxima. Robles and Buenaventura have not supplied this date. Accordingly, each will be required to submit an amendment with the appropriate information, to the presiding Administrative Law Judge and a copy to the Chief, TV Branch, and to the Chief, Hearing Branch, Mass Media Bureau, within 20 days after this Order is released.

10. In Section V–G, item 5, FCC Form 301, KFG does not specify its overall tower height above mean sea level, but its vertical tower sketch shows this height to be 2400 feet. In Exhibit E, Figure 7, KFG includes a copy of its FAA notification form which indicates a proposed overall tower height of 2390 feet above mean sea level. KFG must either amend its application within 20 days of the date of release of this Order to conform to the data submitted to the FAA or to refile with the FAA (with a copy to the Commission) to conform to the data submitted to the Commission.

11. Except as indicated by the issues specified below, the applicants are qualified to construct and operate as proposed. Since these applicants are mutually exclusive, the Commission is unable to make the statutory finding that their grant would serve the public interest, convenience, and necessity. Therefore, the applicants must be designated for hearing in a consolidated proceeding on the issues specified below.

12. Accordingly, it is ordered, That pursuant to section 309(e) of the Communications Act of 1934, as amended, the applications are designated for hearing in a consolidated proceeding, to be held before an Administrative Law Judge at a time and place to be specified in a subsequent Order, upon the following issues:

1. To determine whether there is a reasonable possibility that the tower height and location proposed each by KFG '85 and Robles Communications, Inc. would each constitute a hazard to air navigation.

2. To determine which of the proposals would, on a comparative basis, best serve the public interest.

3. To determine, in light of the evidence adduced pursuant to the foregoing issues, which of the applications should be granted.

13. It is further ordered, That in the event that MM Docket No. 85–251 has not been resolved when this comparative hearing is concluded, the grant of any of the competing applications will be conditioned as follows: This grant is subject to the outcome of MM Docket No. 85–251, which may require the permittee to change to channel 57.

14. It is further ordered, That Channel 41 Limited Partnership shall file a copy of its EEO program with the presiding Administrative Law Judge, within 20 days after this Order is released.

15. It is further ordered, That Buenaventura Communications shall submit the certification, statement and/or information required by paragraph 4, *supra*, to the presiding Administrative Law Judge, within 20 days after this Order is released.

16. It is further ordered, That, in the event of the grant of the application of Ventura 41 Television Associates, the construction permit shall be conditioned as follows: Prior to commencement of operation of the television station authorized herein, permittee shall certify to the Commission that Walter F. Ulloa has severed all connection with the licensee of Station KMEX–TV, Los Angeles, California.

17. It is further ordered, That the Federal Aviation Administration is made a party respondent to this proceeding with respect to issue 1.

18. It is further ordered, That Channel 41 Limited Partnership and Robles Communications, Inc. shall each, within 20 days after the release of this Order, file with the presiding Administrative Law Judge a site availability certification, in the form required by the Commission, or advise the Administrative Law Judge that the certification cannot be made, as may be appropriate.

19. It is further ordered, That Buenaventura Communications shall submit an amendment providing the information required by Section 73.685(f) of the Commission's Rules, to the presiding Administrative Law Judge and copy to the Chief, Television Branch and the Chief, Hearing Branch, Mass Media Bureau, within 20 days after the release date of this Order.

20. It is further ordered, That KFG '85 shall, within 20 days of the release of this Order, amend its application to conform to the data submitted to the FAA or to refile with the FAA (with a copy to the Commission) to conform to the data submitted to the Commission, as required in Section V–G, item 5, FCC Form 301.

21. It is further ordered, That to avail themselves of the opportunity to be head, the applicants and the party respondent herein shall, pursuant to § 1.221(c) of the Commission's Rules, in person or by attorney, within 20 days of the mailing of this Order, file with the Commission, in triplicate, a written appearance stating an intention to appear on the date fixed for the hearing and present evidence on the issues specified in this Order.

22. It is further ordered, That the applicants herein shall, pursuant to section 311(a)(2) of the Commissions Act of 1934, as amended, and § 73.3594 of the Commission's Rules, give notice of the hearing within the time and in the manner prescribed in such Rule, and shall advise the Commission of the publication of such notice as required by § 73.3594(g) of the Rules.

Federal Communications Commission.

Roy J. Stewart,

Chief, Video Services Division, Mass Media Bureau.

[FR Doc. 86–454 Filed 1–8–86; 8:45 am]

BILLING CODE 6712–01–M

Danville Broadcasting et al.; Hearing Designation Order

In re Applications of MM Docket No. 85–389:

	File No.
M. Leslie Thurman d/b/a Danville Broadcasting.	BPCT–850627KH
Haughton Partnership, Ltd.	BPCT–850815KM

For Construction Permit, Danville, Virginia.

Hearing Designation Order

Adopted: December 16, 1985.
Released: January 2, 1986.
By the Chief, Video Services Division.

1. The Commission, by the Chief, Video Services Division, acting pursuant to delegated authority, has before it the above-captioned mutually exclusive applications for authority to construct a new commercial television station on Channel 24, Danville, Virginia.

2. On September 30, 1985, the Association of Maximum Service Telecasters (AMST) filed informal objections to both applications on the ground that both transmitter sites would be 53 miles from the site of Station WEFC(TV), channel 38, Roanoke, Virginia, whereas Section 73.610 of the Commission's Rules requires a minimum separation of 59.5 miles between a station operating on channel 24 and one operating on channel 38. Both sites would, therefore, be short-spaced 7 miles. Accordingly, issues will be specified to determine whether circumstances exist warranting a waiver of the rule.

3. No determination has been reached that the tower height and location proposed by each of the applicants would not constitute a hazard to air navigation. Accordingly, an issue regarding this matter will be specified.

4. On June 26, 1985, the Commission issued a Public Notice (Mimeo No. 5421) requiring all applicants for new broadcast stations to certify that they have obtained reasonable assurance that their specified transmitter sites will be available to them. Danville Broadcasting (DB) has not submitted such a certification. Accordingly, DB will be given 20 days from the date of release of this Order to file such a certification, in the form required by the Commission, with the presiding Administrative Law Judge. If the applicant cannot make the certification, it shall so advise the Administrative Law Judge who shall then specify an appropriate issue.

5. Haughton filed an amendment on September 25, 1985, increasing its tower height also resulted in the radius of the Grade B contour of the proposed station increasing from 39 to 43 miles. Since there are no major metropolitan areas in that gain area, the indicated increase in Grade B population of more than 2,000,000 people appears to be implausible. The applicant will be required to recalculate its Grade B population and submit an amendment to the Administrative Law Judge within 20 days after this Order is released.

6. Except as indicated by the issues specified below, the applicants are qualified to construct and operate as proposed. Since these applications are mutually exclusive, the Commission is unable to make the statutory finding that their grant would serve the public interest, convenience, and necessity. Therefore, the applications must be designated for hearing in a consolidated proceeding on the issues specified below.

7. Accordingly, it is ordered, That pursuant to section 309(e) of the Communications Act of 1934, as amended, the applications are designated for hearing in a consolidated proceeding, to be held before an Administrative Law Judge at a time and place to be specified in a subsequent Order, upon the following issues:

1. To determine with respect to Danville Broadcasting and Haughton Partnership, Ltd., whether the proposals are consistent with Section 73.610 of the Commission's Rules and, if not, whether circumstances exist which would warrant waivers of the rule.

2. To determine with respect to each of the applicants, whether there is a reasonable possibility that the tower height and location proposed by each would constitute a hazard to air navigation.

3. To determine which the proposals would, on a comparative basis, better serve the public interests.

4. To determine, in light of the evidence adduced pursuant to the foregoing issues, which, if either, of the applications should be granted.

8. It is further ordered, That Danville Broadcasting shall, within 20 days after the release of this Order, file with the presiding Administrative Law Judge a site availability certification in the form required by the Commission, or advise the Administrative Law Judge that the certification cannot be made, as may be appropriate.

9. It is further ordered, That, Haughton Partnership, Ltd. shall submit an amendment with respect to the Grade B population as set out in paragraph 7, supra, to the Administrative Law Judge within 20 days after this Order is released.

10. It is further ordered, That the Association of Maximum Service Telecasters, Inc. is made a party respondent to the proceeding.

11. It is further ordered, That the Federal Aviation Administration is made a party respondent to this proceeding with respect to issue 2.

12. It is further ordered, That to avail themselves of the opportunity to be heard, the applicants and the parties respondent herein shall, pursuant to § 1.221(c) of the Commission's Rules, in person or by attorney, within 20 days of the mailing of this Order, file with the Commission, in triplicate, a written appearance stating an intention to appear on the date fixed for the hearing and present evidence on the issues specified in this Order.

13. It is further ordered, That the applicants herein shall, pursuant to § 311(a)(2) of the Communications Act of 1934, as amended, and § 73.3594 of the Commission's Rules, give notice of the hearing within the time and in the manner prescribed in such Rule, and shall advise the Commission of the publication of such notice as required by § 73.3594(g) of the Rules.

Federal Communications Commission.

Roy J. Stewart,

Chief, Video Services Division, Mass Media Bureau.

[FR Doc. 86-456 Filed 1-8-86; 8:45 am]

BILLING CODE 6712-01-M

James and Sharon Deon Sepulveda et al. Hearing Designation Order

In re Applications of MM Docket No. 85-393

	File No.
James and Sharon Deon Sepulveda.	BPCP-85081KF
Centennial Broadcasting.	BPCT-85081KI
Pacific Television, Inc..	BPCT-85081KE
Charles M. Lohr.....	BPCT-85081KF

For Construction Permit for New Television Station, Eureka, California.

Hearing Designation Order

Adopted: December 19, 1985.
Released: January 2, 1986.
By the Chief, Video Services Division.

1. The Commission, by the Chief, Video Services Division, acting pursuant to delegated authority, had before it the above-captioned mutually exclusive applications of James and Sharon Deon Sepulveda (Sepulveda), Centennial Broadcasting (Centennial), Pacific Television, Inc. (Pacific), and Charles M. Lohr, for authority to construct a new commercial television station on Channel 29, Eureka, California.

2. The effective radiated visual power, antenna height above average terrain and other technical data submitted by the applicants indicate that there would be a significant difference in the size of the area and population that each proposes to serve. Consequently, the areas and populations which would be within the predicted 64 dBu (Grade B) contour, together with the availability of other television service of Grade B or greater intensity, will be considered under the standard comparative issue,

for the purpose of determining whether a comparative preference should accrue to any of the applicants.

3. Section V–C, Item 10(e), FCC 301, requires an applicant to submit the area and population within its predicted Grade B contour. Centennial has not submitted this information. Accordingly, Centennial will be required to submit an amendment with the response to Item 10(e), to the presiding Administrative Law Judge, within 20 days after this October is released.

4. In Section V–C, FCC Form 301, Centennial specifies a maximum visual effective radiated power of 5,000 kW and an antenna height above average terrain of 2,750 feet. This combination of power and height exceeds the maximum permitted by § 73.614 of the Commission's Rules. Accordingly, Centennial must submit a corrective amendment to the presiding Administrative Law Judge, within 20 days after this Order is released.[1]

5. Centennial states that it is limited partnership. Section II, Item 5(a), FCC Form 301, requires that if the applicant is a partnership, the requested information must be given for each general or limited partner. Centennial's application identifies only the general partner with a 95% ownership interest and does not indicate that there are any limited partners nor does it identify ownership of the remaining 5%. Section 73.3514(a) of the Commission's Rules requires an applicant to provide all information called for by FCC forms, unless the information is inapplicable. However, in *Attribution of Ownership Interests*, 97 FCC 2d 997 (1984), *recon. granted in part*, 58 RR 2d 604 (1985) the Commission stated that, henceforth, limited partnership interests were not attributable for the purposes of the multiple ownership rules if the applicant can certify that the limited partners will not be involved in any material respect in the business or operation of the station, 97 FCC 2d at 1023. The Commission defined the degree of noninvolvement in paragraphs 48–50 of the June 24 decision on reconsideration. Further, the Commission directed that FCC Form 301, among others, be amended to conform to the new attribution standards, 97 FCC 2d at 1034. Although changes in the form have not yet been made, there is now no need to provide information as to the limited partners if Centennial can submit the necessary certification and showing that limited partnershp interests will be sold only to individuals or entities that are sufficiently insulated. If the certification or showing is not appropriate, of course, the necessary information as to them would have to be filed as an amendment. Further, the Commission retained the cross-interest policy as to other attributable media interests in the same area. *Id.* at 1030. Accordingly, Centennial will be required either to state that the limited partners have or will have not other media interests subject to the cross-interest policy or identify the limited partners with such interests, identify the other local media and state the nature and extent of the ownership interest.

6. No determination has been reached that the tower height and location proposed each by Centennial and Pacific would not constitute a hazard to air navigation. Accordingly, and issue regarding this matter will be specified.

7. In Section III, Item 1, FCC Form 301, Pacific indicated that, upon completion of its financial arrangements, it would provide financial certification. It has not done so. Accordingly, the applicant will be given 20 days from the release date of this Order to review its financial proposal in light of the Commission's requirements, to make any changes that may be necessary, and, if appropriate, to submit a certification to the presiding Administrative Law Judge in the manner called for in Section III, Form 301, as to its financial qualifications. If the applicant cannot make the certification, it shall so advise the Administrative Law Judge who shall then specify an appropriate issue.

8. An applicant who proposes to employ five or more full-time station employees must establish a program designed to assure equal opportunity for women and minority groups. This program must be submitted to the Commission. Although Pacific states that it will employ more than five full-time persons, it has not included a copy of its equal employment opportunity (EEO) program. Accordingly, Pacific will be required to submit a copy of its EEO program to the presiding Administrative Law Judge, within 20 days after this Order is released.

9. Section 73.685(f) of the Commission's Rules requires an applicant proposing to use a directional antenna to include a tabulation of relative field pattern, oriented so that 0 degrees corresponds to True North and tabulated at least every 10 degrees plus any minima or maxima. Pacific has not supplied this data, and the data submitted by Sepulveda does not contain the relative field values. Accordingly, Pacific and Sepulveda will each be required to submit an amendment with the appropriate information to the presiding Administrative Law Judge and copies to the Chief, Television Branch, and the Chief, Hearing Branch, Mass Media Bureau, within 20 days after this Order is released.

10. Except as indicated by the issues specified below, the applicants are qualified to construct and operate as proposed. Since the applications are mutually exclusive, the Commission is unable to make the statutory finding that their grant would serve the public interest, convenience, and necessity. Therefore, the applications must be designated for hearing in a consolidated proceeding on the issues specified below.

11. Accordingly, it is ordered, That pursuant to section 309(e) of the Communications Act of 1934, as amended, the applications are designated for hearing in a consolidated proceeding, to be held before an Administrative Law Judge at a time and place to be specified in a subsequent Order, upon the following issues:

1. To determine whether there is a reasonable possibility that the tower height and location proposed each by Contennial and Pacific would each constitute a hazard to air navigation.

2. To determine which of the proposals would, on a comparative basis, best serve the public interest.

3. To determine, in light of the evidence adduced pursuant to the foregoing issues, which of the applications should be granted.

12. It is further ordered, That the Federal Aviation Administration is made a party respondent to this proceeding with respect to Issue 1.

13. It is further ordered, That Centennial shall submit an amendment stating the area and population within its predicted Grade B contour, to the presiding Administrative Law Judge, within 20 days of the release of this Order.

14. It is further ordered, That Contennial shall submit an amendment to show compliance with § 73.614 of the Commission's Rules pertaining to power and antenna height above average terrain, to the presiding Administrative Law Judge, within 20 days after this Order is released.

15. It is further ordered, That Centennial shall submit the certification, statement and/or information required by Paragraph 5, *supra*, to the presiding Administrative Law Judge, within 20 days after this Order is released.

[1] Reduction of height or power may require the submission of new engineering data such as new contour maps, new vertical tower sketch, and changed are and population figures. If so, this information must be submitted as part of the rquirement amendment.

16. It is further ordered, That within 20 days after this Order is released, Pacific shall submit a financial certification in the form required by Section III, FCC Form 301, or advise the presiding Administrative Law Judge that the required certification cannot be made, as may be appropriate.

17. It is further ordered, That Pacific shall submit a complete EEO proposal to the presiding Administrative Law Judge within 20 days after this Order is released.

18. It is further ordered, That Pacific and Sepulveda each shall submit an amendment providing the information required by § 73.685(f) of the Commission's Rules, to the presiding Administrative Law Judge and a copy each to the Chief, Television Branch, and Chief, Hearing Branch, Mass Media Bureau, within 20 days of the release of this Order.

19. It is further ordered, That to avail themselves of the opportunity to be heard, the applicants and the party respondent herein shall, pursuant to § 1.221(c) of the Commission's Rules, in person or by attorney, within 20 days of the mailing of this Order, file with the Commission, in triplicate, a written appearance stating an intention to appear on the date fixed for the hearing and present evidence on the issues specified in this Order.

20. It is further ordered, That the applicants herein shall, pursuant to Section 311(a)(2) of the Communications Act of 1934, as amended, and § 73.3594 of the Commission's Rules, give notice of the hearing within the time and in the manner prescribed in such Rule, and shall advise the Commission of the publication of such notice as required by § 73.3594(g) of the Rules.

Federal Communications Commission.

Roy J. Stewart,

Chief, Video Services Division, Mass Media Bureau.

[FR Doc. 86-455 Filed 1-8-86; 8:45 am]

BILLING CODE 6712-01-M

UN2JC Communications (Ltd.) et al.; Hearing Designation Order

In re Applications of MM Docket No. 85-392:

	File No.
UN2JC Communications (Limited).	BPCT-850611KE
Liquico Television, Limited.	BPCT-850625KI
Jose Angel Salcido, Jr. d/b/a Salcido Broadcasting Co.	BPCT-850723KE
Josie Moore	BPCT-850725LG

For Construction Permit, El Paso, Texas.

Hearing Designation Order

Adopted: December 19, 1985.
Released: January 2, 1986.
By the Chief, Video Services Division.

1. The Commission, by the Chief, Video Services Division, acting pursuant to delegated authority, has before it the above-captioned mutually exclusive applications for authority to construct a new commercial television station on Channel 65, El Paso, Texas, late-filed amendments filed by Liquico Television,[1] Salcido Broadcasting Co.[2] and Josie Moore; a petition to deny filed by UN2JC Communications (UN2JC) and related pleadings.[3]

2. In its response to Section V-C, Item 5, FCC Form 301, Salcido shows its proposed antenna height above average terrain (HAAT) as 2013 feet, a figure that is inconsistent with the data set forth in the applicant's Exhibit E-5 (tabulation of terrain data) and with the predicted contours as shown on the contour map (Exhibit E-3). Salcido will be required to submit a corrective amendment to the presiding Administrative Law Judge within 20 days of the release of this Order.

3. Josie Moore filed her application on July 25, 1985, with a facsimile signature page and a site availability certification. She explained that the original application was reviewed by her and she executed the signature page and site availability certification. She was unable to return the executed pages in time to be included in the filing of the application. The original signature page and site certification form were subsequently filed on August 6, 1985, with a petition to accept amendment *nunc pro tunc*. The application was substantially complete when it was filed. Clearly, all parties to this proceeding had notice of the application on July 25; therefore, none were prejudiced. These circumstances are governed by a long-standing policy which dictates that the amendment and signature be accepted *nunc pro tunc*. *Communications Gaithersburg, Inc.*, 60 FCC 2d 537 (1976); *B.J. Hart*, 44 FCC 2888 (1960). Therefore, the amended application bearing the original signature of Ms. Moore will be accepted *nunc pro tunc*.

4. Sections V-C and V-G, FCC Form 301, require the signature of the applicant's technical consultant or engineer. Moore's application shows only a typed name, but no signature. Moore will, therefore, be required to file an amendment verifying the signature pages of Sections V-C and V-G with the presiding Administrative Law Judge within 20 days after this Order is released.

5. No determination has been reached that the tower heights and locations proposed by Moore and Salcido would not each constitute a hazard to air navigation. Accordingly, an issue regarding this matter will be specified.

6. Applicants for new broadcast stations are required by § 73.3580(f) of the Commission's Rules to give local notice of the filing of their applications. They must then file with the Commission a certification described in § 73.3580(h) of the Rules. We have no evidence or certification that UN2JC has published the required local notice. To remedy this deficiency, UN2JC will be required to file a certification that it has or will comply with § 73.3580 of the Commission's rules with the presiding Administrative Law Judge within 20 days of the release of this Order.

7. On June 26, 1985, the Commission issued a Public Notice (Mimeo No. 5421) requiring all applicants for new broadcast stations to certify that they have obtained reasonable assurance that their specified transmitter sites will be available to them. UN2JC has not submitted such a certification. Accordingly, UN2JC will be given 20 days after this Order is released to file such a certification, in the form required by the Commission, with the presiding Administrative Law Judge. If the applicant cannot make the certification, it shall so advise the Administrative

[1] The deadline for filing amendments to the above-captioned applications was September 13, 1985 ("B" cut-off date). On October 15, 1985, Liquico filed a petition for leave to amend its application accompanied by an amendment which corrects the call letters of the station on whose tower it proposes to mount its antenna and other minor corrections. For good cause shown, the petition will be granted and the amendment will be accepted.

[2] Salcido Broadcasting Co., in response to the petition to deny its application filed by UN2JC, on September 23, 1985, filed a petition for leave to amend its application to specify a new transmitter site. For good cause shown, the petition will be granted and the amendment will be accepted for Section 1.65 purposes only.

[3] On September 13, 1985, UN2JC filed petitions to deny against all of the other competing applications. The basis for the petitions is that none of the applicants have reasonable assurance of their proposed transmitter sites. UN2JC's petitions are in effect, predesignation petitions to specify issues against competing applicants. Such pleadings are no longer authorized. *Revised Procedures for the Processing of Contested Broadcast Applications*, 72 FCC 2d 202 (1979). Accordingly, the petitions will be dismissed. UN2JC may raise its questions in the form of timely petitions to enlarge issues addressed to the presiding Administrative Law Judge.

Law Judge who shall then specify an appropriate issue.

8. The effective radiated visual power, antenna height above average terrain and other technical data submitted by the applicants indicate that there would be a significant difference in the size of the area and population that each proposes to serve. Consequently, the areas and populations which would be within the predicted 64 dBu (Grade B) contour, together with the availability of other television service of Grade B or greater intensity, will be considered under the standard comparative issue, for the purpose of determining whether a comparative preference should accrue to any of the applicants.

9. Except as indicated by the issues specified below, the applicants are qualified to construct and operate as proposed. Since the applications are mutually exclusive, the Commission is unable to make the statutory finding that their grant will serve the public interest, convenience, and necessity. Therefore, the applications must be designated for hearing in a consolidated proceeding on the issues specified below.

10. Accordingly, it is ordered, That pursuant to section 309(e) of the Communications Act of 1934, as amended, the applications are designated for hearing in a consolidated proceeding, to be held before an Administrative Law Judge at a time and place to be specified in a subsequent Order, upon the following issues:

1. To determine with respect to Josie Moore and Salcido Broadcasting Co., whether there is a reasonable possibility that the tower height and location proposed by each would constitute a hazard to air navigation.

2. To determine which of the proposals would, on a comparative basis, best serve the public interest.

3. To determine, in light of the evidence adduced pursuant to the foregoing issues, which of the applications should be granted.

11. It is further ordered, That Salcido Broadcasting Co. shall submit a corrective amendment in response to Section V–C, Item 5, FCC Form 301, as set out in paragraph 2, supra, to the presiding Administrative Law Judge within 20 days of the release of this Order.

12. It is further ordered, That the petition for leave to amend filed by Salcido Broadcasting Co. is granted, and the amendment is accepted for § 1.65 purposes only.

13. It is further ordered, That the petition for leave to amend filed by Liquico Television, Inc. is granted, and the amendment is accepted.

14. It is further ordered, That UN2JC Communications shall, within 20 days after this Order is released, file with the presiding Administrative Law Judge, a site availability certification, in the form required by the Commission or advise the Administrative Law Judge that the certification cannot be made, as may be appropriate.

15. It is further ordered, That UN2JC Communications shall file a certification with the presiding Administrative Law Judge, within 20 days after this Order is released, that it has or will comply with § 73.3580 of the Commission's Rules.

16. It is further ordered, That the petitions to deny filed by UN2JC Communications are dismissed.

17. It is further ordered, That Josie Moore shall submit a verification of the signature pages of her application to Section V–C and V–G to the presiding Administrative Law Judge within 20 days after this Order is released.

18. It is further ordered, That the amendment filed by Josie Moore on August 6, 1985, is accepted *nunc pro tunc.*

19. It is further ordered, That the Federal Aviation Administration is made a party respondent to this proceeding with respect to issue 1.

20. It is further ordered, That to avail themselves of the opportunity to be heard, the applicants and the party respondent herein shall, pursuant to § 1.221(c) of the Commission's Rules, in person or by attorney, within 20 days of the mailing of this Order, file with the Commission, in triplicate, a written appearance stating an intention to appear on the date fixed for the hearing and present evidence on the issues specified in this Order.

21. It is further ordered, That the applicants herein shall, pursuant to section 311(a)(2) of the Communications Act of 1934, as amended, and § 73.3594 of the Commission's Rules, give notice of the hearing within the time and in the manner prescribed in such Rule, and shall advise the Commission of the publication of such notice as required by § 73.3594(g) of the Rules.

Federal Communications Commission.

Roy J. Stewart,

Chief, Video Services Division, Mass Media Bureau.

[FR Doc. 86–457 Filed 1–8–86; 8:45 am]

BILLING CODE 6712-01-M

Venice Flying Service, Inc.; Hearing Designation Order

In re the Applications of PR Docket No. 85–398:

	File No.
Venice Flying Service, Inc., Venice, Florida.	125–A–RL–85
Air Venice, Inc., Venice, Florida.	100–A–L–95

For an Aeronautical Advisory Station to Serve Venice Municipal Airport, Venice, Florida.

Hearing Designation Order

Adopted: December 20, 1985.
Released: January 3, 1986.

1. Venice Flying Service, Inc. (Venice) and Air Venice, Inc. (Air Venice) have each filed an application for authority to operate an aeronautical advisory station at Venice Municipal Airport, Venice, Sarasota County, Florida. Venice seeks renewal of its current station license, while Air Venice seeks new station authorization. Each application meets the basic eligibility requirements of Part 87 of the Commission's rules. The applications captioned above are mutually exclusive under § 87.251(a) of the Commission's rules which provides that only one aeronautical advisory station may be authorized at an uncontrolled airport. Accordingly, it is necessary to designate these applications for comparative hearing in order to determine which, if any, should be granted.

2. In view of the foregoing, it is ordered, that pursuant to the provisions of section 309(e) of the Communications Act of 1934, as amended, 47 U.S.C. 309(e), and § 0.331 of the Commission's rules, 47 CFR 0.331, the applications captioned above are hereby designated for hearing in a consolidated proceeding at a time and place to be specified in a subsequent Order on the following issues:

(a) To determine which applicant would provide the public with the better aeronautical advisory service based on the following comparative considerations:

(1) Location of the aviation service organization and proposed radio station in relation to the landing area and traffic patterns;

(2) Hours of operation;

(3) Personnel available to provide advisory service;

(4) Experience of the applicants and their employees in aviation and aviation communications, including but not limited to operation of stations in the aviation services under Part 87 that may be or have been authorized to the applicant;

(5) Ability to provide information pertaining to primary and secondary communications as specified in § 87.257 of the Commission's rules;

(6) Proposed radio system including control and dispatch points; and

(7) Availability of the radio facilities to other aviation service organizations;

(b) To determine in light of the evidence adduced on the foregoing issues which the applications should be granted.

3. It is further ordered, that the burden of proof and the burden of proceeding with the introduction of evidence is on each applicant with respect to its application.

4. It is further ordered, that to avail themselves of an opportunity to be heard, Venice and Air Venice, in person or by attorneys, must file with the Commission a written appearance, in triplicate, within 20 days of the date of this Order, stating an intention to appear on the date set for hearing and to present evidence on the issue specified in this Order. See § 1.221(c) of the Commission's rules, 47 CFR 1.221(c). Failure to file a written appearance within the time specified may result in dismissal of the application with prejudice.

Federal Communications Commission.

Robert S. Foosaner,

Chief, Private Radio Bureau.

[FR Doc. 86-458 Filed 1-8-86; 8:45 am]

BILLING CODE 6712-01-M

DEPARTMENT OF HEALTH AND HUMAN SERVICES

Statement of Organization, Functions, and Delegations of Authority; Health Care Financing Administration

Section F.50. of the Statement of Organization, Functions, and Delegations of Authority for the Department of Health and Human Services, Health Care Financing Administration (HCFA) (49 FR 35247, dated September 6, 1984) is hereby amended to add a new paragraph, F.50.2.f., to indicate that the authorities under sections 1862 (h)(1), (2)(A), and (3) of the Social Security Act have been delegated to the Assistant Secretary for Health. The new paragraph reads as follows:

f. The Assistant Secretary for Health shall exercise the authority under sections 1862 (h)(1), (2)(A), and (3) of the Act (42 U.S.C. 1395y (h)(1), (2)(A), and (3)) relating to the registration and testing of cardiac pacemaker devices and leads.

Dated: December 27, 1985.

Otis R. Bowen,

Secretary of Health and Human Services.

[FR Doc. 86-441 Filed 1-8-86; 8:45 am]

BILLING CODE 4120-03-M

Statement of Organization, Functions, and Delegations of Authority; Health Care Financing Administration

Part F. of the Statement of Organization, Functions, and Delegations of Authority for the Department of Health and Human Services, Health Care Financing Administration (HCFA), (Federal Register, Vol. 48, No. 198, pg. 48441, dated Wednesday, October 12, 1983) is amended to reflect the reorganization of the Bureau of Program Operations, Office of the Associate Administrator for Operations, by removing the division of Group Health Plans Operations from the Office of Financial Operations and establishing a new Office of Prepaid Operations. This reorganization will provide a better utilization of resources and a more efficient balance of staff and functions.

The specific amendments to Part F. are described below:

—Section FP.20.A.4., Office of Financial Operations (FPA7), is amended to read as follows:

4. Office of Financial Operations (FPA7)

Sets policies and procedures by which State agencies, contractors and Regional Offices prepare and submit periodic budget estimates. In consultation with other HCFA and BPO components, develops and negotiates the national budget for Medicare contractors, including workload and funds estimates. Controls and manages the Medicare cash flow and related banking activities. Compiles estimates of benefit payments and administrative costs for the State Medicaid program. Administers and issues the Medicaid grant awards. Approves all State claims for Federal reimbursement under Title XIX. Reviews periodic contractor and State agency expenditure reports to evaluate budget execution and determine the allowability of costs. Provides the definitive HCFA interpretations of Medicaid administration and training cost reimbursement policy. Issues clarifications to Regional Offices regarding Federal financial participation issues. Prepares analyses of Medicare and Medicaid expenditure trends and patterns. Approves disallowances of State Medicaid reimbursement claims, serves as the focal point in central office for the defense of disallowances before the Departmental Grant Appeals Board (GAB), and interprets and disseminates GAB decisions to pertinent HCFA staff. Ensures implementation of GAB decisions. Directs and controls Title XIX compliance activities. Reviews contractor, State agency and State fiscal agent performance in determining the correct amount of provider, physician and supplier overpayments, and assists contractors, State agencies and fiscal agents in negotiations related to the acceptability of the technique for determining the amount of overpayment and the methods of recovery. When compromises are not appropriate and overpayments are uncollectable, prepares cases and, in general, assists the General Accounting Office, the Office of the General Counsel and the Department of Justice in filing suit. Prepares manual instructions concerning the proper determination and recovery of overpayments. Designs, implements and maintains a Medicare/Medicaid overpayment tracking system. Directs the procesing of all Medicare (Part A) beneficiary appeals and beneficiary overpayments. Plans, directs and coordinates the processing of claims submitted for reconsideration and hearings. Reviews Office of Hearings and Appeals, Social Security Administration, decisions.

—Section FP.20.A.4.e., Division of Group Health Plans Operations (FPA75), is deleted in its entirety.

—A new Section FP.20.A.5, Office of Prepaid Operations (FPA9), is added to read as follows:

5. Office of Prepaid Operations (FPA9)

Develops, plans and conducts a comprehensive program to contract with and make payments to prepaid health plans (including Health Maintenance Organizations, Health Care Prepayment Plans, Competitive Medical Plans and Intermediaries at Risk) for the provision of services under the Medicare program. Coordinates and monitors the implementation with HCFA and HHS components in regard to contract administration, capitation formula, reimbursement policies and the prepaid health care information system. Determines the amounts of payments to be made to prepaid health plans and the amounts, methods and frequency of retroactive adjustments. Incorporates a prospective payment system for prepaid health care through the implementation of the Tax Equity and Fiscal Responsibility Act risk contracts. Evaluates cost reporting methodologies and conducts a continuing audit program to determine the final program liability for cost contracts. Conducts or participates in studies aimed at long-

range improvements and the overall evaluation of prepaid health care and its impact on the Medicare program. Represents HCFA at the national level to maintain and promote prepaid health plan participation in the Medicare program.

Dated: December 24, 1985.

C. McClain Haddow,

Acting Administrator, Health Care Financing Administration.

[FR Doc. 86-442 Filed 1-8-86; 8:45 am]

BILLING CODE 4120-01-M

Food and Drug Administration

[Docket No. 84-0433]

Canned Pacific Salmon Deviating From Identity Standard; Amendment and Extension of Temporary Marketing Permit

AGENCY: Food and Drug Administration.

ACTION: Notice.

SUMMARY: The Food and Drug Administration (FDA) is announcing that (1) a temporary permit to market test canned chunked-style, skinless and boneless salmon packed in water is being amended to reflect a change in the name of the permit holder; and (2) the expiration date of the permit is being extended. This extension will allow the permit holder to continue experimental market testing of the product while the agency takes action on the permit holder's petition to amend the standard for canned Pacific salmon.

DATE: The new expiration date of the permit will be either the effective date of a final rule for any proposal to amend the standard of identity for canned Pacific salmon which may result from the petition, or 30 days after termination of such proposal.

FOR FURTHER INFORMATION CONTACT: Johnnie G. Nichols, Center for Food Safety and Applied Nutrition (HFF-215), Food and Drug Administration, 200 C Street, SW., Washington, DC 20204, 202-485-0101.

SUPPLEMENTARY INFORMATION: A temporary permit was issued under the provisions of 21 CFR 130.17 to Ralston Purina Co., St. Louis, MO 63164, to market test canned chunked-style, skinless and boneless salmon packed in water to test consumer acceptance of the new style pack. The permit was issued in order to facilitate market testing of foods that deviate from the requirements of the standard of identity promulgated under section 401 of the Federal Food, Drug, and Cosmetic Act (21 U.S.C. 341). Notice of issuance of the temporary permit to Ralston Purina Co. was published in the Federal Register of January 17, 1985 (50 FRF 2619). The expiration date of the permit is April 13, 1986.

Since the permit was issued, the seafood division of Ralston Purina Co. has become a wholly owned subsidiary of Van Camp Seafood Co., Inc. Ralston Purina Co. has requested that the temporary permit be amended to reflect the change in the name of the permit holder. Accordingly, FDA is amending the temporary permit to indicate that Van Camp Seafood Co., Inc., is the permit holder and that company name will be declared as the manufacturer on the test product label.

Ralston Purina has also requested that the temporary permit be extended so the market test period can continue while agency action on a pending petition submitted by Ralston Purina to amend the canned Pacific salmon standard proceeds. FDA has concluded that it is in the interest of consumers to issue the extension. FDA is inviting interested persons to participate in the market test under the conditions that apply to Van Camp Seafood, Co., Inc. (formerly Ralston Purina Co.) including the labeling requirements and the amounts of test product to be distributed, except that the designated area of distribution shall not apply.

Any interested person who wishes to participate in the market test must notify, in writing, the Deputy Director, Division of Food Technology (HFF-211), Center for Food Safety and Applied Nutrition, Food and Drug Administration, 200 C St., SW., Washington, DC 20204. The notification must include the amount of test product to be distributed, the area of distribution, and labeling that will be used for the test product.

Therefore, FDA is amending the permit to change the name under which the permit is held and, under the provisions of § 130.17(i) (21 CFR 130.17(i)), FDA is extending the expiration date of the permit such that the permit expires either on the effective date of a final rule for any proposal to amend the standard of identity for canned Pacific salmon which may result from the pending petition, or 30 days after termination of such proposal. All other conditions and terms of this permit remain the same.

Dated: December 30, 1985.

Sanford A. Miller,

Director, Center for Food Safety and Applied Nutrition

[FR Doc. 85-412 Filed 1-8-85; 8:45 am]

BILLING CODE 41670-01-M

DEPARTMENT OF THE INTERIOR

Office of the Secretary

President's Commission on Americans Outdoors; Meeting

Pursuant to section 10(a)(2) of the Federal Advisory Committee Act (Pub. L. 92-463), as amended, notice is hereby given that a meeting of the President's Commission on Americans Outdoors (Commission) will be held Thursday, January 30, 1986, starting at 9:00 am, in the Walt Disney Conference Center on Club Lake Drive, Lake Buena Vista, Florida 32830.

This will be a hearing to obtain information on the kinds of programs that are provided and opportunities afforded in recreation programs in this country. Attendees have been invited by the Commission for this public hearing; however interested parties may request time to testify by contacting the Commission.

This meeting is opened to the public, interested persons may attend. The Commission contact is Mr. James Gasser, and he may be contacted at the President's Commission on Americans Outdoors, P.O. Box 18547, 1111-20th Street, NW, Washington, DC 20036-8547, (202) 634-7310.

Dated January 3, 1986.

Victor H. Ashe,

Executive Director, President's Commission on Americans Outdoors.

[FR Doc. 86-478 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-70-M

Bureau of Land Management

Wyoming; Emergency Closure of Public Lands

AGENCY: Bureau of Land Management, Interior.

ACTION: Emergency closure of public lands.

SUMMARY: Notice is hereby given that effective December 28, 1985, and until April 30, 1986, most of the public lands within the Slate Creek elk winter range will be closed to all motor vehicles. The boundary of the ORV closure consists of all public land north and west of Highway 189, beginning at the Windy Point Road (more recently called the Horsetrap Unit Road), and ending at the Fontenelle Creek Road and all public lands south of the Fontenelle Creek Road and east of Slate Creek Ridge. The legal description of the closure includes those portions of Sections 1, 2, 12 and 13, T. 22 N., R. 115 W., east of the Windy

Point Road and north of Highway 189; Sections 1–11, and 15–18, T. 22 N., R. 114 W., north of Highway 189; Sections 1–4, 7–16, 21–28, and 33–36, T. 23 N., R. 115 W., east of Slate Creek Ridge; all of T. 23 N., R. 114 W., except that portion of Section 36 southeast of Highway 189; Sections 1–5, 8–17, 2–22, 28, 29, and 32, northwest of Highway 189 in T. 23 N., R. 113 W., Sections 6 and 7 northwest of Highway 189 in T. 23 N., R. 112 W., Sections 7, 18, 19, 29–32, T. 24 N., R. 112 W., east of Highway 189, and south of Fontenelle Creek Road; Sections 8–17, 20–29, and 32–36 south of the Fontenelle Creek Road in T. 24 N., R. 113 W., Sections 1–4, 9–16, 21–28, and 33–36 south of Fontenelle Creek Road and Fontenelle Creek and east of Slate Creek Ridge in T. 24 N., R. 115 W., 6th Principal Meridian.

The purpose of this closure is to prevent undue stress on the elk and deer, and to help maintain the elk herds on their natural winter ranges. The authority for this closure is 43 CFR 8341.2 and 43 CFR 8364.1.

This closure does not apply to state and private lands, access to the Horsetrap Oil and Gas Unit, or to private residences within the boundaries of this closure order.

Agnes M. Okano,

Acting District Manager.

[FR Doc. 86–424 Filed 1–8–86; 8:45 am]

BILLING CODE 4310-22-M

National Public Lands Advisory Council; Renewal

This notice is published in accordance with section 9(a)(2) of the Federal Advisory Committee Act of 1972 (Pub. L. 92–463). Following consultation with the General Services Administration, notice is hereby given that the Secretary of the Interior is renewing the National Public Lands Advisory Council to provide advice concerning policy issues related to the resources and uses of the public lands administered by the Department of the Interior through the Bureau of Land Management.

Further information concerning the Council may be obtained from the Director, Bureau of Land Management (150), U.S. Department of the Interior, Main Interior Building, Room 5558, Washington, DC 20240.

The certification of renewal is published below.

Certification

I hereby certify that the renewal of the National Public Lands Advisory Council is necessary and in the public interest in connection with the performance of duties imposed on the Department of the Interior by the Federal Land Policy and Management Act of 1976, Pub. L. 94–579.

Dated: December 17, 1985.

Donald Paul Hodel,

Secretary of the Interior.

[FR Doc. 86–418 Filed 1–8–86; 8:45 am]

BILLING CODE 4310-10-M

Arizona; Filing of Plats of Survey

January 3, 1986.

1. The plats of survey of the following described lands were officially filed in the Arizona State Office, Phoenix, Arizona, on the dates indicated:

A plat representing a dependent resurvey of a portion of the subdivision lines of section 33, Township 11 North, Range 18 West, Gila and Salt River Meridian, Arizona, was accepted October 1, 1985, and was officially filed October 3, 1985.

A supplemental plat showing additional lottings in Sections 8 and 9, Township 23 South, Range 23 East, Gila and Salt River Meridian, Arizona, was accepted October 1, 1985, and was officially filed October 3, 1985.

These plats were prepared at the request of the Bureau of Land Management, Yuma District and Safford District Office, respectively.

A plat representing a dependent resurvey of portions of the west boundary and subdivisional lines and a survey of subdivisions in Section 18, Township 14 North, Range 2 West, Gila and Salt River Meridian, Arizona, was accepted October 15, 1985, and was officially filed October 17, 1985.

This plat was prepared at the request of the U.S. Forest Service, Prescott National Forest.

2. These plats will immediately become the basic records for describing the land for all authorized purposes. These plats have been placed in the open files and are available to the public for information only.

3. All inquiries relating to these lands should be sent to the Arizona State Office, Bureau of Land Management, P.O. Box 16563, Phoenix, Arizona 85011.

James P. Kelly,

Chief, Branch of Cadastral Survey.

[FR Doc. 86–443 Filed 1–8–86; 8:45 am]

BILLING CODE 4310-32-M

Closure of Public Lands in Ada County, ID

AGENCY: Bureau of Land Management, Idaho.

ACTION: Notice of closure of public lands in Ada County, Idaho.

Pursuant to 43 CFR 8364.1(a), the following described public lands are hereby closed to access and use by the general public for the reasons listed below:

Boise Meridian

T. 2S., R. 2 E.,
Section 1, S½,
Section 2, SW¼NE¼, SE¼NW¼, S½,
Section 3, S½SE¼,
Section 10, E½, E½NW¼, E½E½SW¼,
Section 11 to 15, inclusive,
Section 22, E½E½, E½NW¼NE¼,
Section 23 to 26, inclusive,
Section 27, E½NE¼, NE¼NE¼SE¼,
Section 34, E½SE¼NE¼, NE¼NE¼SE¼,
Section 35;

T. 2S., R. 3 E., Boise Meridian,
Section 1, SW¼SW¼,
Section 2, S½S½,
Section 3, lots 3, 4, SW¼SW¼NE¼, S½NW¼, S½,
Section 4, S½N½, S½,
Section 5, S½S½NE¼, S½,
Section 6, lots 6, 7, E½SW¼, SE¼,
Section 7 to 11, inclusive,
Section 12, SW¼SW¼NE¼, W½, W½SE¼, SW¼SE¼SE¼,
Section 13 to 15, inclusive,
Section 17 to 35, inclusive,

T. 2 S., R. 4 E., Boise Meridian,
Section 18, lots 1–4, SW¼NW¼NE¼, SW¼NE¼, SW¼SE¼NE¼, E½SW¼, SE¼
Section 19,
Sections 30 and 31, inclusive,

T. 3 S., R. 2 E., Boise Meridian,
Section 1,
Section 2, lots 1–3, S½NE¼, N½SE¼N W¼, SE¼SE¼NW¼, NE¼NE¼SW¼, SE¼,
Section 11, E½NE¼NE¼, NW¼NE¼N E¼,
Section 12, E½, N½NW¼, N½S½NW¼, SE¼SE¼NW¼,
Section 13, NE¼, E½SE¼, E½NW¼SE¼,
Section 24, NE¼NE¼, E½SE¼NE¼;

T. 3 S., R. 3 E., Boise Meridian,
Section 1 to 15, inclusive,
Section 17, to 24, inclusive,
Section 25, N½, SW¼, N½SE¼, SW¼SE¼,
Section 26 to 29, inclusive,
Section 30, N½NE¼, SE¼NE¼,
Section 33, N½N½N½,
Section 34, N½NW¼NW¼,
Section 35, N½NE¼NE¼;

T. 3 S., R. 4 E., Boise Meridian,
Section 5, W½W½SW¼, SE¼SW¼SW¼,
Section 6, lots 2–4, SW¼NE¼,† W½SE¼ NE¼, SE¼SE¼NE¼, S½NW¼, S½,
Section 7,
Section 8, W½W½, SW¼SE¼NW¼, W½, W½SW¼, SE¼S¼,
Section 17, W½W½NE¼, SE¼SW¼NE¼, W½, W½SE¼, W½SE¼SE¼,
Section 18 and 19, inclusive,
Section 20, N½NE¼, N½SW¼NE¼, SW¼SW¼NE¼, NW¼, N½NE¼SW¼, SW¼NE¼SW¼, NW¼SW¼, N½SW¼SW¼,

Section 30, lots 1–3, NW¼NE¼NE¼, NW¼NE¼, NE¼NW¼, N½SE¼NW¼, SW¼SE¼NW¼.

These lands are hereby closed to all forms of access and use including motorized vehicles, horseback, and foot traffic. This closure, which shall remain in full force and effect until further notice, does not apply to the Idaho Military Division (IMD) personnel, National Guard Units operating under IMD authorization, BLM personnel, and livestock operators authorized by the BLM.

These lands are being closed for safety of the general public because the area is used for the impact of projectiles fired during military exercises. Some of the projectiles are explosive but fail to detonate on contact and can explode without warning. It is impossible to completely decontaminate the area of these unexploded projectiles; therefore, it is essential to close it to the general public.

Use of the areas described above by the Idaho Military Division is authorized by the Federal Land Policy and Management Act through a Memorandum of Understanding between the Idaho State director of the Bureau of Land Management and the Governor of the State of Idaho. The Memorandum of Understanding and other documents relating to this closure are available for inspection at the BLM Boise District Office, 3948 Development Avenue, Boise, Idaho 83705.

Dated: December 6, 1985

Martin J. Zimmer,

District Manager.

[FR Doc. 86–421 Filed 1–8–86; 8:45 am]

BILLING CODE 4310–66–M

[M 59730—State Exchange]

Opening of Public Lands; Beaverhead County, MT

AGENCY: Bureau of Land Management, Interior.

ACTION: Notice of Conveyance and Order Providing for Opening of Public Land in Beaverhead County, Montana.

SUMMARY: This order will open lands reconveyed to the United States in an exchange under the Federal Land Policy and Management Act of 1976, 43 U.S.C. 1701, et seq. (FLPMA), to the operation of the public land laws. It also informs the public and interested government officials of the issuance of the patent. All oil and gas deposits were reserved by both parties in the exchange.

DATE: At 9 a.m. on February 24, 1986, the lands reconveyed to the United States shall be open to the operation of the public land laws, subject to valid existing rights, the provisions of existing withdrawals and the requirements of applicable law. The lands described in paragraph one below were segregated from settlement, sale, location and entry, including the mining laws, but not from exchange, by the Notice of Realty Action published in the **Federal Register** on July 6, 1984 (49 FR 27831). The segregation terminated issuance of the patent.

ADDRESS: For Further Information Contact: Edward H. Croteau, Chief, Lands Adjudication Section, Bureau of Land Management, Montana State Office, P.O. Box 36800, Billings, Montana 59107, Telephone (406) 657–6082.

SUPPLEMENTARY INFORMATION: 1. Notice is hereby given that pursuant to the Act of October 21, 1976, the following described public land, with all oil and gas deposits reserved to the United States, was conveyed to the State of Montana:

Principal Meridian, Montana

T. 13 S., R. 6 W.,
Sec. 23, S½;
Sec. 26, SW¼;
Sec. 27, W½NE¼, SE¼NE¼, N½NW¼, SE¼;
Sec. 28, NE¼;
Sec. 34, E½NE¼, NE¼SE¼;
Sec. 35, N½NE¼, NW¼NW¼.
T. 13 S., R. 9 W.,
Sec. 21, N½, N½SW¼.
T. 12 S., R. 10 W.,
Sec. 10, W½;
Sec. 15, W½;
Sec. 22, W½.
Aggregating 2,600 acres.

2. In exchange for the above-selected land, the United States acquired the following described land, excluding the oil and gas deposits, in Beaverhead County, Montana:

Principal Meridian, Montana

T. 11 S., R. 7 W.,
Sec. 16, all.
T. 12 S., R. 7 W.,
Sec. 7, W½NE¼, E½NW¼, N½SE¼;
Sec. 6, SW¼NE¼, SE¼NW¼, N½SW¼.
T. 13 S., R. 7 W.,
Sec. 3, S½SW¼;
Sec. 4, S½S½;
Sec. 9, NW¼NE¼, SE¼NE¼, N½SW¼;
Sec. 10, SW¼NW¼;
Sec. 11, S½NW¼, SW¼.
T. 11 S., R. 8 W.,
Sec. 36, all.
T. 12 S., R. 8 W.,
Sec. 13, NW¼NE¼, N½NW¼, SW¼NW¼, E½SW¼.

Aggregating 2,600 acres.

3. The values of federal public land and the nonfederal land in the exchange were appraised at $390,000 each.

4. At 9 a.m. on February 24, 1986, the land described in paragraph 2 above will be open to the operation of the public land laws.

January 2, 1986.

John A. Kwiatkowski,

Deputy State Director, Division of Lands and Renewable Resources.

[FR Doc. 86–422 Filed 1–8–86; 8:45 am]

BILLING CODE 4310–DN–M

Minerals Management Service

Development Operations Coordination Document; Corpus Christi Oil and Gas Co.

AGENCY: Minerals Management Service, Interior.

ACTION: Notice of the receipt of a proposed Development Operations Coordination Document (DOCD).

SUMMARY: Notice is hereby given that Corpus Christi Oil and Gas Company has submitted a DOCD describing the activities it proposes to conduct on Lease OCS–G 6147, Block 86, High Island Area, offshore Texas. Proposed plans for the above area provide for the development and production of hydrocarbons with support activities to be conducted from an onshore base located at Sabine Pass, Texas.

DATE: The subject DOCD was deemed submitted on December 31, 1985.

ADDRESS: A copy of the subject DOCD is available for public review at the Office of the Regional Director, Gulf of Mexico OCS Region, Minerals Management Service, 3301 North Causeway Blvd., Room 147, Metairie, Louisiana (Office Hours: 9 a.m., Monday through Friday).

FOR FURTHER INFORMATION CONTACT: Michael J. Tolbert; Minerals Management Service; Gulf of Mexico OCS Region; Rules and Production; Plans, Platform and Pipeline Section; Exploration/Development Plans Unit; Phone (504) 838–0875.

SUPPLEMENTARY INFORMATION: The purpose of this Notice is to inform the public, pursuant to Sec. 25 of the OCS Lands Act Amendments of 1978, that the Minerals Management Service is considering approval of the DOCD and that it is available for public review.

Revised rules governing practices and procedures under which the Minerals Management Service makes information contained in DOCDs available to affected states, executives of affected local governments, and other interested parties became effective December 13, 1979, (44 FR 53685). Those practices and

procedures are set out in revised § 250.34 of Title 30 of the CFR.

Dated: January 3, 1986.

J. Rogers Pearcy,

Acting Regional Director, Gulf of Mexico OCS Region.

[FR Doc. 86-425 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-MR-M

Development Operations Coordination Document; Exxon Co., U.S.A.

AGENCY: Minerals Management Service, Interior.

ACTION: Notice of the receipt of a proposed Development Operations Coordination Document (DOCD).

SUMMARY: Notice is hereby given that Exxon Company, U.S.A. has submitted a DOCD describing the activities it proposes to conduct on Leases OCS-G 1201, 1204, and 1205, Blocks 69, 72, and 73, respectively, South Marsh Island Area, offshore Louisiana. Proposed plans for the above area provide for the development and production of hydrocarbons with support activities to be conducted from an onshore base located at Intracoastal City, Louisiana.

DATE: The subject DOCD was deemed submitted on January 3, 1986.

ADDRESSES: A copy of the subject DOCD is available for public review at the Office of the Regional Director, Gulf of Mexico OCS Region, Minerals Management Service, 3301 North Causeway Blvd., Room 147, Metairie, Louisiana (Office Hours: 9 a.m. to 3:30 p.m., Monday through Friday).

FOR FURTHER INFORMATION CONTACT: Ms. Angie Gobert, Minerals Management Service; Gulf of Mexico OCS Region; Rules and Production; Plans, Platform and Pipeline Section; Exploration/Development Plans Unit; Phone (504) 838-0876.

SUPPLEMENTARY INFORMATION: The purpose of this Notice is to inform the public, pursuant to section 25 of the OCS Lands Act Amendments of 1978, that the Minerals Management Service is considering approval of the DOCD and that it is available for public review.

Revised rules governing practices and procedures under which the Minerals Management Service makes information contained in DOCDs available to affected states, executives of affected states, local governments, and other interested parties became effective December 13, 1979, (44 FR 53685). Those practices and procedures are set out in revised § 250 34 of Title 30 of the CFR.

Dated: January 3, 1986.

J. Rogers Pearcy,

Acting Regional Director, Gulf of Mexico OCS Region.

[FR Doc. 86-426 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-MR-M

Development Operations Coordination Document; Exxon Co., U.S.A.

AGENCY: Minerals Management Service, Interior.

ACTION: Notice of the receipt of a proposed Development Operations Coordination Document (DOCD).

SUMMARY: Notice is hereby given that Exxon Company, U.S.A. has submitted a DOCD describing the activities it proposes to conduct on Lease OCS-G 3237, Block 193, High Island Area, offshore Texas. Proposed Plans for the above area provide for the development and production of hydrocarbons with support activities to be conducted from an onshore base located at Intracoastal City, Louisiana.

DATE: The subject DOCD was deemed submitted on December 30, 1985.

ADDRESS: A copy of the subject DOCD is available for public review at the Office of the Regional Director, Gulf of Mexico OCS Region, Minerals Management Service, 3301 North Causeway Blvd., Room 147, Metairie, Louisiana (Office Hours: 9 a.m. to 3:30 p.m., Monday through Friday).

FOR FURTHER INFORMATION CONTACT: Michael J. Tolbert, Minerals Management Service; Gulf of Mexico OCS Region; Rules and Production; Plans, Platform and Pipeline Section; Exploration/Development Plans Unit; Phone (504) 838-0875.

SUPPLEMENTARY INFORMATION: The purpose of this Notice is to inform the public, pursuant to section 25 of the OCS Lands Act Amendments of 1978, that the Minerals Management Service is considering approval of the DOCD and that it is available for public review.

Revised rules governing practices and procedures under which the Minerals Management Service makes information contained in DOCDs available to affected states, executives of affected states, local governments, and other interested parties became effective December 13, 1979, (44 FR 53685). Those practices and procedures are set out in revised §250.34 of Title 30 of the CFR.

Dated: December 31, 1985.

J. Rogers Pearcy,

Acting Regional Director, Gulf of Mexico OCS Region.

[FR Doc. 86-427 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-MR-M

Development Operations Coordination Document; Union Oil Co. of California

AGENCY: Minerals Management Serivce, Interior.

ACTION: Notice of the receipt of a proposed Development Operations Coordination Document (DOCD).

SUMMARY: Notice is hereby given that Union Oil Company of California has submitted a DOCD describing the activities it proposes to conduct on Lease OCS 0549, Block 35, Vermilion Area, offshore Louisiana. Proposed plans for the above area provide for the development and production of hydrocarbons with support activities to be conducted from an onshore base locaed at Intracoastal City, Louisiana.

DATE: The subject DOCD was deemed submitted on December 31, 1985.

ADDRESS: A copy of the subject DOCD is available for public review at the Office of the Regional Director, Gulf of Mexico OCS region, Minerals Management Serivce, 3301 North Causeway Blvd., Room 147, Metairie, Louisiana (Office Hours: 9 a.m. to 3:30 p.m., Monday through Friday).

FOR FURTHER INFORMATION CONTACT: Michael J. Tolbert, Minerals Management Serivce; Gulf of Mexico OCS Region; Rules and Production; Plans, Platform and Pipeline Section; Exploration/Development Plans Unit; Phone (504) 838-0875.

SUPPLEMENTARY INFORMATION: The purpose of this Notice is to inform the public, pursuant to section 25 of the OCS Lands Act Amendments of 1978, that the Minerals Management Service is considering approval of the DOCD and that it is available for public review.

Revised rules governing practices and procedures under which the Minerals Management Service makes information contained in DOCDs available to affected states, executives of affected states, local governments, and other interested parties became effective December 13, 1979, (44 FR 53685). Those practices and procedurs are set out in revised § 250.34 of Title 30 of the CFR.

Dated: January 3, 1986.

J. Rogers Pearcy,

Acting Regional Director, Gulf of Mexico OCS Region.

[FR Doc. 86-428 Filed 1-8-86; 8:45 am]

BILLING CODE 4310-MR-M

INTERNATIONAL TRADE COMMISSION

[Investigation No. 701-TA-254 (Final)]

Import Investigations; Certain Red Raspberries From Canada

AGENCY: International Trade Commission.

ACTION: Suspension of final countervailing duty investigation.

SUMMARY: Effective December 26, 1985, the United States Department of Commerce suspended its countervailing duty investigation involving certain red raspberries from Canada. The basis for the suspension is an agreement to offset or eliminate completely all benefits provided by the governments of Canada and of the Province of British Columbia which the Department of Commerce finds to constitute subsidies on exports of certain red raspberries to the United States. Accordingly, the United States International Trade Commission hereby gives notice of the suspension of its countervailing duty investigation No. 701-TA-254 (Final) involving imports from Canada of certain red raspberries, provided for in items 146.54, 146.56 and 146.74 of the Tariff Schedules of the United States.

EFFECTIVE DATE: December 26, 1985.

FOR FURTHER INFORMATION CONTACT: Stephen Vastagh (202-523-0283), Office of Investigations, U.S. International Trade Commission, 701 E Street NW., Washington, DC 20436. Hearing-impaired individuals are advised that information on this matter can be obtained by contacting the Commission's TDD terminal on 202-724-0002.

Authority

This notice is published pursuant to § 207.40 of the Commission's rules (19 CFR 207.40)

Issued: January 6, 1986.

By order of the Commission.

Kenneth R. Mason,

Secretary.

[FR Doc. 86-432 Filed 1-8-86; 8:45 am]

BILLING CODE 7020-02-M

INTERSTATE COMMERCE COMMISSION

[Finance Docket No. 30741]

Burlington Northern Railroad Co., Merger Exemption, Galveston Terminal Railway Co.

The Burlington Northern Railroad Company (BN) and Galveston Terminal Railway Company (GTRC) filed a notice of exemption for GTRC to merge into BN.

GTRC is a wholly-owned subsidiary of BN. Consummation of the merger will promote corporate simplification and eliminate the expense and burden associated with maintenance of GTRC as a separate corporate entity. Under the merger plan, GTRC will be dissolved as a separate corporate entity, and all of its assets and liabilities will be vested in BN. No reduction of transportation facilities are contemplated and no obligations of GTRC will be impaired.

This is a transaction within a corporate family of the type specifically exempted from the necessity of prior review and approval under 49 CFR 1180.2(d)(3). It will not result in adverse changes in service levels, significant operational changes, or a change in the competitive balance with carriers outside the corporate family.

As a condition to use of this exemption, any employees affected by the merger shall be protected pursuant to *New York Dock Ry.-Control-Brooklyn Eastern District*, 360 I.C.C. 60 (1979).

Decided: December 19, 1985.

By the Commission, Heber P. Hardy, Director, Office of Proceedings.

James H. Bayne,

Secretary.

[FR Doc. 86-438 Filed 1-8-86; 8:45 am]

BILLING CODE 7035-01-M

[Finance Docket No. 30389 (Sub-1), et al.]

Seaboard System Railroad, Inc.; Trackage Rights; Southern Railway Co. et al.

In Finance Docket No. 30389 (Sub-No. 1), Southern Railway Company has agreed to grant temporary overhead trackage rights to Seaboard System Railroad, Inc., between Appalachia, VA (MP 0.74) and Frisco, TN (MP 46. 48T).

In Finance Docket No. 30390 (Sub-No. 1), Seaboard System Railroad, Inc. has agreed to grant temporary overhead trackage rights to Norfolk and Western Railway Company and Southern Railway Company, between St. Paul, VA (MP 42.2) and Frisco, TN (MP 98.24).

In Finance Docket No. 30391 (Sub-No. 1), Norfolk and Western Railway Co., Southern Railway Company and Interstate Railroad Company have agreed to grant temporary overhead trackage rights for operation of interroad trains to each other, between Norton (MP N-465.8) and Carbo (MP N-434.5), VA and Bulls Gap, TN (MP 87.OTC).

The trackage rights will be effective on January 1, 1986, and will terminate on July 1, 1986.

This notice is filed under 49 CFR 1180.2(d)(7). Petitions to revoke the exemption under 49 U.S.C. 10505(d) may be filed at any time. The filing of a petition to revoke will not stay the transaction.

Dated: December 31, 1985.

By the Commission, Jane F. Mackall, Acting Director, Office of Proceedings.

James H. Bayne,

Secretary.

[FR Doc. 86-440 Filed 1-8-86; 8:45 am]

BILLING CODE 7035-01-M

NATIONAL FOUNDATION ON THE ARTS AND THE HUMANITIES

Media Arts Advisory Panel; Meeting

Pursuant to section 10 (a)(2) of the Federal Advisory Committee Act (Pub. L. 92-463), as amended, notice is hereby given that a meeting of the Media Arts Advisory Panel (Film/Video Production Prescreening) to the National Council on the Arts will be held on January 27-29, 1986 from 9:00 am—5:30 pm in room 716 of the Nancy Hanks Center, 1100 Pennsylvania Avenue, NW, Washington, DC 20506.

This meeting is for the purpose of Panel review, discussion, evaluation, and recommendation on applications for financial assistance under the National Foundation on the Arts and the Humanities Act of 1965, as amended, including discussion of information given in confidence to the agency by grant applicants. In accordance with the determination of the Chairman published in the **Federal Register** of February 13, 1980, these sessions will be closed to the public pursuant to subsections (c) (4), (6) and 9(b) of section 552b of Title 5, United States Code.

Further information with reference to this meeting can be obtained from Mr. John H. Clark, Advisory Committee Management Officer, National Endowment for the Arts, Washington, DC 20506, or call (202) 682-5433.

Yvonne M. Sabine,

Acting Director, Office of Council and Panel Operations, National Endowment for the Arts.

[FR Doc. 86-419 Filed 1-8-86; 8:45 am]

BILLING CODE 7537-01-M

NATIONAL SCIENCE FOUNDATION

Program Solicitation for Elementary School Science Instruction

This document is one of a series of targeted program solicitations that NSF's Directorate for Science and

Engineering Education will issue to elicit proposals directed toward high priority problems and opportunities facing mathematics, science and technology education in the Nation's schools.

This particular solicitation is intended to encourage partnerships between publishers, school systems and science education materials-developers—so as to provide several competitive, high-quality alternative science programs for use in typical American elementary schools.

These solicitations are intended to supplement, not to supplant, current guidelines and announcements, which describe the broad range of interests of NSF's Divisions of Materials Development, Research and Informal Science Education (see NSF Publication 85–10) and of Teacher Preparation and Enhancement (NSF 85–9).

National Science Foundation, Directorate for Science and Engineering Education, Division of Materials Development, Research and Informal Science Education, Instructional Materials Development Program, Submission Deadline: May 15, 1986.

Introduction

The Division of Materials Development, Research and Informal Science Education (DMDRI) supports a wide range of projects designed to provide new and improved models and materials that can help to increase the quality of, and continuously renew, the nation's educational systems in mathematics, science and technology. This broad goal translates into four objectives that frame the Division's programs:

- Expand our understanding of the factors that promote effective teaching and learning of mathematics, science and technology;
- Stimulate the development of exemplary educational models and materials—incorporating the most recent advances in subject matter, research in teaching and learning, and instuctional technology—and facilitate their use in the schools;
- Encourage informal learning through programs of mass media that can reach larage portions of the population efficiently and effectively, together with science museum exhibits and activities that provide direct hands-on experience, and science related programs of recreational organizations; and
- Analyze the potential for, and explore the use of, advanced technologies in education.

The Division employs a combined approach in eliciting and selecting projects for support. First, the Division accepts "unsolicited" proposals submitted in response to program announcements describing its general purview and interests (e.g., NSF 85–10).

Second, the Division issures periodic program solicitations that supplement these guidelines and focus resources on specific high priority problems and opportunities. Generally, these solicitations will be designed to leverage or energize activity that will be self-perpetuating or have other lasting impact, and will be for one-time NSF support.

This is one such solicitation. Its focus is the creation of improved programs and materials for science instruction in elementary shcools.

The Division also has issued recently another solicitation, focused on the creation of improved materials and model programs for elementary school mathematics. A third solicitation, targeted on the preparation of middle school science and mathematics teachers, has been issued by the Division of Teacher Preparation and Enhancement.

Solicitation

Research has demonstrated the clear and lasting impact of early learning—not only as a base for further education, but also for establishing patterns of study, talent, reasoning and curiosity. This is particularly true in the sciences, where stimulation of intellectual curiosity and an early introduction to important principles and concepts is critical to later success. Without a challenging and involving introduction, talent is less likely to appear or flourish.

Research has also shown a great deal about how science should ideally be taught. We know that early education in the sciences should establish a background of broad principles and concepts that can be developed and extended over the course of years. And we know that children should learn the fundamentals of inquiry and discovery, making their own observations and interpretations so as to develop patterns of critical thinking that can serve them throughout their lives. This habit of disciplined inquiry and analysis is the essential characteristic of scientific discovery.

Yet very little time is devoted to science instruction in most elementary schools, and learning that involves active initiative and participation by the child, other than as a reader, is rare indeed. In many elementary school classrooms, science is not taught at all.

This is not for a lack of materials or demonstrations. There exist many instructional materials of high quality for teaching science to elementary school children. And these materials are being used or adapted very successfully in a small number of schools and systems. But their attractive potential seems difficult to realize in the vast majority of the Nation's schools.

Some of the obstacles and impediments to implementing model programs are clear. For the child to be an active participant in learning science requires facilities, materials, maintenance, and support staff that usually are not available in a typical elementary school. All these require money. Just as important, they require a change in approach by teachers and school administrators.

The classical methods of teaching—"teach-to-the-text" and "read-and-recite"—are deeply embedded in our schools. And elementary schools are already burdened with major obligations: What should be displaced to make way for added hours of science? What strategies for educational change are most effective for modifying well established practices?

The purpose of this solicitation is to encourage proposals to develop materials and programs that address these complex problems in today's schools and classrooms.

Perhaps there is a need to modify currently available materials, or to adapt them in ways that encourage their use. Perhaps there is a need for new materials that are better adapted to the realities and styles of more typical schools and teachers. Perhaps there need to be special efforts or materials that help schools and teachers. Perhaps there are particularly critical facilities or activities that would stimulate change.

Perhaps there is a need for special work with teachers or special programs to inform parents. Perhaps it is possible to combine science with other activities, such as reading and mathematics.

Perhaps all of the above.

* * * * *

Proposals are sought for projects that will improve the content, increase the role of the child as an active agent in the learning process, and lead to an increase in the time allotted to science instruction in elementary schools. We seek to foster a number of exemplary programs that can serve as alternative real-world models for schools and systems that are eager to change.

An ideal proposal should build on the strengths of existing instructional materials—modifying, adapting, selecting or otherwise exploiting them as part of a cohesive science program for elementary school use, i.e., for grades K–6 or for a subset of these grade levels.

Among possible activities that could be included is the establishment and testing of model elementary school science programs. Projects that integrate science with other subjects or areas of instruction will also be eligible for consideration. Projects may focus on limited areas of elementary school science but, if so, they should include plans for coordinating any newly developed materials with existing activities and materials to form a cohesive program.

It is expected that projects will devote special attention to frequent hands-on experiences, and will establish a coherent pattern of science topics appropriate for elementary school instruction. To the extent possible, projects should capitalize upon the experience and interests of children.

Proposals should reflect relevant research in teaching, learning and the use of technology. They should also discuss the standards of student achievement that will be sought and describe how the success of the project will be measured. This discussion should include criteria to be used in the evaluation of adoption and change in the school environment.

The Division of Materials Development, Research and Informal Science Education expects to make three to six awards in this area, with a duration of 3–4 years each. The total funding for these awards will approximate $10,000,000.

Important Considerations

The purpose of this solicitation is to provide alternative models for improvement and change. Thus, proposals, should reflect a clear and consistent view of the purpose of early science education, and should evidence insight into the impediments to providing this. Proposals will be weighed significantly on the basis of the coherence of this philosophy, and the credibility of the plan to bring about meaningful change.

At a minimum, every proposal should include:

- A clear and consistent view of the goals of early science education, and a discussion of how these goals can be accommodated within the competing demands and constraints of typical schools and systems;
- A preliminary discussion of existing elementary school science materials—including identification of gaps, problems or obsolescence;
- Discussion of a plan to develop, select, revise or supplement materials, so as to serve the needs of typical teachers and students;
- Discussion of implementation issues and impediments to adoption—and how these will be addressed by the project;
- Discussion of any plans to develop supplementary programs or materials for use by teachers, school administrators and parents;
- Discussion of plans for assuring the accuracy of the science and for incorporating the most recent findings of research in teaching and learning, including appropriate content advice for scientists, teachers and educators;
- Description of the relationship of the proposed program to state and locally mandated elementary science programs;
- Evidence of cooperation and commitment of a representative school system that will participate in the planning, strategy and testing; and
- A strategy for promoting widespread awareness and adoption or replication of successful projects. (Participation by publishers or other dissemination agents is strongly encouraged; see the discussion below.)

* * * * *

Projects should include a combination of professionals with the appropriate broad range of knowledge and experience. Thus each proposal should document the education and experience of project staff in such areas as: science, science education, school policies and procedures, and classroom teahing at the relevant levels.

Each proposal should take into account existing programs of high quality,[1-2] the results of research on the effectiveness of previously developed materials[3-5] and the recommendations of professional societies and commissions.[6-13]

Programs should be designed, to the extent possible, to be appropriate for all students, including females, minorities, students with physical or sensory disabilities, and the gifted and talented.

Proposals should include plans for field testing and appropriate revision of the developed materials. Funds may be requested to support workshops for teachers, administrators and parents, as part of the initial implementation and testing of the materials.

Proposals should particularly address questions of how a successful program might spread to other locations. At the very least, plans should include careful documentation of the strategies for change and of experiences in implementing the materials in schools. More preferable would be plans for publication—for preparing teachers to use the materials, for making information about the materials available to state and local school agencies, and for making the materials available to schools that wish to use them. With this end in view, the involvement of publishers or other relevant organizations very early in the process of planning and development is strongly encouraged.

The Foundation is currently conducting discussions with a number of educational publishers and associations, so as to assure that such cooperation can be profitable while serving the public interest. The program staff will be pleased to provide up-to-date information on the state of these discussions, and to assist in encouraging cooperation wherever possible.

Agreements with publishers for financial participation may incorporate subsequent publication and distribution rights, as well as phased contributions by the Government and private sector. Proposers are encouraged to discuss such possibilities with the program staff.

Contributions from participants, beneficiaries or other sources are strongly encouraged. These might be in the form of in-kind services, facilities, direct contributions, release time for participating teachers, etc. Such

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[1] *New Directions in Elementary Science Teaching*, P. DeHart Hurd and J.J. Gallagher, Wadsworth Publishing Co. Inc., 1969.

[2] *Elementary Science*, J. Penick, ed. Focus on Excellence Series, National Science Teachers Association, 1982.

[3] *Effects of Activity-based Elementary Science on Student Outcomes: A Quantitative Synthesis*, T. Bredderman. Review of Educational Research 53 (1983) 499–518.

[4] *How Effective Were the Hands-on Science Programs of Yesterday?* J. Shymansky, W. Kyle, Jr., and J. Alport. Science and Children 1982.

[5] *The Effects of New Science Curricula on Student Performance*, J. Shymansky, W. Kyle, Jr., and J. Alport. Journal of Research in Science Teaching 20 (1983) 387–404.

[6] *A Revised and Intensified Science and Technology Curriculum, Grades K–12 Urgently Needed for Our Future*, Report by the NSB Commission on Precollege Education in Mathematics, Science and Technology, 1983.

[7] *Characteristics of a Good Elementary Science Program*, K. Mechling and D. Oliver. National Science Teachers Association, 1982.

[8] *Chemistry in the Kindergarten-through-Ninth Grade Curricula: Report with Recommendations*, American Chemical Society, 1983.

[9] *Educating Americans for the 21st Century*, National Science Board Commission on Precollege Education in Mathematics, Science and Technology, 1983.

[10] *Research Within Reach: Science Education*, National Science Teachers Association, 1985.

[11] *Science and Mathematics in the Schools: Report of a Convocation*, National Academy of Sciences, 1982.

[12] *Science-Technology-Society: Science Education for the 1990s*, Position Statement. National Science Teachers Association, 1982.

[13] *What Research Says to the Science Teacher*, Volume 4. National Science Teachers Association, 1982.

participation provides a particularly eloquent assurance of the importance assigned to the project.

Preparation and Submission of Proposals

For guidance on the specifics of proposal preparation, proposers should consult the two publications, *Program Announcement, Division of Materials Development and Research* (NSF 85–10) and *Grants for Scientific and Engineering Research)* (NSF 83–57).

The first of these publications (NSF 85–10) includes required forms that should accompany each proposal and a discussion of the criteria that are used in evaluating proposals. One of these required forms is a Cover Page. In the upper left hand block of this Cover Page, labeled "For Consideration by NSF Organizational Unit," it is important to identify the Division and the solicitation target to which you are responding, i.e., "Division of Materials Development, Research and Informal Science Education; Programs for Elementary School Science Instruction."

The second publication (NSF 83–57) provides detailed information on proposal preparation and processing and on grant administration. This latter document should be used with the following understandings:

- For "research" substitute "science education" or "science education project" as appropriate;
- The terms "new discoveries" or "fundamental advances" include development of the educational materials and infrastructure directed toward those goals.

Except as modified by the guidelines set forth herein and in NSF 85–10, standard NSF guidelines on proposal preparation (content, format, budget, other sources of support, etc.), proposal submission, evaluation, NSF awards (general information and highlights), declinations, and withdrawals contained in NSF 83–57 are applicable.

These publications may be obtained from the Forms and Publications Unit, National Science Foundation, 1800 G Street, NW, Washington, DC 20550.

Who May Submit

Organizations with a scientific or educational mission are eligible to submit proposals. Among these are: colleges and universities; state and local education agencies; professional societies; science museums and zoological parks; research laboratories; private foundations; publishers and private industries; and other public and private organizations, whether for profit or non-profit. Proposers are strongly encouraged to involve participation from more than one of these areas, as well as appropriate schools or systems.

The Foundation provides awards for research in the sciences and engineering. The awardee is wholly responsible for the conduct of such research and preparation of the results for publication. The Foundation, therefore, does not assume responsibility for such findings or their interpretation.

The Foundation welcomes proposals from all qualified scientists and science educators, and strongly encourages women and minorities to compete fully in the development programs described in this document. In accordance with Federal statutes and regulations and NSF policies, no person shall be excluded on grounds of race, color, age, gender, national origin, or physical handicap from participation under any program or activities receiving financial assistance from the National Science Foundation.

NSF has TDD (Telephonic Device for the Deaf) capability which enables individuals with hearing impairment to communicate with the Division of Personnel and Management for information relating to NSF programs, employment, or general information. This number is 202/357–7492.

How To Submit

Preliminary Proposals

By their nature, proposals appropriate to this solicitation are likely to be complex and require a laborious and costly effort. In addition, formal proposals will receive a particularly intensive and demanding review. For both of these reasons, *a preliminary proposal and a response from the Instructional Materials Development Program are required before a formal proposal will be accepted.*

This preliminary proposal may be in the form of a comparatively brief and informal letter-of-inquiry, outlining the concept and general structure of the contemplated subject, as well as the organization(s) and personnel contemplated, and the order of magnitude of support required. This preliminary proposal should not exceed six pages in length. The Program will respond with comments on the concept and a staff opinion of the general competitive status of such a proposal. This opinion will have no formal role, nor will it in any way preclude or affect the review of a formal proposal, but it can be of great help to proposers in deciding whether to undertake the cost and effort of a formal submission.

When To Submit

Proposers may submit a preliminary proposal at any time, but should expect that two to three weeks will probably be required for a response. After this has been received, a formal proposal may be submitted.

Formal proposals responding to this program solicitation must be received no later than May 15, 1986. Project starting dates of September 1, 1986 or later may be requested.

Where To Submit

Preliminary proposals should be sent to: Instructional Materials Development Program, Directorate for Science and Engineering Education, National Science Foundation, Washington, DC 20550.

Formal proposals, when submitted, should be addressed to the Data Support Services Section, National Science Foundation, and not to the Division.

For Additional Information

Questions not addressed in this publication or in the publications NSF 85–10 and NSF 83–57 may be directed to the NSF staff by writing to the Instructional Materials Program at the address above, or by calling 202/357–7066. Such direct contact to discuss potential projects is welcomed.

Dated: January 6, 1986.

George W. Tressel,

Acting Division Director, Division of Materials Development, Research and Informal Science Education.

[FR Doc. 86–484 Filed 1–8–86; 8:45 am]

BILLING CODE 7555-01-M

Advisory Panel for Cellular Physiology; Meeting

In accordance with the Federal advisory Committee Act, as amended, Pub. L. 92–463, the National Science Foundation announces the following meeting.

Name: Advisory Panel for Cellular Physiology.

Date and Time: Monday, Tuesday and Wednesday January 27, 28, and 29, 1986, from 9:00 a.m. until 5:00 p.m.

Place: Room 1242A, National Science Foundation, 1800 G Street, NW., Washington, DC 20550.

Type of Meeting: Closed.

Contact Person: Maryanna P. Henkart, Program Director, Cellular Physiology, Room 332, Telephone: 202/357–7377.

Purpose of Advisory Panel: To provide advice and recommendations concerning support for research in Cellular Physiology.

Agenda: To review and evaluate research proposals as part of the selection process for awards.

Reason for closing: The proposals being reviewed include information of a proprietary or confidential nature, including technical information, financial data, such as salaries; and personal information concerning individuals associated with the proposals. These matters are within exemptions (4) and (6) of 5 U.S.C. 552b(c), Government in the Sunshine Act.

Authority to Close Meeting: This determination was made by the Committee Management Officer pursuant to provisions of section 10(d) of Pub. L. 92-463. The Committee Management Officer was delegated the authority to make such determinations by the Director, NSF, on July 6, 1979.

January 6, 1986.

M.R. Winkler,

Committee Management Officer.

[FR Doc. 86-482 Filed 1-8-86; 8:45 am]

BILLING CODE 7555-01-M

Committee on Equal Opportunities in Science and Technology; Meeting

In accordance with the Federal Advisory Committee Act, Pub. L. 92-463, the National Science Foundation announces the following meeting:

Name: Committee on Equal Opportunities in Science and Technology.

Dates: Wednesday, Thursday, and Friday, January 29-31, 1986.

Time: 9:00 a.m.-5:00 p.m.

Place: National Science Foundation, 1800 G Street, NW., Room 540, Washington, D.C. 20550.

Type of meeting: Open.

Contact Person: Dr. Elvira Doman, Executive Secretary, National Science Foundation, Rm. 332-B, 1800 G Street, NW., Washington, DC 20550, Telephone: 202/357-7975.

Purpose of Committee: Responsible for all Committee matters relating to the participation in and opportunities for education, training, and research for minorities, women and handicapped persons in science and technology, and the impact of science and technology on them.

Summary Minutes: May be obtained from the contact person at the above stated address.

Agenda: The Committee will consider mechanisms to increase participation of minorities, women and handicapped persons in Foundation programs, research projects, and on all NSF advisory committees. It will also advise the Director on how to modify NSF policies and procedures relating to minority, women and handicapped persons as well as the internal distribution of funds to implement this program.

M. Rebecca Winkler,

Committee Management Officer.

January 6, 1986.

[FR Doc. 86-483 Filed 1-8-86; 8:45 am]

BILLING CODE 7555-01-M

NUCLEAR REGULATORY COMMISSION

Bi-Weekly Notice; Applications and Amendments to Operating Licenses Involving No Significant Hazards Considerations; Correction

AGENCY: Nuclear Regulatory Commission.

ACTION: Bi-Weekly notice: Correction.

SUMMARY: On December 30, 1985 (50 FR 53226), a Bi-Weekly Notice regarding no significant hazards considerations was published in the **Federal Register**. The publication date of the document was originally intended to be January 2 and would have allowed for a 30-day comment period to expire on February 3, 1986. However, since the actual publication was 3 days earlier than originally anticipated, the comment period will now expire on January 29, 1986.

FOR FURTHER INFORMATION CONTACT: John Philips, Chief, Rules and Procedures Branch, Division of Rules and Records, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC, Telephone: 301-492-7086.

1. On page 53227, column 1, second complete paragraph, line 1, remove "February 3" and insert in its place "January 29".

Dated at Bethesda, Maryland, this 6th day of January 1986.

For the Nuclear Regulatory Commission.

Donnie H. Grimsley,

Director, Division of Rules and Records, Office of Administration.

[FR Doc. 86-493 Filed 1-8-86; 8:45 am]

BILLING CODE 1505-01-M

[Docket No. 50-321]

Environmental Assessment and Final Finding of No Significant Impact Regarding Proposed Amendment to Facility Operating License: Georgia Power Co.; Oglethorpe Power Corp; Municipal Electric Authority of Georgia; City of Dalton, GA

The U.S. Nuclear Regulatory Commission (the Commission) is considering the issuance of an amendment to Facility Operating License No. DPR-57 issued to Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, and the city of Dalton, Georgia, (the licensees) for operation of the Edwin I. Hatch Nuclear Plant, Unit No. 1 (the facility) located in Appling County, Georgia.

Environmental Assessment

Identification of proposed action: With the exception of one change that was found to be unacceptable, the proposed action would permit the licensees to implement the changes to the Hatch Plant Unit 1 Technical Specifications (TSs) as described in their letter of July 24, 1984. It would permit changes in the surveillance frequencies and in the trip setpoints associated with the new analogue transmitter trip system (ATTS) equipment that is being installed at Unit 1. It would also increase the turbine exhaust pressure range over which the reactor core isolation cooling (RCIC) system is allowed to operate and would make a number of administrative corrections. The proposed change that was found to be unacceptable involved changing the reactor vessel steam dome lower steam dome pressure limit and deleting the reactor vessel steam dome upper pressure limit for opening the low pressure core injection and core spray systems injection valves.

The need for proposed action is to:

(i) Support the installation of new ATTS equipment,

(ii) Extend the operating range of the RCIC system, and

(iii) Update and correct identification numbers and correct minor typographical errors.

Environmental impacts of the proposed action: The proposed action will provide revised surveillance requirements and trip setpoints that are appropriate to the new ATTS equipment and are consistent with the FSAR Accident Analysis for Hatch Unit 1. It will also provide for greater availability of the RCIC during small break loss of coolant accidents. Thus, post-accident radiological releases will not be greater than previously determined, nor does the proposed change otherwise affect radiological plant effluents. Occupational exposures to radiation would also be unaffected. Therefore, the Commission concludes that there are no significant radiological environmental impact associated with this proposed amendment.

With regard to potential nonradiological impacts, the proposed change involves systems located within the restricted area as defined in 10 CFR 20. No nonradiological effluents are affected, and no other environmental impact would occur. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed change.

Since we have concluded that there is no measurable envoronmental impact associated with the proposed changes to the Technical Specifications, any alternatives to these changes will have

either no environmental impact or greater environmental impact.

The principal alternative would be to deny the requested amendment. This would not reduce environmental impacts of plant operation.

Alternative use of resources: This action does not involve the use of resources not previously considered in connection with the Final Environmental Statement related to Hatch Unit 1 operation (Final Environmental Statement Dated October 25, 1972).

Agencies and persons consulted: The Commission's staff reviewed the licensee's request and did not consult other agencies or persons.

Finding of No Significant Impact

The Commission has determined not to prepare an environmental impact statement for the proposed license amendment.

Based upon the foregoing environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment.

For further details with respect to this action, see the application for amendment dated July 24, 1985, which is available for public inspection at the Commission's Public Document Room, 1717 H Street NW., Washington, D.C., and at the Applying County Public Library, 301 City Hall Drive, Baxley, Georgia.

Dated at Bethesda, Maryland, this 3rd day of January 1986.

For the Nuclear Regulatory Commission.

Daniel R. Muller,

Director, BWR Project Directorate #2, Division of BWR Licensing.

[FR Doc. 86-486 Filed 1-8-86; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-320]

General Public Utilities Nuclear Corp. (Three Mile Island Nuclear Station Unit 2); Exemption

I

GPU Nuclear Corporation, Metropolitan Edison Company, Jersey Central Power and Light Company and Pennsylvania Electric Company (collectively, the licensee) are the holders of Facility Operating License No. DPR-73, which has authorized operations of the Three Mile Island Nuclear Station, Unit 2 (TMI-2) at power levels up to 2772 megawatts thermal. The facility, which is located in Londonderry Township, Dauphin County, Pennsylvania, is a pressurized water reactor previously used for the commercial generation of electricity.

By Order for Modification of License, dated July 20, 1979, the licensee's authority to operate the facility was suspended and the licensee's authority was limited to maintenance of the facility in the present shutdown cooling mode (44 FR 45271). By further Order of the Director, Office of Nuclear Reactor Regulation, dated February 11, 1980, a new set of formal license requirements was imposed to reflect the post-accident condition of the facility and to assure the continued maintenance of the current safe, stable, long-term cooling condition of the facility (45 FR 11292). The license provides, among other things, that it is subject to all rules, regulations and Orders of the Commission now or hereafter in effect.

II

By letter dated August 27, 1985, the licensee requested exemptions from 10 CFR 50.61 requiring the submission to the U.S. Nuclear Regulatory Commission of projections, analyses, schedules and other steps necessary to protect against pressurized thermal shock events. Specifically, Paragraph (b)(1) of 10 CFR 50.61 requires licensees to submit projected values for Reference Temperature for each weld and plate or forging in the reactor vessel beltline and Paragraph (b)(3) requires an analysis and schedule for implementation of a flux reduction program if the projected values of Reference Temperature are expected to exceed the pressurized thermal shock screening criteria set forth in Paragraph (b)(2) of 10 CFR 50.61. Additionally, the rule requires certain steps be taken if the flux reduction program does not result in reducing the value of the Reference Temperature below that of the pressurized thermal shock screening criteria.

III

Nuclear plant pressure vessels are fabricated from ferritic steels. A pressure vessel must be designed to maintain fracture toughness of the vessel material for the life of the plant. The pressure vessel of a nuclear plant can be subjected to a pressurized thermal shock (PTS) when an extended cooling transient to the vessel wall is accompanied by primary system pressurization. Under these conditions repeated thermal and pressurization stresses on the internal surfaces of the vessel can cause the formation of cracks. An adequate level of fracture toughness provides assurance that small cracks will not propagate in a "brittle" manner as a result of stresses during an abnormal transient such as PTS event.

Failure in a brittle manner could fracture the vessel wall and lead to severe failure of the primary pressure boundary in the core area. Due to irraditional damage, older pressure vessels generally have a greater probability of shifting the fracture toughness curve to higher temperatures, thereby increasing the probability of nonductible or brittle vessel failure.

For a pressurized thermal shock to result in a significant nonductile failure the following conditions must be present:

- The nuclear plant pressure vessel must exhibit significant loss of fracture toughness through neutron irradition.
- An overcooling transient must occur that is of sufficient duration to cause a steep thermal gradient across the vessel wall and cooling to the low-toughness temperature range.
- A flow must be present of sufficient size and be located at a critical vessel beltline location where reduced fracture toughness and high thermal stress exist.
- A simultaneous high reactor coolant pressure must be present.

IV

The staff has reviewed the past and present condition of the damaged TMI-2 reactor and has determined that:

- The plant went critical on March 28, 1978 and went into commercial operation on December 30, 1978. The accident at TMI-2 occurred on March 28, 1979. Neutron irradiation damage to the vessel is minimal.
- Since the middle of July 1982, the Reactor Coolant System (RCS) has been essentially vented to the reactor building. Since July of 1984, the reactor pressure vessel head has been removed. With the reactor vessel head removed the RCS cannot be pressurized. The licensee has no plans at this time to repressurize the RCS.
- As of the middle of September 1985, the incore thermocouple readings range from 70 °F to 91 °F with an average of 79 °F. The average cold leg temperature is 54 °F. The incore temperature continues to drop over time. RCS cooling is by natural heat loss to the reactor building ambient atmosphere. No future increase in temperature is expected but rather continued slow cooldown.

With the licensee readying for the commencement of fuel removal, the lack of pressure in the RCS and essentially ambient core and RCS temperatures, a pressurized thermal shock is not a credible event. Therefore, the determination of projected values for Reference Temperature for each weld and plate or forging in the reactor vessel beltline and the development of

mitigative actions should the Reference Temperature exceed the screening criteria are not warranted. Undertaking the analyses and other actions required by 10 CFR 50.61 would impose an unnecessary burden and expense on the licensee with no concomitant benefit.

V

Accordingly, the Commission has determined that, pursuant to 10 CFR 50.12, an exemption is authorized by law and will not endanger life or property or the common defense and security and is otherwise in the public interest. The Commission hereby grants an exemption from the requirements of 10 CFR 50.61, as long as the reactor remains shutdown.

It is further determined that the exemption does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. In light of this determination and as reflected in the Environmental Assessment and Notice of Finding of No Significant Environmental Impact prepared pursuant to 10 CFR 51.21 and 51.30 through 51.32, issued on December 19, 1985, it was concluded that the instant action is insignificant from the standpoint of environmental impact and an environmental impact statement need not be prepared.

Effective Date: December 30, 1985.
Dated at Bethesda, Maryland.
Issuance Date: December 30, 1985.

For The Nuclear Regulatory Commission.

Robert M. Bernero,

Acting Director, Office of Nuclear Reactor Regulation.

[FR Doc. 86-487 Filed 1-8-86; 8:45 am]

BILLING CODE 7590-01-M

[Docket No. 50-461A]

Illinois Power Company et al. (Clinton Power Station, Unit 1)

Notice is hereby given that Dr. Roger Batz has requested a reevaluation by the Director of the Office of Nuclear Reactor Regulation of the "Update Finding of No Significant Antitrust Changes" pursuant to the operating license antitrust review of the Clinton Power Station, Unit 1. After further review by my staff, I have decided not to change any updated finding.

A copy of my updated finding, the request for reevaluation, any my reevaluation are available for public examination and copying, for a fee, at the Commission's Public Document Room, 1717 H Street NW., Washington, DC 20555.

Dated at Bethesda, Maryland, this 2nd day of January 1986.

For the Nuclear Regulatory Commission.

Darrell G. Eisenhut,

Acting Director, Office of Nuclear Reactor Regulation.

[FR Doc. 86-485 Filed 1-8-86; 8:45 am]

BILLING CODE 7590-01-M

PACIFIC NORTHWEST ELECTRIC POWER AND CONSERVATION PLANNING COUNCIL

Power Plant Amendments: Columbia River Basin and Wildlife Program

AGENCY: Pacific Northwest Electric Power and Conservation Planning Council (Northwest Power Planning Council).

ACTION: Notice of schedule for public hearings on alternative interim passage objectives and notice of corrections.

SUMMARY: On December 12, 1985 the Northwest Power Planning Council voted to initiate rulemaking pursuant to section 4(d)(1) of the Northwest Power Act and section 1404(a)(1) of the Columbia River Basin Fish and Wildlife Program (Program) to consider proposed amendments to those portions of the Programs aimed at improving the downstream passage of juvenile fish at U.S. Army Corps of Engineers dams on the lower Columbia and Snake Rivers. The rulemaking is summarized, the issues involved are described and directions for participating in oral hearings and for submitting written comments are included in a **Federal Register** notice dated December 24, 1985, (50 FR 52575). The dates, times and addresses at which the Council will hear public testimony follow. Following those dates, times and addresses are certain corrections to the December 24, 1985 notice concerning the cost of the proposed inteim survival objectives.

DATES AND ADDRESSES: Hearings will be held on January 13, 1986, 1:00 p.m., Coach House Inn, 2101 11th Avenue, Helena, Montana; January 17, 1986, 9:30 a.m., University Inn, Lion Room, 2360 University Drive, Boise, Idaho; January 21, 1986, 9:30 a.m., Airport Ramada Inn, Room 100, Spokane, Washington; and January 22, 1986, 9:30 a.m., Northwest Power Planning Council, 850 S.W. Broadway, Suite 1100, Portland, Oregon.

To reserve a time period for presenting oral comment at a hearing, contact Ruth Curtis, Information Coordinator, at the Council's central office (850 S.W. Broadway, Suite 1100, Portland, Oregon 97205 or (503) 222-5161, toll free 1-800-222-3355 in Idaho, Montana, and Washington or 1-800-452-2324 in Oregon) no later than two business days before the hearing.

Correction

The second sentence of the next-to-last paragraph of the Council's December 24, 1985 **Federal Register** notice (50 FR 52575) contained mistaken cost figures. In fact, the costs of the proposed interim survival objectives would range from $13.8 million to $15.5 million, and can be expected to increase Bonneville's preference rate by about .19 mill, or, when compared to current program requirements, by about .09 mill.

FOR FURTHER INFORMATION CONTACT: Ms. Judy Allender at the address or telephone numbers given above.

Edward Sheets,

Executive Director.

[FR Doc. 85-407 Filed 1-8-86; 8:45 am]

BILLING CODE 0000-00-M

SECURITIES AND EXCHANGE COMMISSION

[Release No. 34-22762; File No. SR-OCC-85-20]

Self-Regulatory Organizations; Options Clearing Corp.; Notice of Proposed Rule Change Implementing Dial-Up Access for On-Line System ("C/MACS")

Pursuant to section 19(b)(1) of the Securities Exchange Act of 1934, 15 U.S.C. 78s(b)(1), notice is hereby given that on December 8, 1985, the Options Clearing Corporation ("OCC") filed with the Securities and Exchange Commission the proposed rule change described in Items, I, II and III below, which items have been prepared by the self-regulatory organization. The Commission is publishing this notice to solicit comments on the proposed rule change from interested persons.

I. Self-Regulatory Organization's Statement of the Terms of Substance of the Proposed Rule Change

The proposed rule change consists of the implementation by the Options Clearing Corporation ("OCC") of dial-up access to its on-line system ("C/MACS").

II. Statement of the Purpose of, and Statutory Basis for, the Proposed Rule Change

In its filing with the Commission, OCC included statements concerning the purpose of, and basis for, the proposed rule change. The text of these statements may be examined at the places specified below. OCC has

prepared summaries, set forth in Sections (A), (B), and (C) below, of the most significant aspects of such statements.

(A) Purpose of, and Statutory Basis for, the Proposed Rule Change

In mid-1984, OCC's C/MACS System became available to OCC's Clearing Members for inputting instructions to OCC by computer terminal located on the Clearing Member's premises (*see* File No. SR-OCC-83-15). Access to the System at that time was available by dedicated lines only, and OCC undertook to obtain SEC approval prior to implementing dial-up access.

OCC now proposes to give Clearing Members access to the C/MACS System by dial-up, utilizing the public dial network and hardware already in use by the Clearing Member for other systems (e.g., personal computer terminals). Dial-up is a cost-effective alternative to access by dedicated leased lines, which requires each user to purchase or lease hardware dedicated specifically to C/MACS applications. By reducing users' costs, OCC will make the improved communications of the C/MACS System available to smaller firms.

OCC shares the Commission's previously stated concerns regarding the security of dial-up access to terminal systems, particularly with regard to access by unauthorized individuals. OCC has dealt with these concerns by designing dial-up access to operate as follows: An authorized C/MACS user will dial into OCC's communications network and type into the network a unique password identifying the terminal for which access is sought. Upon receipt of this call the authenticity of the password will be verified, the connection will be terminated and the terminal to which that password had been assigned will be dialed back. If the original call to the System came from other than the proper terminal, no connection will be made. If the call to the System came from the proper terminal and that terminal is ready, the connection will be made, and standard access procedures (*i.e.*, input of Logonid and password) will be required to complete access to the System, and insure appropriate application security.

As in other on-line systems previously approved by the Commission (*See, e.g.*, File No. SR-MSTC-84-5),[1] the C/MACS System will impose time limits for expected user responses, violation of which will result in denied or terminated access. The System will also generate a log showing all dial-up activity, and OCC will supplement its current monitoring for security violations with procedures for monitoring dial-up defaults (*e.g.*, incorrect password, violation of time limits). An unusual number of such defaults will result in notification to and consultation with the user firm's management.

In the event that development of dial-up access is completed prior to Commission approval, it will be made available to a limited number of Clearing Members on a pilot basis until approval is received.

The proposed rule change is consistent with the requirements of the Act in that it will further the efficient handling of securities transactions by making new data processing and communications techniques available on a cost-effective basis to a greater number of Clearing Members.

(B) Burden on Competition

OCC does not believe that the proposed rule change will have any impact on competition.

(C) Comments on the Proposed Rule Change Received From Members, Participants or Others

Comments on the proposed rule change have not been and are not expected to be solicited and none was received.

III. Date of Efffectiveness of the Proposed Rule Change and Timing for Commission Action

Within 35 days of the date of publication of this notice in the **Federal Register** or within such longer period (i) as the Commission may designate up to 90 days if it finds such longer period to be appropriate and publishes its reasons for so finding, or (ii) as to which the self-regulatory organization consents, the Commission will:

(a) By order approve such proposed rule change, or

(b) Institute proceedings to determine whether the proposed rule change should be disapproved.

IV. Solicitation of Comments

Interested persons are invited to submit written data, views and arguments concerning the foregoing. Persons making written submissions should file six copies thereof with the Secretary, Securities and Exchange Commission, 450 Fifth Street NW., Washington, DC 20549. Copies of the submission, all subsequent amendments, all written statements with respect to the proposed rule change that are filed with the Commission, and all written communications relating to the proposed rule change between the Commission and any person, other than those that may be withheld from the public in accordance with the provisions of 5 U.S.C. 552, will be available for inspection and copying in the Commission's Public Reference Section, 450 Fifth Street NW., Washington, DC. Copies of such filing will also be available for inspection and copying at the principal office of the above-mentioned self-regulatory organization. All submissions should refer to the file number in the caption above and should be submitted by January 30, 1986.

For the Commission by the Division of Market Regulation, pursuant to delegated authority.

John Wheeler,

Secretary.

January 2, 1986.

[FR Doc. 86-473 Filed 1-8-86; 8:45 am]

BILLING CODE 8010-01-M

[1] *See* Securities and Exchange Act Release No. 21227 (August 9, 1984), 49 FR 32698 (August 15, 1984).

[Release No. 34-22760; File Nos. SR-PCC-85-9 and SR-PSDTC-85-10]

Self-Regulatory Organizations; Order Approving Proposed Rule Changes of Pacific Clearing Corporation and Pacific Securities Depository Trust Company

On October 18, 1985, Pacific Clearing Corporation ("PCC") and Pacific Securities Depository Trust Company ("PSDTC") filed proposed rule changes under section 19(b)(1) of the Securities Exchange Act of 1934 (the "Act"). The Commission published notice of the proposals in Securities Exchange Act Release No. 22652 (November 21, 1985), 50 FR 48852 (November 27, 1985). No comments were received. This Order approves the proposals.

The proposals amend PCC's and PSDTC's By-Laws to reduce the number of directors on PCC's and PSDTC's Boards of Directors ("Boards"). Specifically, the proposals reduce the number of directors on each Board to between the ten and thirteen, down from between twelve and fifteen. The proposals provide that the initial number of directors shall be eleven, but may be changed from time to time by vote of the shareholders.[1] Prior to the proposals, the exact number of directors was set at thirteen and could be changed only by the Board of Directors of PCC or PSDTC.[2]

[1] The Pacific Stock Exchange ("PSE") is the sole shareholder of both PCC and PSDTC.

[2] PCC's and PSDTC's Boards, however, currently are composed of eleven directors with the same eleven individuals on each Board.

PCC and PSDTC state in their filings that their Nominating Committees [3] nominate qualified individuals [4] to serve on PCC's or PSDTC's Board. In addition, any ten members of PCC or PSDTC can nominate qualified director candidates. The PSE, as sole shareholder of PCC and PSDTC, elects PCC and PSDTC directors from the slate of nominees. PCC and PSDTC note in their filings that their Nominating Committees and the PSE must, pursuant to their By-Laws, assure fair representation of PCC and PSDTC members in the director nomination and election process.

PCC and PSDTC state in their filings that they proposed to reduce their authorized number of directors because they have had difficulty in finding enough qualified individuals willing to serve on the PCC and PSDTC Boards. PCC and PSDTC also state that deleting their Boards' authority to set the exact number of directors and placing that authority with their shareholder will allow a change in the number of directors, within the range of ten to thirteen directors, without the need for By-Law amendments.[5] Finally, PCC and PSDTC state that the proposals are consistent with the Act because they will continue to assure fair representation of PCC and PSDTC members in the administration of their affairs.

The Commission finds that the proposals are consistent with the requirements of the Act. The Commission previously has found the governance structure of PCC and PSDTC, including the election of their Boards of Directors by PSE as the sole shareholder of both clearing agencies and the use of nominating committees for those boards drawn from the executive committee of the PSE Board of Directors, to be consistent with the requirements of section 17A(b)(3)(C).[6] The instant proposed rule changes effect a largely technical change in the number of Board members for PCC and PSDTC, reducing the fixed number of Board members by two and substituting the shareholder (PSE) for the clearing agency Boards themselves in changing the number of directors within a narrow range. The stated reasons for these changes are to deal with the apparent difficulty in attracting qualified directors to the Boards and to provide somewhat greater flexibility in changing the number of directors as future needs arise. PCC and PSDTC have represented that, notwithstanding relegation to PSE, as sole shareholder, of the responsibility for changing the number of directors, any such change will be filed with the Commission under section 19(b) of the Act and exposed for public comment. The Commission would review such a rule change, and any comments received, for consistency with the Act and the fair representation standard of section 17A.

Under the circumstances, the Commission finds the reduction in the number of directors to be consistent with the Act. The Commission also finds the substitution of PSE for PCC and PSDTC Boards of Directors as the entity responsible for changing the size of the Boards to be consistent with the Act under the conditions set forth in the proposed rule change and in light of PCC's and PSDTC's commitment to file any such change with the Commission as proposed rule changes. By doing so, the proposals should continue to assure fair representation of PCC's and PSDTC's shareholders and participants, consistent with the requirements of section 17A, and will expose any PSE initiated changes in the number of PCC or PSDTC directors to public scrutiny and Commission review.

It is therefore ordered, under section 19(b)(2) of the Act, that the proposed rule changes be, and hereby are approved.

For the Commission, by the Division of Market Regulation, pursuant to delegated authority.

Dated: January 2, 1986.

John Wheeler,

Secretary.

[FR Doc. 86-472 Filed 1-8-86; 8:45 am]

BILLING CODE 8010-01-M

[3] The Nominating Committees consist of members of the Executive Committee of the Board of Governors of PSE.

[4] To be eligible, a PCC or PSDTC director candidate must be an officer, director, or general partner of PCC or PSDTC, or of a member organization of PSE, or be a governor of PSE.

[5] As stated in Release No. 22852, the Commission expects any change in the number of PCC and PSDTC directors, whether through By-Law amendment or otherwise, to be filed with the Commission under section 19(b) of the Act.

[6] *See* Securities Exchange Act Release No. 20221 (Sept. 23, 1983), 48 FR 45167 (Oct. 3, 1983).

SMALL BUSINESS ADMINISTRATION

[Delegation of Authority No. 12-A; Rev. 3, Amdt. 2]

Deputy Associate Administrator for Financial Assistance

Delegation of Authority No. 12-A (48 FR 14461) is hereby amended to delegate authority to the Deputy Associate Administrator for Financial Assistance to approve and suspend pool assemblers participation in the Loan Pooling Program. Delegation of Authority No. 12-A is amended as follows:

I

A. Deputy Associate Administrator for Financial Assistance

1. FINANCIAL ASSISTANCE PROGRAM

* * * * *

i. To take all necessary actions to approve, suspend or terminate pool assemblers from participation in the Loan Pooling Program.

* * * * *

Effective Date: Upon publication in the **Federal Register.**

Dated: December 20, 1985.

Robert A. Turnbull,

Acting Administrator.

[FR Doc. 86-226 Filed 1-8-86; 8:45 am]

BILLING CODE 8025-01-M

DEPARTMENT OF TRANSPORTATION

National Highway Traffic Safety Administration

[Docket No. IP86-1; Notice 1]

Grumman Olson; Receipt of Petition for Determination of Inconsequential Noncompliance

The Grumman Olson Division of Grumman Allied Industries, Inc. of Sturgis, Michigan, has petitioned to be exempted from the notification and remedy requirements of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1381 *et seq.*) for an apparent noncompliance with 49 CFR 571.302, Motor Vehicle Safety Standard No. 302, *Flammability of Interior Materials*, on the basis that it is inconsequential as it relates to motor vehicle safety.

This Notice of Receipt of a petition is published under section 157 of the National Traffic and Motor Vehicle Safety Act (15 U.S.C. 1417) and does not represent any agency decision or other exercise of judgment concerning the merits of the petition.

Paragraph S4.3(a) of FMVSS No. 302 in pertinent part requires that:

(2) "When tested in accordance with S5, material described in S4.1 and S4.2 shall not burn, nor transmit a flame front across its surface, at a rate of more than four inches per minute."

The petitioner, Grumman Olson, manufacturer 3,943 walk-in vans for the United Parcel Service between January 1, 1981 and November 1, 1985, with seat fabric which showed a burn rate average of 5.1 inches/minute.

The noncompliance was brought to the attention of Grumman Olson when the Union City Body Company, who also manufactures bodies for the United

Parcel Service, petitioned for exemption from FMVSS No. 302. Both Union City Body Company and Grumman Olson use the same seat supplier.

Upon investigation, Grumman Olson discovered that its seat supplier had changed the seat material in 1981 with no update of the certification. Grumman Olson submitted samples of seat material to an independent test laboratory to determine the burn rate. The three samples submitted averaged 5.1 inches/minute.

Grumman Olson believes that the noncompliance is inconsequential for the following reasons:

1. The noncompliance is marginal.

2. The amount of seat fabric is relatively small.

3. The material is located on a pedestal type seat and is located approximately 20 inches above the floor.

4. Due to the location and size of the seat, any fire in the vehicle would have to be very severe to reach the seat and set it on fire. Ignition of the seat fabric would be the result of a severe truck fire and not a material contributing factor.

5. All units carry a 5–BC fire extinguisher.

Interested persons are invited to submit written data, views and arguments on the petition of Grumman Olson described above. Comments should refer to the docket number and be submitted to: Docket Section, National Highway Traffic Safety Administration, Room 5109, 400 Seventh Street SW., Washington, DC 20590. It is requested but not required that five copies be submitted.

All comments received before the close of business on the closing date indicated below will be considered. The application and supporting materials, and all comments received after the closing date will also be filed and will be considered to the extent possible. When the petition is granted or denied, the Notice will be published in the **Federal Register** pursuant to the authority indicated below.

Comment closing date: February 10, 1986.

(Sec. 102, Pub. L. 93–492, 88 Stat. 1470 (15 U.S.C. 1417); delegations of authority at 49 CFR 1.50 and 49 CFR 501.8)

Issued on January 6, 1986.

Barry Felrice,

Associate Administrator for Rulemaking.

[FR Doc. 86–495 Filed 1–8–86; 8:45 am]

BILLING CODE 4910–59–M

Research and Special Programs Administration

Marine/Land Radionavigation Users Conferences

AGENCY: Research and Special Programs Administration (RSPA), DOT.

ACTION: Notice of conference.

SUMMARY: Marine/Land Radionavigation Users Conferences are to be conducted in San Francisco in January 1986, New Orleans in March 1986, Chicago in April 1986 and Washington, DC in May 1986. The purpose of these Conferences is to present to the users and suppliers of navigation equipment the opportunity to comment on current plans and policy for federally provided systems which satisfy marine, inland waterway and land radionavigation requirements. This information relates to the selection of a future mix of radionavigation systems as required by the Federal Radionavigation Plan. An opportunity will be provided for users to participate in the meeting and make their comments to representatives of the Coast Guard, RSPA, Maritime Administration and other government agencies participating in the conference.

DATE: San Francisco, Jan. 24, 1986 at Sheraton Palace Hotel; New Orleans, March 26, 1986 at Crowne Plaza Hotel; Chicago, April 17, 1986 at Midland Hotel; Washington, May 22, 1986 at Rosslyn Westpark Hotel. Other meetings may be scheduled as warranted.

FOR FURTHER INFORMATION CONTACT: David C. Scull, Office of Budget and Programs, Research and Special Programs Administration, Department of Transportation, 400 7th Street SW., Washington, DC 20590, (202) 426–9520.

SUPPLEMENTARY INFORMATION: The meeting will open with an overview of the Federal radionavigation planning process, the Federal Radionavigation Plan, and current plans and policy for Federally operated radionavigation systems. The presentation of statements by organizations and/or individuals representing the users of radionavigation systems will follow.

Issued in Washington, DC, on December 31, 1985.

M. Cynthia Douglass,

Administrator, RSPA.

[FR Doc. 86–497 Filed 1–8–86; 8:45 am]

BILLING CODE 4910–60–M

Civil Aircraft Allocation Order (WASP No. 2)

AGENCY: Research and Special Programs Administration, DOT.

ACTION: Notice.

SUMMARY: This notice updates and revises the Civil Aircraft Allocation Order (WASP No. 1) published in the **Federal Register** March 19, 1981.

FOR FURTHER INFORMATION CONTACT: George W. Barry, Office of Emergency Transportation, Room 8404, Nassif Building, 400 Seventh Street, SW., Washington, DC 20590. (202) 426–4118.

SUPPLEMENTARY INFORMATION: On January 1, 1985, the transfer of the Civil Aeronautics Board (CAB) emergency responsibilities to the Department of Transportation's Federal Aviation Administration (FAA) was effected as part of the CAB "Sunset" action. Included within this transferred emergency authority was the responsibility for management of the War Air Service Program (WASP). The WASP is a national security, i.e., defense related, program which provides for the maintenance of essential civil air routes and services, to include the distribution and redistribution of air carrier aircraft among civil air carriers, and the identification of those civil air carriers upon whom the application of movement controls may be imposed in an emergency situation. The WASP becomes effective upon Department of Defense activation of the Civil Reserve Air Fleet Program (CRAF) or by direction of the Secretary of Transportation. This order updates and revises the current WASP allocation dated March 12, 1981, and published in the **Federal Register** dated March 19, 1981. Specifically, the order formally recognizes the change in emergency management of the WASP, as well as expanding the WASP fleet by capitalizing upon the significant capability added to the civil air carrier fleet bv the Airline Deregulation Act of 1978, particularly in the commuter airline industry segment. Accordingly, the following notice supersedes that of March 19, 1981.

WASP No. 2—Civil Aircraft Allocation Order

Pursuant to authority under the Defense Production Act of 1950, as amended (50 U.S.C. App 2081 *et seq.*), enabling Executive Order 10480, as amended, DMO–3, as amended (44 CFR Part 322.3, as amended) and Executive Order 11490, as amended, there is allocated to the Federal Aviation Administrator, for use in the War Air

Service Program (WASP), the following civil air carrier aircraft:

All aircraft operated by air carriers certified to operate under the provisions of Federal Aviation Regulation Part 121 (Domestic, Flag, and Supplemental Air Carriers and Commercial Operators of Large Aircraft), and Part 135 (Air Taxi Operators and Commercial Operators) with the exception of those aircraft allocated or reallocated from time-to-time to the Department of Defense for the purposes of the Civil Reserve Air Fleet (CRAF) Program.

This material supersedes the material appearing in FR Doc. 81-8399, filed March 18, 1981, and published in the **Federal Register**, dated March 19, 1981, page 17707.

Issued in Washington, D.C. on January 3, 1986.

M. Cynthia Douglass,

Administrator, Research and Special Programs Administration.

January 3, 1986.

[FR Doc. 86-496 Filed 1-8-86; 8:45 am]

BILLING CODE 4910-60-M

DEPARTMENT OF THE TREASURY

Customs Service

[T.D. 86-5]

Recordation of Trade Name: "Unitek Corporation"

AGENCY: Customs Service, Treasury.

ACTION: Notice of recordation.

SUMMARY: On June 6, 1985, a notice of application for the recordation under section 42 of the Act of July 5, 1946, as amended (15 U.S.C. 1124), of the trade name "UNITEK CORPORATION" was published in the **Federal Register** (50 FR 23866). The notice advised that before final action was taken on the application, consideration would be given to any relevant data, views, or arguments submitted in opposition to the recordation and received not later than August 5, 1985.

Unipacific Corporation, a California corporation, commented in opposition to recordation of the trade name, citing concern that "UNITEK CORPORATION" is confusingly similar to Unipacific Corporation's "UNITECH" trademark registered on the Principal Register of the U.S. Patent and Trademark Office (Reg. No. 1,222,480), used for consumer electronic equipment, namely, portable stereo radios, mini-portable cassette players, FM Converter cassette modules, stereo headphones and televisions.

We find that the two trademarks lawfully co-exist. Therefore, genuine articles bearing the "UNITECH" trademark shall not be seized or detained as confusingly similar to "UNITEK CORPORATION."

Accordingly, as provided in § 133.14, Customs Regulations (19 CFR 133.14), the name "UNITEK CORPORATION" is recorded as the trade name used by Unitek Corporation, a corporation organized under the laws of the State of California, located at 2724 South Peck Road, Monrovia, California 91016. The trade name is used in connection with the developing and marketing of products manufactured in the United States for orthodontists, endodontists and other dental specialists, as well as for general dentists and dental laboratories.

EFFECTIVE DATE: January 9, 1986.

FOR FURTHER INFORMATION CONTACT: Harriet Lane, Entry, Licensing and Restricted Merchandise Branch, U.S. Customs Service, 1301 Constitution Avenue NW., Washington, DC 20229 (202-566-5765).

Dated: January 2, 1986.

Edward T. Rosse,

Acting Director, Entry Procedures and Penalties Division.

[FR Doc. 86-466 Filed 1-8-86; 8:45 am]

BILLING CODE 4820-02-M

Sunshine Act Meetings

Federal Register
Vol. 51, No. 6
Thursday, January 9, 1986

This section of the FEDERAL REGISTER contains notices of meetings published under the "Government in the Sunshine Act" (Pub. L. 94-409) 5 U.S.C. 552b(e)(3).

CONTENTS

1

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 11:30 a.m. Friday, January 10, 1986.

PLACE: 2033 K Street, NW., Washington, DC, 8th Floor Conference Room.

STATUS: Closed.

MATTERS TO BE CONSIDERED: Options Sales Practice Reviews.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254-6314.

Jean A. Webb,
Secretary of the Commission.

[FR Doc. 86-529 Filed 1-7-86; 10:32 am]

BILLING CODE 6351-01-M

2

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 10:00 a.m. Tuesday, January 14, 1986.

PLACE: 2033 K Street, NW., Washington, DC, 5th Floor Hearing Room.

STATUS: Open.

MATTERS TO BE CONSIDERED:

Application of the Chicago Mercantile Exchange for designation in Physical Delivery futures on the European Currency Unit.

Audit Trail.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254-6314.

Jean A. Webb,
Secretary of the Commission.

[FR Doc. 86-530 Filed 1-7-86; 10:32 am]

BILLING CODE 6351-01-M

3

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 11:30 a.m., Tuesday, January 14, 1986.

PLACE: 2033 K Street, NW., Washington, DC., 8th Floor Conference Room.

STATUS: Closed.

MATTERS TO BE CONSIDERED: Financial Reviews.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254-6314.

Jean A. Webb,
Secretary of the Commission.

[FR Doc. 86-531 Filed 1-7-86; 10:32 am]

BILLING CODE 6351-01-M

4

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 10:00 a.m., January 21, 1986.

PLACE: 2033 K Street, NW., Washington, DC, 5th Floor Hearing Room.

STATUS: Open.

MATTERS TO BE CONSIDERED: Reporting Requirements for Contract Markets, Futures Commission Merchants, Clearing Members and Traders—final rules.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254-6314.

Jean A. Webb,
Secretary of the Commission.

[FR Doc. 86-532 Filed 1-7-86; 10:32 am]

BILLING CODE 6351-01-M

5

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 10:00 a.m., Tuesday, January 28, 1986.

PLACE: 2033 K Street, NW., Washington, DC, 5th Floor Hearing Room.

STATUS: Open.

MATTERS TO BE CONSIDERED: Application of the Chicago Board of Trade for designation in European Currency Unit futures.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254-6314.

Jean A. Webb,
Secretary of the Commission.

[FR Doc. 86-533 Filed 1-7-86; 10:32 am]

BILLING CODE 6351-01-M

6

COMMODITY FUTURES TRADING COMMISSION

TIME AND DATE: 11:30 a.m., Friday, January 31, 1986.

PLACE: 2033 K Street, NW., Washington, DC, 8th Floor Conference Room.

STATUS: Closed.

MATTERS TO BE CONSIDERED: Rule enforcement review.

CONTACT PERSON FOR MORE INFORMATION: Jean A. Webb, 254-6314.

Jean A. Webb,
Secretary of the Commission.

[FR Doc. 86-534 Filed 1-7-86; 10:32 am]

BILLING CODE 6351-01-M

7

FEDERAL DEPOSIT INSURANCE CORPORATION

Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that the Federal Deposit Insurance Corporation's Board of Directors will meet in open session at 10:30 a.m. on Monday, January 13, 1986, to consider the following matters;

Summary Agenda: No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Disposition of minutes of previous meetings.

Reports of committees and officers:

Minutes of actions approved by the standing committees of the Corporation pursuant to authority delegated by the Board of Directors.

Reports of the Division of Bank Supervision with respect to applications, requests, or actions involving administrative enforcement proceedings approved by the Director or an Associate Director of the Division of Bank Supervision and the various Regional Directors pursuant to authority delegated by the Board of Directors.

Discussion Agenda:

Memorandum and resolution re: Notice of extension of time to March 31, 1986 for publishing a final amendment to the Corporation's rules and regulations in the form of new Part 252, entitled "Nondiscrimination on the Basis of Handicap in the Federal Deposit Insurance Corporation," which amendment implements section 504 of the Rehabilitation Act of 1973, as amended and ensures that, to the extent practicable, handicapped persons are provided with equal access to Corporation programs and activities.

The meetings will be held in the Board Room on the sixth floor of the FDIC Building located at 550 17th Street NW., Washington, DC.

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation, at (202) 389-4425.

Dated: January 6, 1986.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 86-499 Filed 1-7-86; 9:02 am]

BILLING CODE 6714-01-M

8

FEDERAL DEPOSIT INSURANCE CORPORATION

Agency Meeting

Pursuant to the provisions of the "Government in the Sunshine Act" (5 U.S.C. 552b), notice is hereby given that at 11:00 a.m. on Monday, January 13, 1986, the Federal Deposit Insurance Corporation's Board of Directors will meet in closed session, by vote of the Board of Directors; pursuant to sections 552b(c)(2), (c)(4), (c)(6), (c)(8), and (c)(9)(A)(ii) of Title 5, United States Code, to consider the following matters.

Summary Agenda: No substantive discussion of the following items is anticipated. These matters will be resolved with a single vote unless a member of the Board of Directors requests that an item be moved to the discussion agenda.

Recommendations with respect to the initiation, termination, or conduct of administrative enforcement proceedings (cease-and-desist proceedings, termination-of-insurance proceedings, suspension or removal proceedings, or assessment of civil money penalties) against certain insured banks or officers, directors, employees, agents or other persons participating in the conduct of the affairs thereof:

Names of persons and names and locations of banks authorized to be exempt from disclosure pursuant to the provisions of subsections (c)(6), (c)(8), and (c)(9)(A)(ii) of the "Government in the Sunshine Act" (5 U.S.C. 552b(c)(6), (c)(8), and (c)(9)(A)(ii)).

Note.—Some matters falling within this category may be placed on the discussion agenda without further public notice if it becomes likely that substantive discussion of those matters will occur at the meeting.

Discussion Agenda:

Recommendations regarding the Corporation's assistance agreement with an insured bank pursuant section 13 of the Federal Deposit Insurance Act.

Personnel actions regarding appointments, promotions, administrative pay increases, reassignments, retirements, separations, removals, etc.:

Names of employees authorized to be exempt from disclosure pursuant to the provisions of subsections (c)(2) and (c)(6) of the "Government in the Sunshine Act" (5 U.S.C. 552b(c)(2) and (c)(6)).

The meeting will be held in the Board Room on the sixth floor of the FDIC Building located at 550 17th Street, NW., Washington, DC.

Requests for further information concerning the meeting may be directed to Mr. Hoyle L. Robinson, Executive Secretary of the Corporation, at (202) 389-4425.

Dated: January 6, 1986.

Federal Deposit Insurance Corporation.

Hoyle L. Robinson,

Executive Secretary.

[FR Doc. 86-500 Filed 1-7-86; 8:45 am]

BILLING CODE 6714-01-M

federal register

Thursday
January 9, 1986

Part II

Nuclear Regulatory Commission

10 CFR Parts 19 et al.

Standards for Protection Against Radiation; Proposed Rule; Extension of Comment Period and Republication

NUCLEAR REGULATORY COMMISSION

10 CFR Parts 19, 20, 30, 31, 32, 34, 40, 50, 61, and 70

Standards for Protection Against Radiation

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule; extension of comment period.

SUMMARY: On December 20, 1985 (50 FR 51992), the NRC published for public comment a major revision of its regulations in 10 CFR Part 20 which provide the requirements for the protection of individuals who are exposed, both within and outside of the workplace, to ionizing radiation from routine activities (normal operations) which are licensed by the NRC. The 120-day comment period for this proposed rule was originally scheduled to expire on April 21, 1986. However, due to the substantial number of typesetting errors made in the December 20 publication, the decision was made to correct and republish the entire proposed rule. Since there will be a 3-week delay in the distribution of the proposed rule to affected licensees and interested persons, the NRC has decided to extend the public comment period for an additional 3 weeks. The extended comment period will expire on May 12, 1986.

DATES: The comment period has been extended and now expires on May 12, 1986. Comments received after this date will be considered if it is practical to do so but assurance of consideration cannot be given except as to comments received before this date.

ADDRESSES: Send written comments or suggestions to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch. Comments received may be examined at the NRC Public Document Room, 1717 H Street, NW, Washington, DC 20555.

FOR FURTHER INFORMATION CONTACT: Robert E. Alexander, Division of Radiation Programs and Earth Sciences, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: 301-427-4370.

Dated at Bethesda, Maryland, this 2nd day of January 1986.

For the Nuclear Regulatory Commission.

Donnie H. Grimsley,

Director, Division of Rules and Records, Office of Administration.

[FR Doc. 86-288 Filed 1-8-86; 8:45 am]

BILLING CODE 7590-01-M

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10 CFR Parts 19, 20, 30, 31, 32, 34, 40, 50, 61, and 70

Standards for Protection Against Radiation; Republication

[Editorial Note: The following document was originally published at page 51992 in the issue of Friday, December 20, 1985. The document is being republished in its entirety because of typesetting errors.]

AGENCY: Nuclear Regulatory Commission.

ACTION: Proposed rule.

SUMMARY: The Nuclear Regulatory Commission (NRC) is proposing a major revision of its regulations in 10 CFR Part 20 which provide the requirements for the protection of individuals who are exposed, both within and outside of the workplace, to ionizing radiation from routine activities (normal operations) which are licensed by the NRC. Since these regulations contain basic standards for protection against radiation, the proposed revision would affect all categories of NRC licensees. The intent of the revision is to improve NRC radiation protection standards by reflecting developments in the principles that underlie radiation protection and advances in related sciences that have occurred since the promulgation of 10 CFR Part 20 nearly thirty years ago. In particular the revision would put into practice many of the more recent recommendations of the International Commission on Radiological Protection (ICRP) set forth in ICRP Publications 26, 30, and 32.[1] The expected result of promulgating and implementing the proposed revised rule is an improved rule that provides better assurance of protection; establishes a clear health protection basis for limits and other regulatory actions taken to protect public health; applies to all licensees in a consistent manner; and reflects current information on health risk, dosimetry, and radiation protection practices and experiences. Some small decreases are expected in the number of workers exposed at the higher levels and in the doses received by those workers engaged in milling and fabrication of uranium fuel. While these reductions may not justify a Part 20 revision per se, they do result in a favorable ratio between estimated cost of implementing the revised rule and expected collective dose savings.

DATE: Comments must be submitted in writing on or before April 21, 1986. Comments received after this date will be considered if it is practical to do so, but assurance of consideration cannot be given except as to comments filed on or before this date.

ADDRESSES: Submit written comments and any other information relevant to NRC consideration of this matter to the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Service Branch. Copies of the environmental impact appraisal, regulatory analysis, other referenced documents, and comments received may be examined and copied for a fee at the Commission's Public Document Room at 1717 H Street NW., Washington, DC.

FOR FURTHER INFORMATION CONTACT: Robert E. Alexander, Division of Radiation Programs and Earth Sciences, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Telephone: (301) 427-4370.

SUPPLEMENTARY INFORMATION:

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[1] ICRP Publication 26, "Recommendations of the International Commission on Radiological Protection," adopted January 17, 1977. ICRP Publication 30, "Limits for Intake of Radionuclides by Workers," adopted July 1978. ICRP Publication 32, "Limits for Inhalation of Radon Daughters by Workers," adopted March 1981.

I. Background

The NRC's standards for protection against radiation were developed and published by the Atomic Energy Commission (AEC) in the late 1950s. Their development reflected scientific knowledge, radiation protection practices, and recommendations of expert groups available at the time and coincided with development of Federal Guides approved by President Eisenhower in 1960. These standards provided what, at that time, was considered to be "a very substantial margin of safety for exposed individuals," which infers a threshold value for health damage or no observable clinical effects. In promulgating these standards, the AEC emphasized "that the standards are subject to change with the development of new knowledge, with significant increase in the average exposure of the whole population to radiation, and with further experience in the administration of the Commission's regulatory program" (22 FR 548; January 29, 1957). Consistent with this emphasis, the proposed revision reflects new knowledge, increased uses of radiation and generation of radiation sources, and experience gained during the past twenty years.

None of these factors, upon examination, suggest that there have been significant increases in radiation exposure or in health detriment of workers or members of the public since 1957; on the contrary, protection has been good and has improved over the twenty plus years since the Commission established its regulatory program. This may be partially due to a substantial number of revisions of Part 20 to reflect technical and administrative changes. However, these revisions have not kept the regulations in accord with more recent recommendations of scientific organizations (namely, those having expertise in radiation protection and biological effects of ionizing radiation) to improve overall protection and establish a clear health risk rationale. The basic approach to radiation protection in the original regulation (i.e., margin of safety) has been retained throughout the previous revisions without any effort to relate the approach more directly to any associated health risk. Limits were derived by implicit judgments on health effects associated with the use of licensed materials. In the proposed revision, limits are derived explicitly by quantifying risk, and then by judging the acceptability of the risk through a comparison of risks experienced by workers in industries not involving radiation exposures or a comparison of risks normally encountered by the general public.

A most important development in radiation protection is a recognition of the extensive knowledge concerning the probability or risk of suffering radiation-induced health damage and the merit of using this knowledge to form a rationale for standards. Establishing this approach for the limits and the expected improvements in radiation protection programs derived from new knowledge and operating experience are the basis for the proposed revision.

The capability to develop such health risk-based standards is greatly enhanced by contemporary computer technology, which permits consideration of many physical, biological and chemical variables that can affect the health risk and dose estimates required for developing and implementing the standards. For internally deposited radionuclides, the otherwise complex calculations are reducible to simple tables of intake and derived media concentrations.

The ICRP used these advancements to derive a system for radiation protection based on limiting the "effective" whole body dose and, thus, the estimated risk of health damage. Use of this "effective" whole body risk concept is a major departure from the premises of the present Part 20, which is based on the concept of protecting the (single) "critical organ." Its important advantage lies in permitting any type of exposure to radiation or radioactive materials to be considered as if the exposure were to the whole body.

The ICRP system of dose limitations has three basic components:

(1) No practice or operation involving exposures to radiation should be adopted unless its introduction produces a net benefit, i.e., the practice must be justified;

(2) All exposures shall be kept as low as is reasonably achievable (ALARA),[2] technologic, economic, and social factors being taken into account; and

(3) The effective dose equivalent to individuals shall not exceed the limits selected for the appropriate circumstances.

The ICRP approach provides for selecting dose limits based on estimated risks, comparing health risks in the nuclear industry with health risks in other industries and risks to members of the public with everyday risks, and adding doses from dissimilar exposure modes to obtain the total risk. The system uses two constraints. The first is a limit to constrain the occurrence of radiation-induced stochastic (random) health effects (carcinogenesis and hereditary diseases), in which the severity of the damage is independent of dose. The second is an additional limit to prevent the occurence of radiation-induced non-stochastic health effects (such as cataract formation), in which no clinical damage occurs unless the dose exceeds a given level (threshold) and the severity of the damage is dose dependent. The proposed revision would adopt, in part, the approach to radiation protection and much of the system of dose limitations recommended by the ICRP.

Implementation of the recommendations of ICRP in Publications 26, 30, and 32 leads to the use of many new terms. Since there is a need to understand the new terminology in order to understand the Part 20 revision, these terms have been defined in § 20.3 of the proposed revision. Most of these terms—shallow, eye, and deep dose equivalent; effective dose equivalent; committed dose equivalent; and committed effective dose equivalent—result in greater specificity of meaning (less ambiguity) in assigning the dose to organs or tissues and in being able to sum the external and internal dose equivalent.

The proposed revision of Part 20 would supersede proposed amendments to 10 CFR Parts 19 and 20 published by the Atomic Energy Commission (AEC) on January 3, 1975 (40 FR 799) requiring control of doses to an embryo or fetus as low as is reasonably achievable, proposed amendments to 10 CFR Part 20 published by the NRC on February 20, 1979 (44 FR 10388) deleting the 5(N–18) dose-averaging formula, and proposed amendments to 10 CFR Part 20 published by the NRC on May 9, 1983 (48 FR 20721) modifying its reporting requirements for the loss or theft of licensed material.

To have consistency between proposed changes in Part 20 and related parts of NRC's regulations, conforming amendments are proposed to change the affected sections of Parts 19, 30, 31, 32, 34, 40, 50, 61, and 70. These proposed conforming amendments can be found

[2] ALARA—see § 20.3 in proposed rule for definition.

after Appendix F of the proposed revision of Part 20.

Some other 10 CFR parts, such as Part 50 (Appendix I), Part 61 and Part 100, contain dose values which should also be expressed in terms of effective dose equivalent to be consistent with the proposed revision. These adjustments or revisions would not be simple and no attempt has been made to propose amendments to such provisions in these parts at this time.

Subpart E, 10 CFR Part 140, contains the criteria for determination of extraordinary nuclear occurrences (ENO) and includes a table of Total Projected Radiation Doses, which are expressed as organ doses. Any revision of these values constitutes a substantive change and will be considered as part of an ongoing rulemaking proceeding to modify the ENO criteria rather than in conjunction with the Part 20 revision.

II. Comment Response

The NRC has had the benefit of receiving and reviewing many comments which have been valuable in preparing the proposed revision. About 70 responses were received on the Advance Notice of Proposed Rulemaking (ANPRM) on this revision that was published on March 20, 1980 (45 FR 18023) and about 80 responses were received on the notice of proposed deletion of the 5(N–18) provision that was published on February 20, 1979 (44 FR 10388). Although the responses were widely varied, the general conclusion was that revision of NRC's standards for protection against radiation was favored. The NRC also benefited from its participation in the public meetings associated with the guidelines proposed by the Environmental Protection Agency (EPA) for occupational radiation exposure (46 FR 7836; January 23, 1981) and review of comments received by EPA.

In addition, the NRC had valuable discussions with members of national and international radiation protection organizations, licensees, representatives of labor unions, and other groups. These discussions provided useful views, particularly in regard to technical and administrative problems foreseen in implementing the revision. This revision reflects and attempts to resolve many of the concerns identified, while maintaining the central thrust of the revision—to ensure that radiation protection is adequate and defendable when judged by good protection practices and contemporary standards.

A comparison of salient issues in the present Part 20 with the proposed revision is presented in Table 1. It is noteworthy that some limits for external radiation will be lower (e.g., hands) in the revision and others will be higher (e.g., lens of eye). For internal emitters, specific organ limits will be higher than present values.

BILLING CODE 7590-01-M

ıLE 1. COMPARISON OF SALIENT ISSUES IN THE PRESENT 1

Issue	Present 10 CFR Part 20		P
OCCUPATIONAL			
Limits	External		
	Whole body, head and trunk, active blood-forming organs, lens of eye, or gonads	1.25 rems/qtr or 3 rems/qtr with lifetime occupational exposure history and within 5(N-18) dose-averaging formula.	W t e a
			L
	Hand and forearms; feet and ankles	18 3/4 rems/qtr (75 rems/yr)	H e 1
	Skin of whole body	7 1/2 rems/qtr (30 rems/yr)	S
	No summation of internal (organ) doses.		W f
	No summation of external and internal doses.		D a
			*

T 10 CFR PART 20 WITH THE PROPOSED REVISION

	Proposed Revision
Whole body, head, trunk, arm above elbow, and leg above knee	5 rems/year (0.05 Sv/year) - includes summation of (external) deep dose equivalent and (internal) committed* effective dose equivalent.
	3 rems (0.03 Sv) (external) maximum deep dose equivalent in any quarter.
Lens of eye	15 rems/year (0.15 Sv/year)
Hand, elbow, arm below elbow, foot, knee, and leg below knee	50 rems/year (0.5 Sv/year)
Skin (10 cm^2)	50 rems/year (0.5 Sv/year)
Weighted organ doses for all organs are summed.	
Doses from external and internal sources are summed.	

*Except for selected uranium and transuranic radionuclides for which the derived air concentrations (DACs) and annual limits of intake (ALIs) are hard to measure at levels found in the workplace. For these nuclides, the regulation may be based upon the effective dose equivalent received in the year rather than the committed effective dose equivalent.

TABLE 1. (Con

Issue	Present 10 CFR Part 20
	<u>Internal</u>
	Intake equivalent to 520 MPC-hours/qtr. Calculated to result in a 50-year committed dose of:
	Whole body — 1.25 rems (5 rems/yr)
	Bone, thyroid, and skin — 7.5 rems (30 rems/yr)
	Other organs — 3.75 rems (15 rems/yr)
Planned Special	5(N-18) dose averaging provided - with quarterly limits.

Continued)

Proposed Revision

Annual limit of intake (ALI) equivalent to 2000 DAC-hours/year.
Calculated DACs are based on the following: Organs are assigned weighting factors, based on the estimates of risk to that organ per unit of dose relative to the estimate of risk per unit of dose for uniform whole body exposure. "Capping" dose limit of 50 rems/year (0.5 Sv/year) used to avoid nonstochastic effects. For body parts other than those listed above:

Tissue	w_T	Inferred Dose Limit (rems/year)	Actual Dose Limit (rems/year)
Gonads	0.25	20	20
Breast	0.15	33	33
Red bone marrow	0.12	42	42
Lung	0.12	42	42
Thyroid	0.03	167	50
Bone surfaces	0.03	167	50
Each of 5 remaining organs with the largest dose	0.06	83	50

Planned special exposures allowed in addition to the annual limits from routine exposures. Limits set at 1 x annual limits/year from all events in a year and 5 x annual limits/lifetime from all events. 5(N-18) dose averaging provision is eliminated.

TABLE 1.

ssue	Present 10 CFR Part 20
Embryo/Fetus	Not addressed.
ALARA	Recommended.
Occupational reference level	None
BASIS FOR LIMITS	Biological damage or health effec would not be statistically observ
INTERNAL DOSIMETRIC METHODOLOGY	
Irradiation	Dose to the most irradiated organ i.e., "critical organ," used to l intake via "Maximum Permissible C centrations" (MPC).
	Doses from radionuclides deposite in non-critical organs are ignore
Lung model	1959 ICRP-2 model used.
Retention in lung	Aerosols ranked "Soluble" or "Ins

1. (Continued)

	Proposed Revision
	0.5 rem (5 mSv) during the entire pregnancy due to occupational exposure of the "declared" pregnant woman.
	ALARA program required.
	Investigation level--set by licensee below annual limit.
ects rvable.	"Acceptable" risk (10^{-4} per year for workers, 10^{-6} to 10^{-5} per year for members of the public) based on estimated radiation-induced fatal cancers and serious hereditary disorders. Upper limit of organ dose set to avoid non-stochastic (threshold) effects, such as cataracts.
an, limit Con-	Dose to each organ is calculated, weighted by a factor equating risk from dose to that organ to risk from 5 rems (0.05 Sv) of whole-body irradiation, and then the products are summed. Values for ALIs and DACs have been calculated for each radionuclide.
ted red.	Weighted doses to organs from radionuclides deposited anywhere in the body are summed.
	Improved 1966 model of ICRP Task Group on Lung Dynamics used.
nsoluble."	Aerosols ranked by translocation and elimination rates, i.e., D (days), W (weeks), and Y (years).

TABLE

Issue	Present 10 CFR Part 20
	No consideration given for aero aerodynamic properties.
Translocation	Based on 1959 biological data.
PUBLIC	
Limit	Implied limit for individuals o year to whole body, blood-formi and gonads; 3 rems/year to bone thyroid; and 1.5 rems/year to o No summation of external and in No consideration of food pathwa
Reference level	None.
Collective dose cutoff level	None.
MONITORING	
Adult	Required at 25% of the basic qu limit (0.312 rem).
	Required for intakes greater th of 520 MPC-hours in a quarter.
Minor	Required at 5% of the basic qua limit (0.0625 rem).

E 1. (Continued)

	Proposed Revision
rosol	Assumes 1 μm AMAD. Adjustments for other aerosol size distributions, and physical and chemical properties are possible.
.	Based on 1978 biological data from ICRP-30.
of 0.5 rem/ ming organs, ne and other organs. internal dose. ways.	Explicit limit of 0.5 rem/year (5 mSv/year) for individuals from all sources. Includes summation of external and internal doses and food pathways.
	0.1 rem/year (1 mSv/year) to member of the public as action level for licensee.
	0.001 rem/year (0.01 mSv/year) per person cutoff level for evaluating collective doses to general population.
quarterly	Required at 10% of the annual limit for deep dose equivalent (0.5 rem or 5 mSv). Required at 10% of the annual limit for eyes, skin, or extremities.
than 25%	Required at 30% of the ALI's.
uarterly	Required at 5% of the external annual limits for adults. Required at 5% of the ALIs for adults.

TABLE

Issue	Present 10 CFR Part 20
SEWER DISPOSAL	Concentration limits equivalent 5 rems/year by potential ingest
RECORDS	
Determination of prior dose	Occupational exposure history r as condition for allowing 3 rem quarter and use of 5(N-18) dose formula. Signed statements of last quarter required upon empl
Current exposure records	Form NRC-5 includes only extern dose. Includes items for calcu status under 5(N-18).
Effluent releases	Implied under survey requiremen
Planned special exposures	No provision.
REPORTS	
Criteria for immediate notification of incidents	20 times the basic quarterly do limits. Property damage $200,000.
Overexposures of public	Required if limits for short-te radiation levels or annual effl releases to unrestricted areas exceeded.

LE 1. (Continued)

	Proposed Revision
ent to estion.	Concentration limits equivalent to 0.5 rem/year (5 mSv/year) by potential ingestion.
/ required rems per ose-averaging of dose during mployment.	Occupational exposure history (effective dose equivalent received during the current year and, when appropriate, all planned special exposures and over-exposures received during the lifetime of the individual) required for all individuals requiring provision of individual monitoring devices or services.
ernal lculating	Revised Form NRC-5 includes external dose, internal dose, summation, and dose received during planned special exposures and as overexposures.
ent.	Explicitly required.
	Records required.
dose	5 times the annual dose limits.
	Loss of facility use and property damage criteria deleted.
term fluent s are	Required if any individual in an unrestricted area exceeds 0.5 rem (5 mSv) in one year.

TABLE 1

Issue	Present 10 CFR Part 20
REPORTS (Continued)	
Planned special exposures	No provisions for planned specia exposures.
Exceeding reference level	No provisions.
Individual monitoring reports	Annual statistical summary repor required of 7 categories of lice
	Termination report required of s 7 categories of licensees.
Reports to individuals	Required by § 19.13(d) for any i reported to NRC. Applies only exposures and termination report Pursuant to § 19.13, other repor exposures are available to the i ual on request.

Enclosure 1

BILLING CODE 7590-01-C

E 1. (Continued)

	Proposed Revision
cial	Report required.
	Report required for exceeding 0.1-rem (1 mSv) level to members of public, unless licensee received prior approval for conducting operations which result in doses in excess of the reference level.
port icensees.	Same as present Part 20, except that doses will be effective dose equivalents.
f same	Same as present Part 20, except that doses will be effective dose equivalents.
y information ly to over- orts. ports on e individ-	Same requirements as present Part 20, except that doses reported will be effective dose equivalents. In addition, licensees would report to individuals any planned special exposures; and licensees operating under § 20.205 (the exception for certain uranium and transuranic nuclides having very long effective half-lives) would report estimates of both annual effective dose equivalent and 50-year committed effective dose equivalent to their employees.

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III. Radiation Protection Principles

Prior to ICRP Publication 26 (1977) and the associated Publication 30 (1978), recommendations for dose limits for internal emitters were based on the concept of protecting the "critical organ" at risk, as described in ICRP Publication 2 (1959). Under this concept, protection was provided by limiting the dose to that single body organ or tissue which accumulated the greatest concentration of radioactive material and consequently received the highest dose. In a few cases, sensitivity to radiation damage and other factors were considered. By protecting the "critical organ," a degree of protection was also provided to all other organs. To satisfy the dose limit to the critical organ, intake of radioactive material was controlled by specifying the maximum permissible concentration (MPC) of a given radionuclide in air and water, corresponding to the major routes of intake by inhalation (breathing) and by drinking. These concentrations were set for a given radionuclide either by the critical organ dose limit, such as 15 rems/year to lung for occupational exposures, or by equating the dose delivered by the radionuclide to the skeleton (bone) to that given by a total body content of 0.1 μCi of radium-226. (Evidence of biological effects caused by radium-226 in humans was available at that time.) The limit for exposure of the whole body was set by the organs that had been assigned the lowest dose limits. These organs were bone marrow, gonads, and lens of the eye because of concerns for inducing leukemia, hereditary effects, and cataracts, respectively. The present Part 20 is based on this concept of protecting the critical organ. Summation of external and internal radiation doses is not required in the present Part 20, even though the need and desirability for summation of doses has been recognized since 1959 (see ICRP Publication 2).

Control measures have often been based on the maximum permissible body or organ content (or "burden") of radionuclides. The burden is calculated to deliver the maximum permissible annual dose to a critical organ. These burdens generally correspond to the quantity of radionuclide calculated to be present after an exposure period long enough for equilibrium to be reached between the continuing rate of intake at the "maximum permissible concentration" and the rate of elimination by body excretion and radioactive decay. At equilibrium the body burden is that which corresponds to the annual dose limit. For example, for insoluble plutonium in the lung, the maximum permissible lung burden of 16 nanocuries is that which results in a dose of 15 rem to the lung in the 50th year following continuing intake. For short-lived radioactive materials, which deliver their entire dose for any given single intake or reach equilibrium for continuous intake within a year or so, maximum permissible body and organ burdens can be appropriate measures for assessing protection. However, for control or intake of long-lived radioactive materials (such as uranium and plutonium, for which equilibrium cannot be attained in a lifetime) the use of the maximum permissible body burden as a limit and the corresponding annual dose equivalent limit is less protective unless adequate consideration is also given to the retention and accumulation of the material over the remaining lifetime. For these long-lived radionuclides, retention of material taken into the body during a year can constitute a chronic source of irradiation for many years, perhaps for a lifetime, and a comparison of the annual dose to the annual limit can be misleading.

Since 1960, an extensive research program to determine the biological effects of ionizing radiation has yielded substantial information concerning risk of damage to health. Comparable estimates of the risk of cancer mortality and morbidity and of hereditary damage per unit of dose were published in 1972 and 1980 (BEIR I and III Reports) by the National Academy of Sciences (NAS) and in 1977 and 1982 by the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR).[3] Using the UNSCEAR risk estimates, ICRP Publication 26 introduced the terms "effective dose equivalent" and "committed effective dose equivalent" to describe concepts which would permit combining doses received from external and internal exposures. This method assigns each organ a weighting factor, which is proportional to the estimate of risk to that organ per unit of dose relative to the estimate of risk per unit of dose for a uniform whole body exposure. Except for gonad exposures, these weighting factors are presumed to represent the risk of inducing a fatal cancer in the different tissues relative to the total risk (cancer and hereditary diseases) from uniform whole body exposure for the same dose equivalent. The risk coefficient for gonads is based on the potential risk of serious hereditary damage in the first two generations of offspring of the exposed person. The proposed revision would adopt the relative sensitivity values or weighting factors in ICRP Publication 26. These values and the appropriate risk per unit dose equivalent estimates are shown in Table 2. Also shown is the probability of suffering disease of the irradiated organ, given a unit dose equivalent.

The risk coefficients in Table 2, which are used to determine the relative sensitivity values for radiation-induced fatal cancers in organs, are based primarily on studies of human populations exposed to ionizing radiation at higher dose rates and at higher dose levels than generally found in the workplace and are truly estimates in the statistical sense only. There is no evidence which unequivocally demonstrates an increased incidence of cancers or hereditary effects in humans exposed to radiation at the exposure levels found in the workplace or in the environs of facilities licensed by the NRC. The observed incidence rate of fatal cancers, the observed fluctuations in normal incidence rates, and the relatively low radiation risk make demonstration of any slight increase due to radiation exposure essentially impossible to detect. It is generally prudent to assume in the interest of public health and radiation protection, however, that risk to health is proportional to dose. The risk coefficients, which were derived for exposure conditions with doses and dose rates higher than are expected to occur in the workplace, are believed more likely than not to overestimate the true risk under this assumption.

[3] One segment of these data is currently under review and reevaluation, i.e., the data from Japanese survivors of the A-bombs during World War II. It appears that the reevaluation will require at least 2 years for resolution. The data being challenged are the primary source of information that cover a wide range of exposures and that provide the principal basis for the shape of the dose-health effect response curves. However, the Japanese A-bomb survivor data constitute only one of several sources of human exposure data and, in the opinion of many experts, the risk coefficients are not likely to be changed substantially as a result of the ongoing reevaluation of the data. Consequently, the Commission sees no reason for delaying this rulemaking proceeding until the study is completed.

TABLE 2.—RELATIVE SENSITIVITIES OF ORGANS AND TISSUES OF THE BODY FOR THE INDUCTION OF FATAL CANCERS AND SERIOUS HEREDITARY EFFECTS

Organ or tissue	Weighting factor (relative sensitivity)	Risk coefficient per rem	Probability per rem
Gonads	0.25	(4×10^{-5})	1 in 25,000.
Breast	0.15	(2.5×10^{-5})	1 in 40,000.
Red bone marrow	0.12	(2×10^{-5})	1 in 50,000.
Lung	0.12	(2×10^{-5})	1 in 50,000.
Thyroid	0.03	(5×10^{-6})	1 in 200,000.
Bone surfaces	0.03	(5×10^{-6})	1 in 200,000.
Any remaining five organs or tissues receiving the highest dose at a relative sensitivity of 0.06 each.	0.30	(5×10^{-5})	1 in 20,000.
Total for whole body	1.0	(1.65×10^{-4})	1 in 6,000.

The fractional contribution of the risk to individual organs is determined by dividing the risk to the organ by the risk from uniform whole body irradiation, allowing for no differences in seriousness of damage between serious hereditary diseases and fatal cancers or between different types of fatal cancers. For example, irradiation of the gonads alone would, theoretically, cause about ¼ of the health effects (occurring as hereditary effects in the first two generations of offspring) caused by uniform irradiation of the entire body (occurring as cancer deaths plus serious hereditary diseases) at the same dose level. Irradiation of the lung alone would, theoretically, cause about ⅛ of the health effects (potential lung cancer deaths) caused by uniform whole body irradiation at the same dose level.

Some organs and tissues, such as the thyroid or bone surfaces, are less prone than others to be the site of fatal radiation-induced cancers. If the dose equivalent permitted to those organs were to be based entirely on the relative sensitivity for fatal cancers, the dose might be sufficient to cause functional damage, rather than cancers, to those organs. Therefore, functional damage (non-stochastic) to organs or tissues must be prevented by an overriding or "capping" dose limit.

Explicit in the recommendations of ICRP Publication 26 is that the sum of the (external) deep dose equivalent and the committed effective dose equivalent in one year should not exceed the annual dose equivalent limits. For members of the public (i.e., those persons who are not occupationally associated with radiation industries and activities), the dose limits are ⅒ of the limits for workers, which are numerically the same as the present Part 20 except that internal and external doses are summed and internal doses are committed effective dose equivalents. The annual effective dose equivalent limit implicitly places a limit on the calculated risk of dying of radiation-induced cancer in the future and of transmitting radiation-induced hereditary damage to future offspring.

IV. Acceptability of Risk

Intrinsic in the assumption of a direct proportionality between dose and health damage is the presumption that radiation-induced health damage can occur at any non-zero value of dose, unless a threshold dose for damage is also assumed. (Keep in mind that this adoption of proportionality is made for reason of prudence in protecting public health and does not mean proportionality is supported by the best scientific evidence available.) In selecting values for dose limits, therefore, it is necessary to consider the issue of what level of risk is acceptable or what level of risk is unacceptable. The dose limits selected are then surrogates (substitutes) for risk, and doses at or below the limits are generally acceptable and those above the limits are generally unacceptable. The term "generally" is included here because the level cannot be absolute without exceptions.

The ICRP judged the acceptability of the level of risks to individuals exposed in the workplace (i.e., workers occupationally exposed and often referred to as radiation workers) at the dose limit by comparing this risk with that of workers in industries which do not involve radiation and which are recognized as having high standards of safety. In making this judgment the ICRP recognized the basic question of equality between two different types of death; namely, the risk of fatal cancer from radiation exposure versus the risk of accidental death in other occupations. These inherent problems in developing an index of harm are discussed in ICRP Publication 27 (1977). "Safe" industries were considered to be those in which the average annual mortality due to occupational hazards does not exceed 10^{-4}. It would be desirable to compare the risks to the individual workers whom might be exposed at the annual limit for a substantial fraction of their lifetime to the individual workers in higher (rather than average) risk categories in "safe" industries. However, data are inadequate to determine the number of individual workers who might be exposed at the annual limit for a substantial fraction of their working lifetime. In addition, there are currently no data available on the range of individual (rather than average) risks in "safe" industries. Consequently, the only comparison that can be made at present is between the calculated risk to individuals exposed at the dose limits and the average risk to workers in safe industries.

An acceptable level of risk for a member of the public was judged, by the ICRP, to be in the range of 10^{-6} to 10^{-5} per year. This range is a subjective judgment of risk normally accepted in everyday life as producing no undue concern.

V. Quantification of Risks From Occupational Exposures

If a worker were to receive a uniform whole body dose equivalent of 5 rems or 0.05 Sv (which is the dose equivalent limit in a year for workers), the mathematical expectation of radiation-induced health damage can be estimated using the risk coefficients in Table 2. This risk is about 5 rems $\times 1.65\times10^{-4}$ mortality per rem $=8\times10^{-4}$ to the exposed individual over the individual's remaining lifetime, including a risk of 2×10^{-4} serious hereditary damage in two generations of offspring. If the worker were to receive the 5 rems every year, the annual risk for the worker (after several years) would also be 8×10^{-4}, which is about eight times higher than the "acceptable" average annual occupational risk in "safe" industries. For perspective on the above risk of cancer, the naturally occurring lifetime risk of cancer death is one in six (NAS BEIR III, 1980). If a different end point, such as years of life lost, were selected, the radiation-induced risk would be substantially less relative to loss of lifetime from many other industrial causes. This is so because death from radiation-induced cancer in adults is likely to occur late in life owing to latency periods (which range from a few years to several decades) between exposure and incidence, whereas many industrial deaths are caused by accidents and are expressed promptly.

The annual occupational dose equivalent limit of 5 rems (0.05 Sv) was recommended by the ICRP for several reasons.

1. With an annual dose limit of 5 rems, few individuals actually receive whole body dose equivalents of 5 rems or more

in any year, and very few (if any) individuals receive whole body annual dose equivalents which average near 5 rems over an extended time interval. Radiation workers receive an average annual dose equivalent of less than 0.5 rem which implies an associated risk less than the ICRP accepted value of 10^{-4}.

2. ALARA programs, which would be required in the revised Part 20, would usually maintain exposure levels well below the dose limits.

3. The annual risk value for "safe" industries, 10^{-4}, is an average value for the industry. By definition, some workers would be at higher or lower than the average risk for the industry.

The Commission recognizes that there are essential tasks which could require some individuals to receive annual doses which might approach or, on some special occasions, exceed 5 rems. The proposed revision would adopt the 5-rem (0.05 Sv) annual dose limit,as recommended by ICRP, but would limit the external component to 3 rems (0.03 Sv) any quarter. The proposed revision would also permit a "planned special exposure" which might result in an individual receiving 5 rems (0.05 Sv) in one year in addition to the dose received from routine operations. The estimated risk from a 5-rem planned special exposure would also be about 8×10^{-4}. Thus, the estimated total risk from 10 rems, which could be received in one year from both routine and planned special exposures (a very unlikely situation), would be about 1.6×10^{-3}.

VI. Quantification of Risks From Exposures of Individuals in the General Population

If a very young individual were to receive a whole body dose equivalent of 0.5 rem or 5 mSv (which is the dose equivalent limit in a year for a member of the general public), the mathematical expectation of radiation-induced cancer and of genetic effects in two generations of offspring would be about 8×10^{-5} over the individual's lifetime. In the unlikely event that the individual were to receive 0.5 rem every year for a lifetime, the calculated annual risk for the individual would be about 8×10^{-5}, which is about an order of magnitude higher than the estimated 10^{-6} to 10^{-5} per year average annual risk which is considered by the ICRP to be the "acceptable" range.

The revision of Part 20 would retain a dose equivalent limit of 0.5 rem (5 mSv) in a year for individual members of the general public, but it would also contain a "reference level" of 0.1 rem (1 mSv) in a year. The 0.1-rem reference level, in conjunction with the constraints of the EPA regulations 40 CFR Part 190 and the NRC regulations in 10 CFR Part 50 (§ 50.34a, § 50.36a, and Appendix I) for uranium fuel cycle facilities and light-water-cooled reactors, respectively, and with a required ALARA program for all licensees, is believed to be adequate to ensure that the annual average risk to any individual member of the public is within, or below, the range of 10^{-6} to 10^{-5}. Licensees would be required to report to the NRC when a dose equivalent of 0.1 rem (1 mSv) is received (or is likely to be received) in a year by an individual member of the public from the licensee's activities. The licensee would also be required to report on efforts to reduce the dose level.

VII. Justification

Recommendations for requiring a justification for exposures are not new. Admonitions to consider the necessity for an activity that is known to produce radiation and that has some individual and public health significance have been called for by the ICRP, National Council on Radiation Protection and Measurements (NCRP), and the former Federal Radiation Council (FRC) for more than a decade, justification is a basic tenent of radiation protection. The Commission endorses the principle that a licensed activity should produce some social benefits. In instances where practices are pursuant to, or consistent with, national policy statements or Federal legislative actions, it is concluded that a judgment on social benefit has been made a priori as an intrinsic part of the policy or legislative process. The issue of benefit trade-offs is thus broader than providing protection against radiation, and the revision of Part 20 contains no requirements to justify the activity or to determine net benefit derived.

VIII. As Low As Is Reasonably Achievable

The present Part 20 (in § 20.1(c)) contains an admonition that licensees ". . . should . . . make every reasonable effort to maintain radiation exposures . . . as low as is reasonably achievable." This provision was added to Part 20 more than a decade ago, replacing the view that an activity was acceptable if the exposures were below a specific limit. Through various license provisions (e.g., technical specifications and license conditions) and through rulemaking (e.g., § 50.34a, § 50.36a, and Appendix I in 10 CFR Part 50 and 40 CFR Part 190), substantial ALARA programs and efforts are presently required for certain categories of licensed activities, such as operation of uranium fuel cycle facilities.

The Commission recognizes the importance of ALARA considerations in achieving adequate radiation protection and in the revision would require, rather than merely exhort, all licensees to have a radiation protection program which includes ALARA provisions. However, the Part 20 revision would not require quantified optimization studies, in the sense described below, because of the difficulties in performing the analyses and because it is recognized that the decisions must be largely judgmental in any event.

The ICRP recommends that quantitative optimization evaluations be provided, where practicable, for decisionmaking in radiation protection activities. These evaluations require solutions to differential cost-benefit equations and quantification of technical and socioeconomic factors, including the selection of monetary values for a unit of collective dose (e.g., dollars per person-rem). While optimization has been done for radiation protection activities, the studies can be costly, the methods are not familiar to most persons, the range of uncertainty is substantial, and the quantification of judgmental factors involves difficult social-political considerations as, for example, in dealing with collective dose. For these reasons, the Commission has decided not to require optimization evaluations. However, licensees may apply such evaluations when they consider it beneficial for decisionmaking.

IX. Radiation Protection Program

Only in certain instances are licensees now required to provide a formal radiation protection program for review as part of licensing actions, and even those are not required by the present Part 20. The Part 20 revision would establish a uniform requirement for all licensees to have a radiation protection program which would include provisions for keeping doses ALARA. The revision does not state specifically what must be included in the program, other than provisions for review by management and for internal (licensee) investigation levels. Guidance on the general content and format of the programs would be provided. Since there is a broad range in activities among licensees, the specific provisions of the radiation protection program would be commensurate with the potential for radiation exposures to individual workers and to members of the public.

The revision would not specifically require that the program be reviewed by the NRC. However, the licensee's program would be available for

inspection. The licensee should be able to demonstrate that investigation levels, which will serve to keep doses to individuals well below the dose limits, have been selected and that a procedure for investigating conditions that cause or permit these levels to be exceeded has been established. No formal report to the NRC is required or anticipated for the licensee actions in dealing with the internal investigation levels.

Consideration was given to specifying a numerical value for the ALARA investigation level, rather than leaving it for the licensee to select. However, a single value would not be appropriate for all categories of licensees and, therefore, no value has been specified.

X. Units and Conversion Factors

In accordance with the Metric Conversion Act of 1975, the revision introduces the International System of Units (SI) involving the becquerel, gray, and sievert. This action was also recommended by the ICRP, International Commission on Radiation Units and Measurements (ICRU), and the NCRP in its comments to NRC on earlier drafts of the proposed revision. The proposed radiation protection limits are presented in dual notation so that the regulations do not impede the voluntary transition to the use of the metric system by the Federal agencies, State or local governments, or private sector of the nuclear industry. However, much of the general discussion in the supplementary information uses the so-called "special units," the curie, rad, and rem, which are more familiar to licensees, regulators and workers. This is important in conveying information on the health protection basis for the proposed limits in a format which is as understandable as possible. There has been concern that use of the SI units might be viewed as an attempt to be misleading by using units that are numerically different from the more familiar units. In addition, there has been considerable concern about the potential for errors in the application of the SI units, such as in medical practice. The values in the appendices are given in the traditional units because that is the system in general use by the individuals who will use these values. The rule contains the definitions, prefixes, and conversion factors for the SI units so that licensees may use these units in their radiation control programs and their recordkeeping and reporting requirements.

The present Part 20 and the proposed revision equate an exposure of 1 roentgen due to x- or gamma-radiation to a dose equivalent of 1 rem, except for personnel monitoring purposes. Consideration was given to including in the Part 20 revision a table of factors for converting exposure (in roentgens) to dose equivalent (in rems) for a number of photon energies. Properly calibrated personnel dosimeters take this into account. However, it was recognized that such an extensive table of conversion factors could have been interpreted as requiring licenses to have on-going knowledge of the spectral distribution of photon energies in each portion of the licensee's facilities. Such a requirement would be impractical amd unwarranted. Consequently, a simple conversion factor of 1.0 has been provided for all photon energies. The same conversion value would be applicable to shallow, eye, and deep dose equivalent.

The mean quality factors and fluence per unit dose equivalent for monoenergetic neutrons (Table 2 of the revised rule) have been changed slightly from those in the present Part 20. The values in Table 2 of the revised rule have been adapted from NCRP Reports 38 and 39, National Bureau of Standards Handbook 107, and American National Standards Institute Standard N43.1 (the same values are presented in each of these documents). The fluence of neutrons of unknown energy equivalent to 1 rem has been changed from 14 to 25 million neutrons cm^{-2}. The vaule of 14 million neutrons cm^{-2} rem^{-1} would apply to neutrons of about 40 MeV, well above those emitted by licensed materials.

The proposed revision includes a definition for a "controlled area" which does not exist in the present Part 20. The intent is to codify and clarify current regulatory practice and to remove an existing ambiguity by introducing the term. The present Part 20 defines a restricted area. Logic would seem to indicate that any area which is not a restricted area would be an unrestricted area. However, in many instances there is an area between the restricted area and the truly unrestricted area where dose limits applicable to unrestricted areas are applied, e.g., at the boundary of power reactor sites where there might be limited control of access by individual members of the general public. By recognizing the existence of the area between the restricted area and the truly unrestricted area and by defining it as the controlled area, a current ambiguity is removed.

The proposed revision contains definitions of occupational dose and of public dose. These definitions reflect current practice and remove some ambiguities in applying the different limits.

XI. Standards for Occupational Exposure of Individuals

Table 3 presents a summary of the dose limits specified in the proposed revision. These dose limits have been based upon ICRP Publication 26 with modifications to translate the recommendations into practical regulatory requirements that satisfy NRC's statutory mandate to protect the health of workers in NRC-licensed facilities and activities.

TABLE 3.—SUMMARY OF DOSE LIMITS

Occupational exposures of individuals	Dose limits
Sum of deep dose equivalent and committed effective dose equivalent [1].	5 rems (0.05 Sv) in one year.
Deep dose equivalent (external only).	3 rems (0.03 Sv) in one quarter.
Any organ or tissue, extremities and skin.	50 rems (0.5 Sv) in one year.
Lens of the eye	15 rems (0.15 Sv) in one year.
Minors	1/10 of annual limits for adults.
Embryo/fetus	0.5 rem (5 mSv) during entire pregnancy period.
Planned special exposures:	
Annual limit from all events	1 × annual limits.
Lifetime limit from all events	5 × annual limits.
Exposures of members of the public: Sum of deep dose equivalent and committed effective dose equivalent [1].	0.5 rem (5 mSv) in one year.

[1] The sum of weighted 50-year dose commitments from the intake of radioactive material and (external) deep dose equivalent. "Deep dose equivalent" used in this summation is the highest dose equivalent at a tissue depth of 1 cm to the head, trunk, arm above the elbow, or leg above the knee. (See § 20.3.) For intakes of certain long effective half-lived radioactive material, annual rather than committed effective dose equivalents may be used. (See § 20.205.)

Combined Internal and External Doses

A limit of 5 rems (0.05 Sv) in a calendar year would be established on the sum of the doses from sources internal and external to the body. The deep dose equivalent from external sources and the product of the weighting factors and the 50-year committed dose equivalent to the organs would be summed. The quarterly limit of 3 rems (0.03 Sv) deep dose equivalent from external sources in the present Part 20 would be retained, but the 5(N–18) provisions for cumulative occupational dose in the present Part 20 would be deleted.

The dose equivalents to the extremities (e.g., hand, elbow, forearm below the elbow, foot, knee, and leg below the knee), the skin, and the lens of the eye are not considered in computing the effective dose equivalent, but are subject to limits that would have to be met separately.

Although not recommended by the ICRP, the 3-rem (0.03 Sv) limit for any calendar quarter is retained for the (external) deep dose equivalent to further ensure that short-term workers.

transient workers, or workers who are rotated between fossil and nuclear facilities will be afforded no less protection under the proposed revision than is provided by the present Part 20. Quarterly limits allow for earlier identification of occupational overexposures and the subsequent earlier investigation into and correction of the causes of such exposures. Further, the dose records do not support a demonstrated need for exceeding 3 rems per quarter, particularly when planned special exposure provisions are available. Retention of the quarterly limit was recommended by some representatives of labor unions and by some representatives of industry management.

Derived Limits

In many working situations, it is difficult to assess doses to the various organs and tissues of an individual from inhaled and ingested radionuclides. Consequently, it is necessary to derive more practical indicators of the exposure, such as annual limits of intake (ALIs) and derived air concentrations (DACs), that might serve as surrogates for dose estimates.

An ALI is the quantity of a radionuclide which, if taken into the body of a reference man (as described in ICRP Publication 23) by inhalation or by ingestion in one year, would not exceed a 5-rem (0.05 Sv) committed effective dose equivalent to the whole body or a 50-rem (0.5 Sv) committed dose equivalent to any organ or tissue.

About 1,800 of the ALI values listed in the proposed Table 1 of Appendix B were determined by limiting the committed effective dose equivalent in order to minimize stochastic health damage. The remaining 270 ALIs were determined by limiting the committed dose equivalent to a specific organ in order to prevent non-stochastic health damage. All ALI values may be considered to produce a risk comparable to that of receiving a uniform whole body dose equivalent of 5 rems.

A DAC is the derived air concentration of a radionuclide which, if inhaled by a reference man with an inhalation rate of 0.02 m^3 per minute for 2,000 hours a year, would result in the intake of one ALI. DAC values would replace the inhalation "MPC" values in Table 1 of Appendix B of the present 10 CFR Part 20. The proposed DAC values are in Table 1 of the revised Appendix B. Section XXIX in this Supplementary Information generally compares the proposed DAC and ALI values with the concentration limits (MPCs) currently listed in Appendix B, 10 CFR Part 20.

ALI and DAC values can generally be used to demonstrate compliance with the annual effective dose equivalent limits by verifying that the sum of the fraction of the external (whole body) deep dose equivalent limit and the fractions of the ALIs (or DACs) does not exceed 1. Thus, dose equivalents from internal and external exposure modes may be added and compared to the annual effective dose equivalent limits. Exposures or intakes at or above the ALIs and exposures for substantial periods of time at or above the DAC values given in the proposed Table 1 of Appendix B are generally unacceptable. Application of ALARA principles should provide sufficient control so that sustained intakes and exposures are kept lower than the ALI and DAC values.

Consider the example in Table 4 in order to compare the methods and degree of difficulty of operation using the existing 10 CFR Part 20 and using the proposed revision of Part 20. The example will demonstrate that the familiar terms and techniques, such as MPC-hours and fractions of MPC, may still be used as DAC-hours and fractions of DAC; and that the changes involved in summation under the proposed rule are relatively simple and straightforward.

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TABLE 4. A COMPARATIVE EXAMPLE

PRESENT 10 CFR PART 20	PROPOSED REVISION TO 10 CFR PART 20
LIMITS	
External (whole body) 1.25 rems/quarter, or 3 rems/quarter within 5(N-18) and with occupational exposure history.	5 rems/year effective dose equivalent (Includes summation of external deep dose equivalent and internal committed effective dose equivalent)
Internal Intake equivalent to 520 MPC-hours/quarter.	$\frac{H_d}{5} + \sum_j \frac{I_{i,j}}{ALI_{i,j}} \leq 1$
No requirement for summation of external and internal dose. However, fractional intakes of radionuclides would be summed, in compliance with Note 1 of Appendix B, even though the critical organs are different and there would be few organs that would receive appreciable doses from both radionuclides.	Where: H_d is the deep dose equivalent in rems; 5 is the annual dose limit in rems; $I_{i,j}$ is the annual intake of radionuclide j by inhalation, i; $ALI_{i,j}$ is the annual limit of intake of radionuclide j by inhalation, and $\sum_j$ is the summation of the ratios for all radionuclides included in the intake.
EXAMPLE An individual receives 1 rem deep dose equivalent from external exposure, plus 10 days (80 hours) of exposure at the present maximum permissible concentrations of "soluble" iodine-131 and "soluble" cesium-137 in air.	
1 rem/1.25 rems = 0.8 or 80% of quarterly limit, which is 20% of annual dose.	1 rem/5 rems = 0.2 or 20% of annual dose limit.
^{131}I intake:	^{131}I intake:
(10 days) x (9.6 x 10^6 ml air inhaled/8-hour work day) x (9 x 10^{-9} µCi ^{131}I/ml (MPC)) = 0.9 µCi ^{131}I (intake).	Assumed to be the same, 0.9 µCi ^{131}I (intake)

TABLE 4. (Continued)

PRESENT 10 CFR PART 20	PROPOSED REVISION TO 10 CFR PART 20
EXAMPLE - Continued	
Permissible ^{131}I intake:	Permissible ^{131}I intake:
(6.3 x 10^4 ml air inhaled/quarter) x (9 x 10^{-9} µCi ^{131}I/ml (MPC)) = 5.7 µCi ^{131}I (permissible intake).	50 µCi ^{131}I (ALI, given in Appendix B).
Percent of annual limit of intake:	Percent of annual limit of intake.
0.9 µCi/5.7 µCi = 0.16 or 16% of quarterly intake limit = 0.04 or 4% of annual limit of intake.	(0.9 µCi ^{131}I (intake))/(50 µCi ^{131}I (ALI)) = 0.018 or 1.8% of annual limit of intake.
^{137}Cs intake:	^{137}Cs intake:
(10 days) x (9.6 x 10^6 ml air inhaled/8-hour work day) x (6 x 10^{-8} µCi ^{137}Cs/ml (MPC)) = 6 µCi ^{137}Cs (intake).	Assumed to be the same, 6 µCi ^{137}Cs(intake).
Permissible ^{137}Cs intake:	Permissible ^{137}Cs intake:
(6.3 x 10^4 ml air inhaled/quarter) x (6 x 10^{-8} µCi ^{137}Cs/ml (MPC)) = 38 µCi ^{137}Cs (permissible intake).	2 x 10^2 µCi ^{137}Cs (ALI, given in Appendix B).
Percent of annual limit of intake:	Percent of annual limit of intake:
6 µCi/37.8 µCi = 0.16 or 16% of quarterly limit = 4% of annual limit of intake.	(6 µCi ^{137}Cs (intake))/(2 x 10^2 µCi ^{137}Cs (ALI)) = 0.03 or 3% of annual limit of intake.
Summation:	Summation:
Not required. However, if the fraction of the external dose limit and the fractions of the ^{131}I and ^{137}Cs intakes were added, it would show: 0.20 + 0.04 + 0.04 = 0.28 or 28% of the annual limit.	$\frac{1 \text{ rem}}{5 \text{ rems}} + \frac{0.9 \text{ µCi } ^{131}\text{I(intake)}}{50 \text{ µCi (ALI)}} + \frac{6 \text{ µCi } ^{137}\text{Cs (intake)}}{2 \times 10^2 \text{ µCi (ALI)}}$ = 0.25 or 25% of the annual effective dose equivalent limit.

TABLE 4. (Continued)

PRESENT 10 CFR PART 20	PROPOSED REVISION TO 10 CFR PART 20
EXAMPLE - Continued	
Alternatively - the intake portions of the example could have been expressed in terms of air concentrations:	
^{131}I (10 days) x (8 hours/day) x MPC = 80 MPC-hours.	Because the DAC for ^{131}I is 2 x 10^{-8} µCi/ml, larger than the current MPC of 9 x 10^{-9} µCi/ml, the intake would be (80 hours) x (9 x 10^{-9} µCi/ml (MPC))/ (2 x 10^{-8} µCi/ml (DAC)) = 36 DAC-hours.
^{137}Cs (10 days) x (8 hours/day) x MPC = 80 MPC-hours.	The MPC and the DAC for ^{137}Cs are the same, 6 x 10^{-8} µCi/ml, and the example exposure would equal 80 DAC-hours.
or a total of 160 MPC-hours of intake.	^{131}I 36 DAC-hours/2,000 (DAC-hours per year) = 0.018 or 1.8% of annual intake limit.
	^{137}Cs 80 DAC-hours/2,000 (DAC-hours/per year) = 0.04 or 4% of annual intake limit.
160 MPC-hours/520 (MPC-hours permitted per quarter) or 32% of the quarterly limit or 8% of the annual limit of intake.	The summation of internal (only) doses would be expressed as: $\frac{36\ (\text{DAC hrs})}{2000\ (\text{DAC hrs})}\ ^{131}I + \frac{80\ (\text{DAC hrs})}{2000\ (\text{DAC hrs})}\ ^{137}Cs = 0.06$ or 6% of the annual (internal) dose equivalent limit
Summation, while not required, would be $\frac{1\ \text{rem}}{5\ \text{rems}} + 0.08 = 0.28$	The summation of doses would be $\frac{1\ \text{rem}}{5\ \text{rems}} + 0.06 = 0.26$
or 28% of the annual limit.	or 26% of the annual limit.

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Enclosure 1

Note that iodine-131 is one of the radionuclides whose ALI and DAC were constrained by the 50-rem "capping dose" to prevent the occurrence of non-stochastic effects in a particular organ or tissue, e.g., the thyroid for iodine-131. Use of the non-stochastic ALI could be unduly conservative (e.g., overestimates risk) in some instances. In that case, the "stochastic" ALIs for these radionuclides may be used in the equation to determine effective dose equivalent. However, if the stochastic ALIs are used, the licensee must also show that the 50-rem capping dose to any organ or tissue is not exceeded.

Some concern has been expressed about how to demonstrate compliance with the proposed revision when the exposures involve the assessment of incremental intakes of radionuclides. Such assessment would be required at 30% or more of annual intake limits under the proposed rule, compared to 25% of quarterly limits under the current rule. The internal dose assessments may be based on data from the analyses of air samples, bioassays, or combinations of those techniques. As indicated in the example Table 4, assessment may be in familiar terms, MPC-hours (now called DAC-hours), as well as ALIs. All of these terms are readily converted to committed effective dose equivalent, except in cases where DAC values are based upon the 50-rem capping dose limit for avoiding non-stochastic effects to some organ or tissue. Conservatism is introduced if the DAC and ALI values constrained by capping doses are considered equivalent to 5 rems effective dose equivalent, but this is a reasonable simplification which may be chosen by the licensee.

Part of the concern about assessment of intake results from the more restrictive values of ALIs and DACs proposed for certain radionuclides, particularly for some forms of uranium and transuranics. These more restrictive values have resulted primarily from the use of updated biologic and dosimetric models, rather than by the use of the ICRP system of dose limitation per se.

Demonstration of compliance using the proposed requirement for summation of external dose and internal committed effective dose equivalent is simple and straightforward. It is believed that relatively few licensees operate under conditions in which individuals receive both external doses greater than 10% of the deep dose equivalent annual limit and intakes greater than 30% of the ALIs so that summation would be required.

Adjustments for Site-Specific Parameters

The assumptions made in deriving the ALIs and DACs in Appendix B place limitations on their use. ALI and DAC values can be derived for the actual work conditions. Such derived limits, specific for the licensed condition, would not necessarily require conservative assumptions which would overestimate doses. Actual exposure times and occupancy of the area could be considered. Detailed investigations would be required to provide the necessary information for NRC approval of the revised ALI and DAC values.

It is recognized that, in some cases, it might be necessasry to make additional tests and measurements in order to determine the actual composition of mixtures of radionuclides or of chemical and physical forms which affect translocation within the body. Where specific information is available on the behavior of radionuclides in the body of an individual, the licensee may document or reference the information in the individual's record and use the specific information to assess the dose to the individual. The licensee is encouraged to use such data, when available, because the ICRP values in Publication 30 are derived for average metabolic behavior in an adult population, and the individual's metabolic behavior might differ substantially from the average.

Committed Dose

The proposed system of dose limitations recommended by the ICRP in 1977 (ICRP Publication No. 26) would assign to the year of intake of the radionuclides the entire caculated 50-year committed dose equivalent received from the year's intake. It is indicative of the 50-year risk of health injury resulting from one year of intake of radionuclides that are retained in the body. The technique of regulating exposures by using committed dose equivalent is less burdensome, in most cases, than the alternative technique of accounting, in each year of the individual's life, for the dose actually received from radioactive material deposited in the body that year and the dose received that year from material deposited in each of the previous years. The committed dose equivalent has been reflected in concentration values listed in Appendix B, 10 CFR Part 20, for many years. The technique is recognized to be conservative for several reasons:

(1) An individual might not live long enough (as a result of risks to life other than from radiation) to receive the 50-year committed dose, particularly when exposures occur late in life.

(2) Because of tissue repair mechanisms, doses of low LET radiation which are delivered at a low dose rate are generally believed to result in less risk than similar doses which are delivered promptly. (However, the selected risk estimators include an adjustment for dose rate.)

(3) During the latent period between the radiation exposure and observation of most types of radiation-induced cancer, individuals would be subject to death from other causes.

Exceptions to the Use of Committed Dose Equivalents

Even at the annual limit, it is difficult to assess, by body counting and bioassays, very small intakes of some radionuclides that would deliver a 50-year committed effective dose equivalent. Surrogates for small intakes, such as intake estimates based on exposure hours, generally must be used.

Exposures to certain airborne radioactive material with very long effective half-lives, such as uranium and transuranic elements, pose especially difficult problems with respect to the licensee's being able to demonstrate compliance with the basic dose limit.

The biological, chemical, and physical characteristics of certain radionuclides are such that the air concentrations found in restricted areas at, or below, the DAC values and the amounts of radionuclide found in vivo at, or below, the ALIs might be difficult to measure in a practical manner with sufficient accuracy to permit projections of committed effective dose equivalent to be used to demonstrate compliance with the limits. Further, assessment of the intake (and the associated 50-year committed dose equivalent) from air sampling data, whether from fixed air samplers in the work area or from individual (lapel) air samplers, may show poor correlation with amounts of radioactive material assessed by bioassay.

It is also recognized that processing of the more hazardous long effective half-lived radioactive materials, such as plutonium, routinely takes place within confinement, such as glove-boxes, and that intake by workers results from some failure of that containment that is neither readily anticipated nor controlled. The facilities which process these radionuclides are designed and operated so that intakes from routine operations are within the ALIs, and bioassays are performed to quantify intake amounts.

Licensed operations wherein uranium compounds are processed have not routinely been subject to the same degree of confinement as plutonium because uranium constitutes a much lesser potential health hazard and compliance with the present Part 20 Appendix B (MPC) values could be demonstrated by air sampling at work stations and estimating exposure times at those air concentrations. However, the proposed revision of Part 20 includes DAC values for uranium which are a factor of 5 less than the MPC values in the present Part 20, and the present method of demonstrating compliance might not be practical.

The problem of demonstrating compliance is even more complex if the worker is exposed to a mixture of chemical and physical forms of a given radionuclide. A single measurement would not indicate which inhalation class (D, W, or Y; see § 20.3) or combination of classes of material might be present. The licensee could assume the material to be Class Y, and thereby potentially overestimate the dose and associated risk. Additional measurements of the characteristics of the individual, the bioassay specimens, and the airborne radioactive material would be needed in order to characterize more accurately the material and the 50-year committed effective dose equivalent which would result from the intake of the mixture.

Another potential problem might be demonstrating compliance with the limits if an individual has previously received an intake of a long-lived radionuclide, such as plutonium (for example, at a Department of Energy facility), before being employed by a licensee such as a uranium fuel fabricator. In this case, it might be difficult to assess either the small incremental intakes of uranium, because of the presence of the radionuclide already deposited in the individual's body, or to assess the dose from the deposited plutonium if the emissions from the plutonium were masked by depositions and emissions from uranium.

In view of these and associated difficulties, an exception to the limitations in § 20.201 would be made in § 20.205 for control of occupational exposures to the radionuclides which are listed in Table 3 of the proposed rule. The radionuclides in Table 3 of the rule include those which are within the most restrictive four decades of DAC values, have radioactive half-lives greater than one year, and are Class Y in lung clearance time. Under the exception in § 20.205, licensees would be permitted to control occupational exposure to these radionuclides in terms of the sum of the (external) deep dose equivalent and the effective dose equivalent actually received in one year from all radioactive material retained in the body of the individual, provided that a number of other conditions are met. In addition to design and operational requirements, and to the annual 5-rem (0.05 Sv) effective dose equivalent limit, these conditions include: (1) Limiting the individual's annual effective dose equivalent from the intake of radionuclides in Table 3 during the licensee's operations to 3 rems or 0.03 Sv (including the contributions from materials carried over from previous years); (2) providing the worker the best estimate of the committed effective dose equivalent for the radioactive material remaining in the body of the worker subsequent to the year of intake; (3) revising the committed dose estimate at least annually; and (4) instructing the worker about the significance of both the annual and the committed dose and the uncertainty of the estimates. The 3-rem (0.03 Sv) annual effective dose equivalent limit is included to constrain individual intakes that could deliver a dose equivalent approaching the limit each year for the rest of the individual's life. This value of 3 rems per year is high enough to permit adequate monitoring and job flexibility, but sufficiently below the basic annual dose limit to ensure that the associated risk to the worker would be within the range found in safe industries. The exception would not apply to the dose limit for individuals in the public.

The 5-rem (0.05 Sv) annual effective dose equivalent limit for the individual applies to the dose from *all* known exposures, e.g., external sources, radioactive material deposited internally from previous exposures, and radioactive material deposited internally during the licensee's operations. The 3-rem (0.03 Sv) limit applies *only* to the annual effective dose equivalent resulting from all long-lived material retained in the individual's body.

If the individual were to receive 3 rems from internally retained radionuclides with long effective half-lives, it would be possible to receive a committed dose equivalent equal to 60% of the annual limit each year for a lifetime from the intake during a single year. If this were to occur, the individual could receive 3 rems from the internal deposition each year and would not be permitted to receive any additional intake of long-lived radionuclides which might add to the annual dose. However, it is unlikely that metabolic behavior of such nuclides will remain so stable over a lifetime that this dose would not decrease somewhat in time. In addition, ALARA efforts should be adequate to keep internal depositions well below the limit.

The Commission believes that these conditions are practical, reflect state-of-the-art health physics practice, and permit adjustment of the committed dose equivalent estimates as better data become available.

XII. Minors and Pregnant Women

In developing the proposed revision, consideration was given to regulating the exposure of classes of workers who might be at a relatively higher-than-average risk from radiation exposures, e.g., minors, fertile women, pregnant women, and embryos/fetuses. For minors (persons less than 18 years of age), the annual limits are 1/10 of those for an adult worker.

The present NRC regulations in 10 CFR Part 19 require that all individuals who might be exposed to radiation in their workplace be informed about the potential risks associated with the exposures. As a matter of policy, the NRC has used a single annual limit for both sexes and has relied on information provided in Regulatory Guide 8.13 ("Instruction Concerning Prenatal Radiation Exposure") to all workers regarding risk to an embryo/fetus.

The susceptibility of the embryo/fetus to damage by radiation is well established and recent information suggests that the period from 10 weeks to 17 weeks in development may be especially critical. In view of the greater sensitivity, it is generally considered desirable to limit the dose to the embryo/fetus to not more than 0.5 rem (5 mSv) during the entire pregnancy. To avoid possible greater damage at higher exposure rates, particularly at some critical time during the development of the embryo/fetus, efforts should be made to avoid substantial variation above a uniform monthly exposure rate which would satisfy this limit. Unfortunately, during one of the critical periods of embryonic organ development (the first two or three months of pregnancy), a woman might not realize that she is pregnant. In order to protect an embryo/fetus before a woman is aware of her pregnancy, a lower dose limit for all fertile women might appear to be desirable. However, establishment of a lower dose limit for all fertile women would result in undue restriction when there is no embryo/fetus to protect and could, therefore,

restrict the employment of virtually all women in the nuclear workforce.

The NCRP recommended in Report No. 39 (1971) that "During the entire gestation period, the maximum permissible dose equivalent to the fetus from occupational exposure of the expectant mother should not exceed 0.5 rem." The ICRP recommended a constraint on the dose to the pregnant woman by selecting working conditions so that she would be unlikely to receive more than about 1.5 rem per year. Because of the shielding provided to the fetus by fluids and the mother's overlying tissues and fluids and the duration of the pregnancy, it is likely that the fetus would receive less than 0.5 rem under such selected working conditions.

Under its responsibility to develop Federal guidance for the protection of workers exposed to ionizing radiation, the Environmental Protection Agency (EPA) has proposed guidance for the protection of the embryo/fetus. This guidance includes a recommendation that the dose equivalent to an embryo/fetus as a result of occupational exposure of a woman declared to be pregnant should not exceed 0.5 rem (5 mSv) during the entire gestation period. This recommendation is accompanied by a further recommendation that conformance to this limitation should be achieved without economic penalty or loss of job opportunity and security to workers. As with previous Federal guidance, the NRC, as a matter of policy will implement the final Federal guidance on protection of the embryo/fetus in its regulations.

Consistent with the proposed guidance to Federal agencies, the proposed revision of Part 20 would require the licensee, following a voluntary declaration of pregnancy by the employee, to limit to 0.5 rem (5 mSv) the dose to an embryo/fetus from occupational exposure of the declared pregnant woman throughout the period of pregnancy unless, as noted below, the embryo/fetus may have already received a dose in excess of the limit prior to the declaration. To provide adequate radiation protection for the embryo/fetus, and to minimize the restriction on employment, the Commission recognizes the importance of female workers voluntarily informing their employers of their pregnancy and the estimated date of conception, so that arrangements can be made to restrict potential exposures.

Licensees would be required to use, as dose to an embryo/fetus, the sum of the external radiation (deep dose equivalent) and two times the effective dose equivalent assigned to the expectant mother from the radionuclides which enter the mother's body. The factor of two is the same age-specific factor which was used in deriving the values in Appendix B, Table 2, used in the assessment and control of radiation doses to the public.

The Commission would not consider the licensee in violation of the proposed revision for exceeding the 0.5 rem dose limit if the embryo/fetus had received 0.5 rem, or more, before the pregnant woman notified the licensee of her pregnancy. In order to permit continued employment of the pregnant woman during the remainder of the pregnancy, and recognizing that it is not possible to avoid some additional exposure in a nuclear facility, the proposed revision would permit an additional 1% of the annual dose limit for workers, e.g., 0.05 rem, to be received by the embryo/fetus during the remainder of the pregnancy.

Consistent with the Federal guidance proposed by EPA for protection of an embryo/fetus from occupational radiation exposure of female workers, the proposed amendments to Parts 19 and 20 published by the Atomic Energy Commission on January 3, 1975 (40 FR 799) regarding maintenance of doses to an embryo or fetus as low as is reasonably achievable would be superseded.

XIII. Planned Special Exposures

Removal of the 5 (N–18) "dose-averaging" provision in the present Part 20 could limit the flexibility in the management of some occupational exposures necessary to accomplish tasks in high radiation areas. In order to provide some compensating flexibility, the proposed revision contains a provision for "planned special exposures." However, the provision is designed to be used only in exceptional situations when alternatives which might avoid the higher exposure are unavailable or impractical.

In the proposed provision for planned special exposures, an individual's dose due to all such exposures in a calendar year may not exceed an increment equal to the annual dose limits. Thus, an individual could be permitted to receive 5 rems (0.05 Sv) from planned special exposures in a given year in addition to 5 rems (0.05 Sv) from routine activities (assuming the exposures were all ALARA). No more than five times the annual dose limit may be permitted from all planned special exposures during a "working" lifetime. Doses received from planned special exposures would be recorded along with doses received from normal activities, but would not affect the individual's availability for normal work activities.

The annual and lifetime limits on planned special exposures would be reduced by subtracting from them all doses in excess of the annual limits for normal operating conditions. In other words, overexposures due to accidental or emergency exposure would be added to the planned special exposures for purposes of meeting the annual and lifetime limits of 5 and 25 rems, respectively

A number of limitations would be imposed on licensees prior to the use of the planned special exposure provision. The licensee would be required: To ascertain the dose equivalent from all previous planned special exposures and overexposures for all individuals involved; to inform the individuals involved of the purpose of the planned special exposure event, the estimated doses and special radiation or other conditions that might be involved in performing the task; to provide instruction in measures to be taken to keep the radiation dose and other risks ALARA; and to provide to the employee a written report of the radiation dose actually received. These limitations are designed to ensure protection of the workers and to discourage unwarranted use of this provision.

Consideration was given to permitting a whole body dose equivalent as high as 10 rems from a single planned special exposure event. The 10 rems would be consistent with the ICRP recommendations. However, supporting data have not been found to demonstrate the need for a 10-rem supplemental dose in a year.

Planned special exposures will be restricted to external exposures only. The intake of radioactive material during planned special exposures must be controlled within the limits on committed effective dose equivalent for normal operating conditions. Respiratory protection equipment should be used for planned special exposures when an individual might encounter high airborne concentrations of radioactive material.

Consideration was given to making the use of planned special exposures subject to voluntary action on the part of the individuals receiving the exposure. This approach was not proposed because the risk of suffering health damage from these limited exposures is small and the justification for having the planned special exposure feature is the recognized need of the licensee to accomplish important occasional tasks vital to continued operations. The revision is believed to contain adequate features to permit the licensee to have the assured labor

resources when they are needed while providing adequate worker protection.

Consideration also was given to prohibiting fertile women from participation in planned special exposures. A planned special exposure could result in a whole body effective dose equivalent of 5 rems at the limit, plus an additional 5 rems received during normal working conditions. This theoretical dose equivalent of 10 rems for a possibly pregnant woman could represent a significant increase in risk of damage to the embryo/fetus above the risk from the 0.5 rem limit specified for declared pregnancies.

However, this prohibition has not been included in the revision because of consideration of the following factors. The prohibition would require licensees to either exclude all women from planned special exposures or to question, with the associated invasion of privacy, the reproductive capability of female employees. The prohibition could unnecessarily restrict the work opportunities for women who could choose not to become pregnant during the time intervals involving the higher planned special exposures. The availability and effectiveness of birth control methods now available provides a reduced probability of an unplanned or unexpected pregnancy. Moreover, the dose limit that would be specified for the embryo/fetus would prevent declared pregnant women from participating in planned special exposures.

XIV. Overexposures

The present Part 20 does not specifically address overexposures of workers. However, the present Part 20 does restrict the further exposure of a worker who has exceeded the quarterly limits (1.25 rems per quarter or 3 rems per quarter if the 5(N–18) "bank" has not been "used up") only for the remainder of the quarter in which the overexposure occurs.

The proposed revision would limit the dose equivalent for workers to 3 rems (0.03 Sv) in any quarter and 5 rems (0.05 Sv) in a year. If an individual were to receive more than 3 rems, but less than 5 rems, in a quarter, the worker would still be limited to 5 rems for the year, unless the dose was permitted under the planned special provisions.

The proposed revision would also provide that, except for planned special exposures, individuals who receive occupational doses in excess of the 5-rem annual limits before the end of the calendar year could not be assigned tasks involving more than 1 rem (0.01 Sv) effective dose equivalent each quarter during the remainder of the calendar year, including the quarter in which the overexposure occurred. The additional dose is allowed to permit the continued employment of the individual in the licensed facility, recognizing that it would not be possible to work in the facility without receiving some additional exposure. The risk associated with an overexposure generally would not warrant the removal of the individual from employment in the licensed facility during the remainder of the calendar year. The Commission believes that for those individuals who do not exceed the annual dose limits, the regulations should not present a potential for adversely affecting an individual's availability for continued employment within the basic dose limits, provided that there is no medical advice to the contrary and the individual chooses to do so.

Any portion of the dose received in excess of the annual limits would be subtracted from the annual and lifetime planned special exposure limits and would be required to be reported in every case. Overexposures and use of planned special exposures are expected to be uncommon occurrences, and few individuals would reach the planned special exposure lifetime limit of 25 rems (0.25 Sv).

Consideration was given to limiting additional doses to overexposed workers to 1% of the annual limits. The reason for this suggestion was that it would place more emphasis on the unacceptability of overexposures and to stress the desirability of ALARA levels. This alternative was rejected because of the difficulty in being able to demonstrate compliance through measurements of doses at 1% of the annual limits.

Other limitations such as 6% of the annual limits and 6% of the annual limits per quarter were rejected in favor of the proposed 1 rem per quarter increments because of considerations relating to employability of exposed workers.

XV. Emergency and Accident Conditions

The revision of Part 20 specifically states that the dose limits for normal operating conditions do not apply to emergency conditions. Emergency conditions cannot be detailed in advance of their occurrence, i.e., the conditions will be entirely event-specific. During emergency conditions, it might be necessary to make prompt decisions on actions that could involve some individuals being exposed to high radiation levels in order to prevent even higher exposures to other workers or to members of the public or the spread of radioactive contamination. Because of this, the Commission may require, as part of the licensing process, licensees to develop contingency plans, including how they intend to make prompt decisions on the use of exposure levels that are higher than the proposed regulations would permit. Doses received during emergency conditions or from an accident would become part of the individual's annual occupational dose record and would be subtracted from the annual and lifetime planned special exposure dose limits.

Accidental occurrences, such as tears in rubber gloves or cuts from broken contaminated glassware, can be a principal cause of exposures, particularly for operations which are performed in confinement systems. Such accidents occur with sufficient frequency that the provisions of Part 20 for normal operating conditions should apply. An accidental occurrence does not necessarily constitute an emergency.

XVI. Transient and Moonlighting Workers

In situations where the worker is likely to receive more than 25% of the basic quarterly dose limits, the present Part 20 requires a licensee to obtain a written signed statement of each individual's previous occupational dose. This statement must be obtained prior to first entry of the individual into the licensee's restricted area during each employment or work assignment (if the worker is not an employee of the licensee). If, for a given individual worker, the licensee wishes to permit doses up to 3 rems per quarter (within the 5(N–18) dose-averaging formula), the licensee must obtain the lifetime occupational exposure history of that individual on NRC Form 4.

In the proposed revision, licensees would continue to be required to assess and control the total occupational dose received by all individual workers, including transient workers and moonlighters. The licensee must ascertain the occupational exposure history during the current year for all workers likely to require provision of individual monitoring devices or services, and to control additional occupational exposures so that the total dose does not exceed the limits. NRC Form 4 would be revised for this purpose.

There is also a requirement in the present Part 20 (§ 20.408) for termination reports to be filed by seven categories of licensees.[4] The requirement was

[4] Power reactors, industrial radiographers, fuel processors, high-level waste repositories, independent spent fuel installations, certain large

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designed to provide information on the use of, and exposure experience of, individuals who work for more than one licensee in a calendar quarter (transient workers), or who work for more than one licensee at the same time (moonlighters). The categories of licensees required to submit termination reports were believed to involve the greatest potential for use and significant exposure of transient and moonlighting workers.

The requirement for termination reports in the present Part 20 would be continued in the proposed revision for those seven categories of licensees presently required to report. The reporting would be in terms of annual and committed effective dose equivalent, as appropriate.

The proposed revision would retain the 3 rems (0.03 Sv) per quarter limit for deep dose equivalent, similar to the present Part 20 (see the discussion of combined internal and external doses). Retention of the 3-rems quarterly limit would ensure that the proposed revision will not permit transient workers to receive greater doses than the present Part 20, even for short-term employment.

XVII. Standards for Individuals in the General Public

Dose Limits

The present Part 20 does not contain dose limits, as such, for the general public. Rather, it presents values for concentrations of specific radionuclides in air and water and levels of radiation in unrestricted areas from which one may infer a dose limit equal to 1/10 the limit for radiation workers. This "inferred" dose limit is 0.5 rem per year, which is consistent with the Federal Radiation Protection Guidance developed by the Federal Radiation Council and promulgated by the President May 18, 1960 (25 FR 4402).

There is no provision in the present Part 20 for summation of external and internal doses to the public. The short-term dose rate limits in the present Part 20 are based on the assumption that the dose rates will not persist for significant fractions of the year. The limitations on effluents are calculated so that an individual continuously present at the boundary of the restricted area could receive 0.5 rem whole body dose equivalent, or the dose equivalent limit to other single organs and tissues, from the air or water effluents. There is an additional provision that the Commission may limit quantities of radioactive materials released if it appears that the intake from air, water, and food by a suitable sample of an exposed population group, averaged over a period of a year, would exceed one-third of the limit (§ 20.106(e)).

One of the important differences between the present Part 20 and the proposed revision is the treatment of limitations. In the present Part 20 the basic approach is that if a licensed activity results in exposures which result in doses at or below stated limits, it is generally acceptable and requires no further effort to reduce the exposures. There is a sharp line of demarcation which occurs at the limits. In the proposed revision, there is a graded scale of actions which occurs between the limiting dose conditions and zero doses. This is accomplished by: Specifying limiting dose conditions (upper bound); requiring doses to be as low as reasonably achievable (ALARA); and specifying reference levels (below the dose limits) which require specified actions to be performed at that level.

The proposed revision of Part 20 would explicitly set the annual dose limit at 0.5 rem (5 mSv) to an individual member of the public, considering all known sources of both external and internal dose, other than natural background and medical diagnosis and therapy. The short-term dose rate and the effluent concentration features used as limits in the present Part 20 are carried as reference levels in the proposed revision. In this context, they provide precautionary control procedures while meeting the annual limits on dose equivalent to individuals in the public.

An individual member of the general public might receive exposure to radiation or radioactive material from several sources—some subject to regulatory requirements under the Atomic Energy Act, others not—and from several pathways. (Some facilities operated by or for the Department of Energy (DOE) and the Department of Defense (DOD) are not subject to NRC regulation. X-ray machines, accelerators, and most naturally occurring radioactive material also are not subject to NRC regulation.) If effluents containing radionuclides are released, external exposures occur directly from the passing plumes, from radionuclides in the environs, or from radionuclides taken into the body by inhalation or by ingestion of water or locally produced foodstuff. The exposures of such individuals can be substantially more difficult to estimate accurately than that of a worker who will generally be exposed only to the licensed radioactive source and only by one or two exposure modes (generally by direct exposure to an external source, and, in some instances, by inhalation of airborne radionuclides). The individual worker's exposure can be readily monitored, but exposures of the individual member of the public cannot be easily determined, because it requires detailed knowledge of living conditions and habits. Where these uncertainties exist, the Commission believes that conservative, but reasonable, values for parameters generally should be selected by the licensees when estimating public doses.

Numerically lower limits for doses to the general public in the vicinity of uranium fuel cycle facilities have been established by EPA (40 CFR Part 190), and limiting conditions for operation of light-water-cooled nuclear power reactors have been set by the NRC (§ 50.34a, § 50.36a and Appendix I in 10 CFR Part 50.) These limits were based on ALARA considerations at the time of development.

0.1-rem (1 mSv) Per Year Reference Level

Dose limits are intended to apply to real doses to persons actually exposed. However, it is impossible to accurately determine such doses because of incomplete information about personal food intake and habits, individual metabolism, spatial and temporal considerations, and other confounding factors.

To compensate for this lack of information, it is necessary for licensees to assume values for these factors that are conservative (i.e., tending to overestimate the dose). Compliance with the dose limits can then generally be established in a practical manner by evaluating exposures against a reference level that is a small fraction of the annual dose limit. This assumes that the annual dose to the maximally exposed real person is not likely to exceed a fraction of the limits, and almost certainly will not exceed the limits even if there are other licensed and unlicensed radiation sources in the vicinity. For these reasons , a dose equivalent reference level of 0.1 rem (1 mSv) per year is proposed for individual members of the public. Table 2 of Appendix B contains derived air and water concentrations which are based on 0.1 rem per year to an individual in the general public. This table can be used in making dose projections. Licensees operating within this reference level would be confident that no individual member of the public would be likely to exceed a dose

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commercial suppliers of byproduct material, and licensees receiving radioactive waste from other persons for disposal under Part 61.

equivalent of 0.1 rem per year for a substantial fraction of the individual's lifetime. Thus, the lifetime calculated risk to any individual member of the public is unlikely to exceed 1×10^{-5} per year when exposed continuously to a dose rate of 0.1 rem per year over a lifetime.

If a license has reason to believe that an individual in the general public might have received, or is likely to receive, greater than 0.1 rem (1 mSv) in a year as a consequence of the licensed activity, the licensee would be required to report this to the NRC. In the report, the licensee would be required to provide evidence that the 0.5-rem (5 mSv) dose limit will not be exceeded, describe the application of ALARA provisions of the radiation protection program, and provide the reason why the estimated dose exceeds 0.1 rem per year.

While it is anticipated that essentially all licensees can and will operate within the 0.1-rem reference level, applicants or licensees who anticipate difficulty in demonstrating operation within the 0.1-rem (per year) reference level may apply to the NRC for prior approval to operate in a manner which might cause estimates of dose to individuals in the public greater than 0.1 rem (per year). Information which would be submitted to the NRC for this prior approval would include: Demonstration of a clear need to operate in excess of the reference level; the licensee's program to assess and control dose within the 0.5-rem annual limit; and the licensee's procedures to be followed to maintain public exposures ALARA.

It is emphasized that the reference levels are not limits for permitted dose, but rather define actions required to be taken by the licensees at specific exposure levels. The 0.1-rem reference level will have the effect of constraining the dose to individuals to 0.1 rem per year, or less, and will be in accord with the recommendations of the ICRP for potential long-term exposures of individuals. These proposed regulations should result in exposures to members of the general public being well below the 0.5 rem per year dose limit.

XVIII. De Minimis Level and Collective Dose Evaluations

The need has long been recognized for a de minimis feature in the standards for protection against radiation in order to avoid extending regulatory actions beyond what is needed to adequately protect public health. Applied to radiological protection, de minimis could be a level of risk (or dose rate, as a surrogate measure) so low that it would be a trifle in comparison to the risks which the individual is subjected to daily as part of normal living habits and activities. It would constitute a level of risk so low that no resources could be justified to control it, or to be further concerned with it. The Food and Drug Administration (FDA) has used, in essence, such a rationale in a notice of proposed rulemaking to establish an acceptable level for the presence of carcinogens in food additives (44 FR 17092, March 20, 1979). The FDA concluded that a risk of 1 diethylstilbestrol (DES)-induced cancer death in 1 million persons over a lifetime would constitute such a level. See also, *Monsanto Co. v. Kennedy* (D.C. Cir.) 613 F. 2d 947,954 (1979). This risk value appears acceptable in that it is an insignificant incremental risk to the "normal expectation" risk of about one chance in four of contracting cancer. Normal risks of accidental harm are even greater.

There are a number of ways to establish a de minimis level where exposures to radiation are encountered. Many suggestions have been made to select a de minimis value based on variations of the naturally occurring "background" radiation from cosmic and terrestrial sources. Background levels are highly dependent on local geology and altitude. Background levels varying from less than 0.1 rem to over 0.2 rem per year can be found in the United States. Reference to natural radiation background levels provides a good perspective on radiation exposures, but it is not clear how this range could be used to select a de minimis level that has unique advantages over a judgment on risk in terms of cancer deaths and hereditary diseases.

In view of the Commission's policy to use quantified risk as an important factor in decisionmaking, the de minimis level can be based on a quantitative lifetime risk of dying from a radiation-induced cancer and a subjective judgment that such a risk is insignificant in the view of society. (Hereditary diseases in the first two generations are treated as equivalent to cancer deaths in the ICRP system of dose limitation and are included in the following numerical examples.) Since the total risk coefficient in Table 2 is 1.65×10^{-4} per rem for whole body deep dose equivalents, a risk of 1 in 1 million persons in a lifetime (about 70 years), would be about 0.1 mrem per year.

$$10^{-6}\ \frac{\text{Cancer deaths}}{\text{lifetime}} = D\ \frac{\text{rem}}{\text{year}} \times 1.6 \times 10^{-4}\ \frac{\text{Cancer deaths}}{\text{rem}} \times 70\ \frac{\text{years}}{\text{lifetime}}$$

Solving for "D,"

$$D = \frac{10^{-6}}{70 \times 1.6 \times 10^{-4}} = \text{approximately } 10^{-4}\ \frac{\text{rem}}{\text{year}} \text{ or } 0.0001 \text{ rem per year}$$

Thus, if an individual were to receive 0.0001 rem per year every year for a lifetime, the calculated risk of cancer death (or hereditary disease) induced by radiation would be about 1 in 1 million.

The de minimis level would be a lower limit for regulatory concern which would be applicable to any licensed activity. The establishment of a de minimis dose level does not imply that at higher levels it is necessary to spend resources for radiation protection purposes. Indeed, when an ALARA level for a specific activity is determined, even when it approaches the basic annual limit, additional resources for radiation protection would not be required to reduce the level further. But an ALARA level is *not* a de minimis level. Of course, should an licensee operate in a manner that the de minimis level is satisfied, these operations are by definition ALARA, because to commit further resources would be unjustifiable from a health protection viewpoint alone.

The relationship between the dose limit, ALARA and a de minimis level is illustrated in Figure 1. Note that ALARA is determined by the case-specific evaluation. However, ALARA evaluations could be made for generic licensed activities and an ALARA value determined for those applications. This information could be used as a basis for an exception for some of the requirements of the rule.

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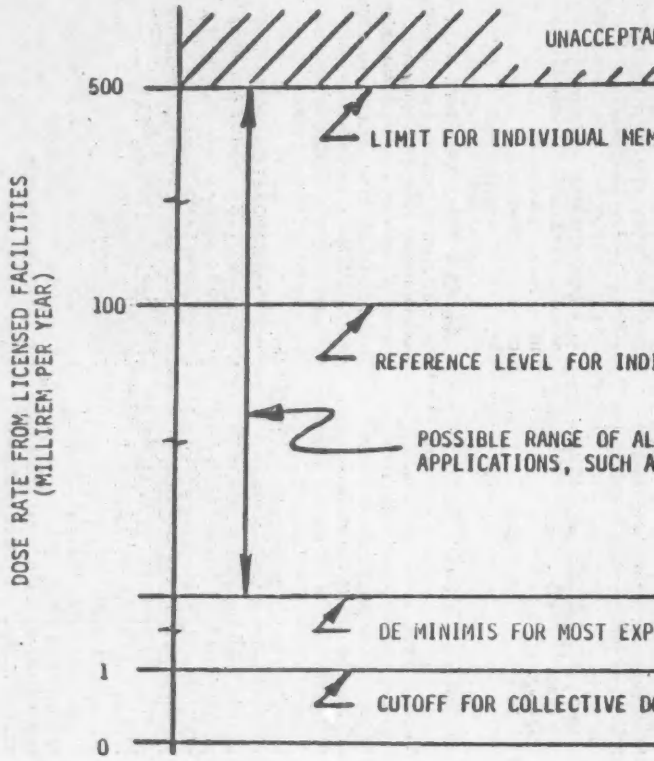

FIGURE 1 - RELATIONSHIP OF LIMIT, REFERENCE LEVEL, ALA

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TABLE REGION

MEMBER OF PUBLIC

NDIVIDUAL MEMBER OF PUBLIC

ALARA APPLICATIONS, INCLUDING GENERIC
AS DECOMMISSIONING, LOW LEVEL WASTES, ETC.

XPOSED INDIVIDUAL MEMBER OF PUBLIC

DOSE CALCULATIONS

LARA, DE MINIMIS, AND COLLECTIVE DOSE CUTOFF LEVEL

[7590-01]

The development of this proposed revision of Part 20 included consideration of de minimis doses lower (see above) and higher than 0.001 rem in a year for the most exposed individual to define sources of exposure below the level of regulatory concern. Some reviewers of preliminary drafts expressed concern that the de minimis provision could permit abuse. For example, licensees might use de minimis findings in lieu of operating procedures that would reduce or avoid dose to the public; radioactive materials might be more widely used in consumer products without controls, thus presenting potential problems of acceptability; inadequate evaluations might be made of doses to the public before release to the environment of very low level radioactive waste streams; or systems for reducing the radionuclide content of effluent streams might not be operated unless subject to specific license requirements. On the other hand, many reviewers believed 0.001 rem per year was too low. Consequently, this broader de minimis feature of applying the concept to the most exposed individual has not been included in the proposed revision.

A more limited application of the de minimis concept has been proposed. Following consideration of lower and higher numbers, a value of 0.001 rem (0.01 mSv) per year per person was selected for limiting the extent of evaluating collective doses to populations. Application of the de minimis level to collective dose estimates would, among other things, limit both the size of the population and the time over which collective dose would need to be considered in evaluating activities associated with the release of radioactive materials to the environment.

The proposed application of the de minimis concept could have a substantial influence on the evaluations of conditions where very large numbers of people are subjected to very low dose rates. In essence, the proposed rule would suggest disregarding extremely low dose rates (0.001 rem per year) without regard to the number of people exposed at that level or less. Thus, this contribution to estimates of collective doses would be disregarded. Where collective doses to a population are evaluated, the acceptability of the associated potential risks can also be compared to the sum of potential risks experienced by the same population over the same time interval. Consequently, even though some de minimis applications could result in very small but finite doses to very large numbers of persons, the comparative collective risk to which these people are routinely subjected (for example, from natural background radiation) is also very substantial and proportional to the number of persons considered.

The Commission is particularly interested in comments on the application of the de minimis concept in radiation protection regulations. Comments are especially invited on the merits of adding to the regulations the application of the concept to the most exposed individual, the cutoff of collective dose evaluation, and the numerical values chosen. A suggested level, reasons for the level, and conditions for application would be helpful.

XIX. Surveys and Monitoring

The revision includes a general requirement for licensees to perform surveys and monitoring to demonstrate compliance with the regulations and to provide NRC with information for assessing the adequacy of the licensee's radiation protection program, particularly the effectiveness of ALARA provisions. The comprehensiveness of the survey and monitoring efforts would be determined by the presumed hazard. Detailed guidance on health physics surveys is provided in NRC Regulatory Guides, such as 8.21 "Health Physics Surveys for Byproduct Material at NRC-Licensed Processing and Manufacturing Plants."

The revision would require the use of individual monitoring devices by individuals who enter a high radiation area, and by adults who are likely to receive from external radiation sources an annual deep dose equivalent greater than 0.5 rem (5 mSv), a dose equivalent greater than 1.5 rems (15 mSv) to the eye, or a dose equivalent greater than 5 rems (0.05 Sv) to the skin or extremities. Adults who are likely to exceed 30% of the ALIs would also be required to be individually monitored for the intake of radioactive material. Establishment of these monitoring requirements at the different levels (10% for external whole body dose and for other external exposures versus 30% for intake of radioactive material), rather than at a common level, reflects consideration of the relative ease and practicality of using dosimeters to monitor doses from external sources compared to monitoring doses from internal sources.

The revision would require individual monitoring of minors who are likely to receive 5% of the adult annual limits for both external dose equivalent (0.25 rem or 2.5 mSv for whole body exposure) and intake of radioactive material. The present requirement for monitoring external dose to minors is 5% of the quarterly external whole body dose equivalent limit (0.0625 rem). The present Part 20 does not contain a monitoring level for intake of radioactive material for minors, but limits exposure of minors to the concentrations permitted in unrestricted areas.

The revision would require assessment of intakes of radionuclides to aid in determining the internal dose to individuals. However, because there are many factors that must be considered, it is not practical to incorporate specific detailed requirements for bioassay in this revision of Part 20. Measurements of concentrations of radionuclides in air would be required for an individual who enters a designated "airborne radioactivity area." The methods used in monitoring to control inhalation of radionuclides must consider: (1) The radionuclide involved; (2) the physical and chemical forms of the materials; (3) the metabolic behavior; and (4) the sensitivity and availability of measurement techniques.

It is expected that ICRP metabolic models and information on the chemical and physical forms of the radioactive materials will be used to derive committed dose equivalents from assessed intakes. However, if metabolic data for the exposed individual are available, they should be used. Owing to uncertainty in parametric values, in circumstances where dose limits may have been exceeded or closely approached, or when restrictions on employment due to dose are contemplated by the licensee, it would be appropriate to consider the personal metabolism of exposed individuals and to determine the appropriate dosimetry parameters by a special monitoring program to ensure that the doses are not substantially underestimated.

Consideration was also given to incorporating specific requirements for effluent and environmental monitoring during normal operations, for the capability to monitor radioactive releases and radiation levels associated with anticipated operational occurrences and postulated accident situations, and for standard performance or proficiency tests of radiation and radioactivity measurements. It was concluded that effluent and environmental monitoring requirements, for both normal and abnormal operating conditions, must be based on considerations that are specific to the nature of the particular licensed activity and to the environs of the licensee's facility. Such specific requirements are included in individual

license conditions or technical specifications and are not warranted in Part 20, which applies to all licensees.

XX. Posting Requirements

Several changes have been proposed to the present Part 20 posting requirements. A new requirement would call for posting very high radiation areas with a sign bearing the radiation symbol and the words "Danger" (not "Caution") "Very High Radiation Area." This posting would be in addition to the controls discussed below.

The present Part 20 provides that a licensee need not post a caution sign in a room or area containing a sealed source if the radiation level at 1 foot from the surface of the source container does not exceed 0.005 rem per hour. This provision has been deleted because the Commission staff believes that any area in which radioactive material is used or stored in quantities that exceed those listed in Appendix C should be posted as a warning to personnel such as housekeeping staff, firemen, or others who might be required to enter the area.

XXI. Procedures for Handling Packages

Procedures for picking up, receiving, and opening packages would be changed in several respects. Currently a licensee is required to make arrangements to receive certain packages offered for delivery or to receive notification from the final carrier if the package is to be picked up. The present Part 20 contains a table of "Exempt" and "Type A" Quantities which identifies those packages for which such arrangements must be made. This table would be replaced in the proposed revision by reference to the Type A_2 quantities specified in, or determined by procedures described in, Appendix A of 10 CFR Part 71. Further, licensees would be required to assess both the level of removable radioactive contamination on the surface and the radiation level at 1 meter from the external surface of all packages of radioactive material. The exceptions from such monitoring requirements in the present § 20.205(b) would be deleted. The present requirement to monitor the radiation level at the surface of the package would be deleted since this requirement increases the occupational radiation exposure of the person performing the measurement and increases the licensee's costs without a corresponding increase in detection of faulty packages.

XXII. Access to High and Very High Radiation Areas

The controls required on access to high and very high radiation areas have been changed from those in the present Part 20 in several respects. The provision in the present Part 20 that a licensee may substitute direct surveillance for other types of controls over access to high radiation areas established for a period of 30 days or less would be changed to permit use of direct surveillance without regard to the number of days involved. It should be noted, however, that this surveillance requires the continuous physical presence of an individual capable of taking all of the precautions that might be necessary to prevent unwarranted exposure of individuals.

The additional controls on access to very high radiation areas (areas where there might be radiation levels of 500 or more rads/hour (5 or more grays/hour) at one meter from a source or from a surface which the radiation penetrates) would be required of all licensees. Only those licensees who use sealed radioactive sources to irradiate materials are required by the present Part 20 to use such additional controls. The revised requirements have been simplified to the degree considered consistent with achieving positive assurance that individuals will not be inadvertently exposed at very high dose rates which present an immediate threat of lethality in any type of licensed facility.

XXIII. Disposal into Sewerage

The NRC is proposing several significant changes in the present Part 20 provisions for release of radioactive material into sanitary sewerage. The revision recognizes that there can be multiple contributors of radioactive material to sanitary sewerage and the dilution afforded by the system should not be relied upon to achieve "acceptable" concentrations in effluents.

The gross quantity (curies) of licensed and other radioactive material that the licensee may release into the sewerage in a year would remain unchanged. However, in the proposed revision, the concentrations that may be released into the sewerage would be those which, if ingested, could result in a calculated committed effective dose equivalent of 0.5 rem (5 mSv) in a year to reference man.

The average concentration of licensed or other radioactive material that the licensee may release into the sewerage in one month would also be limited. The average concentration in the total volume of sewage released by the licensee in a month would not be permitted to exceed the concentration calculated by dividing the occupational oral ingestion ALI by 7.3×10^6. This value is derived by adjusting the annual water intake by ICRP's reference man, 7.3×10^5 ml, by a factor of 10 to reduce the occupational ALI to an intake corresponding to 0.5 rem for an adult in the general population. The concentrations are presented in Table 3 of Appendix B for each radionuclide. The present Part 20 provisions for the daily averaging of releases to the sanitary sewerage, and for the daily release of quantities up to 10 times the existing Appendix C quantities, regardless of the concentration in the licensee's sewage, would be dropped.

While it is clear that people do not directly ingest sewage, intakes of drinking water systems are often located downstream from sewage treatment plants. Some radioactive materials in sewage might not be removed by sewage treatment or by intake water treatment processes and, therefore, could constitute a source of exposure for the general population.

XXIV. Sea Disposal

The present Part 20 (§ 20.302(b)) states that "The Commission will not approve any application for a license for disposal of licensed material at sea unless the applicant shows that sea disposal offers less harm to man or the environment than other practical alternative methods of disposal." The proposed revision deletes this statement. The deletion reflects the mandate of the 1972 Marine Protection, Research, and Sanctuary Act (Pub. L. 92–352) which transferred responsibility for regulating the ocean disposal of radioactive wastes from the NRC to EPA.

XXV. Medical Exceptions

The present Part 20 contains three exceptions to the basic radiation protection standards that are specific to medical situations. The proposed revised Part 20 contains two of these medical exceptions essentially as they appear in the present Part 20: An exception for release of patients' radioactive excreta into sanitary sewerage; and an exception for control of entrance or access to rooms or other areas of hospitals that are high radiation areas solely because of the presence of patients containing radioactive material. The exception from posting rooms or other areas of hospitals because of the presence of patients containing byproduct material would be amended to require posting of the rooms or areas used for patients being treated with therapeutic quantities of unsealed radioactive material or with brachytherapy sources. Such posting has been recommended in Regulatory Guide 10.8, "Guide for the Preparation of

Applications for Medical Programs," since January 1979.

Consideration was given to requiring the collection of urine from hospitalized patients undergoing therapy with unsealed radionuclides, such as iodine-131, and the treatment of this urine as radioactive waste. However, such requirements were not included in the revision because of the potential for occupational exposure of hospital personnel and the protection afforded by the requirement in § 20.102 that releases of radioactive material to the sanitary sewerage are to be maintained ALARA.

XXVI. Records

The recordkeeping requirements necessary to implement the proposed regulation are grouped in Subpart L of the revision.

Licensees would continue to be required to maintain records of most surveys for two years. However, records of surveys used to assess (internal) committed effective dose equivalent; external dose equivalent in cases where dosimeters are lost, destroyed, or the data from the dosimeters are otherwise unavailable; and releases of radionuclides in effluents to the environment, would be required to be maintained until the Commission terminates each pertinent license requiring the record.

The revision would require licensees to determine the occupational radiation exposure history of each individual likely to require provision of individual monitoring devices or services pursuant to § 20.502. The licensee would use a revised NRC Form 4, or equivalent, to record all periods of prior occupational exposures (as provided by and certified by the worker), the occupational dose equivalent received during the current calendar year, and any dose from planned special exposures plus any overexposures (including those from accidents and emergency conditions) received during the lifetime of the individual. Licensees would not be required to reevaluate the separate external dose equivalents and internal committed dose equivalents or intakes of radionuclides assessed under the regulations in effect prior to the effective date of this revision. (A copy of the draft revised NRC Form 4, "Occupational Radiation Exposure History," is presented at the end of this notice.)

The records of current individual monitoring results at the licensed facility would include the results of assessment of the external dose equivalent, the internal dose equivalent, and the sum of those as the effective dose equivalent. NRC Form 5 would be revised for this purpose. (A copy of the draft revised NRC Form 5, "Current Occupational Radiation Exposure," is presented at the end of this notice.) Separate entries would be made for doses received during any planned special exposures and any dose received in excess of the annual limits. Licensees operating under the provisions for control of exposure to long-lived radionuclides (proposed § 20.205) would be required to record both the annual effective dose equivalent and the 50-year committed effective dose equivalent associated with the intakes of radioactive material.

For routine occupational exposure to generally uniform external radiation, the dose equivalent to the whole-body, lens of eye, skin, and extremities are usually assessed from a single personal dosimeter and recorded. When the dose equivalent to a body part, such as a hand, is likely to significantly exceed the whose body dose equivalent, and particularly if it is likely that the annual dose equivalent will exceed 10% of the annual limit for the body part, good practice would suggest that additional dosimeters should be worn to assess the dose equivalent to that body part and the monitoring result recorded for that body part.

The recording of exposures to internal radiation is less straightforward than for external radiation. Four pieces of information would be recorded for each radionuclide and for each physical and chemical form of intake concerned: The radionuclide and lung clearance class; the estimated intake (in μCi or Bq); the ratio of the estimated intake to its specific ALI; and the estimated committed effective dose equivalent from the intake.

XXVII. Reports

The proposed reporting requirements are grouped in Subpart M of the revision. Several of these proposed requirements, i.e., "Reports of overexposures and excessive radiation dose levels and concentrations of radioactive material," would not be changed in intent or substance from the present Part 20. However, the proposed requirements would reflect changes in the proposed system of dose limitation. Two of the initiating criteria (loss of operating time of a facility and monetary values on damage to property) have been deleted from "Notification of incidents." The deletions were made when it was determined that: (1) There was no adequate practical definition of a "facility"; (2) the $200,000 monetary value has not been adjusted for economic changes; and (3) neither of the criteria warrant "immediate" notification.

The Commission decided to incorporate into this overall revision of 10 CFR Part 20 its 1983 proposed revision of 10 CFR 20.204 which requires reports of theft or loss of licensed material. This notice supersedes the Commission's proposed amendment to 10 CFR Part 20 published on May 9, 1983 (48 FR 20721). Because the requirements for reports of theft or loss in this proposed rule are substantively the same as in the 1983 Notice of Proposed Rulemaking, public comments submitted on that notice will be considered under this action.

Planned Special Exposures

Each time that a planned special exposure is conducted the licensee would be required to submit a report to the NRC that indicates the date on which it took place. In addition, the licensee would be required: To maintain detailed records of all aspects of the planned special exposure (see § 20.1103); and to inform, in writing, each individual so exposed of the dose resulting from the planned special exposure (see § 20.206(h)).

0.1-rem (1 mSv) Reference Level

A report would be required within 30 days after the licensee becomes aware that a member of the public received, or was likely to receive, an effective dose equivalent of 0.1 rem or 1 mSv (or higher value if prior approval was granted under the provisions of § 20.303(c)) in a calendar year from sources under the licensee's control. This report would provide the Commission information on substantial sources of exposure to the public and would permit the Commission to focus attention on those programs contributing the larger doses. The reports would also help the Commission to focus on contribution of dose from multiple sources and on additional efforts or requirements that might be warranted to ensure in its judgment that doses to the public are being maintained ALARA and below the annual limit from all known sources, e.g., licensed and unlicensed sources.

Annual and Termination Reports of Exposure

The proposed revision would continue the existing requirements for submission of annual statistical summary reports of monitoring data (§ 20.1206) and of reports of exposure to radiation and radioactive material upon termination of employment or work assignment in the licensee's restricted area (§ 20.1207). These reports would be required of the

same seven categories of licensees as in the present Part 20. The reports would differ from those in the present Part 20 in that the doses reported would include external and internal contributions to the effective dose equivalent and that the time for submission of the annual statistical summary report would be extended from three months in the present rule to seven months in the proposed revision.

In developing the proposed revision, two alternatives for reporting doses received by workers were considered. One alternative would have required all holders of specific licenses to submit an annual report of the effective dose equivalent received by each individual for whom monitoring was required (or for whom monitoring was provided, if that was more practical for the licensee to report). The other alternative would continue the requirement that licensees keep records of monitoring data, but not require them to submit reports to the NRC.

The proposed requirement was chosen because it appears to have relatively minimal economic impact while still providing a means for the Commission to ensure itself that the protection of workers is maintained in those categories of licensees most likely to have the higher exposures.

The Commission requests comments on this issue of reporting requirements, specifically the submission of annual reports of individual monitoring data to the NRC and the provision of such reports to individuals. Also, regardless of the reporting alternative chosen, the Commission encourages the industry, or segments of the industry, to establish a system of collection and collation of annual doses to individuals and seeks comments on this possibility.

XXVIII. Implementation

The implementation of the revised Part 20 would require coordination through a number of interfaces with international, Federal and State organizations, licensees, and various offices of the NRC.

International

Since the revision of Part 20 would, in essence, adopt the dose limits recommended in ICRP 26 and the effective dose equivalent concept, the exposure and dose data from the United States would be comparable to those obtained from other countries who are also proposing regulatory actions which would implement the ICRP recommendations. United Nations organizations, such as the United Nations Scientific Committee on the Effects of Atomic Radiation (UNSCEAR), and the International Atomic Energy Agency (IAEA), and the Nuclear Energy Agency (NEA) of the Organization for Economic Co-operation and Development also would be using radiation protection evaluations (e.g., effective dose equivalents) similar to those of the revised Part 20. If the revision is adopted, the impact with respect to the international technical efforts would be minimal. If the present Part 20 is not revised, the impact on the United States international activities could be substantial, e.g., exposure and dose data from other countries could not be compared with U.S. data and technical discussions would be hampered.

The guidance on collective dose evaluations in the revised Part 20 is likely to be of substantial international and domestic interest. The reactions undoubtedly will be mixed. The ICRP recommended requiring optimization, which includes evaluating the collective doses to all persons in all locations over all time from all radiation sources. The revised Part 20 would *not* require optimization evaluations. The limiting of collective dose evaluations is contrary to the official ICRP philosophy, and opposition by IAEA and some other organizations and countries who are committed to the ICRP recommendations can be anticipated. Other countries are also considering de minimis provisions and would endorse the proposed revision.

Federal

Under the Atomic Energy Act of 1954, as amended, and Reorganization Plan No. 3 of 1970, the EPA has the authority to establish "generally applicable environmental standards" for radiation protection, as well as the responsibility of advising the President in radiation matters, a function of the former Federal Radiation Council (FRC). In 1981 (46 FR 7836), EPA published for comment proposed Federal Radiation Protection Guidance for Occupational Exposure to replace the limits for radiation workers in the 1960 Federal Radiation Protection Guides. The proposed guidance was revised to reflect the comments received and was submitted to affected Federal agencies for concurrence. All these agencies have concurred with the revised proposed Federal guidance. It must now be submitted to the President for approval and signature for it to become effective guidance to Federal agencies.

The draft Federal guidance does not address radiation exposure of the general public and, therefore, the 1960 Federal Guides applicable to the general public will remain in effect. EPA has promulgated standards under the Clean Air Act, as amended, that control air emissions of radioactivity from many facilities licensed by the NRC. These standards apply in addition to NRC's regulations (including Part 20) that regulate offsite exposures to the public.

If, as appears likely, EPA's Federal Radiation Protection Guidance for Occupational Exposure implements the ICRP system of dose limitation, including the weighting factors and the concept of effective dose equivalent, it may be anticipated the EPA will revise their other regulations and guidance to express them in terms of effective dose equivalent. For example, the annual limits on dose to members of the public from operation of uranium fuel cycle facilities in 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," might be changed from the present 25 millirems to the whole body, 75 millirems to the thyroid, and 25 millirems to any other organ, to a single value expressed in terms of effective dose equivalent.

The NRC decided not to wait for the final development of the EPA guidance, but rather developed the revision of 10 CFR Part 20 in parallel and in close coordination with EPA and other Federal agencies so that the revision will be compatible with the EPA guidance and with any changes planned by other agencies.

National

Traditionally, the NRC and its predecessor, the AEC, have looked to the ICRP and NCRP for advice on radiological matters. For many years, recommendations of the two committees have generally been quite similar and the Commission has selectively chosen among the recommendations in revising its regulations. In 1977, the ICRP recommended the risk-based system of dose limitations upon which this proposed revision is based. The NCRP is currently in the process of developing its own recommendations.

It has been suggested that the revision to Part 20 be delayed until the NCRP recommendations are developed and published. During development of the proposed revision to Part 20, the NRC staff had met and corresponded with the NCRP to obtain their comments and suggestions. Since the rulemaking process required to revise Part 20 is likely to require several months beyond publication in the **Federal Register**, there will be opportunities for the NCRP, as well as others, to provide alternative recommendations for consideration by

the Commission before the revision becomes effective.

States

Presently there are 27 States that have entered into agreements with the NRC under section 274 of the Atomic Energy Act of 1954, as amended, whereby the States have assumed jurisdiction over many uses of byproduct, source, and small amounts of special nuclear material that are regulated by the NRC. These States also exercise regulatory control over x-ray machines, naturally-occurring and accelerator-produced radionuclides, and accelerators. The regulations of these Agreement States must be compatible with the regulations of the NRC. Since the revision of Part 20 will lead to a substantial review and revision of the Agreement State regulations, continued interfacing with State agencies is necessary and has already begun.

Intra-agency

Many NRC licensing actions, such as technical specifications and conditions of licenses, contain references to the present Part 20. Other NRC regulations which interface with Part 20 and regulatory guides directly related to the present Part 20 will have to be reviewed and revised if the proposed revision is promulgated. Considerable reorientation of staff and inspectors will be required so that they will understand and uniformly implement the revised Part 20.

In addition to revising some existing regulatory guides, additional regulatory guides and, perhaps, NUREG reports might be needed.

The Commission invites comments and suggestions concerning the revision of existing regulatory guides or the preparation of additional guidance documents which would be needed or useful in implementing the proposed revision.

Licensees

Licensees will need adequate time to implement the necessary changes in their radiation protection programs. Since doses from external sources will be added to doses from intakes of radioactive material, some licensees might have to add or change bioassay programs to demonstrate compliance. Other licensees might choose to modify, or add, engineered facility features to reduce air concentrations or external exposures. Initiating these changes would require preliminary studies, the acquisition of funds, and construction and operation of the systems. Training programs will also need to be revised to incorporate features of the revised rule.

In order to comply with the proposed revision to Part 20, it will be necessary for licensees to understand the specific features, particularly those which are used in summing internal and external doses. Some NRC workshops and regulatory guides might be offered for the benefit of licensees, Regional Offices, States, and others who are affected by the revision.

In view of these considerations, it appears that an extended period of time is warranted between the publication of the revised Part 20 and the full implementation by licensees. Therefore, it is proposed that the implementation should become effective within five full calendar years following publication of the final rule. To facilitate earlier implementation by those licensees who might choose to do so, the Commission staff is available to work with the licensees as may be necessary and within its resources and responsibilities.

However, if licensees are permitted to choose their own time of implementation within the five year period, as proposed, there could be problems such as difficulties with the exchange of information or exposure data, caused by the use of *both* the present and the revised Part 20 over a period of several years. Consequently, the Commission is also considering the alternative of requiring all licensees to implement the revised rule as of January 1st—five full calendar years after the final rule is published. In this case, *all* licensees, having been given five years to prepare, would implement the revised rule on the same date.

According to some information published by the utilities, the revised rule could be implemented comfortably within a much shorter time period. The Commission especially invites comments on the effective date of implementation, including specific information on time and economic considerations.

XXIX. Appendix B

Appendix B to the proposed revision differs from the current Appendix B in a number of ways. In the revision, data are presented for 757 radionuclides, about 500 more than the 260 currently listed. The radionuclides are listed by increasing atomic number, rather than alphabetically. Many of these added radionuclides are not usually considered byproduct, source, or special nuclear material. However, many of them can be produced either in a reactor (and thus classified byproduct material) or in an accelerator and, therefore, may or may not be subject to NRC regulatory control—depending on the method of production. All of these radionuclides would be subject to the regulations of Agreement States, and the States would need the information provided in Appendix B for incorporation into the State regulations. Therefore, the Commission has chosen to include all of the radionuclides for which data are presented in ICRP Publication 30.

For each radionuclide there is a listing of chemical forms to be used in selecting the appropriate inhalation ALI or DAC. These ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter of 1 micrometer (micron) and for three classes of radioactive material with differing biological retention in the lung.

The inhalation ALIs and DACs listed in Table 1 of Appendix B were derived for occupational exposure of the reference man described in ICRP Publication 23. Table 2 presents derived air and water concentrations which, during an exposure of one year, would result in intakes by members of the general public which would cause a committed dose equivalent of 0.1 rem or 1 mSv (reference level), and Table 3 presents water concentrations applicable to sewage disposal.

The data in proposed Appendix B are expressed in the more familiar units of microcuries (μCi) and μCi/ml, rather than in the units of becquerels (Bq) and bq/m^3 used in ICRP Publications 30 and 32. The decision to use the "traditional" system of units in Appendix B is based upon the fact that this is the system in general use by the nuclear industry, including licensees, Federal regulators and the private sector. Therefore, the potential for errors in using these limiting values for radionuclides is significantly reduced by limiting the necessity for conversion calculations. However, the regulation contains the necessary conversion factors for those individuals who want to use the Appendix B values as Bq or Bq/ml. The conversion from Bq to μCi was made using data obtained from Oak Ridge National Laboratory having two significant figures, which were then rounded to one significant figure in μCi. Some of these listings will differ from the ICRP Publications 30 and 32 values, which have been rounded initially to a single significant figure. Additional information on the derivation and use of the ALIs and DACs is presented in the Introduction to Appendix B, as well as in the example presented earlier in this notice.

Concern has been expressed that some of the ALIs and DACs are less restrictive than the concentration limits (MPCs) currently listed in Appendix B, 10 CFR Part 20. Where comparison is

possible, about 65% of the DAC-listings are less restrictive, about 27% are more restrictive, and about 8% remain unchanged. The changes arise from a number of considerations that include:

(1) Dose contribution to all organs and tissues from radioactive material deposited in all organs and tissues, rather than dose to a critical organ from radioactive material deposited in that organ;

(2) Use of a quality factor of 1 for low-energy beta particles, and a quality factor of 20 for alpha particles, rather than 1.7 and 10, respectively;

(3) Updated biological models; and

(4) Application of the risk-based weighting factors within the ICRP 26 system of dose limitation.

The current level of radiation protection is affected much more by consideration of what is ALARA than by specific dose limits. The ALARA requirement will continue to ensure that the level of radiation protection will remain high even though the limits for certain radionuclides might be increased. Furthermore, the summation of external dose and internal committed effective dose equivalent provides an additional constraint on the amount of radionuclide that may be taken into the body.

XXX. Appendix C

Appendix C lists quantities (μCi) for 757 radionuclides. As discussed earlier, the rule contains the necessary conversion factors from μCi to becquerels for those individuals who desire to use the SI system of values for Appendix C quantities. The quantities are those for which labeling would be required pursuant to the proposed § 20.904. Also, the proposed § 20.1201 would require reports of loss or theft of 10 times the quantities specified in Appendix C. The provision in existing § 20.303(a)(2) that a licensee may discharge up to 10 times the Appendix C quantities into the sanitary sewerage in one day, without regard to the concentration of the radionuclide in the water released, would not be continued in the proposed § 20.1003. For the same reasons discussed with respect to Appendix B, radionuclides that may not be byproduct, source, or special nuclear material have been included in this appendix.

The quantities listed in Appendix C were derived by taking one-tenth of the most restrictive occupational annual limit of intake listed in Appendix B, rounding to the nearest factor of ten, and arbitrarily constraining the values listed between 0.001 and 1,000 μCi. These quantities are comparable, but not identical to the existing Appendix C listings and the byproduct material listings in § 30.71, Schedule B, 10 CFR Part 30. Conformity between Appendix C, 10 CFR Part 20, and § 30.71, 10 CFR Part 30, is not considered essential. Further, such conformance would involve addition of a large number of radionuclides to § 30.71, and would constitute a substantive change in the radionuclides available to persons exempt pursuant to § 30.18, 10 CFR Part 30. No change in § 30.71 is proposed at this time.

XXXI. Appendix E

The analytical expressions in the form of mathematical formulae which may be used by licensees to demonstrate compliance with the various dose limits or reference levels of the revised Part 20 have been assembled in Appendix E. Consideration was given to including the formulae in the text of the rule paralleling and immediately following the verbal requirements. However, some reviewers considered the presence of the formulae in the text to be responsible for a perceived complexity and the formulae were placed in an appendix to permit easier reading.

XXXII. Appendix F

The present § 20.311 contains very detailed requirements for the certification and transfer of low-level waste for disposal at land diposal facilities and for the preparation of shipment manifests. In keeping with the generic nature of the proposed revision, the proposed § 20.1006 contains only the broad requirements of the present § 20.311 and the detailed requirements are all contained in Appendix F. The proposed regulations in § 20.1006 and Appendix F are essentially the same as the present § 20.311.

XXXIII. Environmental Impact: Negative Declaration

The Commission has determined, under the National Environmental Policy Act of 1969, as amended, and the Commission's regulations in 10 CFR Part 51, that promulgation of this proposed rule will not have a significant effect on the quality of the human environment and that, therefore, an environmental impact statement is not required. (The environmental assessment and finding of no significant impact on which this determination is based are available for public inspection at the NRC Public Document Room, 1717 H Street NW., Washington, DC.)

XXXIV. Paperwork Reduction Act Statement

Pursuant to the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.), this proposed rule has been submitted to the Office of Management and Budget for clearance of the information collection requirements.

XXXV. Regulatory Analysis

The Commission has prepared a draft regulatory analysis on this proposed regulation. The analysis examines the costs and benefits of the proposed revision and the alternatives considered by the Commission. (The draft analysis is available for inspection in the NRC Public Document Room, 1717 H Street NW., Washington, DC. Single copies of the analysis may be obtained from the person indicated under the "FOR FURTHER INFORMATION CONTACT" heading.)

Benefits

The proposed revision to Part 20 includes numerous changes required to bring the NRC radiation protection standards into accord with current, defendable scientific knowledge, and to reflect contemporary scientific and philosophical approaches to protection against radiation. The major benefits are summarized in Table 5.

TABLE 5.—PRINCIPAL CONCERNS AND BENEFITS OF THE PROPOSED REVISION OF 10 CFR PART 20

Concern with present Part 20	Proposed Part 20 revision	Benefits of revision
1 *Many Values In Appendix B Do Not Reflect Current Knowledge* ● Present MPCs can cause underestimates of doses by a factor of 6 for most alpha emitters and 60 for thorium ● "Soluble" and "insoluble" designations in Part 20 and many other bases were abandoned by health physicists many years ago	● Revises and expands Appendix B to reflect contemporary knowledge of dosimetry and biology	● Derived values will reflect ICRP risk based system and make use of contemporary knowledge. ● Air concentrations are based on a lung model which permits adjustment for the particle sizes of aerosols. ● Values are presented for various compounds. ● Coverage of radionuclides has been increased from 260 to 757. ● Of the radionuclides where comparisons can be made, about 65% of the new values are less restrictive, about 8% are unchanged, and about 27% are more restrictive.

TABLE 5.—PRINCIPAL CONCERNS AND BENEFITS OF THE PROPOSED REVISION OF 10 CFR PART 20—Continued

Concern with present Part 20	Proposed Part 20 revision	Benefits of revision
2. *5(N-18) Dose-Averaging Formula Permits Workers to Receive 12 Rems per Year from External Sources* ● Several hundred workers each year receive doses of 5 rems or more ● *Potential* risk could be substantial (3–10%) from 50 years external exposures at 5 rems per year and additional dose from internal exposures	● Deletes 5(N-18) and adopts 5 rems (0.05 Sv) per year and 3 rems (0.03 Sv) per quarter dose limits ● Provides "planned special exposures" for necessary and unavoidable activities	● Annual and Lifetime doses to individuals receiving highest exposures will be reduced. ● Risks to radiation workers receiving highest exposures will be more comparable to those in safe industries. ● Provides substantial flexibility for licensee to manage justifiable exposures beyond selected annual dose limits.
3. *Dose Limits for Internal and External Doses are Independent* ● Risks from doses at the limits to various organs are unequal	● Establishes 5 rems (0.05 Sv) annual limit for sum of external and internal doses ● Adopts ICRP "effective dose equivalent" which adjusts doses to various organs to whole body dose equivalent based on risk	● Provides for readily monitored records of use. ● Effective dose equivalents limits from combined external and internal exposures are related to individual risk. ● Limits for various organ doses reflect comparable risks. ● Dose weighting factors based on quantified risk of radiation-induced health effects are consistent with Commission policies on use of quantitative risk. ● Workers and public can understand risk base which is more rational than present dose limit selection. ● Doses to workers subjected to both external and internal exposures will be reduced.
4. *No Requirements for Formal Radiation Protection Program or for ALARA* ● Uneven requirements among types of licensees brought about mostly through licensing actions other than Part 20	● Requires written radiation protection program with ALARA provisions ● Requires management commitment and participation ● Requires selection of investigation levels for doses to workers below dose limits	● Ensures adequate radiation protection program and ALARA efforts by *all licensees*. ● Would reduce doses to workers. ● Provides basis for more effective ALARA efforts with reliance on licensee's judgment. ● Provides requirements in Part 20 for enforcement actions.
5. *Limits Treated As Sharp Line of Demarcation Between Acceptable and Unacceptable* ● De Facto limits are established by licensing actions	● Emphasizes ALARA and provides reference levels to permit graded scale of action as limits are approached	● Actions are taken to reduce exposures before dose limits are exceeded and to review exposures when they are substantial. ● Would reduce doses to workers and public without resorting to other regulatory means.
6. *Dose Data on Specific Workers are not Available to Staff until Workers Terminate Employment* ● No reports are made of internal doses ● Workers are not required to be informed of annual or accumulated doses without request	● Requires use of effective dose equivalents	● Compatible with dose system.
7. *Presents No Clear Dose Limits for Members of the Public* ● NRC can require de facto limits without compromising Part 20	● Establishes 500 mrem/yr (5 mSv/yr) effective dose equivalent (external and internal sources) ● Establishes reference levels for action below limits	● Dose limits for public would include possible multiple sources and multiple exposure modes. ● Would provide clearly identified limits and graded actions would result in individual doses less than 100 mrem per year. ● Facilitates use of estimates of health risk as a fundamental determinant in decisionmaking and in any reform of nuclear regulations and licensing.
8. *Present Part 20 Provides No Constraint on Collective Dose Evaluations* ● Can result in unwarranted expenditures of resource for incremental risks which are trifles	● Provides constraint on collective doses evaluations to omit doses less than 1 mrem (0.01 mSv) per year to individuals	● Would save considerable resources. ● Would provide perspective in judgments. ● Would eliminate consideration of health risks which are trifles.

Costs

The initial (first year) cost for implementing the proposed revision to Part 20 is estimated to be about $33 million, $29 million of which would be required for the occupational exposure provisions (see Table 6). The annual cost (first year and continuing) is estimated to be $8 million, approximately $7 million of which would be required for the occupational exposure provisions. These are the estimated costs to all licensees, including those regulated by the Agreement States. Initial costs include items such as software for computers, augmenting internal dosimetry programs, writing radiation protection programs including ALARA provisions, augmenting monitoring programs, revising manuals, and retraining personnel. Taking into account the recurring nature of the annual costs and the time value of money (discounted at a 10% per annum rate) adds about $60 million to the initial costs for a present-day worth totaling about $100 million.

A detailed cost estimate was made for each recording and reporting requirement in the Part 20 revision. Most of these costs would be annual costs for requirements that already exist in the present Part 20. A similar detailed cost estimate for all requirements in the present Part 20 was made for comparative purposes. Based on this comparison, it does not appear that the proposed revision would increase the costs of the present recording and reporting requirements.

Comments on the draft analysis may be submitted to the Commission as indicated under the ADDRESSES heading.

TABLE 6.—ESTIMATES OF COSTS TO NRC AND STATE LICENSEES[1] FROM IMPLEMENTATION OF 10 CFR PART 20 REVISION

	Initial cost [2]	Annual cost [2]
(1) Effect of 5-rem effective dose equivalent	$300,000	$750,000
(2) Impact of planned special exposure	Negligible	Negligible
(3) Impact of extremity and eye limit provision	Negligible	Negligible
(4) Impact of provision for limit to embryo/fetus	Negligible	$50,000
(5) Impact of internal exposure provision	$8,700,000	$4,100,000
(6) Impact of ALARA requirements	$2,200,000	$1,500,000
(7) Impact of revised monitoring requirements	Negligible	$37,000
(8) Impact of recordkeeping requirements	$3,700,000	$140,000
(9) Impact of reporting requirements	Negligible	$180,000

TABLE 6.—ESTIMATES OF COSTS TO NRC AND STATE LICENSEES[1] FROM IMPLEMENTATION OF 10 CFR PART 20 REVISION—Continued

	Initial cost [2]	Annual cost [2]
(10) Impact of revisions of manuals and procedures	$10,800,000	Negligible
(11) Impact of retraining personnel	$3,600,000	Negligible
Subtotal	$29,000,000	$6,800,000
(12) Impact of public exposure issues (Nom.)	$4,000,000	$1,000,000
Total	$33,000,000	$7,800,000

[1] 1982 licensees.
[2] 1982 dollars.

XXXVI. Regulatory Flexibility Certification

The Commission has prepared an initial regulatory flexibility analysis in connection with this proposed rule. The analysis discloses that the proposed rulemaking proceeding would apply to all NRC licensees. The NRC has approximately 7,500 licensees, approximately one quarter of which are small entities. (Note: Agreement States have about another 11,000 licensees.) Types of small entities that would be affected include physicians, small hospitals, small laboratories, small

industrial operations, radiographers, and well loggers. The Commission anticipates that promulgating and implementing the proposed revised rule will result in a regulation that provides better assurance of protection, establishes a clear health protection basis for limits, applies to all licensees, including small entities, in a consistent manner, and reflects current information on health risk, dosimetry, and radiation protection practices and experiences. The potential gain in radiation health protection significantly outweighs the incremental increased impact on small entities. However, the NRC is seeking comments and suggested modifications because of the widely differing conditions under which small licensees operate.

The Commission is particularly seeking comment from small entities (i.e., small businesses, small organizations, and small jurisdictions as defined by the Regulatory Flexibility Act) about the ways the proposed rule will affect them and the ways it may be modified to impose less stringent requirements on them which will still adequately protect the public health and safety. Those small entities who offer comments on how the regulations could be modified to take into account their differing needs should specifically discuss:

(a) The size of the business and how the proposed regulations would result in a significant economic burden upon them as compared to larger organizations in the same business community;

(b) How the proposed regulations could be modified to take into account differing needs or capabilities;

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

(d) How the proposed regulations, as modified, would 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 individuals or groups; and

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

XXXVII. List of Subjects in 10 CFR Part 20

Byproduct material, Licensed material, Nuclear materials, Nuclear power plants and reactors, Occupational safety and health, Packaging and containers, Penalty, Radiation protection, Reporting and recordkeeping requirements, Special nuclear material, Source material, Waste treatment and disposal.

XXXVIII. Additional Comments of NRC Chairman and Commissioners

Additional Comments of Chairman Palladino and Commissioner Zech

Chairman Palladino and Commissioner Zech add the following:

No useful purpose is served by withholding publication of the proposed revision to Part 20 for some indefinite period of time while the need for a backfit analysis is determined. During the comment period, the Commission can determine whether or not a backfit analysis is appropriate; if so, the analysis can be completed concurrently with the comment period. If, at a later date, it is appropriate to obtain comment on the backfit analysis, this issue can be decided at that time.

Chairman Palladino and Commissioner Zech favor performing any analyses required by the backfit rule prior to issuance of the final rulemaking on Part 20. The development of the proposed rule for Part 20 has been on-going for many years and, in fact, is the first revision to the affected standards in over 20 years. More recently, the final backfit rule has been published, and at this time the NRC is developing implementing procedures to ensure compliance with the backfit rule.

Additional Comments of Commissioner Asselstine

Commissioner Asselstine adds the following:

I am generally in favor of this rulemaking which brings about a long overdue updating of our basic radiation standards to reflect the best scientific information available today. This proposed rulemaking is a worthwhile and technically defensible undertaking which moves the United States radiation protection standards in a direction that most other countries have been going. However, the NRC has a backfit rule (10 CFR 50.109) which dictates conditions which must be met before the NRC can promulgate new regulations affecting Part 50 licensees. I preferred that publication of this proposed rule be deferred until the Commission addressed whether this rulemaking complies with the backfit rule. I proposed to the other Commissioners that the backfit analysis required by § 50.109 be made available at the time this proposed rulemaking is published for public comment since such an analysis could have affected the nature and substance of this rulemaking. I also proposed to the other Commissioners that if the Commission were to decide this rulemaking, which affects Part 50 licensees, was not a backfit as defined in § 50.109, then the Commission's rationale for the inapplicability of § 50.109 should be part of the Supplementary Information with a request for any comments on that rationale.

Such an approach has several advantages. First, it would allow the public and the regulated industry to understand how the Commission is complying with regulations that are applicable to the Commission itself. Second, by obtaining public comment on the backfit analysis or the rationale for the inapplicability of § 50.109 during the public comment period on a rulemaking, the NRC would have the benefit of the public and industry views on this aspect of the rulemaking. This would ensure that the backfit analysis is used to shape the substance of a proposed rulemaking. The Commissioners favoring the backfit rule do not agree with the above and voted to publish these proposed revisions to Part 20 before deciding how, if at all, these revisions comply with the backfit rule. We are left to some uncertain date in the future to learn what the backfit rule means in practice. I do not characterize the Commission's action in this regard as providing a predictable or stable regulatory environment.

With regard to this rulemaking, I would appreciate public comments on several issues in addition to those identified in the rulemaking package. They are:

1. What more can be done to protect an embryo or fetus from occupational radiation exposure of female workers without unduly restricting the careers or employment of female workers? Any insights from approaches used by other industries to address this problem are welcomed.

2. Section XVII (Standards for Individuals in the General Public) of the Supplementary Information indicates that the Environmental Protection Agency Environmental Protection Standards for Nuclear Power Operations (40 CFR Part 190) were based on as low as reasonably achievable (ALARA) considerations at the time of development. A clarification by EPA or other interested persons as to whether 40 CFR Part 190 is an upper limit or lower limit for ALARA considerations would be appreciated.

3. The proposed revisions would establish a 1 millirem/year de minimis standard for individual doses for purposes of evaluating collective doses to the population. That is, regardless of the magnitude of the societal doses

associated with individual exposures of less that 1 millirem/year, such societal doses would not be considered in deciding whether additional protective measures are warranted. Why should there not be a de minimis standard such as collective doses less than 100 person-rem comprised of individual doses less than 1 millirem/year?

4. Is this rulemaking a backfit and subject to the analysis and determinations required by 10 CFR 50.109? If yes, should that analysis and determination be available for public comment before making this a final rule? If no, what is the rationale and should that rationale be available for public comment before making this a final rule?

For the reasons set out in the preamble and pursuant to the Atomic Energy Act of 1954, as amended, the Energy Reorganization Act of 1974 as amended, and 5 U.S.C. 553, notice is hereby given that adoption of the following revision of 10 CFR Part 20 and the following amendments to 10 CFR Parts 19, 30, 31, 32, 34, 40, 50, 61, and 70 is contemplated.

1. 10 CFR Part 20 is revised to read as follows:

PART 20—STANDARDS FOR PROTECTION AGAINST RADIATION

Authority: Secs. 53, 63, 65, 81, 103, 104, 161, 182, 186, 68 Stat. 930, 933, 935, 936, 937, 948, 953, 955, as amended (42 U.S.C. 2073, 2093, 2095, 2111, 2133, 2134, 2201, 2232, 2236); secs. 201, as amended, 202, 206, 88 Stat. 1242, as amended, 1244, 1246 (42 U.S.C. 5841, 5842, 5546).

For the purposes of sec. 223, 68 Stat. 958, as amended (42 U.S.C. 2273); §§ 20.102(a), 20.201–20.205, 20.206(e), 20.207, 20.501, 20.502, 20.601 (a) and (c), 20.602(a), 20.701–20.704, 20.801, 20.802, 20.901(a), 20.902, 20.904 (a) and (b), 20.905, 20.1001, 20.1002(b), 20.1003, 20.1004, 20.1005 (b)–(d), 20.1006, 20.1101–20.1108 and 20.1201–20.1207 are issued under sec. 161b., 68 Stat. 948 (42 U.S.C. 2201(b)); and §§ 20.102(a) (2) and (4), 20.204(c), 20.205(b)(5), 20.206 (g) and (h), 20.904(c)(4), 20.905 (c) and (d), 20.1005(c), 20.1006(b)–(d), 20.1101–20.1103, 20.1104(b)–(d), 20.1105–20.1108, and 20.1201–20.1207 are issued under sec. 161o., 68 Stat. 950, as amended (42 U.S.C. 2201(o)).

Subpart A—General Provisions

§ 20.1 Purpose.

(a) The regulations in this part establish standards for protection against ionizing radiation resulting from activities conducted under licenses issued by the Nuclear Regulatory Commission. These regulations are issued under the Atomic Energy Act of

1954, as amended, and the Energy Reorganization Act of 1974, as amended.

(b) It is the purpose of the regulations in this part to control the possession, use, and transfer of licensed material by any licensee in such a manner that the total dose to an individual (including exposures to licensed and unlicensed radioactive material and to other radiation sources) does not exceed the standards for protection against radiation prescribed in the regulations in this part.

§ 20.2 Scope.

The regulations in this part apply to persons licensed by the Commission to receive, possess, use, or transfer byproduct, source, or special nuclear material or to operate a production or utilization facility under Parts 30 through 35, 40, 50, 60, 61, 70, 72, or 150 of this chapter. The limits in this part do not apply to doses due to emergency exposures, to natural background, to intentional exposure of patients to radiation for the purpose of medical diagnosis or therapy, or to voluntary participation in medical research programs.

§ 20.3 Definitions.

As used in this part:

"Absorbed dose" (See Dose terms).

"Act" means the Atomic Energy Act of 1954 (42 U.S.C. 2011 et seq.), as amended.

"Adult" means an individual 18 or more years of age.

"Airborne radioactive material" means radioactive material dispersed in the air in the form of dusts, fumes, particulates, mists, vapors, or gases.

"Airborne radioactivity area" (See Area terms).

"Annual limit of intake" (See Dose control terms).

"ALARA" (See Dose control terms).

"Area" terms:

(1) "Radiation area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.005 rem (0.05 mSv) in 1 hour at 30 cm from the radiation source or from any surface which the radiation penetrates.

(2) "High radiation area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving a dose equivalent in excess of 0.1 rem (1 mSv) in 1 hour at 30 cm from the radiation source or from any surface which the radiation penetrates.

(3) "Very high radiation area" means an area, accessible to individuals, in which radiation levels could result in an individual receiving an absorbed dose in excess of 500 rads (5 grays) in 1 hour at 1 meter from a radiation source or from any surface which the radiation penetrates. (**Note.**—At very high doses received at high dose rates, units of absorbed dose are appropriate, rather than units of dose equivalent.)

(4) "Airborne radioactivity area" means a room, enclosure, or area in which airborne radioactive materials, composed wholly or partly of licensed material, exist in concentrations: (i) In excess of the derived air concentrations (DACs) specified in Appendix B of this part, or (ii) to such a degree that an individual present in the area without respiratory protection equipment could exceed, during the hours an individual is present in a calendar week, an intake of 0.6% of the annual limit of intake (ALI), i.e., 30% of 40 DAC-hours.

(5) "Restricted area" means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

(6) "Controlled area" means an area, outside of a restricted area but inside the site boundary, access to which is limited by the licensee for any reason. The degree of control may vary, for example, from posting to the use of surveillance or barriers.

(7) "Unrestricted area" means an area, access to which is neither limited nor controlled by the licensee.

(8) "Site boundary" means that line beyond which the land or property is neither owned, leased, nor otherwise controlled by the licensee.

"Bioassay" (See Monitoring terms).

"Biological half-time" means the time required for half of a material deposited in the body to be removed by biological processes.

"Byproduct material" (See Licensed material).

"Calendar quarter" (See Quarter).

"Calendar week" (See Week).

"Calendar year" (See Year).

"Class" (or "Lung class" or "Inhalation class") means a classification scheme for inhaled material according to its rate of clearance from the pulmonary region of the lung. Materials are classified as D, W, or Y which applies to a range of biological half-times for D of less than 10 days, for W from 10 to 100 days, and for Y greater than 100 days.

"Collective effective dose equivalent" (See Dose terms).

"Commission" means the Nuclear Regulatory Commission or its duly authorized representatives.

"Committed dose equivalent" (See Dose terms).

"Committed effective dose equivalent" (See Dose terms).

"Controlled area" (See Area terms).

"Declared pregnant woman" means a woman who has voluntarily informed her employer, in writing, of her pregnancy and the estimated date of conception.

"Derived air concentration" (See Dose control terms).

"Dose" terms:

(1) "Dose" or "radiation dose" is a generic term which means absorbed dose, dose equivalent, committed dose equivalent, or committed effective dose equivalent, as defined in other paragraphs of this section.

(2) "Absorbed dose" means the energy imparted by ionizing radiation per unit mass of irradiated material at the location of interest. The units of absorbed dose are the rad and the gray [1 gray (Gy) = 100 rad].

(3) "Dose equivalent" means the product of absorbed dose, quality factor, and all other necessary modifying factors at the location of interest in tissue. The units of dose equivalent are the rem and the sievert [1 sievert (Sv) = 100 rem].

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(4) "External dose" means that portion of the dose equivalent receive from radiation sources outside of the body.

(i) "Deep dose equivalent" (H_d) applies to the external whole-body exposure and is taken as the dose equivalent at a tissue depth of 1 cm.

(ii) "Eye dose equivalent" (H_e) applies to the external exposure of the lens of the eye and is taken as the dose equivalent at a tissue depth of 0.3 cm.

(iii) "Shallow dose equivalent" (H_s) applies to the external exposure of the skin or an extremity and is taken as the dose equivalent at a tissue depth of 0.007 cm.

(5) "Internal dose" means that portion of the dose equivalent received from radioactive material taken into the body.

(i) "Committed dose equivalent" ($H_{c,T}$) means the dose equivalent to organs or tissues of reference (T) that will be received from an intake of radioactive material by an individual during the 50-year period following the intake ($H_{50,T}$).

(ii) "Effective dose equivalent" (H_E) is the sum of the products of the dose equivalent (H_T) to the organ or tissue (T) and the weighting factors (w_T) applicable to each of the body organs or tissues which are irradiated ($\Sigma w_T H_T$).

(iii) "Committed effective dose equivalent" ($H_{E,c}$) is the sum of the products of the weighting factors applicable to each of the body organs or tissues which are irradiated and the committed dose equivalent.

(6) "Collective effective dose equivalent" is the sum of the individual weighted dose equivalents received by a specified population from exposure to the given source of radiation.

(7) "Occupational dose" means the dose received by an individual in a restricted area or in the course of employment in which the individual's assigned duties involve exposure to radiation and to radioactive material from licensed and unlicensed sources of radiation, whether in the possession of the licensee or other person. Occupational dose does not include dose received from natural background, as a patient from medical practices, from voluntary participation in medical research programs, or as a member of the general public.

(8) "Public dose" means the dose received by a member of the public from exposure to radiation and to radioactive material released by a licensee, or to another source of radiation either within a licensee's controlled area or in unrestricted areas. It does not include occupational dose, or dose received from natural background, as a patient from medical practices, or from voluntary participation in medical research programs.

(9) "Working level" means the potential alpha energy concentrations of radon daughters (for radon–222—polonium–218, lead–214, bismuth–214, and polonium–214; and for radon–220—polonium–216, lead–212, bismuth–212, and polonium–212) in 1 liter of air, without regard to the degree of equilibrium, that will result in the eventual emission of 1.3×10^5 MeV of alpha particle energy.

(10) "Working level month" (WLM) means an exposure of 1 working level for 170 hours (2,000 working hours per year/12 months per year=approximately 170 hours per month).

"Dose control" terms:

(1) "ALARA" (acronym for "As low as is reasonably achievable") means making every reasonable effort to maintain exposures to radiation as far below the dose limits in this part as is practical: (i) Consistent with the purpose for which the licensed activity is undertaken, (ii) taking into account the state of technology, the economics of improvements in relation to benefits to the public health and safety, and other societal and socioeconomic considerations, and (iii) in relation to utilization of nuclear energy in the public interest.

(2) "Annual limit of intake" (ALI) means the derived limit for the amount of radioactive material taken into the body of an adult worker by inhalation or ingestion in a year. ALI is the smaller value of intake of a given radionuclide in a year by reference man which would result in a committed effective dose equivalent of 5 rems (0.05 Sv) or a committed dose equivalent of 50 rems (0.5 Sv) to an organ or tissue. (ALI values for intake by ingestion and by inhalation of selected radionuclides are given in Table 1, Columns 1 and 2 of Appendix B of this part.)

(3) "Derived air concentration" (DAC) means the concentration of a given radionuclide in air which, if breathed by reference man for a working year of 2,000 hours under conditions of light activity (inhalation rate 1.2 cubic meters of air per hour), results in an inhalation of one ALI. (DAC values are given in Table 1, Column 3 of Appendix B of this part. Note consideration of submersion dose; see § 20.203.)

(4) "Dose limits" means the permissible upper bounds of radiation doses. They apply to the dose equivalent received during the period of time covered (generally a calendar year), the committed effective dose equivalent resulting from the intake of radioactive material during the same period, or the effective dose equivalent received in a year.

"Dose" or "Radiation dose" (See Dose terms).

"Dose equivalent" (See Dose terms).

"Effective dose equivalent" (See Dose terms).

"Embryo/fetus" means the developing organism from conception until the time of birth.

"Exposure" terms:

(1) "Exposure" means being exposed to ionizing radiation or to radioactive material.

(2) "Natural background exposure" means exposure to cosmic and terrestrial sources of naturally occurring radioactive material, including technologically enhanced radioactive material, such as plasterboard and fertilizer, but not including byproduct material or radioactive material specifically intended to be a radiation source.

(3) "Normal exposure conditions" means the conditions where exposures can be limited by control of the radiation source and by control of the individual exposed to the radiation source.

(4) "Planned special exposure" means an exposure that occurs infrequently during normal operations when it is necessary to permit a few workers to receive doses in excess of the annual dose limits. Dose limiting provisions for planned special exposures are separate from, and in addition to, the dose limiting conditions for normal exposure conditions.

(5) "Emergency exposure conditions" means conditions where the radiation source is not under control so that subsequent exposure can be limited only by remedial actions.

"Extremities" means hand, elbow, arm below the elbow, foot, knee, and leg below the knee.

"Government agency" means any executive department, commission, independent establishment, corporation wholly or partly owned by the United States of America which is an instrumentality of the United States, or any board, bureau, division, service, office, officer, authority, administration, or other establishment in the executive branch of the Government.

"High radiation area" (See Area terms).

"Individual monitoring" (See Monitoring).

"Internal dose" (See Dose terms).

"License" means a license issued under the regulations in Parts 30 through 35, 40, 50, 60, 61, 70, or 72 of this chapter.

"Licensee" means the holder of a license.

"Licensed material" means source material, special nuclear material, or byproduct material received, possessed, used, or transferred under a general or specific license issued by the Commission.

(1) "Byproduct material" means: (i) Any radioactive material (except special nuclear material) yielded in, or made radioactive by, exposure to the radiation incident to the process of producing or utilizing special nuclear material; and (ii) the tailings or wastes produced by the extraction or concentration of uranium or thorium from ore processed primarily for its source material content, including discrete surface wastes resulting from uranium solution extraction processes. Underground ore bodies depleted by these solution extraction operations do not constitute "byproduct material" within this definition.

(2) "Source material" means: (i) Uranium or thorium, or any combination of uranium and thorium in any physical or chemical form; or (ii) ores which contain, by weight, one-twentieth of one percent (0.05%), or more, of uranium, thorium, or any combination of uranium and thorium. Source material does not include special nuclear material.

(3) "Special nuclear material" means: (i) Plutonium, uranium 233, uranium enriched in the isotope 233 or in the isotope 235, and any other material which the Commission, pursuant to the provisions of section 51 of the act, determines to be special nuclear material, but does not include source material; or (ii) any material artificially enriched by any of the foregoing but does not include source material.

"Limits" (See Dose control terms).

"Lost or missing licensed material" means any licensed material whose location is unknown. It includes material which has been shipped but has not reached its destination and whose location cannot be readily traced in the transportation system.

"Members of the public" means persons who are not occupationally associated with the facility or licensed operations.

"Minor" means an individual under 18 years of age.

"Monitoring" terms:

(1) "Monitoring" (radiation monitoring, radiation protection monitoring) means the measurement of radiation levels, amounts or concentrations of radionuclides, or surface area concentrations of radionuclides, and the use of the results of these measurements to evaluate potential exposures and doses.

(2) "Bioassay" (radiobioassay) means the determination of kinds, quantities or concentrations, and, in some cases, the locations of radioactive material in the human body, whether by direct measurement (in vivo counting) or by analysis and evaluation of materials excreted or removed from the human body.

(3) "Individual monitoring" means: (i) The assessment of dose equivalent by the use of devices designed to be worn by an individual; (ii) the assessment of effective dose equivalent by bioassay (see Bioassay) or by determination of the time-weighted air concentrations to which an individual has been exposed, i.e., DAC-hours; or (iii) the assessment of dose equivalent by the use of survey data.

(4) "Survey" means an evaluation of the radiation conditions incident to the production, use, release, disposal, or presence of radioactive materials or other sources of radiation. Such an evaluation may include calculations or a physical survey, or both.

"Natural background exposure" (See Exposure terms).

"Non-stochastic" (See Stochastic effects).

"Normal exposure conditions" (See Exposure terms).

"Occupational dose" (See Dose terms).

"Person" means: (1) Any individual, corporation, partnership, firm, association, trust, estate, public or private institution, group, Government agency other than the Commission or the Department of Energy (except that the Department shall be considered a person within the meaning of the regulations in 10 CFR Chapter I to the extent that its facilities and activities are subject to the licensing and related regulatory authority of the Commission under section 202 of the Energy Reorganization Act of 1974 (88 Stat. 1244)), any State or any political subdivision of or any political entity within a State, any foreign government or nation or any political subdivision of any such government or nation, or other entity; and (2) any legal successor, representative, agent, or agency of the foregoing.

"Planned special exposure" (See Exposure terms).

"Public dose" (See Dose terms).

"Quarter" means 3 consecutive months starting January 1, April 1, July 1, or October 1.

"Radiation" (ionizing radiation) means alpha particles, beta particles, gamma rays, x-rays, neutrons, high-speed electrons, high-speed protons, and other particles capable of producing ions. Radiation, as used in this part, does not include non-ionizing radiation, such as sound, radio, or microwaves, or visable, infrared, or ultraviolet light.

"Radiation area" (See Area terms).

"Reference level" means a level used in the course of implementing radiation protection programs to signal the necessity for a course of action. The action initiated might range from simply recording the information, through investigating causes and consequences, to intervening measures. A reference level is not a limit.

"Reference man" means a hypothetical aggregation of human physical and physiological characteristics arrived at by international consensus. These characteristics may be used by researchers and public health workers to standardize results of experiments and to relate biological insult to a common base. (See ICRP Publication No. 23.)

"Respiratory protection device" means an apparatus, such as a respirator, used to reduce the individual's intake of airborne radioactive materials.

"Restricted area" (See Area terms).

"Site boundary" (See Area terms).

"Source material" (See Licensed material).

"Special nuclear material" (See Licensed material).

"Stochastic effects" means health effects which occur randomly and for which the probability of the effect occurring, rather than its severity, is assumed to be a linear function of dose without threshold. Hereditary effects and cancer incidence are examples of stochastic effects. A "non-stochastic effect" means a health effect the severity of which varies with the dose, and for which a threshold is believed to exist. Cataracts are an example of a non-stochastic effect.

"Survey" (See Monitoring terms).

"Unrestricted area" (See Area terms).

"Uranium fuel cycle" means the operations of milling of uranium ore, chemical conversion of uranium, isotopic enrichment of uranium, fabrication of uranium fuel, generation of electricity by a light-water-cooled nuclear power plant using uranium fuel, and reprocessing of spent uranium fuel, to the extent that these activities directly support the production of electrical power for public use. Uranium fuel cycle does not include mining operations, operations at waste disposal sites, transportation of radioactive material in support of these operations, and the reuse of recovered non-uranium special nuclear and byproduct materials from the cycle.

"Very high radiation area" (See Area terms).

"Week" means 7 consecutive days starting on Sunday.

"Whole body" means, for purposes of external exposure, head, trunk, arms above the elbow, or legs above the knees.

"Working level" (See Dose terms).

"Working level month" (See Dose terms).

"Year" means 12 consecutive months starting January 1, i.e., a calendar year.

§ 20.4 Units of radiation dose.

(a) Dose-limiting standards are stated in terms of effective dose equivalent, expressed in units of rems or sieverts. Provisions for demonstrating compliance with the standards are stated in terms of absorbed dose, expressed in units of rads or grays; and in terms of dose equivalent, effective dose equivalent, committed dose equivalent, and committed effective dose equivalent, all expressed in units of rems or sieverts.

(1) "Gray" (Gy) is a unit of absorbed dose. One gray is equal to an absorbed dose of 1 joule/kilogram or 100 rads.

(2) "Rad" is a unit of absorbed dose. An absorbed dose of 1 rad is equal to an absorbed dose of 100 ergs/gram or 0.01 joule/kilogram.

(3) "Roentgen" (R) is that quantity of x- or gamma-radiation which causes ionization in air equal to 2.58×10^{-4} coulomb per kilogram. An exposure of 1 roentgen results in an absorbed dose of 0.87 rad in air.

(4) "Sievert" (Sv) is a unit of dose equivalent. One sievert is equal to a dose equivalent of 1 joule/kilogram or 100 rems.

(5) "Rem" is a unit of dose equivalent for any type of ionizing radiation absorbed by body tissue in terms of its estimated biological effect relative to an exposure of one roentgen of x- or γ-rays. The dose equivalent in rems is numerically equal to the absorbed dose in rads multiplied by the quality factor, distribution factor, and any other necessary modifying factors.

(6) The prefixes in Table 1 are used when the unit of radiation dose is expressed in the International System of Units (SI).

TABLE 1 - SI PREFIXES

Factor	Prefix	Symbol	Factor	Prefix	Symbol
10^{18}	exa	E	10^{-1}	deci	d
10^{15}	peta	P	10^{-2}	centi	c
10^{12}	tera	T	10^{-3}	milli	m
10^{9}	giga	G	10^{-6}	micro	μ
10^{6}	mega	M	10^{-9}	nano	n
10^{3}	kilo	k	10^{-12}	pico	p
10^{2}	hecto	h	10^{-15}	femto	f
10^{1}	deka	da	10^{-18}	atto	a

(b) For the purposes of the regulations in this part, any of the following is considered to result in a dose of 1 rem:

(1) An exposure of 1 roentgen of x- or gamma-radiation, except for personnel monitoring purposes which shall comply with the requirements in § 20.501(c);

(2) An absorbed dose, in tissue, of 1 rad due to beta radiation;

(3) An absorbed dose, in tissue, of 0.05 rad due to alpha particles, fission fragments, and other particles heavier than neutrons; or

(4) An absorbed dose, in tissue, of 0.1 rad due to neutrons or high energy protons.

(c) If it is more convenient to measure the neutron fluence rate than to determine the neutron dose equivalent rate in rems per hour, as provided in paragraph (b)(4) of this section, 1 rem of neutron radiation of unknown energies may, for purposes of the regulations in this part, be assumed to result from a total fluence of 25 million neutrons per square centimeter incident upon the body. If sufficient information exists to estimate the approximate energy distribution of the neutrons, the licensee may use the incident fluence equivalent to 1 rem or the appropriate Q value from Table 2 to convert a measured tissue-dose in rads to dose equivalent in rems.

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TABLE 2 - MEAN QUALITY FACTORS, Q[a] AND FLUENCE PER UNIT DOSE EQUIVALENT FOR MONOENERGETIC NEUTRONS[b]

	Neutron Energy (MeV)	Q	Fluence per Unit Dose Equivalent (neutrons cm^{-2} rem^{-1})
(thermal)	2.5×10^{-8}	2	980×10^6
	1×10^{-7}	2	980×10^6
	1×10^{-6}	2	810×10^6
	1×10^{-5}	2	810×10^6
	1×10^{-4}	2	840×10^6
	1×10^{-3}	2	980×10^6
	1×10^{-2}	2.5	1010×10^6
	1×10^{-1}	7.5	170×10^6
	5×10^{-1}	11	39×10^6
	1	11	27×10^6
	2.5	9	29×10^6
	5	8	23×10^6
	7	7	24×10^6
	10	6.5	24×10^6
	14	7.5	17×10^6
	20	8	16×10^6
	40	7	14×10^6
	60	5.5	16×10^6
	1×10^2	4	20×10^6
	2×10^2	3.5	19×10^6
	3×10^2	3.5	16×10^6
	4×10^2	3.5	14×10^6

[a]Value of quality factor (Q) at the point where the dose equivalent is maximum in a 30-cm diameter cylinder tissue-equivalent phantom.

[b]Monoenergetic neutrons incident normally on a 30-cm diameter cylinder tissue-equivalent phantom.

§ 20.5 Units of radioactivity.

(a) For the purposes of this part, radioactivity is expressed in units of curies (Ci), or becquerels (Bq), or their multiples, or disintegrations per unit of time.

(1) One curie $=3.7\times10^{10}$ disintegrations per second $=3.7\times10^{10}$ becquerels $=2.22\times10^{12}$ disintegrations per minute.

(2) One becquerel=1 disintegration (transformation) per second (s^{-1}).

(3) The prefixes listed in Table 1 of § 20.4 are used when the unit of radioactivity is expressed in SI units.

§ 20.6 Interpretations.

Unless specifically authorized by the Commission in writing, no interpretation of the meaning of the regulations in this part by an officer or employee of the Commission other than a written interpretation by the General Counsel is binding on the Commission.

§ 20.7 Communications.

Unless otherwise specified, communications or reports concerning the regulations in this part should be addressed to the Executive Director for Operations, U.S. Nuclear Regulatory Commission, Washington, DC 20555. A communication, report, or application may be delivered in person to the Commission's offices at 1717 H Street NW, Washington, DC or 7920 Norfolk Avenue, Bethesda, MD.

§ 20.8 Reporting, recording, and application requirements: OMB approval.

(a) The Nuclear Regulatory Commission has submitted the information collection requirements contained in this part to the Office of Management and Budget for approval as required by the Paperwork Reduction Act of 1980 (44 U.S.C. 3501 et seq.). The OMB control number is ———.

(b) The approved information collection requirements contained in this part appear in §§ 20.102, 20.202, 20.204, 20.205, 20.206, 20.303, 20.501, 20.502, 20.601, 20.602, 20.703, 20.904, 20.905, 20.1002, 20.1005, 20.1006, 20.1102, 20.1103, 20.1104, 20.1105, 20.1106, 20.1107, 20.1108, 20.1201, 20.1202, 20.1203, 20.1204, 20.1205, 20.1206, and 20.1207.

§ 20.9 Conditions of exposure.

The regulations in this part apply to normal exposure conditions, including planned special exposures and inadvertent exposures which occur through operational mishaps. The regulations in this part do not apply to emergency exposure conditions. However, the Commission recognizes that emergency exposure conditions can exist as a result of the possession, use, or transfer of licensed material. Nothing in this part shall be interpreted as limiting the exposure of individuals to radiation when exposures occur under emergency circumstances and are for the purpose of minimizing danger to life or property. However, the dose received during an emergency or accident shall be included in the individual's records. Further, the Commission may require a licensee to develop a contingency plan dealing with foreseeable situations that includes provisions for planned countermeasures.

Subpart B—System Of Radiation Dose Limitation

§ 20.101 General.

In the interest of public health and safety and in setting the radiation protection standards in this part, the Commission assumes that—

(a) There is, within the range of exposure conditions usually encountered in radiation work, a linear relationship without threshold between dose and probability of stochastic (random) health effects;

(b) The severity of each type of stochastic health effect is independent of dose; and

(c) Non-stochastic (nonrandom) occurrences of radiation-induced health effects are prevented by limiting exposures so that doses are below the thresholds for their induction.

§ 20.102 As low as is reasonably achievable levels of exposure.

(a) Each licensee shall ensure that the dose to individuals receiving occupational doses and to members of the public is as low as is reasonably achievable (ALARA) and does not exceed the appropriate limits. Procedures and engineering controls based on sound radiation protection principles and practices should be used, to the extent practical, to reduce potential exposures.

(1) Each licensee shall develop and implement a radiation protection program including provisions for keeping dose equivalents ALARA.

(2) The licensee's radiation protection program shall include examination and verification of program features and of records by management, or their designee, and administrative controls specifying investigation levels below the limits.

(3) Each licensee shall review circumstances which cause doses in excess of the investigation levels to affirm that doses are ALARA and to take corrective action, if warranted.

(4) The licensee shall maintain records of ALARA actions in accordance with § 20.1102.

(b) A licensee operating a uranium fuel cycle facility so as to meet the provisions of 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," and, if the facility is a light-water-cooled nuclear power reactor, so as to comply with the provisions of Appendix I of Part 50 of this chapter, meets the requirements of this section for maintaining doses to members of the public at levels which are ALARA.

Subpart C—Occupational Dose Limits

§ 20.201 Occupational dose limits for adults.

(a) The licensee shall constrain the occupational dose to individual adults, except for the planned special exposures in § 20.206 and the provisions for very long effective half-lived radionuclides in § 20.205, to the following dose limits.

(1) The annual limit is the more limiting of—

(i) The sum of the (external) deep dose equivalent to the whole body and the (internal) committed effective dose equivalent being equal to 5 rems (0.05 Sv) (see Appendix E of this part for mathematical expression); or

(ii) The sum of the deep dose equivalent and the committed dose equivalent being equal to 50 rems (0.5 Sv) to an organ or tissue other than the lens of the eye (see Appendix E of this part for mathematical expression).

(2) The deep dose equivalent component of the annual effective dose equivalent in paragraph (a)(1) of this section shall not exceed 3 rems (0.03 Sv) in any calendar quarter.

(3) The dose equivalents to the lens of the eye, to the skin, and to the extremities are subject to the following limits.

(i) The annual dose equivalent limit to the lens of the eye is 15 rems (0.15 Sv).

(ii) The annual dose equivalent limit to the skin and to each of the extremities is 50 rems (0.5 Sv). This limit applies to the dose equivalent average over 10 square centimeters in the region of highest exposure.

(b) If an individual receives an exposure that results in a dose exceeding the 3-rem quarterly limit, but less than the 5-rem annual limit, the licensee shall constrain further exposures so that the annual dose limit is not exceeded, unless the dose was permitted under the planned special exposure provisions in § 20.206.

(c) If an individual receives an exposure that results in a dose exceeding the annual limits specified in this section, unless permitted as a planned special exposure by § 20.206, the following conditions shall be satisfied.

(1) The licensee shall not assign the individual to tasks likely to result in the individual receiving an additional occupational dose exceeding one rem (0.01 Sv) effective dose equivalent during any quarter remaining in the calendar year, including the quarter in which the overexposure occurred.

(2) Doses received in excess of the annual limits, including doses received during accidents, emergencies, planned special exposures, or additional overexposures as provided in paragraph (c)(1) of this section, shall be subtracted from the limits for planned special exposures that the individual may receive during the current year (see § 20.206(e)(1)) and during the individual's lifetime (see § 20.206(e)(2)).

(d) Derived air concentration (DAC) and annual limit of intake (ALI) values are presented in Table 1 of Appendix B of this part and may be used in demonstrating compliance with the occupational dose limits.

§ 20.202 Compliance with requirements for summation of external and internal doses.

If an individual is occupationally exposed at levels exceeding both 10% of the (external) deep dose equivalent and 30% of the (internal) annual limit of intake (ALI) of radioactive material, the licensee shall demonstrate compliance with the annual dose limit by summing the deep dose equivalent and the committed effective dose equivalent. If the deep dose equivalent is less than 10% of the annual limit, or if the committed effective dose equivalent is less than 30% of the annual limit, the doses need not be summed. (**Note.**—The dose equivalents for the lens of the eye, the skin, and the extremities are not included in the summation, but are subject to separate limits.)

(a) Because the actual dose equivalent cannot be measured directly, the licensee may use individual monitoring data or other radiation measurements if these data or measurements yield, or are adjusted to yield, a value that is not less than the deep dose equivalent in the region of highest exposure to the whole body of an individual.

(b) Because the committed dose equivalent cannot be measured directly, the licensee may substitute one of the following techniques to demonstrate compliance with the limits.

(1) *Intake by inhalation.* If the only intake of radionuclides is by inhalation, the annual limit is not exceeded—

(i) If the sum of the fraction of the (external) deep dose equivalent limit and the sum of the fractions of the ALI by inhalation of each radionuclide during the year do not exceed unity (see Appendix E of this part for mathematical expression); or

(ii) If the sum of the fraction of the deep dose equivalent limit and the sum of the fractions of the derived air concentration (DAC) of each radionuclide inhaled during the year do not exceed unity (see Appendix E of this part for mathematical expression); or

(iii) If the sum of the fraction of the deep dose equivalent limit and the sum of the committed effective dose equivalents to all significantly irradiated [1] organs or tissues (T) calculated from bioassy data and using appropriate biological models, expressed as a fraction of the annual dose limit, does not exceed unity (see Appendix E of this part for mathematical expression).

[1] An organ or tissue is "significantly irradiated" if, for that organ or tissue, the weighted value per unit intake is greater than 10% of the maximum weighted value of $H_{e,T}$ per unit intake in any organ or tissue.

(2) *Intake by oral ingestion.* If the occupationally exposed individual also receives an intake of radionuclides by oral ingestion greater than 10% of the applicable ALI, the licensee shall account for this intake and include it in demonstrating compliance with the limits (see Appendix E of this part for mathematical expression).

(3) *Intake through wounds or absorption through skin.* The licensee shall evaluate and, to the extent practical, account for intakes through wounds or skin absorption. (**Note.**—The intake through intact skin has been included in the calculation of DAC for hydrogen-3.)

§ 20.203 Further provisions—external exposure.

(a) Derived air concentrations for radioactive noble gases (see class "submersion" in Appendix B of this part) are based upon the dose equivalent rates from exposure to the (external) radiation from submersion in a semi-infinite cloud of uniform concentration, i.e., 2-pi geometry. DAC values may be calculated for submersion in concentrations of noble gases or very short-lived radionuclides in finite volumes. The submersion dose equivalent can also be measured with individual or other radiation monitoring devices. Therefore, the licensee may use either the individual or other radiation monitoring data or measurements of radionuclide concentrations in air to estimate the dose equivalent from exposure to airborne noble gases.

(b) Derived air concentrations for radionuclides other than noble gases (see Appendix B of this part) are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body. The DACs for these radionuclides do not include contributions to the deep dose equivalent from external exposures, such as from submersion in a cloud containing radioactive material. Some very short-lived radionuclides which decay by beta-gamma emission, particularly those marked footnote 2 in Appendix B of this part, can also constitute an important source of external exposure. Consequently, the licensee must also include the dose equivalent from submersion in estimating the effective dose equivalent from airborne concentrations of radioactive material. Licensees may use individual or other radiation monitoring devices to measure, rather than calculate, the dose equivalent from submersion.

(c) The licensee may adjust the estimates of deep dose equivalent based on DAC values when the individual is exposed to clouds with finite volumes or to clouds with nonuniform concentrations.

(d) The licensee may not use DAC values to estimate deep dose equivalent for exposures in which the individual is located where the air concentrations are substantially less than the maximum in the cloud. The use of the semi-infinite cloud conversion factor could cause an underestimate of dose equivalent in such cases. Individual or other radiation monitoring devices may be used to obtain the appropriate dose equivalent estimates in any case.

§ 20.204 Further provisions—internal exposure.

(a) For purposes of determining compliance with occupational dose equivalent limits, the licensee shall take suitable and timely measurements of—

(1) Concentrations of radioactive materials in air in the work areas;

(2) Quantities of radionuclides in the body;

(3) Quantities of radionuclides excreted from the body; or

(4) Combinations of these measurements.

(b) Unless respiratory protection equipment is used, as provided in § 20.703, or the assessment of intake is based on bioassays, the licensee shall assume that an individual inhales radioactive material at the airborne concentration in which the individual is present.

(c) When specific information on the physical and biochemical properties of the radionuclides taken into the body and the behavior of the material in an individual is known, that information may be used in the calculation of committed effective dose equivalent and, if used, the licensee shall document that information in the individual's record.

(d) When a licensee chooses to use DAC or ALI fractions to demonstrate compliance with dose limits, Appendix B values may be adjusted to reflect actual parametric values if the licensee can justify the adjustment with a suitable data base.

(e) When fractional intakes of Class D, W, or Y compounds (see Appendix B of this part) of a given radionuclide are known, the licensee shall assess the contribution of each fraction to the total committed effective dose equivalent separately.

(f) Because of the technical difficulties associated with assessment of incremental intakes by inhalation of Class Y radioactive materials, alone or in mixtures with Class D or Class W materials, and assessment of the committed effective dose equivalent to individual workers from intakes of these materials, recording and reporting of these assessments may be delayed for periods up to 7 months, unless otherwise required by §§ 20.1202 or 20.1203, in order to permit the licensee to make additional measurements basic to the assessments.

(g) Precise knowledge of the composition of mixtures of specific radionuclides in air is not necessary for radiation protection purposes. When a mixture of radionuclides exists in air, the licensee may consider any single radionuclide as "not present" in the mixture if—

(1) The concentration of that radionuclide in air is less than 10% of its DAC;

(2) The sum of these percentages for all of the radionuclides considered as "not present" in the mixture does not exceed 30%; and

(3) The licensee uses the radioactivity of the entire mixture (total radioactivity) in demonstrating compliance with the dose limits in § 20.201 and in complying with the monitoring requirements in § 20.502(b).

(h) Based on a number of simplifying assumptions, inhalation of one ALI, or exposure for 2,000 DAC-hours, may be assumed to result in a risk equal to the risk from a whole body dose equivalent of 5 rems (0.05 Sv).

(1) In some cases, the ALI (and the associated DAC) listed in Table 1 of Appendix B of this part is determined by the quantity of a radionuclide that would deliver 50 rems (0.5 Sv) to a particular organ or tissue (the non-stochastic ALI). In such a case, the organ or tissue to which the non-stochastic ALI applies is specified, and the quantity of radionuclide that would result in a committed effective dose equivalent of 5 rems (0.05 Sv), the stochastic ALI, is listed in parentheses.

(2) When the intake is a mixture of radionuclides, the licensee may use the stochastic ALIs to determine committed effective dose equivalent. However, if the licensee chooses to use the stochastic ALIs, the licensee must also demonstrate that the dose equivalent to any organ or tissue does not exceed 50 rems (0.5 Sv). This is demonstrated if the inequality in the reference to § 20.202 in Appendix E of this part does not exceed unity when summing the fraction of the external deep dose equivalent limit, and the fractions of the non-stochastic ALIs (or DACs) of all of the radionuclides (for which the particular organ or tissue is specified in Appendix B of this part) taken into the body by the individual.

(i) In addition to the annual dose limits, the licensee shall limit the soluble

uranium intake by an individual to 10 milligrams in a calendar week in consideration of chemical toxicity (see footnote 3 of Appendix B of this part).

§ 20.205 Further provisions—internal exposure involving radionuclides with very long effective half-lives.

(a) Biological, chemical, and physical characteristics of the radionuclides listed in Table 3 are of such a nature that the air concentrations found in restricted areas and the amounts of radionuclide found in bioassay samples at or below permissible ALIs might be difficult to measure in a practical manner with sufficient accuracy to permit projection of the committed effective dose equivalent to be used to demonstrate compliance with the limits in § 20.201 by the methods provided in § 20.202(b)

TABLE 3 [1]

Element	Isotope						
Thorium	-228Y	-229Y	-230Y	-232Y			
Protactinium	-231Y						
Uranium	-232Y	-233Y	-234Y	-235Y	-236Y	-238Y	
Plutonium	-236Y	-238Y	-239Y	-240Y	-241Y	-242Y	-244Y
Californium	-249Y	-250Y	-251Y	-252Y			

[1] Y refers to the classification of radioactive materials dependent on their biological retention in the lung (see Appendix B of this part).

(b) A licensee may permit an individual in a restricted area to receive a dose in excess of the limit in § 20.201, when all or part of the dose equivalent received by an individual is from the intake of one or more of the radionuclides listed in Table 3, if each of the following conditions are satisfied:

(1) Facilities constructed after (*effective date of the revision*) are designed so that air concentrations averaged over the year in restricted areas are within the DAC values.

(2) The licensee operates the facility in a manner that will ensure that any individual is unlikely to have an intake from occupational exposure in 1 year in excess of the ALI value.

(3) The sum of the (external) deep dose equivalent, H_D, and the effective dose equivalent, $\Sigma_T w_T H_T$, received in one year (due to both the radionuclides taken into the body during the current year and the radionuclides remaining in the body from previous years) does not exceed 5 rems (0.05 Sv).

(4) The licensee limits the effective dose equivalent received by the individual in one year from the intake of radionuclides in Table 3 (due to both the radionuclides taken into the body during the current year and the radionuclides remaining in the body from previous years) to 3 rems (0.03 Sv).

(5) The licensee provides the best estimate to both the effective dose equivalent received in a year and the committed effective dose equivalent for all of the radioactive material remaining in the body of the individual at the end of the current year. These estimates shall be recorded, revised at least annually if the exposure is later found to be other than previously estimated, reported to the individual annually, and sent to subsequent employers as part of the individual's occupational exposure history.

(6) The licensee formally instructs the individual employee concerning the significance of both the effective dose equivalent received in a year and the committed effective dose equivalent and the uncertainty of the estimates or projections.

§ 20.206 Planned special exposures.

A licensee may authorize an adult worker to receive doses from exposure to external sources in excess of the limits specified in § 20.201 provided that each of the following conditions is satisfied.

(a) The licensee authorizes a planned special exposure only in an exceptional situation, when alternatives which might avoid the higher exposure are unavailable or impractical.

(b) The licensee (and employer, if the employer is not the licensee) specifically authorizes the planned special exposure, in writing, before the exposure occurs.

(c) Before a planned special exposure, the licensee ensures that the individuals involved are—

(1) Informed of the purpose of the planned operation;

(2) Informed of the estimated doses and special radiation or other conditions that might be involved in performing the task; and

(3) Instructed in the measures to be taken to keep the dose and other risks ALARA.

(d) Before a planned special exposure, the licensee ascertains the dose equivalent from all previous planned special exposures and all doses in excess of the annual limits for each individual involved in accordance with § 20.1104(a)(2).

(e) Subject to § 20.201(c)(2), the licensee does not authorize a planned special exposure which would cause an individual—

(1) To exceed, numerically, one times the annual dose limits specified in § 20.201(a) from all planned special exposures and all doses in excess of the annual limits in a calendar year; or

(2) To exceed a total lifetime dose from all planned special exposures and all doses in excess of the annual limits by that individual of five times the annual limits specified in § 20.201(a).

(f) The licensee provides respiratory protection to ensure that the intake by inhalation will be within the appropriate annual limit of intake (ALI).

(g) The licensee maintains records of the conduct of a planned special exposure in accordance with § 20.1105, and submits a written report in accordance with § 20.1204.

(h) The licensee records the dose resulting from a planned special exposure in the individual's record and informs the individual, in writing, of the dose received within 15 days following determination of the dose. However, this dose will not be considered in controlling future occupational dose to the individual under § 20.201(a).

§ 20.207 Occupational dose limits for minors.

The annual dose limits for occupational exposure for minors are 10% of the annual dose limits specified for adult workers in § 20.201(a). The dose limits for minors are not exceeded if the inequality in the reference for § 20.202 in Appendix E of this part is equal to or less than $\frac{1}{10}$.

§ 20.208 Dose to an embryo/fetus.

(a) Except as noted in paragraph (c) of this section, a licensee shall ensure that the effective dose equivalent to an embryo/fetus due to occupational exposure of a declared pregnant woman does not exceed 0.5 rem (5 mSv) during the entire pregnancy. Efforts should be made to avoid substantial variation above a uniform monthly exposure rate which would satisfy this limit. (For recordkeeping requirements, see § 20.1106.)

(b) The effective dose equivalent to an embryo/fetus is the sum of—

(1) The deep dose equivalent to the declared pregnant woman; and

(2) In the absence of age-specific transport parameters for the radionuclides involved, two times the committed effective dose equivalent that would be otherwise assessed due to the intake of radionuclides by the pregnant

woman.[2] Further, the licensee may, for intakes of Class Y materials, calculate the dose to the embryo/fetus on the basis of photon dose to the embryo/fetus (target) from other (source) organs plus the dose equivalent to the embryo/fetus from that portion of the pregnant woman's intake of Class Y material that is transportable, applying either the factor of 2 or age-specific factors applicable to the transportable fraction involved.

(c) Notwithstanding the limit in paragraph (a) of this section, if the dose to the embryo/fetus is found to have exceeded 0.5 rem (5 mSv) by the time the woman declares to the licensee the pregnancy and the estimated date of conception, the licensee is in compliance with paragraph (a) of this section if the licensee does not assign the woman tasks which result in the embryo/fetus receiving an additional dose exceeding 0.05 rem (0.5 mSv) during the remainder of the pregnancy.

Subpart D—Radiation Dose Limits and Reference Level for Individual Members of the Public

§ 20.301 Dose limits for individuals members of the public.

(a) Exposure of any individual member of the public shall be constrained so that the total dose from all known sources and operations, licensed and unlicensed, except for natural background, medical diagnosis and therapy, and radioactive material disposed into sanitary sewerage according to § 20.1003, does not exceed 0.5 rem (5 mSv) per year. The total dose shall be the sum of the (external) deep dose equivalent to the whole body and the (internal) committed effective dose equivalent.

(b) If the licensee permits members of the public to have access to controlled areas, the limits for members of the public still apply to those individuals.

(c) The Commission may impose additional restrictions on radiation levels in unrestricted areas and on the total quantity of radionuclides that a licensee may release in effluents in order to restrict the collective effective dose equivalent.

[2] This factor of 2 recognizes potential differences in biological factors that could result in the embryo/fetus receiving an effective dose equivalent greater than that of the pregnant woman as a result of intake of radioactive material by the pregnant woman. The licensee may use factors other than 2 for specific radionuclides when such factors become available from scientific authorities and are approved by regulatory authorities for use by licensees.

§ 20.302 [Reserved]

§ 20.303 Reference level for the exposure of individual members of the public.

The annual dose limits apply to actual doses that are received by individuals in the public. However, it is impractical, if not impossible, to determine precisely an actual dose because of possible multiple sources, complex problems involving dosimetry, incomplete information concerning water and food intake, habits, spatial and temporal considerations, and other confounding factors. Furthermore, individual members of the public might be subjected to exposures to radiation from several sources, not all of which are controlled by the licensee. Some of the exposures might also occur from activities which are not regulated by the Commission, by State governments, or by other Federal agencies. Therefore, compliance with the dose limits must generally be established in a practical manner by using site-specific parameters and reasonable assumptions to demonstrate that the doses are not likely to exceed a fraction of the limits. For this purpose, reference levels are established. Operations that result in doses at or below these reference levels will ensure that no individual member of the public will be subject to doses that exceed the annual dose limits in § 20.301.

(a) A licensee will be in compliance with the 0.5-rem (5 mSv) annual limit in § 20.301 if the licensee demonstrates that sources under the licensee's control will not result in an individual member of the public receiving a dose in excess of a 0.1-rem (1 mSv) annual reference level.

(b) A licensee may demonstrate operation within the 0.1-rem (1 mSv) annual reference level in paragraph (a) of this section by—

(1) Demonstrating that the sum of the (external) deep dose equivalent and the (internal) committed effective dose equivalent to the individual likely to be the highest exposed from sources under the licensee's control does not exceed the 0.1-rem (1 mSv) annual reference level (see Appendix E of this part for mathematical expression); or

(2) Demonstrating that annual average concentrations of radioactive material released in gaseous and liquid effluents at the boundary of the unrestricted area are constrained to the values specified in Table 2 of Appendix B of this part and dose rates in unrestricted areas are constrained to 0.002 rem (0.02 mSv) in an hour and not more than 0.05 rem (0.5 mSv) in a year.

(c) A licensee or license applicant may apply for prior authorization of operations which may result in exposure of individual members of the public in excess of the reference level in paragraph (a) of this section, but within the annual limits in § 20.301 of this part. The licensee or license applicant shall include in the application for authorization to operate in excess of the reference level—

(1) Demonstration of a clear need to operate in excess of the reference level;

(2) The licensee's program to assess and control dose within the 0.5-rem (5 mSv) annual limit; and

(3) The procedures to be followed to maintain public exposures ALARA.

(d) A licensee shall review the circumstances which cause, or are likely to cause, values which exceed the criteria selected for demonstrating compliance according to paragraph (a) of this section or exceed the level approved under the provisions in paragraph (c) of this section and shall report the findings (see § 20.1205).

(e) In addition to the requirements of this part, a licensee engaged in uranium fuel cycle operations subject to the provisions of 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," shall comply with the requirements of that part.

§ 20.304 Collective dose evaluations.

Doses to individual members of the public receiving 0.001 rem (0.01 mSv) or less in a year may be omitted in collective dose evaluations to prevent an unwarranted commitment of resources for controlling or regulating exposures at levels where calculated risks are negligibly small.

Subpart E—[Reserved]

Subpart F—Surveys and Monitoring

§ 20.501 General.

(a) Each licensee shall make, or cause to be made, surveys that—

(1) May be necessary for the licensee to comply with the regulations in this part; and

(2) Are reasonable under the circumstances to evaluate the extent of radiation levels that could be present and the potential for intake of radioactive materials by individuals.

(b) The licensee shall ensure that instruments and equipment used for quantitative radiation measurements (e.g., dose rate and effluent monitoring) are calibrated for the type of radiation measured.

(c) After [date to be determined in separate rulemaking action], all personnel dosimeters, except extremity

dosimeters and pocket ionization chambers, that require processing to yield a dose value and that are provided to comply with § 20.201 or with the applicable terms and conditions of any license issued by the Nuclear Regulatory Commission:

(1) Shall be processed by a processor currently accredited by the National Voluntary Laboratory Accreditation Program for Personnel Dosimetry Processors of the National Bureau of Standards in accordance with accreditation criteria established in 15 CFR Part 7; and

(2) Shall be approved in this accreditation process for the type of radiation or radiations for which the individual wearing the dosimeter is monitored.

§ 20.502 Conditions requiring individual monitoring of external and internal occupational dose.

(a) Each licensee shall monitor exposures to radiation and shall supply and require the use of individual monitoring devices by—

(1) Adults exposed under circumstances that could result in the individual receiving, in one year from sources external to the body, a dose in excess of 10% of the annual limits in § 20.201(a).

(2) Minors exposed under circumstances that could result in the individual receiving in a year from sources external to the body a dose in excess of 5% of the annual limits for adults in § 20.201(a).

(3) Individuals entering a high or very high radiation area.

(b) Each licensee shall assess the intake of radioactive material by and the committed effective dose equivalent to—

(1) Adults exposed under circumstances that could result in an intake in a year in excess of 30% of the applicable ALI(s) in Table 1, Columns 1 and 2 of Appendix B of this part;

(2) Minors exposed under circumstances that could result in an intake in a year in excess of 5% of the applicable ALI(s) in Table 1, Columns 1 and 2 of Appendix B of this part; and

(3) Individuals using respiratory protection devices to limit the intake of radioactive material under the provisions of §§ 20.702 and 20.703.

Subpart G—Control of Exposure From External Sources in Restricted Areas

§ 20.601 Control of access to high radiation areas.

(a) The licensee shall ensure that each entrance or access point to a high radiation area has one of the following features:

(1) A control device which, upon entry into the area, causes the level of radiation to be reduced below that level at which an individual might receive a dose of 0.1 rem (1 mSv) in 1 hour at 30 cm from the radiation source or from any surface which the radiation penetrates.

(2) A control device which energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry.

(3) Entryways that are locked, except during periods when access to the area is required, with positive control over each individual entry.

(4) The licensee may substitute continuous surveillance over a high radiation area to prevent unauthorized entry in place of the controls required by paragraphs (a)(1), (a)(2), and (a)(3) of this section.

(b) A licensee may apply to the Commission for approval of alternative methods for controlling access to high radiation areas.

(c) The licensee shall establish the controls required by paragraphs (a) and (b) of this section in a way that does not prevent individuals from leaving a high radiation area.

(d) Control is not required for each entrance or access point to a room or other area which is a high radiation area solely because of the presence of radioactive materials prepared for transport and packaged and labeled in accordance with the regulations of the Department of Transportation provided that—

(1) The packages do not remain in the area longer than 3 days; and

(2) The dose rate at 1 meter from the external surfaces does not exceed 0.01 rem (0.1 mSv) per hour.

(e) Control of entrance or access to rooms or other areas in hospitals is not required solely because of the presence of patients containing radioactive material, provided that there are personnel in attendance who will take the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the limits established in this part and to operate within the ALARA provisions of the licensee's radiation protection program.

§ 20.602 Control of access to very high radiation areas.

In addition to the requirements in § 20.601, the licensee shall institute additional measures to ensure that an individual is not able to gain unauthorized or inadvertent access to areas in which radiation levels could be encountered at 500 rads (5 grays) or more in 1 hour at 1 meter from a radiation source or any surface through which the radiation penetrates.

(a) The licensee shall include these measures:

(1) *Primary controls.* Control devices on each entrance or access point which function automatically: To prevent entry when a very high radiation area exists; to permit entry only after reduction of the radiation level below 0.1 rem (1 mSv) per hour at 30 cm from the radiation source or from any surface which the radiation penetrates; and to prevent operation of the source or otherwise prevent the existence of a very high radiation area while an individual is in the area;

(2) *Secondary controls.* Additional control devices which will initiate audible and visible alarm signals to indicate the failure of the primary entry control device and the presence of the radiation hazard; and

(3) *Administrative controls.* Administrative procedures to alert personnel in the area before operation of the source(s) and in sufficient time to permit evacuation of the area, or to operate a control device which will prevent operation of the source, or to otherwise prevent or reduce the probability of exposure at very high radiation levels.

(b) A licensee may apply to the Commission for approval of alternative methods of controlling access to very high radiation areas.

Subpart H—Respiratory Protection Controls To Restrict Internal Exposure in Restricted Areas

§ 20.701 Use of process or other engineering controls.

The licensee shall use, to the extent practical, process engineering controls (e.g., process-containment or ventilation), to limit the concentrations of the radioactive materials in air.

§ 20.702 Use of other controls.

When it is not practical to apply process engineering controls to limit the concentrations of radioactive material in air to values below those defined as an airborne radioactivity area, licensees shall use increased surveillance, limitation of exposure times, respiratory protection equipment, or other controls to limit intake.

§ 20.703 Use of individual respiratory protection equipment.

(a) In estimating exposure of individuals to airborne radioactive materials, the licensee may make allowance for respiratory protection equipment used to limit the inhalation of

the material pursuant to § 20.702, provided the following conditions are satisfied:

(1) The licensee shall select respiratory protection equipment that provides a protection factor (see Appendix A of this part) greater than the factor by which average concentrations of radioactive materials are expected to exceed the values specified in Table 1, Column 3 of Appendix B of this part. The concentration of radioactive material in the air that is inhaled when respirators are worn may be initially estimated by dividing the ambient concentration by the protection factor. If the exposure is later found to be greater than estimated, the corrected value shall be used.

(2) The licensee shall maintain and implement a respiratory protection program that includes—

(i) Air sampling sufficient to identify the potential hazard, permit proper equipment selection, and estimate exposures;

(ii) Surveys and bioassays, as appropriate, to evaluate actual intakes;

(iii) Testing of respirators for operability immediately prior to each use;

(iv) Written procedures regarding selection, fitting, issuance, maintenance, and testing of respirators; supervision and training of personnel; and recordkeeping; and

(v) Determination by a physician prior to initial fitting of respirators, and every 9 to 15 months thereafter, that the individual user is physically able to use the respiratory protection equipment.

(3) The licensee shall issue a written policy statement on respirator usage covering—

(i) The use of process engineering controls, instead of respirators;

(ii) The routine, nonroutine, and emergency use of respirators; and

(iii) The periods of respirator use and relief from respirator use. The licensee shall advise each respirator user that the user may leave the area at any time for relief from respirator use in the event of equipment malfunction, physical or psychological distress, procedural or communication failure, significant deterioration of operating conditions, or any other condition that might require such relief.

(4) The licensee shall use only respiratory protection equipment certified by the National Institute for Occupational Safety and Health/Mine Safety and Health Administration (NIOSH/MSHA).

(5) If the licensee wishes to use equipment that has not been tested or certified by NIOSH/MSHA, has not had certification extended by NIOSH/MSHA, or is not on an existing schedule for testing or certification, the licensee shall include with the application for authorized use of such equipment a demonstration by testing, or a demonstration on the basis of reliable test information, that the material and performance characteristics of the equipment are capable of providing an acceptable degree of protection under anticipated conditions of use.

(b) The licensee shall obtain authorization from the Commission before assigning respiratory protection factors in excess of those specified in Appendix A of this part. The Commission may authorize a licensee to use higher protection factors on receipt of an application that—

(1) Describes the situation for which a need exists for higher protection factors; and

(2) Demonstrates that the respiratory protective equipment provides these higher protection factors under the proposed conditions of use.

§ 20.704 Further restrictions on the use of respiratory protection equipment.

The Commission may impose further restrictions, in addition to those in §§ 20.702, 20.703, and Appendix A of this part to—

(a) Ensure that the respiratory protection program of the licensee is adequate to limit exposures of individuals to airborne radioactive materials, and

(b) Limit the extent to which a licensee may use respiratory protection equipment instead of process or other engineering controls.

Subpart I—Storage and Control of Licensed Material

§ 20.801 Security of stored material.

The licensee shall secure licensed materials stored in controlled or unrestricted areas from unauthorized access or removal.

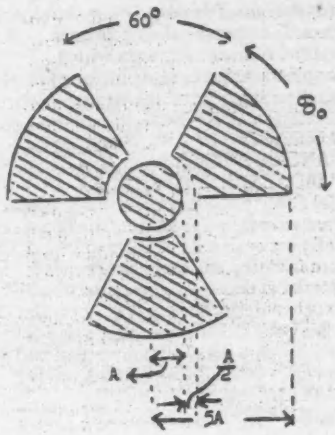
§ 20.802 Control of material not in storage.

The licensee shall control and maintain constant surveillance of licensed material which is in a controlled or unrestricted area and which is not in storage.

Subpart J—Precautionary Procedures

§ 20.901 Caution signs.

(a) *Standard radiation symbol.* Unless otherwise authorized by the Commission, the symbol prescribed by this part shall use the colors magenta or purple on yellow background. The symbol prescribed by this part is the three-bladed design.



Radiation Symbol

(1) Cross-hatched area is to be magenta or purple.

(2) Background is to be yellow.

(b) *Exception to color requirements for standard radiation symbol.* Notwithstanding the requirements of paragraph (a) of this section, licensees are authorized to label sources, source holders, or device components containing sources of licensed materials that are subjected to high temperatures, with conspicuously etched or stamped radiation caution symbols and without a color requirement.

(c) *Additional information on signs and labels.* In addition to the contents of signs and labels prescribed in this part, the licensee may provide, on or near the required signs and labels, additional information, as appropriate, to make individuals aware of potential radiation exposures and to minimize the exposures.

§ 20.902 Posting requirements.

(a) *Posting of radiation areas.* The licensee shall post each radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIATION AREA" or "DANGER, RADIATION AREA."

(b) *Posting of high radiation areas.* The licensee shall post each high radiation area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, HIGH RADIATION AREA" or "DANGER, HIGH RADIATION AREA."

(c) *Posting of very high radiation areas.* The licensee shall post each very high radiation area with a conspicuous sign or signs bearing the radiation symbol and words "DANGER, VERY HIGH RADIATION AREA."

(d) *Posting of airborne radioactivity areas.* The licensee shall post each airborne radioactivity area with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, AIRBORNE RADIOACTIVITY AREA" or "DANGER, AIRBORNE RADIOACTIVITY AREA."

(e) *Posting of areas or rooms in which licensed material is stored.* The licensee shall post each area or room in which there is stored an amount of licensed material exceeding 10 times the quantity of such material specified in Appendix C of this part with a conspicuous sign or signs bearing the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL(S)" or "DANGER, RADIOACTIVE MATERIAL(S)."

§ 20.903 Exceptions to posting requirements.

(a) A licensee is not required to post caution signs in areas or rooms containing radioactive materials for periods of less than 8 hours, if each of the following conditions is met:

(1) The materials are constantly attended during these periods by an individual who takes the precautions necessary to prevent the exposure of individuals to radiation or radioactive materials in excess of the limits established in this part; and

(2) The area or room is subject to the licensee's control.

(b) Rooms or other areas in hospitals, other than those involving patients being treated with therapeutic quantities of unsealed radioactive materials or with brachytherapy sources, are not required to be posted with caution signs pursuant to § 20.902 because of the presence of patients containing radioactive material, provided that there are personnel in attendance who will take the necessary precautions to prevent the exposure of individuals to radiation or radioactive material in excess of the limits established in this part and to operate within the ALARA provisions of the licensee's radiation protection program.

§ 20.904 Labeling containers.

(a) *Labeling.* Except as provided by paragraph (c) of this section, the licensee shall ensure that each container of licensed material bears a durable, clearly visible label identifying the radionuclide(s), the estimate of the quantity of radioactivity, and the date for which the activity is estimated. The label shall bear the radiation symbol and the words "CAUTION, RADIOACTIVE MATERIAL" or "DANGER, RADIOACTIVE MATERIAL." It should also provide sufficient information to permit individuals handling or using the containers, or working in the vicinity of the containers, to take precautions to avoid or minimize exposures. The licensee should include appropriate information such as radiation levels, kinds of material, and mass enrichment.

(b) *Removing labels from empty containers.* Each licensee shall, prior to disposal of empty uncontaminated containers to unrestricted areas, remove or deface the radioactive material label or otherwise clearly indicate that the container no longer contains radioactive materials.

(c) *Exceptions to labeling requirements.* A licensee is not required to label the following—

(1) Containers holding licensed material in quantities less than the applicable quantities listed in Appendix C of this part;

(2) Containers holding licensed material in concentrations less than those specified in Table 3 of Appendix B of this part;

(3) Containers attended by an individual who takes the precautions necessary to prevent the exposure of individuals in excess of the limits established by this part;

(4) Containers which are accessible only to individuals authorized to handle or use them, or to work in the vicinity of the containers, if the contents are identified to these individuals by a readily available written record (examples of containers of this type are containers in locations such as water-filled canals, storage vaults, or hot cells). The record must be retained as long as the containers are in use for the purpose indicated on the record.

(5) Installed manufacturing or process equipment, such as reactor components, piping, and tanks.

§ 20.905 Procedures for picking up, receiving, and opening packages.

(a) Each licensee who expects to receive a package containing quantities of radioactive material in excess of the "Type A_2" quantities specified in or determined by procedures described in Appendix A of Part 71 of this chapter shall make arrangements—

(1) To receive the package when the carrier offers it for delivery; or

(2) To receive notification of the arrival of the package at the carrier's terminal and to pick up the package expeditiously.

(b) Each licensee, upon receipt of a package containing radioactive material, shall monitor the external surfaces of the package for radioactive contamination and radiation levels, and shall make other surveys as may be required by § 20.501. The licensee shall perform the monitoring as soon as practical after receipt of the package, but not later than 3 hours after the package is received at the licensee's facility if it is received during the licensee's normal working hours, or not later than 3 hours from the beginning of the next working day if it is received after working hours.

(c) The licensee shall immediately notify the final delivery carrier and, by telephone and telegram, mailgram, or facsimile, the Administrator of the appropriate NRC Regional Office listed in Appendix D of this part if packages, other than those transported by exclusive use vehicle, are found to have—

(1) Removable radioactive contamination in excess of 0.01 microcurie (0.37 kBq) per 100 square centimeters on the external surfaces of the package; or

(2) Radiation levels at 1 meter from the external surface of the package in excess of 0.01 rem (0.1 mSv) per hour.

(d) Each licensee shall—

(1) Establish and maintain written procedures for safely opening packages in which radioactive material is received;

(2) Ensure that the procedures are followed and that due consideration is given to special instructions for the type of package being opened; and

(3) Retain copies of the written procedures as long as they are appropriate for use.

Subpart K—Waste Disposal

§ 20.1001 General requirement.

A licensee shall dispose of licensed material only—

(a) By transfer to an authorized recipient as provided in § 20.1006 or in the regulations in Parts 30, 40, 60, 61, 70, or 72 of this chapter;

(b) By decay in storage;

(c) By release in effluents within the constraints in §§ 20.301 and 20.303; or

(d) As authorized under §§ 20.1002, 20.1003, 20.1004, or 20.1005.

§ 20.1002 Method for obtaining approval of proposed disposal procedures.

(a) A licensee or applicant for a license may apply to the Commission for approval of proposed procedures, not otherwise authorized in the regulations in this chapter, to dispose of radioactive waste generated in the licensee's activities. Each application shall include—

(1) A description of the radioactive waste, including the physical and chemical properties important to risk

evaluation, and the proposed manner and conditions of waste disposal;

(2) An analysis and evaluation of pertinent information on the nature of the environment;

(3) The nature and location of other potentially affected licensed and unlicensed facilities; and

(4) Procedures to ensure that doses are maintained ALARA and within the dose limits in this part.

(b) A person must file an application for a license to receive radioactive waste from other persons for disposal at a land disposal facility under Part 61 of this chapter or at a geologic repository under Part 60 of this chapter.

§ 20.1003 Disposal by release into sanitary sewerage.

(a) A licensee may discharge licensed material into sanitary sewerage if each of the following conditions is satisfied.

(1) The material is readily soluble in water.

(2) The quantity of licensed or other radioactive material that the licensee releases into the sewer in one month divided by the average monthly volume of water released into the sewer by the licensee does not exceed the concentration listed in Table 3 of Appendix B of this part.

(3) If more than one radionuclide is released, the following conditions must also be satisfied:

(i) The licensee shall determine the fraction obtained by dividing the actual monthly average concentrations of each radionuclide released by the licensee into the sewer by the monthly average concentration of the radionuclide listed in Table 3 of Appendix B of this part; and

(ii) The sum of the fractions for each radionuclide required by paragraph (a)(3)(i) of this section does not exceed unity.

(4) The gross quantity of licensed and other radioactive material that the licensee releases into the sanitary sewerage system in a year does not exceed 5 curies (185 GBq) of hydrogen-3, 1 curie (37 GBq) of carbon-14, and 1 curie (37 GBq) of all other radioactive materials.

(b) Excreta from individuals undergoing medical diagnosis or therapy with radioactive material shall be exempt from any limitations contained in paragraph (a) of this section.

§ 20.1004 Treatment or disposal by incineration.

A licensee may treat or dispose of licensed material by incineration only in the amounts and forms specified in § 20.1005, or as specifically approved by the Commission pursuant to § 20.1002, and within the constraints in §§ 20.301 and 20.303.

§ 20.1005 Disposal of specific wastes.

(a) A licensee may dispose of the following licensed material as if it were not radioactive:

(1) 0.05 microcurie (1.85 kBq), or less, of hydrogen-3 or carbon-14 per gram of medium used for liquid scintillation counting.

(2) 0.05 microcurie (1.85 kBq), or less, of hydrogen-3 or carbon-14 per gram of animal tissue, averaged over the weight of the entire animal.

(b) A licensee may not dispose of tissue under paragraph (a)(2) of this section in a manner that would permit its use either as food for humans or as animal feed.

(c) The licensee shall maintain records in accordance with § 20.1108.

(d) The licensee shall comply with other applicable Federal, State and local regulations governing other toxic or hazardous properties of materials.

§ 20.1006 Transfer for disposal and manifests.

(a) The requirements of this section and Appendix F of this part are designed to control transfers of low-level radioactive waste intended for disposal at a land disposal facility (as defined in Part 60 of this chapter), establish a manifest tracking system, and supplement existing requirements concerning transfers and recordkeeping for such wastes.

(b) Each shipment of radioactive waste intended for disposal at a licensed land disposal facility must be accompanied by a shipment manifest as specified in section I of Appendix F of this part.

(c) Each shipment manifest shall include a certification by the waste generator as specified in section II of Appendix F of this part.

(d) Each person involved in the transfer for disposal and disposal of waste, including the waste generator, waste collector, waste processor, and disposal facility operator, shall comply with the requirements specified in section III of Appendix F of this part.

Subpart L—Records

§ 20.1101 General provisions.

Each licensee shall clearly indicate the radiation units of all quantities on records required by this part.

§ 20.1102 Records of radiation protection program, including ALARA provisions.

(a) Each licensee shall maintain records showing—

(1) The radiation protection program, including provisions for maintaining doses ALARA; and

(2) The examination and verification of program features and records, and actions taken by licensee management, or its designee, adequate to demonstrate compliance with the requirements in § 20.102 for maintaining doses ALARA and to demonstrate implementation of the licensee's ALARA program.

(b) The licensee shall retain these records for two years or until completion of the first inspection of the radiation protection aspects of the licensee's program, whichever is longer.

§ 20.1103 Records of surveys.

(a) Each licensee shall maintain records showing the results of surveys and calibrations required by §§ 20.501 and 20.905(b). The licensee shall retain these records for two years after the record is made or until completion of the first inspection of the radiation protection aspects of the licensee's program, whichever is longer.

(b) The licensee shall retain each of the following records required by § 20.703(a)(2)(ii) until the Commission terminates each pertinent license requiring the record:

(1) Records of the results of surveys to determine individual intakes of radioactive material and used in the assessment of internal dose.

(2) Records of the results of surveys to determine the dose from external sources and used, in the absence of individual monitoring data, in the assessment of individual dose equivalents.

(3) Records of the results of surveys used to evaluate the release of radioactive effluents to the environment.

§ 20.1104 Determination of prior occupational dose.

(a) The licensee shall determine—

(1) The occupational radiation dose received during the current calendar year by each individual who enters the licensee's restricted or controlled area and is likely to receive in a year an occupational dose requiring provision of individual monitoring devices or services pursuant to § 20.502; and

(2) Prior to permitting an individual to participate in a planned special exposure, all planned special exposures and overexposures (including doses received during accidents and emergencies) received during the lifetime of the individual.

(b) The licensee shall determine the exposure history, as required by paragraph (a) of this section, and record on NRC Form 4, or other clear and

legible record, all of the information required in that form.[3] The form or record must show each period in which the individual received occupational exposure to radiation or radioactive material and must be signed by the individual who received the exposure.

(c) The records on NRC Form 4 shall be retained until the Commission terminates each pertinent license requiring this record. Arrangements may be made for transfer of the records to the NRC upon termination of the license. The licensee shall retain records used in preparing NRC Form 4 for two years after the record is made or until completion of the first inspection of the radiation protection aspects of the licensee's program, whichever is longer.

(d) The licensee shall attempt to obtain reports of the individual's previously accumulated effective dose equivalent by telephone, telegram, electronic media, or letter. The licensee shall request a follow-up written verification of dose data received via telephone, telegram, or electronic media. The licensee may accept an up-to-date NRC Form 4 signed by the individual and countersigned by an appropriate official of the most recent employer for work involving radiation exposure, or the individual's current employer, if the individual is not employed by the licensee. For each period for which the licensee obtains reports, the licensee shall use the dose shown in the report in preparing NRC Form 4. If a determination had been made that the individual was unlikely to receive doses for which monitoring was required under § 20.502, it shall be assumed that the individual has received a dose equal to the minimum doses which would require monitoring. For each quarter for which the licensee is unable to obtain complete reports of the individual's occupational dose, the licensee shall assume that—

(1) The individual has received 1.25 rems (12.5 mSv) per calendar quarter of the current year; and

(2) The individual is not available for planned special exposures.

§ 20.1105 Records of planned special exposures.

(a) The licensee shall maintain records which describe, for each use of the provisions of § 20.206 for planned special exposures—

(1) Evaluations made pursuant to § 20.206(a) before the planned special exposure;

(2) The name of the management official who authorized the planned special exposure pursuant to § 20.206(b) and a copy of the signed authorization;

(3) What actions were necessary;

(4) Why the actions were necessary;

(5) How doses were maintained ALARA; and

(6) What individual and collective doses were expected to result, and the doses actually received in the planned special exposure.

(b) The licensee shall retain the records until the Commission terminates each pertinent license requiring these records.

§ 20.1106 Records of individual monitoring results.

(a) Each licensee shall maintain records of doses received by all individuals for whom monitoring was required under normal operating conditions, and all doses due to overexposures, planned special exposures, accidents and emergency conditions.

(b) Each licensee required by § 20.502 to provide individual monitoring devices to assess external dose equivalent shall maintain records of the results.[4]

(c) Each licensee required by § 20.502 or a specific license condition to assess individual internal effective dose equivalent shall maintain records of the results that contain—

(1) The estimated amounts of the radionuclides providing significant exposures as a result of an intake; and

(2) The total effective dose equivalent assigned to the intake of radionuclides.

(d) Each licensee shall add the assessments of individual external dose equivalent and internal effective dose equivalent resulting from the intake of radioactive material for individuals for whom monitoring is required by § 20.502 or a specific license condition. The licensee shall enter this sum and maintain the records specified in paragraphs (a) and (b) of this section on NRC Form 5, in accordance with the instructions for NRC Form 5, or on clear and legible records containing all of the information required by NRC Form 5.

(1) Where specific information on the physical and biochemical properties of the radionuclides involved and their behavior in an individual is known and differs from the instructions for NRC Form 5, the licensee may use that information. If specific information on an individual is used, the licensee shall document or reference in the individual's record the information and the calculation techniques and models used.

(2) The licensee shall enter on NRC Form 5, or equivalent record—

(i) External deep dose equivalent doses for periods of time not exceeding one calendar quarter; and

(ii) Dose equivalents resulting from the intake of radioactive material, and the summation of dose equivalents from external sources and from intake, for periods of time not exceeding one year.

(3) The licensee shall maintain the records of dose to an embryo/fetus with the records of dose to the mother.

(e) Each licensee subject to § 20.501(c) of this part, in addition to preserving personnel monitoring records in accordance with this section, shall also preserve with these records copies of pertinent personnel dosimetry processor accreditation certificates from the National Voluntary Laboratory Accreditation Program as necessary to demonstrate compliance with § 20.501(c) after [date to be determined in separate rulemaking action].

(f) The licensee shall retain each required form or record until the Commission terminates each pertinent license requiring the record.

§ 20.1107 Records of release of radioactive material in effluents.

(a) Each licensee shall maintain records of the identity and quantity of radioactive material in effluents released to unrestricted areas, within the constraints in §§ 20.301 and 20.303, except that the identity of the individual radionuclide in effluents need not be documented if the total concentration of such unknown radionuclides is less than 10% of the limit for unknown mixtures.

(b) The licensee shall retain the records required by paragraph (a) of this section until the Commission terminates each pertinent license requiring the record.

§ 20.1108 Records of waste disposal.

(a) Each licensee shall maintain records of the disposal of licensed materials made under §§ 20.1002, 20.1003, 20.1004, 20.1005, and disposal by burial in soil, as authorized before January 28, 1981.[5]

[3] Licensees are not required to reevaluate the separate external dose equivalents and internal committed dose equivalents or intakes of radionuclides assessed under the regulations in effect before ———. Further, occupational exposure histories obtained and recorded on NRC Form 4 before ——— would not have included effective dose equivalent, but may be used in the absence of specific information on the intake of radionuclides by the individual.

[4] Assessments of dose equivalent (rem or sievert) and records made using units in effect before ——— need not be changed.

[5] A previous § 20.304 permitted burial of small quantities of licensed materials in soil before January 28, 1981, without specific Commission authorization.

(b) The licensee shall retain the records required by paragraph (a) of this section until the Commission terminates each pertinent license requiring the record.

§ 20.1109 Form of records.

The licensee may retain the original record or reproduced copy or microform of any record required by this part if—

(a) The reproduced copy shows a signature by the licensee or is authorized to be a copy of the official, original record; and

(b) The microform is capable of producing a clear and legible copy after storage for the period specified by Commission regulations.

Subpart M—Reports

§ 20.1201 Reports of theft or loss of licensed material.

(a) *Telephone reports.* (1) Each licensee shall report by telephone as follows:

(i) Immediately after its occurrence becomes known to the licensee, any lost, stolen, or missing licensed material in such quantities and under such circumstances that it appears to the licensee that a substantial exposure could result to persons in unrestricted areas; or

(ii) Within 30 days after the occurrence of any lost, stolen or missing licensed material becomes known to the licensee, all licensed material in a quantity greater than ten times the quantity specified in Appendix C of this part which is still missing at this time.

(2) Reports must be made as follows:

(i) Licensees having an installed Emergency Notification System shall make the reports to the NRC Operations Center in accordance with § 50.72 of this chapter; and

(ii) All other licensees shall make reports to the Administrator of the appropriate NRC Regional Office listed in Appendix D of this part.

(b) *Written reports.* (1) Each licensee who is required to make a report under paragraph (a) of this section shall, within 30 days after learning of the occurence of any lost, stolen or missing licensed material, report in writing the following information:

(i) A description of the licensed material involved, including kind, quantity, and chemical and physical form;

(ii) A description of the circumstances under which the loss or theft occurred;

(iii) A statement of disposition, or probable disposition, of the licensed material involved;

(iv) Exposure of individuals to radiation, circumstances under which the exposure occurred, and the possible effective dose equivalent to persons in unrestricted areas;

(v) Actions which have been taken, or will be taken, to recover the material; and

(vi) Procedures or measures which have been, or will be, adopted to ensure against a recurrence of the loss or theft of licensed material.

(2) Reports must be made as follows:

(i) For holders of an operating license for a nuclear power plant, the events included in paragraph (b) of this section must be reported in accordance with the procedures described in § 50.73(b), (c), (d), (e), and (g) of this chapter and must include the information required in paragraph (b)(1) of this section.

(ii) All other licensees shall make reports to the Administrator of the appropriate NRC Regional Office listed in Appendix D of this part.

(c) A duplicate report is not required if the licensee is also required to submit a report pursuant to §§ 30.55(c), 40.64(c), 50.72, 50.73, 70.52, 73.27(b), 73.67(e)(3)(vi), 73.67(g)(3)(iii), 73.71, or 150.19(c) of this chapter.

(d) Subsequent to filing the written report, the licensee shall also report any additional, substantive information on the loss or theft within 30 days after the licensee learns of such information.

(e) The licensee shall prepare any reports filed with the Commission pursuant to this section so that names of individuals who may have received exposure to radiation are stated in a separate and detachable part of the report.

§ 20.1202 Notification of incidents.

(a) *Immediate notification.* Each licensee shall immediately report any event involving byproduct, source, or special nuclear material possessed by the licensee which may have caused, or threatens to cause, any of the following conditions—

(1) An individual to receive a deep dose equivalent of 25 rems (0.25 Sv) or more, a dose equivalent to the lens of the eye of 75 rems (0.75 Sv) or more, or a absorbed dose to the skin or extremities of 250 rads (2.5 Gy) or more; or

(2) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours—

(i) The individual could have received an intake five times the occupational annual limit of intake; or

(ii) For licensees operating under the provisions of § 20.205, the individual could have received an effective dose equivalent of 5 rems in a year.

(iii) The provisions of paragraphs (a)(2)(i) and (a)(2)(ii) of this section do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures.

(b) *Twenty-four hour notification.* Each licensee shall, within 24 hours of discovery of the event, report any event involving loss of control of licensed material possessed by the licensee which may have caused, or threatens to cause, any of the following conditions—

(1) An individual to receive, in a period of 24 hours, a deep dose equivalent exceeding 5 rems (0.05 Sv), a dose equivalent to the lens of the eye exceeding 15 rems (0.15 Sv), or a dose equivalent to the skin or extremities exceeding 50 rems (0.5 Sv). This does not include doses which result from planned special exposures, which are within the limits for planned special exposures and which are reported under § 20.1204; or

(2) The release of radioactive material, inside or outside of a restricted area, so that, had an individual been present for 24 hours—

(i) The individual could have received an intake in excess of one occupational annual limit of intake; or

(ii) For licensees operating under the provisions of § 20.205, the individual could have received an effective dose equivalent of 3 rems (0.03 Sv) in a year.

(iii) The provisions of paragraphs (b)(2)(i) and (b)(2)(ii) of this section do not apply to locations where personnel are not normally stationed during routine operations, such as hot-cells or process enclosures.

(c) The licensee shall prepare any report filed with the Commission pursuant to this section so that names of individuals who have received exposure to radiation or radioactive material are stated in a separate and detachable part of the report.

(d) Reports made by licensees in response to the requirements of this section must be made as follows:

(1) Licensees that have an installed Emergency Notification System shall make the reports required by paragraphs (a) and (b) of this section to the NRC Operations Center in accordance with § 50.72 of this chapter

(2) All other licensees shall make the reports required by paragraphs (a) and (b) of this section by telephone and by telegram, mailgram, or facsimile to the Administrator of the appropriate NRC Regional Office listed in Appendix D of this part.

§ 20.1203 Reports of overexposures and excessive radiation levels and concentrations of radioactive material.

(a) In addition to notification required by § 20.1202, each licensee shall submit a follow-up report, in writing, within 30 days after becoming aware of the following occurrences:

(1) An individual has received an occupational effective dose equivalent in excess of the annual dose limits in §§ 20.201, 20.205, and 20.207, or in excess of any applicable limit in the license.

(2) Levels of radiation or concentrations of radioactive materials in a restricted area are in excess of any applicable limit in the license;

(3) Any incident for which notification is required by § 20.1202;

(4) An individual member of the public has received a dose equivalent in excess of the public dose limit in § 20.301;

(5) Levels of radiation or concentrations of radioactive material (whether or not involving excessive exposure of any individual) in an unrestricted area are in excess of ten times any applicable limit in the license;

(b)(1) Each report required by paragraph (a) of this section must describe the extent of exposure of individuals to radiation and radioactive material, including—

(i) Estimates of each individual's dose equivalent;

(ii) The levels of radiation and concentrations of radioactive material involved;

(iii) The cause of the exposure, levels, or concentrations; and

(iv) Corrective steps taken or planned to ensure against a recurrence.

(2) The licensee shall include in each report positive identification of each occupationally exposed individual, including the name, social security number, and date of birth. The licensee shall prepare the report so that this information is stated in a separate and detachable part of the report.

(c) In addition to the reports required by paragraph (a) of this section, each licensee operating a uranium fuel cycle facility shall make a report in writing of levels of radiation or releases of radioactive materials in excess of the limits specified in 40 CFR Part 190, "Environmental Radiation Protection Standards for Nuclear Power Operations," or in excess of license conditions related to compliance with 40 CFR Part 190. Each report required by this paragraph shall describe:

(1) The extent of exposure of individuals to radiation or to radioactive material;

(2) Levels of radiation or concentrations of radioactive material involved;

(3) The cause of the exposure, levels, or concentrations; and

(4) Corrective steps taken or planned to ensure against a recurrence, including the schedule for achieving conformance with 40 CFR Part 190 and with associated license conditions.

(d) For holders of an operating license for a nuclear power plant, the occurrences included in paragraphs (a) or (c) of this section must be reported in accordance with the procedures described in §§ 50.73(b), (c), (d), (e), and (g) of this chapter and must also include the information required by paragraphs (a) and (c) of this section. Occurrences reported in accordance with § 50.73 of this chapter need not be reported by a duplicate report under paragraphs (a) or (c) of this section.

(e) All other licensees who make reports under paragraphs (a) or (c) of this section shall, within 30 days after learning of the overexposure or excessive level or concentration, make a report in writing to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, DC 20555, with a copy to the appropriate NRC Regional Office listed in Appendix D of this part.

§ 20.1204 Reports of planned special exposures.

The licensee shall submit a written report to the Administrator of the appropriate NRC Regional Office listed in Appendix D of this part, within 15 days following any planned special exposure conducted in accordance with § 20.206, informing the Commission that a planned special exposure was conducted, and indicating the date the planned special exposure occurred.

§ 20.1205 Reports of exceeding reference level.

(a) Each licensee shall report, in writing, within 30 days after becoming aware that an individual member of the public has received, or is likely to receive, in a calendar year, an effective dose equivalent in excess of 0.1 rem (1 mSv), the reference level established in § 20.303(a) or in excess of any level approved under the provisions of § 20.303(c).

(b) In the report required by paragraph (a) the licensee shall identify—

(1) The location of the individual member(s) of the public involved;

(2) The effective dose equivalent of the individual member(s) of the public, including levels of radiation and concentrations of radionuclides involved, demonstrating that the 0.5 rem (5 mSv) limit in § 20.301 has not been exceeded;

(3) The cause of the exposure levels or concentrations; and

(4) The corrective steps taken or planned to ensure that exposures are maintained ALARA.

(c) For holders of an operating license for a nuclear power plant, the report required by paragraph (a) of this section must be reported in accordance with the procedures described in § 50.73(b), (c), (d), (e), and (g) of this chapter and must include the information required by paragraph (b) of this section.

(d) All other licensees who make reports under paragraph (a) of this section shall make the report in writing to the U.S. Nuclear Regulatory Commission, Document Control Desk, Washington, DC 20555, with a copy to the Administrator of the appropriate NRC Regional Office listed in Appendix D of this part.

(e) A duplicate report is not required if the licensee is also required to submit a report pursuant to §§ 30.55(c), 40.64(c), 50.72, 50.73, 70.52, 73.27(b), 73.67(e)(3)(vi), 73.67(g)(3)(iii), 73.71 or 150.19(c) of this chapter.

§ 20.1206 Reports of personnel monitoring.

Each person described in § 20.1207 shall, by August 1 of each calendar year, submit to the Director, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, the reports specified in paragraphs (a) and (b) of this section, covering the preceding calendar year.[6]

(a) A report of either: (1) The total number of individuals for whom personnel monitoring devices or services were required under § 20.502 or § 34.33(a) of this chapter during the calendar year; or (2) the total number of individuals for whom personnel monitoring devices or services were provided during the calendar year: Provided, however, that such total includes at least the number of individuals required to be reported under paragraph (a)(1) of this section. The report shall indicate whether it is submitted in accordance with paragraph (a)(1) or (a)(2) of this section. If personnel monitoring devices or services were not required to be provided to any individual by the licensee under § 20.502 or § 34.33(a) of this chapter during the calendar year,

[6] A licensee whose license expires or terminates prior to or on the last day of the calendar year shall submit reports at the expiration or termination of the license, covering that part of the year during which the license was in effect.

the licensee shall submit a negative report indicating that such personnel monitoring devices or services were not required.

(b) A statistical summary report of the personnel monitoring information recorded by the licensee for individuals for whom personnel monitoring devices or services were either required or provided, as described in paragraph (a) of this section, indicating the number of individuals whose total effective dose equivalent recorded during the previous calendar year was in each of the following estimated ranges:

Estimated ranges of effective dose equivalent in rems*	Number of individuals in each range
No measurable exposure	
Measurable exposure less than 0.1	
0.1 to 0.25	
0.25 to 0.5	
0.5 to 0.75	
0.75 to 1	
1 to 2	
2 to 3	
3 to 4	
4 to 5	
5 to 6	
6 to 7	
7 to 8	
8 to 9	
9 to 10	
10 to 11	
11 to 12	
12 +	

* Individual values exactly equal to the values separating ranges of effective dose equivalent shall be reported in the higher range. The low exposure range data are required in order to obtain better information about the estimated effective dose equivalent actually recorded. This section does not require improved measurements.

§ 20.1207 Reports of personnel monitoring on termination of employment or work.

(a) This section applies to each person licensed by the Commission to:

(1) Operate a nuclear reactor designed to produce electrical or heat energy pursuant to § 50.21(b) or § 50.22 of this chapter or a testing facility as defined in § 50.2(r) of this chapter;

(2) Possess or use byproduct material for purposes of radiography pursuant to Parts 30 and 34 of this chapter;

(3) Possess or use at any one time, for purposes of fuel processing, fabricating, or reprocessing, special nuclear material in a quantity exceeding 5,000 grams of contained uranium-235, uranium-233, or plutonium or any combination thereof pursuant to Part 70 of this chapter;

(4) Possess high-level radioactive waste at a geologic repository operations area pursuant to Part 60 of this chapter; or

(5) Possess spent fuel in an independent spent fuel storage installation (ISFSI) pursuant to Part 72 of this chapter; or

(6) Possess or use at any time, for processing or manufacturing for distribution pursuant to Parts 30, 32, or 33 of this Chapter, byproduct material in quantities exceeding any one of the following quantities:

Radionuclides*	Quantity in curies
Cesium-137	1
Cobalt-60	1
Gold-198	100
Iodine-131	1
Iridium-192	10
Krypton-85	1,000
Prometium-147	10
Technetium-99m	1,000

* The Commission may require as a license condition, or by rule, regulation or order pursuant to § 20.502, reports from licensees who are licensed to use radionuclides not on this list, in quantities sufficient to cause comparable radiation levels.

(7) Receive radioactive waste from other persons for disposal under Part 61 of this chapter.

(b) When an individual terminates employment with a licensee described in paragraph (a) of this section, or an individual assigned to work in such a licensee's facility, but not employed by the licensee, completes the work assignment in the licensee's facility, the licensee shall furnish to the Director, Office of Nuclear Regulatory Research, U.S. Nuclear Regulatory Commission, Washington, DC 20555, a report of the individual's exposures to radiation and radioactive material, incurred during the period of employment or work assignment in the licensee's facility, containing information recorded by the licensee pursuant to § 20.1106. Such report shall be furnished within 30 days after the exposure of the individual has been determined by the licensee or 90 days after the date of termination of employment or work assignment, whichever is earlier.

Subpart N—Exemptions and Additional Requirements

§ 20.1301 Applications for exemptions.

The Commission may, upon application by a licensee or upon its own initiative, grant an exemption from the requirements of the regulations in this part if it determines the exemption is authorized by law and would not result in undue hazard to life or property.

§ 20.1302 Additional requirements.

The Commission may, by rule, regulation, or order, impose requirements on a licensee, in addition to those established in the regulations in this part, as appropriate or necessary to protect health or to minimize danger to life or property.

Subpart O—Enforcement

§ 20.1401 Violations.

(a) The Commission may obtain an injunction or other court order to prevent a violation of the provisions of—

(1) The Atomic Energy Act of 1954, as amended;

(2) Title II of the Energy Reorganization Act of 1974; or

(3) A regulation or order issued under the requirements of those Acts.

(b) The Commission may obtain a court order for the payment of a civil penalty imposed under section 234 of the Atomic Energy Act for violation—

(1) Of sections 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109 of the sections specified in paragraph (b)(1) of this section;

(2) Of section 206 of the Energy Reorganization Act of 1954;

(3) Of any rule, regulation, or order issued under the requirements of the sections specified in paragraph (b)(1) of this section;

(4) Of any term, condition, or limitation of any license issued under the sections specified in paragraph (b)(1) of this section; or

(5) For which a license may be revoked under section 186 of the Act.

(c) Any person who willfully violates a provision of the Act or regulation or order issued under the requirements of the Act may be guilty of a crime and, upon conviction, be punished by fine or imprisonment or both, as provided by law.

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APPENDIX A

PROTECTION FACTORS FOR RESPIRATORS[a]

Description[b]	Modes[c]	Protection Factors[d] Particulates only	Protection Factors[d] Particulates, gases, & vapors[e]	Tested & Certified Equipment National Institute for Occupational Safety and Health/Mine Safety and Health Administration tests for permissibility
I. AIR-PURIFYING RESPIRATORS[f]				
Facepiece, half-mask[g]	NP	10		
Facepiece, full	NP	50		30 CFR Part 11,
Facepiece, half-mask, full, or hood	PP	1000		Subpart K.
II ATMOSPHERE-SUPPLYING RESPIRATORS				
1. Air-line respirator				
Facepiece, half-mask	CF		1000	
Facepiece, half-mask	D		5	
Facepiece, full	CF		2000	
Facepiece, full	D		5	30 CFR Part 11,
Facepiece, full	PD		2000	Subpart J.
Hood	CF		h	
Suit	CF		i	j
2. Self-contained breathing apparatus (SCBA)				
Facepiece, full	D		50	
Facepiece, full	PD		10,000[k]	30 CFR Part 11,
Facepiece, full	RD		50	Subpart H.
Facepiece, full	RP		5,000[l]	
III. COMBINATION RESPIRATORS				
Any combination of air-purifying and atmosphere-supplying respirators		Protection factor for type and mode of operation as listed above		30 CFR Part 11, §11.63(b).

[7590-01]

FOOTNOTES

a. For use in the selection of respiratory protective devices to be used only where the contaminants have been identified and the concentrations (or possible concentrations) are known.

b. Only for shaven faces and where nothing interferes with the seal of tight-fitting facepieces against the skin. (Hoods and suits are excepted.)

c. The mode symbols are defined as follows:

CF = continuous flow
D = demand
NP = negative pressure (i.e., negative phase during inhalation)
PD = pressure demand (i.e., always positive pressure)
PP = positive pressure
RD = demand, recirculating (closed circuit)
RP = pressure demand, recirculating (closed circuit)

d. 1. The protection factor is a measure of the degree of protection afforded by a respirator, defined as the ratio of the concentration of airborne radioactive material outside the respiratory protective equipment to that inside the equipment (usually inside the facepiece) under conditions of use. It is applied to the ambient airborne concentration to estimate the concentrations inhaled by the wearer according to the following formula:

$$\text{Concentration inhaled} = \frac{\text{Ambient airborne concentration}}{\text{Protection factor}}$$

2. The protection factors apply:

(a) Only for individuals trained in using respirators and wearing properly fitted respirators that are used and maintained under supervision in a well-planned respiratory protective program.

(b) For air-purifying respirators only when high efficiency particulate filters (above 99.97% removal efficiency by thermally generated 0.3 μm dioctyl phthalate (DOP) test or equivalent) are used in atmospheres not deficient in oxygen and not containing radioactive gas or vapor respiratory hazards.

(c) No adjustment is to be made for the use of sorbents against radioactive material in the form of gases or vapors.

(d) For atmosphere-supplying respirators only when supplied with adequate respirable air. Respirable air shall be provided of the quality and quantity required in accordance with NIOSH/MSHA certification (described in 30 CFR Part 11). Oxygen and air shall not be used in the same apparatus.

e. Excluding radioactive contaminants that present an absorption or submersion hazard. For tritium oxide, approximately one-third of the intake occurs by absorption through the skin so that an overall protection factor of less than 2 is appropriate when atmosphere-supplying respirators are used to protect against tritium oxide. If the protection factor for a device is 5 the effective protection factor for tritium is about 1.4; for devices with protection factors of 10 the effective factor for tritium oxide is about 1.7; and for devices with protection factors of 100 or more the effective factor for tritium oxide is about 1.9. Air-purifying respirators are not suitable for protection against tritium oxide. See also footnote i concerning supplied-air suits.

f. Canisters and cartridges shall not be used beyond service-life limitations.

g. Under-chin type only. This type of respirator is not satisfactory for use where it might be possible (e.g., if an accident or emergency were to occur) for the ambient airborne concentrations to reach instantaneous values greater than 10 times the pertinent values in Table 1, Column 3 of Appendix B of this part. This type of respirator is not suitable for protection against plutonium or other high-toxicity materials. The mask is to be tested for fit prior to use, each time it is donned.

h. Equipment shall be operated in a manner that ensures that proper air flow-rates are maintained. A protection factor of no more than 1000 may be utilized for tested-and-certified supplied-air hoods when a minimum air flow of 6 cubic feet (0.17 cubic meters) per minute is maintained and calibrated airline pressure gauges or flow measuring devices are used. A protection factor of up to 2000 may be used for tested and certified hoods only when the air flow is maintained at the manufacturer's recommended maximum rate for the equipment, this rate is greater than 6 cubic feet (0.17 cubic meters) per minute, and calibrated airline pressure gauges or flow measuring devices are used.

The design of the supplied-air hood or helmet (with a minimum flow of 6 cfm (0.17 m^3 per minute) of air) may determine its overall efficiency and the protection it provides. For example, some hoods aspirate contaminated air into the breathing zone when the wearer works with hands-over-head. This aspiration may be overcome if a short cape-like extension to the hood is worn under a coat or overalls. Other limitations specified by the approval agency shall be considered before using a hood in certain types of atmospheres (see footnote i).

i. Appropriate protection factors shall be determined, taking into account the design of the suit and its permeability to the contaminant under conditions of use. There shall be a standby rescue person equipped with a respirator or other apparatus appropriate for the potential hazards and communications equipment whenever supplied-air suits are used.

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No approval schedules are currently available for this equipment. Equipment is to be evaluated by testing or on the basis of reliable test information.

This type of respirator may provide greater protection and be used as an emergency device in unknown concentrations for protection against inhalation hazards. External radiation hazards and other limitations to permitted exposure, such as skin absorption, must be taken into account in such circumstances.

Quantitative fit testing shall be performed on each individual and no more than 0.02% leakage is allowed with this type of apparatus. Perceptible outward leakage of gas from this or any positive pressure self-contained breathing apparatus is unacceptable because service life will be reduced substantially. Special training in the use of this type of apparatus shall be provided to the wearer.

1: Protection factors for respirators as may be approved by the Bureau of Mines/National Institute for Occupational Safety and Health H), according to applicable approvals for respirators for type and of use to protect against airborne radionuclides, may be used to the t that they do not exceed the protection factors listed in this table. rotection factors listed in this table may not be appropriate to mstances where chemical or other respiratory hazards exist in addition dioactive hazards. The selection and use of respirators for such mstances should take into account applicable approvals of the U.S. u of Mines/NIOSH.

2: Radioactive contaminants for which the concentration values in 1, Column 3 of Appendix B of this part are based on internal dose o inhalation may, in addition, present external exposure hazards at r concentrations. Under these circumstances, limitations on occu- may have to be governed by external dose limits.

APPENDIX B

ANNUAL LIMITS OF INTAKE (ALIs) AND DERIVED AIR CONCENTRATIONS (DACs) OF RADIONUCLIDES FOR OCCUPATIONAL EXPOSURE; REFERENCE LEVEL CONCENTRATIONS; CONCENTRATIONS FOR RELEASE TO SEWERAGE

Introduction

For each radionuclide a table listing is given indicating the chemical form which is to be used for selecting the appropriate ALI or DAC value. The ALIs and DACs for inhalation are given for an aerosol with an activity median aerodynamic diameter of 1 μm and for three classes (D,W,Y) of radioactive material, which refer to their biological retention in the pulmonary region of the lung. This classification applies to a range of biological half-lives for D of less than 10 days, for W from 10 - 100 days, and for Y greater than 100 days.

Table 1

Note that the columns in Table 1 of this appendix captioned "Oral Ingestion ALI," "Inhalation ALI," and "DAC," are applicable to occupational exposure to radioactive material.

The ALIs in this appendix are the annual intakes of given radionuclides by "Reference Man" which would result in either (1) a committed effective dose equivalent of 5 rems (stochastic ALI), or (2) a committed dose equivalent of 50 rems to an organ or tissue (non-stochastic ALI). The stochastic ALIs were derived to result in a risk, due to irradiation of organs and tissues, comparable to the risk associated with 5 rems whole body deep dose equivalent. The derivation includes multiplying the committed dose equivalent to an organ or tissue by a weighting factor, w_T. This weighting factor is the proportion of the risk of stochastic effects resulting from irradiation of the organ or tissue, T, to the total risk of stochastic effects when the whole body is irradiated uniformly. The values of w_T are listed below. The non-stochastic ALIs were derived to avoid non-stochastic effects, such as prompt damage to tissue or reduction in organ function.

Organ or Tissue	w_T
Gonads	0.25
Breast	0.15
Red bone marrow	0.12
Lung	0.12
Thyroid	0.03
Bone surfaces	0.03
Remainder	0.30*

*(0.30 results from 0.06 for each of 5 "remainder organs")

When an ALI is determined by the stochastic limit, this value, alone, is given. When an ALI is determined by the non-stochastic limit, the organ or tissue to which the limit applies is shown, and the stochastic limit is shown in parentheses. (Abbreviated organ or tissue designations used are: LLI wall = lower large intestine wall; St. wall = stomach wall; Blad. wall = bladder wall; and Bone surf. = bone surface.)

Use of the ALI listed first, the more limiting of the stochastic and non-stochastic ALIs, will ensure that non-stochastic effects are avoided and that stochastic effects are limited to an acceptably low level. If, in a particular situation involving a radionuclide for which the non-stochastic ALI is limiting, use of that non-stochastic ALI is considered unduly conservative, the licensee may use the stochastic ALI to determine effective dose equivalent. However, the licensee shall also ensure that the 50-rem committed dose equivalent limit for any organ or tissue is not exceeded. This is demonstrated if the inequality in the reference to § 20.202 in Appendix E of this part does not exceed unity when using the fractions of the non-stochastic ALIs of all of the radionuclides involved that would be limited by the committed dose equivalent to that organ or tissue.

Note that the dose equivalents for hands and forearms, feet and lower legs, skin, and lens of the eye are not considered in computing the effective dose equivalent, but are subject to limits that must be met separately.

A value of $w_T = 0.06$ is applicable to each of the five organs or tissues in the "remainder" category receiving the highest dose equivalents, and the dose equivalents of all other remaining tissues may be neglected. The following parts of the GI tract - stomach, small intestine, upper large intestine, and lower large intestine - are to be treated as four separate organs.

The DAC values are derived limits intended to control chronic exposures. The relationship between DAC and ALI is given by:

$$\text{DAC} = \text{ALI in } \mu\text{Ci}/(2000 \text{ hours per year} \times 60 \text{ min per hour} \times 2 \times 10^4 \text{ ml per minute})$$

$$= \text{ALI}/2.4 \times 10^9\ \mu\text{Ci per ml}$$

where 2×10^4 ml is the volume of air breathed at work by "Reference Man" per minute under working conditions of "light activity."

ALI and DAC values relate to submersion[1] in or to intake, by the specified route of entry into the body, of the single radionuclide named and include an appropriate allowance for any daughter radionuclides produced in the body during the decay of the parent nuclide. However, intakes that include both parent and daughter radionuclides should be treated by the general method appropriate to mixtures.

The values of ALI and DAC do not apply directly when the individual both ingests and inhales a radionuclide, when the individual is exposed to a mixture of radionuclides, or when the individual is exposed to both internal

and external irradiation (see definition of ALI). In such a case, the method and summation formula specified in the reference to § 20.202 in Appendix E of this part shall apply. When an individual is exposed to several translocation classifications, D, W, or Y, of the same radionuclide, the exposure may be treated as exposure to a mixture of radionuclides.

If an individual is exposed to external sources of radiation in addition to unsealed sources of radioactive material, the licensee must limit the total exposure in a year so that the dose equivalent is in compliance with §§ 20.201 and 20.202.

Table 2

The columns in Table 2 of this appendix captioned "Reference Level Concentrations," "Air" and "Water," are applicable to the assessment and control of dose to the public, particularly in the implementation of the reference level provisions in § 20.303.

The reference level air concentration values listed in Table 2, Column 1, were derived by one of two methods. For those radionuclides for which intake (committed effective dose equivalent) is limiting, the occupational stochastic inhalation ALI was divided by 2.4×10^9 (μCi/ml) x 300. The factor of 2.4×10^9 (μCi/ml), relating the inhalation ALI to the DAC, is explained above. The factor of 300 includes the following components: 50 - to relate the 5-rem annual occupational dose limit to the 0.1-rem reference level; 3 - to adjust for the difference in exposure time and inhalation rate between workers and members of the public; and 2 - to adjust the occupational values, which were derived for adults, so that they are applicable to other age groups.

For those radionuclides for which submersion (external dose) is limiting, the occupational DAC in Table 1, Column 3, was divided by 219. The factor of 219 is composed of a factor of 50, described above, and a factor of 4.38 relating occupational exposure for 2,000 hours per year to full-time exposure for 8,760 hours per year. Note that an additional factor of 2 for age considerations is not warranted in the submersion case.

The reference level water concentrations were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^7(ml). The factor of 7.3×10^7(ml) includes the following components: 7.3×10^5(ml) - the annual water intake of "Reference Man"; 50 - described above; and 2 - described above. Note that because the reference level concentrations are not constrained by consideration of non-stochastic effects (capping doses), as are some of the occupational ALIs and DACs, and because of the difference in the biological models for intake by inhalation and by oral ingestion, there are three groupings of radionuclides in Note 2 of this appendix which are applicable to unknown mixtures of radionuclides.

Table 3

The monthly average concentrations for release to sewerage are applicable to the provisions in § 20.1003. The concentration values were derived by taking the most restrictive occupational stochastic oral ingestion ALI and dividing by 7.3×10^6(ml). The factor of 7.3×10^6(ml) is composed of 7.3×10^5(ml) - the annual water intake by "Reference Man," and a factor of 10 to relate the 5-rem annual occupational dose limit to the 0.5-rem annual dose limit for individual members of the public.

LIST OF

Name	Atomic Number
Actinium	89
Aluminum	13
Americium	95
Antimony	51
Argon	18
Arsenic	33
Astatine	85
Barium	56
Berkelium	97
Beryllium	4
Bismuth	83
Bromine	35
Cadmium	48
Calcium	20
Californium	98
Carbon	6
Cerium	58
Cesium	55
Chlorine	17
Chromium	24
Cobalt	27
Copper	29
Curium	96
Dysprosium	66
Einsteinium	99
Erbium	68
Europium	63
Fermium	100
Fluorine	9
Francium	87
Gadolinium	64
Gallium	31
Germanium	32
Gold	79
Hafnium	72
Holmium	67
Hydrogen	1
Indium	49
Iodine	53
Iridium	77
Iron	26
Krypton	36
Lanthanum	57
Lead	82
Lutetium	71
Magnesium	12
Manganese	25
Mendelevium	101
Mercury	80

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OF ELEMENTS

Name	Atomic Number
Molybdenum	42
Neodymium	60
Neptunium	93
Nickel	28
Niobium	41
Osmium	76
Palladium	46
Phosphorus	15
Platinum	78
Plutonium	94
Polonium	84
Potassium	19
Praseodymium	59
Promethium	61
Protactinium	91
Radium	88
Radon	86
Rhenium	75
Rhodium	45
Rubidium	37
Ruthenium	44
Samarium	62
Scandium	21
Selenium	34
Silicon	14
Silver	47
Sodium	11
Strontium	38
Sulfur	16
Tantalum	73
Technetium	43
Tellurium	52
Terbium	65
Thallium	81
Titanium	22
Thorium	90
Thulium	69
Tin	50
Tungsten	74
Uranium	92
Vanadium	23
Xenon	54
Ytterbium	70
Yttrium	39
Zinc	30
Zirconium	40

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
1	Hydrogen-3	Water, DAC includes skin absorption	$8x10^4$	$8x10^4$	$2x10^{-5}$	$7x10^{-8}$	$1x10^{-3}$	$1x10^{-2}$
4	Beryllium-7	W, all compounds except those given for Y	$4x10^4$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$6x10^{-4}$	$6x10^{-3}$
		Y, oxides, halides and nitrates	-	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	-	-
4	Beryllium-10	W, see ^7Be	$1x10^3$	$2x10^2$	$6x10^{-8}$	$2x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^7Be	-	$1x10^1$	$6x10^{-9}$	$2x10^{-11}$	-	-
6	Carbon-11[2]	Monoxide	-	$1x10^6$	$5x10^{-4}$	$2x10^{-6}$	-	-
		Dioxide	-	$6x10^5$	$3x10^{-4}$	$9x10^{-7}$	-	-
		Organic	$5x10^5$	$5x10^5$	$2x10^{-4}$	$6x10^{-7}$	$7x10^{-3}$	$7x10^{-2}$
		D	-	$4x10^5$	$2x10^{-4}$	-	-	-
6	Carbon-14	Monoxide	-	$2x10^6$	$7x10^{-4}$	$2x10^{-6}$	-	-
		Dioxide	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
		Organic	$2x10^3$	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		D	-	$2x10^3$	$1x10^{-6}$	-	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
9	Fluorine-18[2]	D, fluorides of H, Li, Na, K, Rb, Cs, Fr	$5x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		W, fluorides of Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, As, Sb, Bi, Fe, Ru, Os, Co, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, V, Nb, Ta, Mn, Tc, Re	-	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
		Y, lanthanum fluoride	-	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
11	Sodium-22	D, all compounds	$4x10^2$	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	$6x10^{-6}$	$6x10^{-5}$
11	Sodium-24	D, all compounds	$4x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$5x10^{-5}$	$5x10^{-4}$
12	Magnesium-28	D, all compounds except those given for W	$7x10^2$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$9x10^{-6}$	$9x10^{-5}$
		W, oxides, hydroxides, carbides, halides, and nitrates	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
13	Aluminum-26	D, all compounds except those given for W	$4x10^2$	$6x10^1$	$3x10^{-8}$	$9x10^{-11}$	$6x10^{-6}$	$6x10^{-5}$
		W, oxides, hydroxides, carbides, halides, and nitrates	-	$9x10^1$	$4x10^{-8}$	$1x10^{-10}$	-	-

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Enclosure 1

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
14	Silicon-31	D, all compounds except those given for W and Y	9×10^{3}	3×10^{4}	1×10^{-5}	4×10^{-8}	1×10^{-4}	1×10^{-3}
		W, oxides, hydroxides, carbides, and nitrates	-	3×10^{4}	1×10^{-5}	4×10^{-8}	-	-
		Y, aluminosilicate glass	-	3×10^{4}	1×10^{-5}	4×10^{-8}	-	-
14	Silicon-32	D, see ^{31}Si	2×10^{3}	2×10^{2}	1×10^{-7}	3×10^{-10}	-	-
			(3×10^{3}) LLI wall	-	-	-	4×10^{-5}	4×10^{-4}
		W, see ^{31}Si	-	1×10^{2}	5×10^{-8}	2×10^{-10}	-	-
		Y, see ^{31}Si	-	5×10^{0}	2×10^{-9}	7×10^{-12}	-	-
15	Phosphorus-32	D, all compounds except phosphates given for W	6×10^{2}	9×10^{2}	4×10^{-7}	1×10^{-9}	9×10^{-6}	9×10^{-5}
		W, phosphates of Zn^{2+}, S^{3+}, Mg^{2+}, Fe^{3+}, Bi^{3+}, and lanthanides	-	4×10^{2}	2×10^{-7}	5×10^{-10}	-	-
15	Phosphorus-33	D, see ^{32}P	6×10^{3}	8×10^{3}	4×10^{-6}	1×10^{-8}	8×10^{-5}	8×10^{-4}
		W, see ^{32}P	-	3×10^{3}	1×10^{-6}	4×10^{-9}	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
16	Sulfur-35	Gas	-	1×10^{4}	6×10^{-6}	2×10^{-8}	-	-
		D, sulfides and sulfates except those given for W	6×10^{3}	2×10^{4}	7×10^{-6}	2×10^{-8}	-	-
			(8×10^{3}) LLI wall	-	-	-	1×10^{-4}	1×10^{-3}
		W, elemental sulfur, sulfides of Sr, Ba, Ge, Sn, Pb, As, Sb, Bi, Cu, Ag, Au, Zn, Cd, Hg, W, Mo. Sulfates of Be, Sr, Ba, Ra, As, Sb, Bi	-	2×10^{3}	9×10^{-7}	3×10^{-9}	-	-
17	Chlorine-36	D, chlorides of H, Li, Na, K, Rb, Cs, Fr	2×10^{3}	2×10^{3}	1×10^{-6}	3×10^{-9}	2×10^{-5}	2×10^{-4}
		W, chlorides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Cr, Mo, W, Mn, Tc, Re	-	2×10^{2}	1×10^{-7}	3×10^{-10}	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
17	Chlorine-38[2]	D, see ^{36}Cl	$2x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{36}Cl	-	$5x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
17	Chlorine-39[2]	D, see ^{36}Cl	$2x10^4$	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-
			($3x10^4$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{36}Cl	-	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	-	-
18	Argon-39	Submersion[1]	-	-	$2x10^{-4}$	$8x10^{-7}$	-	-
18	Argon-41	Submersion[1]		-	$3x10^{-6}$	$1x10^{-8}$	-	-
19	Potassium-40	D, all compounds	$3x10^2$	$4x10^2$	$2x10^{-7}$	$6x10^{-10}$	$4x10^{-6}$	$4x10^{-5}$
19	Potassium-42	D, all compounds	$5x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$6x10^{-5}$	$6x10^{-4}$
19	Potassium-43	D, all compounds	$6x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$9x10^{-5}$	$9x10^{-4}$
19	Potassium-44[2]	D, all compounds	$2x10^4$	$7x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
			($3x10^4$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
19	Potassium-45[2]	D, all compounds	$3x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
			($5x10^4$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
20	Calcium-41	W, all compounds	$3x10^3$	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
20	Calcium-45	W, all compounds	$2x10^3$	$8x10^2$	$4x10^{-7}$	$1x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
20	Calcium-47	W, all compounds	$8x10^2$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
21	Scandium-43	Y, all compounds	$7x10^3$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
21	Scandium-44m	Y, all compounds	$5x10^2$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
21	Scandium-44	Y, all compounds	$4x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
21	Scandium-46	Y, all compounds	$9x10^2$	$2x10^2$	$1x10^{-7}$	$3x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
21	Scandium-47	Y, all compounds	$2x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
21	Scandium-48	Y, all compounds	$8x10^2$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
21	Scandium-49[2]	Y, all compounds	$2x10^4$	$5x10^4$	$2x10^{-5}$	$8x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
22	Titanium-44	D, all compounds except those given for W and Y	$3x10^2$	$1x10^1$	$5x10^{-9}$	$2x10^{-11}$	$4x10^{-6}$	$4x10^{-5}$
		W, oxides, hydroxides, carbides, halides, and nitrates	-	$3x10^1$	$1x10^{-8}$	$4x10^{-11}$	-	-
		Y, $SrTiO_3$	-	$6x10^0$	$2x10^{-9}$	$8x10^{-12}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
22	Titanium-45	D, see ^{44}Ti	9×10^{3}	3×10^{4}	1×10^{-5}	4×10^{-8}	1×10^{-4}	1×10^{-3}
		W, see ^{44}Ti	-	4×10^{4}	1×10^{-5}	5×10^{-8}	-	-
		Y, see ^{44}Ti	-	3×10^{4}	1×10^{-5}	4×10^{-8}	-	-
23	Vanadium-47[2]	D, all compounds except those given for W	3×10^{4}	8×10^{4}	3×10^{-5}	1×10^{-7}	4×10^{-4}	4×10^{-3}
		W, oxides, hydroxides, carbides, and halides	-	1×10^{5}	4×10^{-5}	1×10^{-7}	-	-
23	Vanadium-48	D, see ^{47}V	6×10^{2}	1×10^{3}	5×10^{-7}	2×10^{-9}	9×10^{-6}	9×10^{-5}
		W, see ^{47}V	-	6×10^{2}	3×10^{-7}	8×10^{-10}	-	-
23	Vanadium-49	D, see ^{47}V	7×10^{4}	3×10^{4}	1×10^{-5}	5×10^{-8}	1×10^{-3}	1×10^{-2}
		W, see ^{47}V	-	2×10^{4}	8×10^{-6}	3×10^{-8}	-	-
24	Chromium-48	D, all compounds except those given for W and Y	6×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	8×10^{-5}	8×10^{-4}
		W, halides and nitrates	-	7×10^{3}	3×10^{-6}	1×10^{-8}	-	-
		Y, oxides and hydroxides	-	7×10^{3}	3×10^{-6}	1×10^{-8}	-	-
24	Chromium-49[2]	D, see ^{48}Cr	3×10^{4}	8×10^{4}	4×10^{-5}	1×10^{-7}	4×10^{-4}	4×10^{-3}
		W, see ^{48}Cr	-	1×10^{5}	4×10^{-5}	1×10^{-7}	-	-
		Y, see ^{48}Cr	-	9×10^{4}	4×10^{-5}	1×10^{-7}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
24	Chromium-51	D, see ^{48}Cr	4×10^{4}	5×10^{4}	2×10^{-5}	6×10^{-8}	5×10^{-4}	5×10^{-3}
		W, see ^{48}Cr	-	2×10^{4}	1×10^{-5}	3×10^{-8}	-	-
		Y, see ^{48}Cr	-	2×10^{4}	8×10^{-6}	3×10^{-8}	-	-
25	Manganese-51	D, all compounds except those given for W	2×10^{4}	5×10^{4}	2×10^{-5}	7×10^{-8}	3×10^{-4}	3×10^{-3}
		W, oxides, hydroxides, halides and nitrates	-	6×10^{4}	3×10^{-5}	8×10^{-8}	-	-
25	Manganese-52m	D, see ^{51}Mn	3×10^{4}	9×10^{4}	4×10^{-5}	1×10^{-7}	4×10^{-4}	4×10^{-3}
		W, see ^{51}Mn	-	1×10^{5}	4×10^{-5}	1×10^{-7}	-	-
25	Manganese-52	D, see ^{51}Mn	7×10^{2}	1×10^{3}	5×10^{-7}	2×10^{-9}	1×10^{-5}	1×10^{-4}
		W, see ^{51}Mn	-	9×10^{2}	4×10^{-7}	1×10^{-9}	-	-
25	Manganese-53	D, see ^{51}Mn	5×10^{4}	1×10^{4}	5×10^{-6}	-	7×10^{-4}	7×10^{-3}
			-	(2×10^{4}) Bone surf.	-	3×10^{-8}	-	-
		W, see ^{51}Mn	-	1×10^{4}	5×10^{-6}	2×10^{-8}	-	-
25	Manganese-54	D, see ^{51}Mn	2×10^{3}	9×10^{2}	4×10^{-7}	1×10^{-8}	3×10^{-5}	3×10^{-4}
		W, see ^{51}Mn	-	8×10^{2}	3×10^{-7}	1×10^{-9}	-	-
25	Manganese-56	D, see ^{51}Mn	5×10^{3}	2×10^{4}	6×10^{-6}	2×10^{-8}	7×10^{-5}	7×10^{-4}
		W, see ^{51}Mn	-	2×10^{4}	9×10^{-6}	3×10^{-8}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
26	Iron-52	D, all compounds except those given for W	$9x10^2$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, oxides, hydroxides, and halides	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-
26	Iron-55	D, see ^{52}Fe	$9x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{52}Fe	-	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
26	Iron-59	D, see ^{52}Fe	$8x10^2$	$3x10^2$	$1x10^{-7}$	$5x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{52}Fe	-	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	-	-
26	Iron-60	D, see ^{52}Fe	$3x10^1$	$6x10^0$	$3x10^{-9}$	$9x10^{-12}$	$4x10^{-7}$	$4x10^{-6}$
		W, see ^{52}Fe	-	$2x10^1$	$8x10^{-9}$	$3x10^{-11}$	-	-
27	Cobalt-55	W, all compounds except those given for Y	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, oxides, hydroxides, halides and nitrates	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
27	Cobalt-56	W, see ^{55}Co	$4x10^2$	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	$6x10^{-6}$	$6x10^{-5}$
		Y, see ^{55}Co	-	$2x10^2$	$8x10^{-8}$	$3x10^{-10}$	-	-
27	Cobalt-57	W, see ^{55}Co	$4x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$6x10^{-5}$	$6x10^{-4}$
		Y, see ^{55}Co	-	$7x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
27	Cobalt-58m	W, see ^{55}Co	$6x10^4$	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	$8x10^{-4}$	$8x10^{-3}$
		Y, see ^{55}Co	-	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
27	Cobalt-58	W, see ^{55}Co	$1x10^3$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{55}Co	-	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
27	Cobalt-60m[2]	W, see ^{55}Co	$1x10^6$	$4x10^6$	$2x10^{-3}$	$5x10^{-6}$	$1x10^{-2}$	$1x10^{-1}$
		Y, see ^{55}Co	-	$3x10^6$	$1x10^{-3}$	$4x10^{-6}$	-	-
27	Cobalt-60	W, see ^{55}Co	$2x10^2$	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	$3x10^{-6}$	$3x10^{-5}$
		Y, see ^{55}Co	-	$3x10^1$	$1x10^{-8}$	$5x10^{-11}$	-	-
27	Cobalt-61[2]	W, see ^{55}Co	$2x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		Y, see ^{55}Co	-	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	-	-
27	Cobalt-62m[2]	W, see ^{55}Co	$4x10^4$	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	-	-
			($5x10^4$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
		Y, see ^{55}Co	-	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
28	Nickel-56	D, all compounds except those given for W	$1x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, oxides, hydroxides, and carbides	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
28	Nickel-57	D, see ^{56}Ni	$2x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{56}Ni	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
28	Nickel-59	D, see ^{56}Ni	$2x10^4$	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{56}Ni	-	$7x10^3$	$3x10^{-6}$	$1x10^{-8}$	-	-
28	Nickel-63	D, see ^{56}Ni	$9x10^3$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{56}Ni	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
28	Nickel-65	D, see ^{56}Ni	$8x10^3$	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{56}Ni	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
28	Nickel-66	D, see ^{56}Ni	$4x10^2$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	-	-
			($5x10^2$) LLI wall	-	-	-	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{56}Ni	-	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-
29	Copper-60	D, all compounds except those given for W and Y	$3x10^4$	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
		W, sulfides, halides, and nitrates	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
		Y, oxides and hydroxides	-	$1x10^5$	$4x10^{-5}$	$1x10^{-7}$	-	-
29	Copper-61	D, see ^{60}Cu	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{60}Cu	-	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
		Y, see ^{60}Cu	-	$4x10^4$	$1x10^{-5}$	$5x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
29	Copper-64	D, see ^{60}Cu	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{60}Cu	-	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	-	-
		Y, see ^{60}Cu	-	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	-	-
29	Copper-67	D, see ^{60}Cu	$5x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$6x10^{-5}$	$6x10^{-4}$
		W, see ^{60}Cu	-	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	-	-
		Y, see ^{60}Cu	-	$5x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
30	Zinc-62	Y, all compounds	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
30	Zinc-63[2]	Y, all compounds	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
30	Zinc-65	Y, all compounds	$4x10^2$	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	$5x10^{-6}$	$5x10^{-5}$
30	Zinc-69m	Y, all compounds	$4x10^3$	$7x10^3$	$3x10^{-6}$	$1x10^{-8}$	$6x10^{-5}$	$6x10^{-4}$
30	Zinc-69[2]	Y, all compounds	$6x10^4$	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	$8x10^{-4}$	$8x10^{-3}$
30	Zinc-71m	Y, all compounds	$6x10^3$	$2x10^4$	$7x10^{-6}$	$2x10^{-8}$	$8x10^{-5}$	$8x10^{-4}$
30	Zinc-72	Y, all compounds	$1x10^3$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
31	Gallium-65[2]	D, all compounds except those given for W	$5x10^4$	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		W, oxides, hydroxides, carbides, halides, and nitrates	-	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
31	Gallium-66	D, see ^{65}Ga	$1x10^{3}$	$4x10^{3}$	$1x10^{-6}$	$5x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{65}Ga	-	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	-	-
31	Gallium-67	D, see ^{65}Ga	$7x10^{3}$	$1x10^{4}$	$6x10^{-6}$	$2x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{65}Ga	-	$1x10^{4}$	$4x10^{-6}$	$1x10^{-8}$	-	-
31	Gallium-68[2]	D, see ^{65}Ga	$2x10^{4}$	$4x10^{4}$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{65}Ga	-	$5x10^{4}$	$2x10^{-5}$	$7x10^{-8}$	-	-
31	Gallium-70[2]	D, see ^{65}Ga	$5x10^{4}$	$2x10^{5}$	$7x10^{-5}$	$2x10^{-7}$	-	-
			($8x10^{4}$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{65}Ga	-	$2x10^{5}$	$8x10^{-5}$	$3x10^{-7}$	-	-
31	Gallium-72	D, see ^{65}Ga	$1x10^{3}$	$4x10^{3}$	$1x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{65}Ga	-	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	-	-
31	Gallium-73	D, see ^{65}Ga	$5x10^{3}$	$2x10^{4}$	$6x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{65}Ga	-	$2x10^{4}$	$6x10^{-6}$	$2x10^{-8}$	-	-
32	Germanium-66	D, all compounds except those given for W	$2x10^{4}$	$3x10^{4}$	$1x10^{-5}$	$4x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, oxides, sulfides, and halides	-	$2x10^{4}$	$8x10^{-6}$	$3x10^{-8}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
32	Germanium-67[2]	D, see ^{66}Ge	$3x10^{4}$	$9x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	-	-
			($5x10^{4}$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
		W, see ^{66}Ge	-	$1x10^{5}$	$4x10^{-5}$	$1x10^{-7}$		-
32	Germanium-68	D, see ^{66}Ge	$5x10^{3}$	$4x10^{3}$	$2x10^{-6}$	$5x10^{-9}$	$6x10^{-5}$	$6x10^{-4}$
		W, see ^{66}Ge	-	$1x10^{2}$	$4x10^{-8}$	$1x10^{-10}$	-	-
32	Germanium-69	D, see ^{66}Ge	$1x10^{4}$	$2x10^{4}$	$6x10^{-6}$	$2x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{66}Ge	-	$8x10^{3}$	$3x10^{-6}$	$1x10^{-8}$	-	-
32	Germanium-71	D, see ^{66}Ge	$5x10^{5}$	$4x10^{5}$	$2x10^{-4}$	$6x10^{-7}$	$7x10^{-3}$	$7x10^{-2}$
		W, see ^{66}Ge	-	$4x10^{4}$	$2x10^{-5}$	$6x10^{-8}$	-	-
32	Germanium-75[2]	D, see ^{66}Ge	$4x10^{4}$	$8x10^{4}$	$3x10^{-5}$	$1x10^{-7}$	-	-
			($8x10^{4}$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{66}Ge	-	$8x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	-	-
32	Germanium-77	D, see ^{66}Ge	$9x10^{3}$	$1x10^{4}$	$4x10^{-6}$	$1x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{66}Ge	-	$6x10^{3}$	$2x10^{-6}$	$8x10^{-9}$	-	-
32	Germanium-78[2]	D, see ^{66}Ge	$2x10^{4}$	$2x10^{4}$	$9x10^{-6}$	$3x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{66}Ge	-	$2x10^{4}$	$9x10^{-6}$	$3x10^{-8}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
33	Arsenic-69[2]	W, all compounds	3×10^{4}	1×10^{5}	5×10^{-5}	2×10^{-7}	-	-
			(5×10^{4}) St. wall	-	-	-	7×10^{-4}	7×10^{-3}
33	Arsenic-70[2]	W, all compounds	1×10^{4}	5×10^{4}	2×10^{-5}	7×10^{-8}	2×10^{-4}	2×10^{-3}
33	Arsenic-71	W, all compounds	4×10^{3}	5×10^{3}	2×10^{-6}	6×10^{-9}	5×10^{-5}	5×10^{-4}
33	Arsenic-72	W, all compounds	9×10^{2}	1×10^{3}	6×10^{-7}	2×10^{-9}	1×10^{-5}	1×10^{-4}
33	Arsenic-73	W, all compounds	8×10^{3}	2×10^{3}	7×10^{-7}	2×10^{-9}	1×10^{-4}	1×10^{-3}
33	Arsenic-74	W, all compounds	1×10^{3}	8×10^{2}	3×10^{-7}	1×10^{-9}	2×10^{-5}	2×10^{-4}
33	Arsenic-76	W, all compounds	1×10^{3}	1×10^{3}	6×10^{-7}	2×10^{-9}	1×10^{-5}	1×10^{-4}
33	Arsenic-77	W, all compounds	4×10^{3}	5×10^{3}	2×10^{-6}	7×10^{-9}	6×10^{-5}	6×10^{-4}
33	Arsenic-78[2]	W, all compounds	8×10^{3}	2×10^{4}	9×10^{-6}	3×10^{-8}	1×10^{-4}	1×10^{-3}
34	Selenium-70[2]	D, all compounds except those given for W	1×10^{4}	4×10^{4}	2×10^{-5}	5×10^{-8}	1×10^{-4}	1×10^{-3}
		W, oxides, hydroxides, carbides, and elemental Se	-	4×10^{4}	2×10^{-5}	6×10^{-8}	-	-
34	Selenium-73m[2]	D, see ^{70}Se	3×10^{4}	2×10^{5}	6×10^{-5}	2×10^{-7}	4×10^{-4}	4×10^{-3}
		W, see ^{70}Se	-	1×10^{5}	6×10^{-5}	2×10^{-7}	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
34	Selenium-73	D, see ^{70}Se	3×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	4×10^{-5}	4×10^{-4}
		W, see ^{70}Se	-	2×10^{4}	7×10^{-6}	2×10^{-8}	-	-
34	Selenium-75	D, see ^{70}Se	5×10^{2}	7×10^{2}	3×10^{-7}	1×10^{-9}	7×10^{-6}	7×10^{-5}
		W, see ^{70}Se	-	6×10^{2}	3×10^{-7}	8×10^{-10}	-	-
34	Selenium-79	D, see ^{70}Se	6×10^{2}	8×10^{2}	3×10^{-7}	1×10^{-9}	8×10^{-6}	8×10^{-5}
		W, see ^{70}Se	-	6×10^{2}	2×10^{-7}	8×10^{-10}	-	-
34	Selenium-81m[2]	D, see ^{70}Se	2×10^{4}	7×10^{4}	3×10^{-5}	1×10^{-7}	3×10^{-4}	3×10^{-3}
		W, see ^{70}Se	-	7×10^{4}	3×10^{-5}	1×10^{-7}	-	-
34	Selenium-81[2]	D, see ^{70}Se	6×10^{4}	2×10^{5}	9×10^{-5}	3×10^{-7}	-	-
			(8×10^{4}) St. wall	-	-	-	1×10^{-3}	1×10^{-2}
		W, see ^{70}Se	-	2×10^{5}	1×10^{-4}	3×10^{-7}	-	-
34	Selenium-83[2]	D, see ^{70}Se	3×10^{4}	1×10^{5}	5×10^{-5}	2×10^{-7}	4×10^{-4}	4×10^{-3}
		W, see ^{70}Se	-	1×10^{5}	5×10^{-5}	2×10^{-7}	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
35	Bromine-74m[2]	D, bromides of H, Li, Na, K, Rb, Cs, Fr	$1x10^4$	$4x10^4$	$2x10^{-5}$	$5x10^{-8}$	-	-
			($2x10^4$) St. wall	-	-	-	$3x10^{-4}$	$3x10^{-3}$
		W, bromides of lanthanides, Be, Mg, Ca, Sr, Ba, Ra, Al, Ga, In, Tl, Ge, Sn, Pb, As, Sb, Bi, Fe, Ru, Os, Co, Rh, Ir, Ni, Pd, Pt, Cu, Ag, Au, Zn, Cd, Hg, Sc, Y, Ti, Zr, Hf, V, Nb, Ta, Mn, Tc, Re	-	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
35	Bromine-74[2]	D, see ^{74m}Br	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
			($3x10^4$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{74m}Br	-	$8x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
35	Bromine-75[2]	D, see ^{74m}Br	$3x10^4$	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{74m}Br	-	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-
35	Bromine-76	D, see ^{74m}Br	$4x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$5x10^{-5}$	$5x10^{-4}$
		W, see ^{74m}Br	-	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
35	Bromine-77	D, see ^{74m}Br	$2x10^4$	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{74m}Br	-	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
35	Bromine-80m	D, see ^{74m}Br	$2x10^4$	$2x10^4$	$7x10^{-6}$	$2x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{74m}Br	-	$1x10^4$	$6x10^{-6}$	$2x10^{-8}$	-	-
35	Bromine-80[2]	D, see ^{74m}Br	$5x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{74m}Br	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
35	Bromine-82	D, see ^{74m}Br	$3x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{74m}Br	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-
35	Bromine-83	D, see ^{74m}Br	$5x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{74m}Br	-	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
35	Bromine-84[2]	D, see ^{74m}Br	$2x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	-	-
			($3x10^4$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{74m}Br	-	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
36	Krypton-74	Submersion[1]	-	-	$3x10^{-6}$	$1x10^{-8}$	-	-
36	Krypton-76	Submersion[1]	-	-	$9x10^{-6}$	$4x10^{-8}$	-	-
36	Krypton-77	Submersion[1]	-	-	$4x10^{-6}$	$2x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
36	Krypton-79	Submersion[1]	-	-	2×10^{-5}	7×10^{-8}	-	-
36	Krypton-81	Submersion[1]	-	-	7×10^{-4}	3×10^{-6}	-	-
36	Krypton-83m	Submersion[1]	-	-	1×10^{-2}	5×10^{-5}	-	-
36	Krypton-85m	Submersion[1]	-	-	2×10^{-5}	1×10^{-7}	-	-
36	Krypton-85	Submersion[1]	-	-	1×10^{-4}	7×10^{-7}	-	-
36	Krypton-87	Submersion[1]	-	-	5×10^{-6}	2×10^{-8}	-	-
36	Krypton-88	Submersion[1]	-	-	2×10^{-6}	9×10^{-9}	-	-
37	Rubidium-79[2]	D, all compounds	4×10^{4}	1×10^{5}	5×10^{-5}	2×10^{-7}	-	-
			(5×10^{4}) St. wall	-	-	-	7×10^{-4}	7×10^{-3}
37	Rubidium-81m[2]	D, all compounds	2×10^{5}	3×10^{5}	1×10^{-4}	5×10^{-7}	-	-
			(3×10^{5}) St. wall	-	-	-	4×10^{-3}	4×10^{-2}
37	Rubidium-81	D, all compounds	4×10^{4}	5×10^{4}	2×10^{-5}	7×10^{-8}	5×10^{-4}	5×10^{-3}
37	Rubidium-82m	D, all compounds	1×10^{4}	2×10^{4}	7×10^{-6}	2×10^{-8}	2×10^{-4}	2×10^{-3}
37	Rubidium-83	D, all compounds	6×10^{2}	1×10^{3}	4×10^{-7}	1×10^{-9}	9×10^{-6}	9×10^{-5}
37	Rubidium-84	D, all compounds	5×10^{2}	8×10^{2}	3×10^{-7}	1×10^{-9}	7×10^{-6}	7×10^{-5}

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
37	Rubidium-86	D, all compounds	5×10^{2}	8×10^{2}	3×10^{-7}	1×10^{-9}	7×10^{-6}	7×10^{-5}
37	Rubidium-87	D, all compounds	1×10^{3}	2×10^{3}	6×10^{-7}	2×10^{-9}	1×10^{-5}	1×10^{-4}
37	Rubidium-88[2]	D, all compounds	2×10^{4}	6×10^{4}	3×10^{-5}	9×10^{-8}	-	-
			(3×10^{4}) St. wall	-	-	-	4×10^{-4}	4×10^{-3}
37	Rubidium-89[2]	D, all compounds	4×10^{4}	1×10^{5}	6×10^{-5}	2×10^{-7}	-	-
			(5×10^{4}) St. wall	-	-	-	7×10^{-4}	7×10^{-3}
38	Strontium-80[2]	D, all soluble compounds except $SrTiO_3$	4×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	6×10^{-5}	6×10^{-4}
		Y, all insoluble compounds and $SrTiO_3$	-	1×10^{4}	5×10^{-6}	2×10^{-8}	-	-
38	Strontium-81[2]	D, see ^{80}Sr	2×10^{4}	8×10^{4}	3×10^{-5}	1×10^{-7}	3×10^{-4}	3×10^{-3}
		Y, see ^{80}Sr	-	8×10^{4}	3×10^{-5}	1×10^{-7}	-	-
38	Strontium-83	D, see ^{80}Sr	2×10^{3}	7×10^{3}	3×10^{-6}	1×10^{-8}	3×10^{-5}	3×10^{-4}
		Y, see ^{80}Sr	-	4×10^{3}	1×10^{-6}	5×10^{-9}	-	-
38	Strontium-85m[2]	D, see ^{80}Sr	2×10^{5}	6×10^{5}	3×10^{-4}	9×10^{-7}	3×10^{-3}	3×10^{-2}
		Y, see ^{80}Sr	-	8×10^{5}	4×10^{-4}	1×10^{-6}	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
38	Strontium-85	D, see ^{80}Sr	$3x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		Y, see ^{80}Sr	-	$2x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
38	Strontium-87m	D, see ^{80}Sr	$4x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		Y, see ^{80}Sr	-	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
38	Strontium-89	D, see ^{80}Sr	$5x10^2$	$8x10^2$	$4x10^{-7}$	$1x10^{-9}$	$6x10^{-6}$	$6x10^{-5}$
		Y, see ^{80}Sr	-	$1x10^2$	$6x10^{-8}$	$2x10^{-10}$	-	-
38	Strontium-90	D, see ^{80}Sr	$3x10^1$	$2x10^1$	$8x10^{-9}$	$3x10^{-11}$	$4x10^{-7}$	$4x10^{-6}$
		Y, see ^{80}Sr	-	$4x10^0$	$2x10^{-9}$	$5x10^{-12}$	-	-
38	Strontium-91	D, see ^{80}Sr	$2x10^3$	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{80}Sr	-	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-
38	Strontium-92	D, see ^{80}Sr	$3x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		Y, see ^{80}Sr	-	$7x10^3$	$3x10^{-6}$	$9x10^{-9}$	-	-
39	Yttrium-86m[2]	W, all compounds except those given for Y	$2x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		Y, oxides and hydroxides	-	$5x10^4$	$2x10^{-5}$	$8x10^{-8}$	-	-
39	Yttrium-86	W, see ^{86m}Y	$1x10^3$	$3x10^3$	$1x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{86m}Y	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
39	Yttrium-87	W, see ^{86m}Y	$2x10^3$	$3x10^3$	$1x10^{-6}$	$5x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{86m}Y	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
39	Yttrium-88	W, see ^{86m}Y	$1x10^3$	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{86m}Y	-	$2x10^2$	$1x10^{-7}$	$3x10^{-10}$	-	-
39	Yttrium-90m	W, see ^{86m}Y	$8x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		Y, see ^{86m}Y	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
39	Yttrium-90	W, see ^{86m}Y	$4x10^2$	$7x10^2$	$3x10^{-7}$	$9x10^{-7}$	$6x10^{-6}$	$6x10^{-5}$
		Y, see ^{86m}Y	-	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-
39	Yttrium-91m[2]	W, see ^{86m}Y	$1x10^5$	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	$2x10^{-3}$	$2x10^{-2}$
		Y, see ^{86m}Y	-	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	-	-
39	Yttrium-91	W, see ^{86m}Y	$5x10^2$	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	$6x10^{-6}$	$6x10^{-5}$
		Y, see ^{86m}Y	-	$1x10^2$	$5x10^{-8}$	$2x10^{-10}$	-	-
39	Yttrium-92	W, see ^{86m}Y	$3x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		Y, see ^{86m}Y	-	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	-	-
39	Yttrium-93	W, see ^{86m}Y	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{86m}Y	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
39	Yttrium-94[2]	W, see ^{86m}Y	$2x10^4$	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
			($3x10^4$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
		Y, see ^{86m}Y	-	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
39	Yttrium-95	W, see ^{86m}Y	$4x10^4$	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
			($5x10^4$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
		Y, see ^{86m}Y	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
40	Zirconium-86	D, all compounds except those given for W and Y	$1x10^3$	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, oxides, hydroxides, halides and nitrates	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
		Y, carbide	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-
40	Zirconium-88	D, see ^{86}Zr	$4x10^3$	$2x10^2$	$9x10^{-8}$	$3x10^{-10}$	$5x10^{-5}$	$5x10^{-4}$
		W, see ^{86}Zr	-	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	-	-
		Y, see ^{86}Zr	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-
40	Zirconium-89	D, see ^{86}Zr	$2x10^3$	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{86}Zr	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-
		Y, see ^{86}Zr	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
40	Zirconium-93	D, see ^{86}Zr	$1x10^3$	$6x10^0$	$3x10^{-9}$	-	-	-
			($3x10^3$) Bone surf.	($2x10^1$) Bone surf.	-	$2x10^{-11}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{86}Zr	-	$2x10^1$	$1x10^{-8}$	-	-	-
			-	($5x10^1$) Bone surf.	-	$8x10^{-11}$		-
		Y, see ^{86}Zr	-	$6x10^1$	$2x10^{-8}$	-	-	-
			-	($8x10^1$) Bone surf.	-	$1x10^{-10}$	-	-
40	Zirconium-95	D, see ^{86}Zr	$1x10^3$	$1x10^2$	$5x10^{-8}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($3x10^2$) Bone surf.	-	$4x10^{-10}$	-	-
		W, see ^{86}Zr	-	$4x10^2$	$2x10^{-7}$	$5x10^{-10}$	-	-
		Y, see ^{86}Zr	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-
40	Zirconium-97	D, see ^{86}Zr	$6x10^2$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$9x10^{-6}$	$9x10^{-5}$
		W, see ^{86}Zr	-	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
		Y, see ^{86}Zr	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
41	Niobium-88[2]	W, all compounds except those given for Y	$5x10^4$	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		Y, oxides and hydroxides	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
41	Niobium-89[2]	W, see ^{88}Nb	$1x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
	(66 min)	Y, see ^{88}Nb	-	$4x10^4$	$2x10^{-5}$	$5x10^{-8}$	-	-
41	Niobium-89	W, see ^{88}Nb	$5x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
	(122 min)	Y, see ^{88}Nb	-	$2x10^4$	$6x10^{-6}$	$2x10^{-8}$	-	-
41	Niobium-90	W, see ^{88}Nb	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{88}Nb	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-
41	Niobium-93m	W, see ^{88}Nb	$9x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
			($1x10^4$) LLI wall	-	-	-	$1x10^{-4}$	$1x10^{-3}$
		Y, see ^{88}Nb	-	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	-	-
41	Niobium-94	W, see ^{88}Nb	$9x10^2$	$2x10^2$	$8x10^{-8}$	$3x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{88}Nb	-	$2x10^1$	$6x10^{-9}$	$2x10^{-11}$	-	-
41	Niobium-95m	W, see ^{88}Nb	$2x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{88}Nb	-	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	-	-
41	Niobium-95	W, see ^{88}Nb	$2x10^3$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{88}Nb	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
41	Niobium-96	W, see ^{88}Nb	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{88}Nb	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
41	Niobium-97[2]	W, see ^{88}Nb	$2x10^4$	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
		Y, see ^{88}Nb	-	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
41	Niobium-98[2]	W, see ^{88}Nb	$1x10^4$	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{88}Nb	-	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-
42	Molybdenum-90	D, all compounds except those given for Y	$2x10^3$	$7x10^3$	$3x10^{-6}$	$1x10^{-8}$	$3x10^{-5}$	$3x10^{-4}$
		Y, oxides, hydroxides, and MoS_2	-	$5x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
42	Molybdenum-93m	D, see ^{90}Mo	$4x10^3$	$2x10^4$	$7x10^{-6}$	$2x10^{-8}$	$6x10^{-5}$	$6x10^{-4}$
		Y, see ^{90}Mo	-	$1x10^4$	$6x10^{-6}$	$2x10^{-8}$	-	-
42	Molybdenum-93	D, see ^{90}Mo	$4x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$5x10^{-5}$	$5x10^{-4}$
		Y, see ^{90}Mo	-	$2x10^2$	$8x10^{-8}$	$3x10^{-10}$	-	-
42	Molybdenum-99	D, see ^{90}Mo	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{90}Mo	-	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
42	Molybdenum-101[2]	D, see ^{90}Mo	$4x10^4$	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		Y, see ^{90}Mo	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
43	Technetium-93m[2]	D, all compounds except those given for W	$7x10^4$	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, oxides, hydroxides, halides, and nitrates	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
43	Technetium-93	D, see ^{93m}Tc	$3x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{93m}Tc	-	$1x10^5$	$4x10^{-5}$	$1x10^{-7}$	-	-
43	Technetium-94m[2]	D, see ^{93m}Tc	$2x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{93m}Tc	-	$6x10^4$	$2x10^{-5}$	$8x10^{-7}$	-	-
43	Technetium-94	D, see ^{93m}Tc	$9x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{93m}Tc	-	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	-	-
43	Technetium-96m[2]	D, see ^{93m}Tc	$2x10^5$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	$2x10^{-3}$	$2x10^{-2}$
		W, see ^{93m}Tc	-	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	-	-
43	Technetium-96	D, see ^{93m}Tc	$2x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{93m}Tc	-	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	-	-
43	Technetium-97m	D, see ^{93m}Tc	$5x10^3$	$7x10^3$	$3x10^{-6}$	-	$6x10^{-5}$	$6x10^{-4}$
			-	($8x10^3$) St. wall	-	$1x10^{-8}$	-	-
		W, see ^{93m}Tc	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
43	Technetium-97	D, see ^{93m}Tc	$4x10^4$	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	$5x10^{-4}$	$5x10^{-3}$
		W, see ^{93m}Tc	-	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	-	-
43	Technetium-98	D, see ^{93m}Tc	$1x10^3$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{93m}Tc	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
43	Technetium-99m	D, see ^{93m}Tc	$8x10^4$	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{93m}Tc	-	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	-	-
43	Technetium-99	D, see ^{93m}Tc	$4x10^3$	$5x10^3$	$2x10^{-6}$	$8x10^{-9}$	$6x10^{-5}$	$6x10^{-4}$
		W, see ^{93m}Tc	-	$7x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-
43	Technetium-101[2]	D, see ^{93m}Tc	$9x10^4$	$3x10^5$	$1x10^{-4}$	$5x10^{-7}$	-	-
			($1x10^5$) St. wall	-	-	-	$2x10^{-3}$	$2x10^{-2}$
		W, see ^{93m}Tc	-	$4x10^5$	$2x10^{-4}$	$5x10^{-7}$	-	-
43	Technetium-104[2]	D, see ^{93m}Tc	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
			($3x10^4$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{93m}Tc	-	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
44	Ruthenium-94[2]	D, all compounds except those given for W and Y	$2x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, halides	-	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
		Y, oxides and hydroxides	-	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	-	-
44	Ruthenium-97	D, see ^{94}Ru	$8x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{94}Ru	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
		Y, see ^{94}Ru	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
44	Ruthenium-103	D, see ^{94}Ru	$2x10^3$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{94}Ru	-	$1x10^3$	$4x10^{-7}$	$1x10^{-9}$	-	-
		Y, see ^{94}Ru	-	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-
44	Ruthenium-105	D, see ^{94}Ru	$5x10^3$	$2x10^4$	$6x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{94}Ru	-	$1x10^4$	$6x10^{-6}$	$2x10^{-8}$	-	-
		Y, see ^{94}Ru	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
44	Ruthenium-106	D, see ^{94}Ru	$2x10^2$	$9x10^1$	$4x10^{-8}$	$1x10^{-10}$	$3x10^{-6}$	$3x10^{-5}$
		W, see ^{94}Ru	-	$5x10^1$	$2x10^{-8}$	$7x10^{-11}$	-	-
		Y, see ^{94}Ru	-	$1x10^1$	$5x10^{-9}$	$2x10^{-11}$	-	-
45	Rhodium-99m	D, all compounds except those given for W and Y	$2x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, halides	-	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
		Y, oxides and hydroxides	-	$7x10^4$	$3x10^{-5}$	$9x10^{-8}$	-	-
45	Rhodium-99	D, see ^{99m}Rh	$2x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{99m}Rh	-	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	-	-
		Y, see ^{99m}Rh	-	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
45	Rhodium-100	D, see ^{99m}Rh	$2x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{99m}Rh	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-
		Y, see ^{99m}Rh	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
45	Rhodium-101m	D, see ^{99m}Rh	$6x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$8x10^{-5}$	$8x10^{-4}$
		W, see ^{99m}Rh	-	$8x10^3$	$4x10^{-6}$	$1x10^{-8}$	-	-
		Y, see ^{99m}Rh	-	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	-	-
45	Rhodium-101	D, see ^{99m}Rh	$2x10^3$	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{99m}Rh	-	$8x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
		Y, see ^{99m}Rh	-	$2x10^2$	$6x10^{-8}$	$2x10^{-10}$	-	-
45	Rhodium-102m	D, see ^{99m}Rh	$1x10^3$	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{99m}Rh	-	$4x10^2$	$2x10^{-7}$	$5x10^{-10}$	-	-
		Y, see ^{99m}Rh	-	$1x10^2$	$5x10^{-8}$	$2x10^{-10}$	-	-
45	Rhodium-102	D, see ^{99m}Rh	$6x10^2$	$9x10^1$	$4x10^{-8}$	$1x10^{-10}$	$8x10^{-6}$	$8x10^{-5}$
		W, see ^{99m}Rh	-	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	-	-
		Y, see ^{99m}Rh	-	$6x10^1$	$2x10^{-8}$	$8x10^{-11}$	-	-
45	Rhodium-103m[2]	D, see ^{99m}Rh	$4x10^5$	$1x10^6$	$5x10^{-4}$	$2x10^{-6}$	$6x10^{-3}$	$6x10^{-2}$
		W, see ^{99m}Rh	-	$1x10^6$	$5x10^{-4}$	$2x10^{-6}$	-	-
		Y, see ^{99m}Rh	-	$1x10^6$	$5x10^{-4}$	$2x10^{-6}$	-	-
45	Rhodium-105	D, see ^{99m}Rh	$4x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
		W, see ^{99m}Rh	-	$6x10^3$	$3x10^{-6}$	$9x10^{-9}$	-	-
		Y, see ^{99m}Rh	-	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
45	Rhodium-106m	D, see ^{99m}Rh	$8x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{99m}Rh	-	$4x10^4$	$2x10^{-5}$	$5x10^{-8}$	-	-
		Y, see ^{99m}Rh	-	$4x10^4$	$1x10^{-5}$	$5x10^{-8}$	-	-
45	Rhodium-107[2]	D, see ^{99m}Rh	$7x10^4$	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{99m}Rh	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
		Y, see ^{99m}Rh	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
46	Palladium-100	D, all compounds except those given for W and Y	$1x10^3$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, nitrates	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
		Y, oxides and hydroxides	-	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
46	Palladium-101	D, see ^{100}Pd	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{100}Pd	-	$3x10^4$	$1x10^{-5}$	$5x10^{-8}$	-	-
		Y, see ^{100}Pd	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
46	Palladium-103	D, see ^{100}Pd	$6x10^3$	$6x10^3$	$3x10^{-6}$	$9x10^{-9}$	-	-
			($8x10^3$) LLI wall	-	-	-	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{100}Pd	-	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
		Y, see ^{100}Pd	-	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
46	Palladium-107	D, see ^{100}Pd	$3x10^4$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{100}Pd	-	$7x10^3$	$3x10^{-6}$	$1x10^{-8}$	-	-
		Y, see ^{100}Pd	-	$4x10^2$	$2x10^{-7}$	$5x10^{-10}$	-	-
46	Palladium-109	D, see ^{100}Pd	$2x10^3$	$6x10^3$	$3x10^{-6}$	$9x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{100}Pd	-	$5x10^3$	$2x10^{-6}$	$8x10^{-9}$	-	-
		Y, see ^{100}Pd	-	$5x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
47	Silver-102[2]	D, all compounds except those given for W and Y	$5x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		W, nitrates and sulfides	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
		Y, oxides and hydroxides	-	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
47	Silver-103[2]	D, see ^{102}Ag	$4x10^4$	$1x10^5$	$4x10^{-5}$	$1x10^{-7}$	$5x10^{-4}$	$5x10^{-3}$
		W, see ^{102}Ag	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
		Y, see ^{102}Ag	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
47	Silver-104m[2]	D, see ^{102}Ag	$3x10^4$	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{102}Ag	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
		Y, see ^{102}Ag	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
47	Silver-104[2]	D, see ^{102}Ag	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{102}Ag	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
		Y, see ^{102}Ag	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
47	Silver-105	D, see ^{102}Ag	$3x10^3$	$1x10^3$	$4x10^{-7}$	$1x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{102}Ag	-	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	-	-
		Y, see ^{102}Ag	-	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	-	-
47	Silver-106m	D, see ^{102}Ag	$8x10^2$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{102}Ag	-	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
		Y, see ^{102}Ag	-	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
47	Silver-106[2]	D, see ^{102}Ag	$6x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$8x10^{-4}$	$8x10^{-3}$
		W, see ^{102}Ag	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
		Y, see ^{102}Ag		$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
47	Silver-108m	D, see ^{102}Ag	$6x10^2$	$2x10^2$	$8x10^{-8}$	$3x10^{-10}$	$9x10^{-6}$	$9x10^{-5}$
		W, see ^{102}Ag	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-
		Y, see ^{102}Ag	-	$2x10^1$	$1x10^{-8}$	$3x10^{-11}$	-	-
47	Silver-110m	D, see ^{102}Ag	$5x10^2$	$1x10^2$	$5x10^{-8}$	$2x10^{-10}$	$6x10^{-6}$	$6x10^{-5}$
		W, see ^{102}Ag	-	$2x10^2$	$8x10^{-8}$	$3x10^{-10}$	-	-
		Y, see ^{102}Ag	-	$9x10^1$	$4x10^{-8}$	$1x10^{-10}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
47	Silver-111	D, see ^{102}Ag	$9x10^2$	$2x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
			($1x10^3$) LLI wall	-	-	-	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{102}Ag	-	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
		Y, see ^{102}Ag	-	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
47	Silver-112	D, see ^{102}Ag	$3x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{102}Ag	-	$1x10^4$	$4x10^{-6}$	$1x10^{-8}$	-	-
		Y, see ^{102}Ag	-	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	-	-
47	Silver-115[2]	D, see ^{102}Ag	$3x10^4$	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{102}Ag	-	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
		Y, see ^{102}Ag	-	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
48	Cadmium-104[2]	D, all compounds except those given for W and Y	$2x10^4$	$7x10^4$	$3x10^{-5}$	$9x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, sulfides, halides, and nitrates	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
		Y, oxides and hydroxides	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
48	Cadmium-107	D, see ^{104}Cd	$2x10^4$	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{104}Cd	-	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	-	-
		Y, see ^{104}Cd	-	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
48	Cadmium-109	D, see ^{104}Cd	3×10^{2}	4×10^{1}	1×10^{-8}	5×10^{-11}	4×10^{-6}	4×10^{-5}
		W, see ^{104}Cd	-	1×10^{2}	5×10^{-8}	2×10^{-10}	-	-
		Y, see ^{104}Cd	-	1×10^{2}	5×10^{-8}	2×10^{-10}	-	-
48	Cadmium-113m	D, see ^{104}Cd	2×10^{1}	2×10^{0}	1×10^{-9}	3×10^{-12}	3×10^{-7}	3×10^{-6}
		W, see ^{104}Cd	-	8×10^{0}	4×10^{-9}	1×10^{-11}	-	-
		Y, see ^{104}Cd	-	1×10^{1}	5×10^{-9}	2×10^{-11}	-	-
48	Cadmium-113	D, see ^{104}Cd	2×10^{1}	2×10^{0}	9×10^{-10}	4×10^{-12}	3×10^{-7}	3×10^{-6}
		W, see ^{104}Cd	-	8×10^{0}	3×10^{-9}	1×10^{-11}	-	-
		Y, see ^{104}Cd	-	1×10^{1}	6×10^{-9}	2×10^{-11}	-	-
48	Cadmium-115m	D, see ^{104}Cd	3×10^{2}	5×10^{1}	2×10^{-8}	8×10^{-11}	4×10^{-6}	4×10^{-5}
		W, see ^{104}Cd	-	1×10^{2}	5×10^{-8}	2×10^{-10}	-	-
		Y, see ^{104}Cd	-	1×10^{2}	6×10^{-8}	2×10^{-10}	-	-
48	Cadmium-115	D, see ^{104}Cd	9×10^{2}	1×10^{3}	6×10^{-7}	2×10^{-9}	1×10^{-5}	1×10^{-4}
		W, see ^{104}Cd	-	1×10^{3}	5×10^{-7}	2×10^{-9}	-	-
		Y, see ^{104}Cd	-	1×10^{3}	6×10^{-7}	2×10^{-9}	-	-
48	Cadmium-117m	D, see ^{104}Cd	5×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	6×10^{-5}	6×10^{-4}
		W, see ^{104}Cd	-	2×10^{4}	7×10^{-6}	2×10^{-8}	-	-
		Y, see ^{104}Cd	-	1×10^{4}	6×10^{-6}	2×10^{-8}	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
48	Cadmium-117	D, see ^{104}Cd	5×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	6×10^{-5}	6×10^{-4}
		W, see ^{104}Cd	-	2×10^{4}	7×10^{-6}	2×10^{-8}	-	-
		Y, see ^{104}Cd	-	1×10^{4}	6×10^{-6}	2×10^{-8}	-	-
49	Indium-109	D, all compounds except those given for W	2×10^{4}	4×10^{4}	2×10^{-5}	6×10^{-8}	3×10^{-4}	3×10^{-3}
		W, oxides, hydroxides, halides and nitrates	-	6×10^{4}	3×10^{-5}	9×10^{-8}	-	-
49	Indium-110[2] (69.1 min)	D, see ^{109}In	2×10^{4}	4×10^{4}	2×10^{-5}	6×10^{-8}	2×10^{-4}	2×10^{-3}
		W, see ^{109}In	-	6×10^{4}	2×10^{-5}	8×10^{-8}	-	-
49	Indium-110 (4.9 h)	D, see ^{109}In	5×10^{3}	2×10^{4}	7×10^{-6}	2×10^{-8}	7×10^{-5}	7×10^{-4}
		W, see ^{109}In	-	2×10^{4}	8×10^{-6}	3×10^{-8}	-	-
49	Indium-111	D, see ^{109}In	4×10^{3}	6×10^{3}	3×10^{-6}	9×10^{-9}	6×10^{-5}	6×10^{-4}
		W, see ^{109}In	-	6×10^{3}	3×10^{-6}	9×10^{-9}	-	-
49	Indium-112[2]	D, see ^{109}In	2×10^{5}	6×10^{5}	3×10^{-4}	9×10^{-7}	2×10^{-3}	2×10^{-2}
		W, see ^{109}In	-	7×10^{5}	3×10^{-4}	1×10^{-6}	-	-
49	Indium-113m[2]	D, see ^{109}In	5×10^{4}	1×10^{5}	6×10^{-5}	2×10^{-7}	7×10^{-4}	7×10^{-3}
		W, see ^{109}In	-	2×10^{5}	8×10^{-5}	3×10^{-7}	-	-
49	Indium-114m	D, see ^{109}In	3×10^{2}	6×10^{1}	3×10^{-8}	9×10^{-11}	4×10^{-6}	4×10^{-5}
		W, see ^{109}In	-	1×10^{2}	4×10^{-8}	1×10^{-10}	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
49	Indium-115m	D, see ^{109}In	$1x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{109}In	-	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-
49	Indium-115	D, see ^{109}In	$4x10^1$	$1x10^0$	$6x10^{-10}$	$2x10^{-12}$	$5x10^{-7}$	$5x10^{-6}$
		W, see ^{109}In	-	$5x10^0$	$2x10^{-9}$	$7x10^{-12}$	-	-
49	Indium-116m[2]	D, see ^{109}In	$2x10^4$	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{109}In	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
49	Indium-117m[2]	D, see ^{109}In	$1x10^4$	$3x10^4$	$1x10^{-5}$	$5x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{109}In	-	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
49	Indium-117[2]	D, see ^{109}In	$6x10^4$	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	$8x10^{-4}$	$8x10^{-3}$
		W, see ^{109}In	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
49	Indium-119m[2]	D, see ^{109}In	$4x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
			($5x10^4$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
		W, see ^{109}In	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
50	Tin-110	D, all compounds except those given for W	$4x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
		W, sulfides, oxides, hydroxides, halides, nitrates, and stannic phosphate	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
50	Tin-111[2]	D, see ^{110}Sn	$7x10^4$	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{110}Sn	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
50	Tin-113	D, see ^{110}Sn	$2x10^3$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{110}Sn	-	$5x10^2$	$2x10^{-7}$	$8x10^{-10}$	-	-
50	Tin-117m	D, see ^{110}Sn	$2x10^3$	$1x10^3$	$5x10^{-7}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($2x10^3$) Bone surf.	-	$3x10^{-9}$	-	-
		W, see ^{110}Sn	-	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
50	Tin-119m	D, see ^{110}Sn	$3x10^3$	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-
			($5x10^3$) LLI wall	-	-	-	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{110}Sn	-	$1x10^3$	$4x10^{-7}$	$1x10^{-9}$	-	-
50	Tin-121m[2]	D, see ^{110}Sn	$3x10^3$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{110}Sn	-	$5x10^2$	$2x10^{-7}$	$8x10^{-10}$	-	-
50	Tin-121	D, see ^{110}Sn	$6x10^3$	$2x10^4$	$6x10^{-6}$	$2x10^{-8}$	$8x10^{-5}$	$8x10^{-4}$
		W, see ^{110}Sn	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
50	Tin-123m	D, see ^{110}Sn	$5x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$
		W, see ^{110}Sn	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
50	Tin-123	D, see ^{110}Sn	$5x10^2$	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{110}Sn	-	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	-	-
50	Tin-125	D, see ^{110}Sn	$4x10^2$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
			($5x10^2$) LLI wall	-	-	-	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{110}Sn	-	$4x10^2$	$1x10^{-7}$	$5x10^{-10}$	-	-
50	Tin-126	D, see ^{110}Sn	$3x10^2$	$6x10^1$	$2x10^{-8}$	$8x10^{-11}$	$4x10^{-6}$	$4x10^{-5}$
		W, see ^{110}Sn	-	$7x10^1$	$3x10^{-8}$	$9x10^{-11}$	-	-
50	Tin-127	D, see ^{110}Sn	$7x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$9x10^{-5}$	$9x10^{-4}$
		W, see ^{110}Sn	-	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	-	-
50	Tin-128[2]	D, see ^{110}Sn	$9x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{110}Sn	-	$4x10^4$	$1x10^{-5}$	$5x10^{-8}$	-	-
51	Antimony-115[2]	D, all compounds except those given for W	$8x10^4$	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, oxides, hydroxides, halides, sulfides, sulfates, and nitrates	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
51	Antimony-116m[2]	D, see ^{115}Sb	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{115}Sb	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
51	Antimony-116	D, see ^{115}Sb	$8x10^4$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{115}Sb	-	$3x10^5$	$1x10^{-4}$	$5x10^{-7}$	-	-
51	Antimony-117	D, see ^{115}Sb	$7x10^4$	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
		W, see ^{115}Sb	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
51	Antimony-118m	D, see ^{115}Sb	$5x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{115}Sb	-	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	-	-
51	Antimony-119	D, see ^{115}Sb	$1x10^4$	$5x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{115}Sb	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
51	Antimony-120[2] (16 min)	D, see ^{115}Sb	$1x10^5$	$4x10^5$	$2x10^{-4}$	$6x10^{-7}$	-	-
			($2x10^5$) St. wall	-	-	-	$2x10^{-3}$	$2x10^{-2}$
		W, see ^{115}Sb	-	$5x10^5$	$2x10^{-4}$	$7x10^{-7}$	-	-
51	Antimony-120 (5.76 d)	D, see ^{115}Sb	$9x10^2$	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{115}Sb	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
51	Antimony-122	D, see ^{115}Sb	$7x10^2$	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	$9x10^{-6}$	$9x10^{-5}$
		W, see ^{115}Sb	-	$1x10^3$	$4x10^{-7}$	$1x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
51	Antimony-124m[2]	D, see ^{115}Sb	$2x10^5$	$8x10^5$	$4x10^{-4}$	$1x10^{-6}$	-	-
			($3x10^5$) St. wall	-	-	-	$4x10^{-3}$	$4x10^{-2}$
		W, see ^{115}Sb	-	$6x10^5$	$2x10^{-4}$	$8x10^{-7}$	-	-
51	Antimony-124	D, see ^{115}Sb	$5x10^2$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{115}Sb	-	$2x10^2$	$1x10^{-7}$	$3x10^{-10}$	-	-
51	Antimony-125	D, see ^{115}Sb	$2x10^3$	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{115}Sb	-	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	-	-
51	Antimony-126m[2]	D, see ^{115}Sb	$5x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$
		W, see ^{115}Sb	-	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
51	Antimony-126	D, see ^{115}Sb	$5x10^2$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{115}Sb	-	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	-	-
51	Antimony-127	D, see ^{115}Sb	$7x10^2$	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{115}Sb	-	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
51	Antimony-128[2] (10.4 min)	D, see ^{115}Sb	$8x10^4$	$4x10^5$	$2x10^{-4}$	$5x10^{-7}$	-	-
			($1x10^5$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{115}Sb	-	$4x10^5$	$2x10^{-4}$	$6x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
51	Antimony-128 (9.01 h)	D, see ^{115}Sb	$1x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{115}Sb	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
51	Antimony-129	D, see ^{115}Sb	$3x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-3}$
		W, see ^{115}Sb	-	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	-	-
51	Antimony-130[2]	D, see ^{115}Sb	$2x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{115}Sb	-	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
51	Antimony-131[2]	D, see ^{115}Sb	$1x10^4$	$2x10^4$	$1x10^{-5}$	-	$2x10^{-4}$	$2x10^{-3}$
			-	($3x10^4$) Thyroid	-	$4x10^{-8}$	-	-
		W, see ^{115}Sb	-	$2x10^4$	$1x10^{-5}$	-	-	-
			-	($5x10^4$) Thyroid	-	$8x10^{-8}$	-	-
52	Tellurium-116	D, all compounds except those given for W	$8x10^3$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, oxides, hydroxides, and nitrates	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
52	Tellurium-121m	D, see ^{116}Te	$5x10^2$	$2x10^2$	$8x10^{-8}$	-	-	-
			($8x10^2$) Bone surf.	($3x10^2$) Bone surf.	-	$4x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{116}Te	-	$4x10^2$	$2x10^{-7}$	$6x10^{-10}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
52	Tellurium-121	D, see ^{116}Te	$3x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{116}Te	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
52	Tellurium-123m	D, see ^{116}Te	$6x10^2$	$2x10^2$	$9x10^{-8}$	-	-	-
			($1x10^3$) Bone surf.	($5x10^2$) Bone surf.	-	$8x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{116}Te	-	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	-	-
52	Tellurium-123	D, see ^{116}Te	$5x10^2$	$2x10^2$	$8x10^{-8}$	-	-	-
			($1x10^3$) Bone surf.	($5x10^2$) Bone surf.	-	$8x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{116}Te	-	$4x10^2$	$2x10^{-7}$	-	-	-
			-	($1x10^3$) Bone surf.	-	$2x10^{-9}$	-	-
52	Tellurium-125m	D, see ^{116}Te	$1x10^3$	$4x10^2$	$2x10^{-7}$	-	$1x10^{-5}$	$1x10^{-4}$
			-	($1x10^3$) Bone surf.	-	$2x10^{-9}$	-	-
		W, see ^{116}Te	-	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
52	Tellurium-127m	D, see ^{116}Te	$6x10^2$	$3x10^2$	$1x10^{-7}$	-	$9x10^{-6}$	$9x10^{-5}$
			-	($5x10^2$) Bone surf.	-	$8x10^{-10}$	-	-
		W, see ^{116}Te	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
52	Tellurium-127	D, see ^{116}Te	$7x10^3$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{116}Te	-	$2x10^4$	$7x10^{-6}$	$2x10^{-8}$	-	-
52	Tellurium-129m	D, see ^{116}Te	$5x10^2$	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{116}Te	-	$2x10^2$	$1x10^{-7}$	$3x10^{-10}$	-	-
52	Tellurium-129[2]	D, see ^{116}Te	$3x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{116}Te	-	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
52	Tellurium-131m	D, see ^{116}Te	$3x10^2$	$4x10^2$	$2x10^{-7}$	-	-	-
			($5x10^2$) Thyroid	($1x10^3$) Thyroid	-	$2x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{116}Te	-	$4x10^2$	$2x10^{-7}$	-	-	-
			-	($8x10^2$) Thyroid	-	$1x10^{-9}$	-	-
52	Tellurium-131[2]	D, see ^{116}Te	$3x10^3$	$5x10^3$	$2x10^{-6}$	-	-	-
			($5x10^3$) Thyroid	($1x10^4$) Thyroid	-	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{116}Te	-	$5x10^3$	$2x10^{-6}$	-	-	-
			-	($1x10^4$) Thyroid	-	$2x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
52	Tellurium-132	D, see ^{116}Te	$2x10^2$	$2x10^2$	$9x10^{-8}$	-	-	-
			($5x10^2$) Thyroid	($8x10^2$) Thyroid	-	$1x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
		W, see ^{116}Te	-	$2x10^2$	$9x10^{-8}$	-	-	-
			-	($5x10^2$) Thyroid	-	$8x10^{-10}$	-	-
52	Tellurium-133m[2]	D, see ^{116}Te	$3x10^3$	$5x10^3$	$2x10^{-6}$	-	-	-
			($5x10^3$) Thyroid	($1x10^4$) Thyroid	-	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{116}Te	-	$5x10^3$	$2x10^{-6}$	-	-	-
			-	($1x10^4$) Thyroid	-	$2x10^{-8}$	-	-
52	Tellurium-133[2]	D, see ^{116}Te	$1x10^4$	$2x10^4$	$9x10^{-6}$	-	-	-
			($3x10^4$) Thyroid	($5x10^4$) Thyroid	-	$8x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{116}Te	-	$2x10^4$	$9x10^{-6}$	-	-	-
			-	($5x10^4$) Thyroid	-	$8x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
52	Tellurium-134[2]	D, see ^{116}Te	$2x10^4$	$2x10^4$	$1x10^{-5}$	-	$2x10^{-4}$	$2x10^{-3}$
			-	($5x10^4$) Thyroid	-	$8x10^{-8}$	-	-
		W, see ^{116}Te	-	$2x10^4$	$1x10^{-5}$	-	-	-
			-	($5x10^4$) Thyroid	-	$8x10^{-8}$	-	-
53	Iodine-120m[2]	D, all compounds	$1x10^4$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
53	Iodine-120[2]	D, all compounds	$4x10^3$	$9x10^3$	$4x10^{-6}$	-	-	-
			($8x10^3$) Thyroid	($1x10^4$) Thyroid	-	$2x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
53	Iodine-121	D, all compounds	$1x10^4$	$2x10^4$	$8x10^{-6}$	-	-	-
			($3x10^4$) Thyroid	($5x10^4$) Thyroid	-	$8x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
53	Iodine-123	D, all compounds	$3x10^3$	$6x10^3$	$3x10^{-6}$	-	-	-
			($1x10^4$) Thyroid	($2x10^4$) Thyroid	-	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
53	Iodine-124	D, all compounds	$5x10^1$	$8x10^1$	$3x10^{-8}$	-	-	-
			($2x10^2$) Thyroid	($3x10^2$) Thyroid	-	$4x10^{-10}$	$2x10^{-6}$	$2x10^{-5}$

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
53	Iodine-125	D, all compounds	$4x10^1$	$6x10^1$	$3x10^{-8}$	-	-	-
			($1x10^2$) Thyroid	($2x10^2$) Thyroid	-	$3x10^{-10}$	$2x10^{-6}$	$2x10^{-5}$
53	Iodine-126	D, all compounds	$2x10^1$	$4x10^1$	$1x10^{-8}$	-	-	-
			($8x10^2$) Thyroid	($1x10^2$) Thyroid	-	$2x10^{-10}$	$1x10^{-6}$	$1x10^{-5}$
53	Iodine-128[2]	D, all compounds	$4x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
53	Iodine-129	D, all compounds	$5x10^0$	$9x10^0$	$4x10^{-9}$	-	-	-
			($2x10^1$) Thyroid	($3x10^1$) Thyroid	-	$4x10^{-11}$	$3x10^{-7}$	$3x10^{-6}$
53	Iodine-130	D, all compounds	$4x10^2$	$7x10^2$	$3x10^{-7}$	-	-	-
			($1x10^3$) Thyroid	($2x10^3$) Thyroid	-	$3x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
53	Iodine-131	D, all compounds	$3x10^1$	$5x10^1$	$2x10^{-8}$	-	-	-
			($1x10^2$) Thyroid	($2x10^2$) Thyroid	-	$2x10^{-10}$	$1x10^{-6}$	$1x10^{-5}$
53	Iodine-132m[2]	D, all compounds	$4x10^3$	$8x10^3$	$4x10^{-6}$	-	-	-
			($1x10^4$) Thyroid	($2x10^4$) Thyroid	-	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
53	Iodine-132	D, all compounds	$4x10^3$	$8x10^3$	$3x10^{-6}$	-	-	-
			($8x10^3$) Thyroid	($2x10^4$) Thyroid	-	$2x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
53	Iodine-133	D, all compounds	$1x10^2$	$3x10^2$	$1x10^{-7}$	-	-	-
			($5x10^2$) Thyroid	($8x10^2$) Thyroid	-	$1x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
53	Iodine-134[2]	D, all compounds	$2x10^4$	$5x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
			($3x10^4$) Thyroid	-	-	-	$4x10^{-4}$	$4x10^{-3}$
53	Iodine-135	D, all compounds	$8x10^2$	$2x10^3$	$7x10^{-7}$	-	-	-
			($2x10^3$) Thyroid	($5x10^3$) Thyroid	-	$8x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
54	Xenon-120	Submersion[1]	-	-	$1x10^{-5}$	$4x10^{-8}$	-	-
54	Xenon-121	Submersion[1]	-	-	$2x10^{-6}$	$1x10^{-8}$	-	-
54	Xenon-122	Submersion[1]	-	-	$7x10^{-5}$	$3x10^{-7}$	-	-
54	Xenon-123	Submersion[1]	-	-	$6x10^{-6}$	$3x10^{-8}$	-	-
54	Xenon-125	Submersion[1]	-	-	$2x10^{-5}$	$7x10^{-8}$	-	-
54	Xenon-127	Submersion[1]	-	-	$1x10^{-5}$	$6x10^{-8}$	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
54	Xenon-129m	Submersion[1]	-	-	$2x10^{-4}$	$9x10^{-7}$	-	-
54	Xenon-131m	Submersion[1]	-	-	$4x10^{-4}$	$2x10^{-6}$	-	-
54	Xenon-133m	Submersion[1]	-	-	$1x10^{-4}$	$6x10^{-7}$	-	-
54	Xenon-133	Submersion[1]	-	-	$1x10^{-4}$	$5x10^{-7}$	-	-
54	Xenon-135m	Submersion[1]	-	-	$9x10^{-6}$	$4x10^{-8}$	-	-
54	Xenon-135	Submersion[1]	-	-	$1x10^{-5}$	$7x10^{-8}$	-	-
54	Xenon-138	Submersion[1]	-	-	$4x10^{-6}$	$2x10^{-8}$	-	-
55	Cesium-125[2]	D, all compounds	$5x10^{4}$	$1x10^{5}$	$6x10^{-5}$	$2x10^{-7}$	-	-
			($8x10^{4}$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
55	Cesium-127	D, all compounds	$6x10^{4}$	$9x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
55	Cesium-129	D, all compounds	$2x10^{4}$	$3x10^{4}$	$1x10^{-5}$	$5x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
55	Cesium-130[2]	D, all compounds	$6x10^{4}$	$2x10^{5}$	$8x10^{-5}$	$3x10^{-7}$	-	-
			($1x10^{5}$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
55	Cesium-131	D, all compounds	$2x10^{4}$	$3x10^{4}$	$1x10^{-5}$	$4x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
55	Cesium-132	D, all compounds	$3x10^{3}$	$4x10^{3}$	$2x10^{-6}$	$6x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
55	Cesium-134m	D, all compounds	$1x10^{5}$	$1x10^{5}$	$6x10^{-5}$	$2x10^{-7}$	$2x10^{-3}$	$2x10^{-2}$
55	Cesium-134	D, all compounds	$7x10^{1}$	$1x10^{2}$	$4x10^{-8}$	$1x10^{-10}$	$9x10^{-7}$	$9x10^{-6}$
55	Cesium-135m[2]	D, all compounds	$1x10^{5}$	$2x10^{5}$	$8x10^{-5}$	$3x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
55	Cesium-135	D, all compounds	$7x10^{2}$	$1x10^{3}$	$5x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
55	Cesium-136	D, all compounds	$4x10^{2}$	$7x10^{2}$	$3x10^{-7}$	$9x10^{-10}$	$6x10^{-6}$	$6x10^{-5}$
55	Cesium-137	D, all compounds	$1x10^{2}$	$2x10^{2}$	$6x10^{-8}$	$2x10^{-10}$	$1x10^{-6}$	$1x10^{-5}$
55	Cesium-138[2]	D, all compounds	$2x10^{4}$	$6x10^{4}$	$2x10^{-5}$	$8x10^{-8}$	-	-
			($3x10^{4}$) St. wall	-	-	-	$4x10^{-4}$	$4x10^{-3}$
56	Barium-126[2]	D, all compounds	$6x10^{3}$	$2x10^{4}$	$6x10^{-6}$	$2x10^{-8}$	$8x10^{-5}$	$8x10^{-4}$
56	Barium-128	D, all compounds	$5x10^{2}$	$2x10^{3}$	$7x10^{-7}$	$2x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
56	Barium-131m[2]	D, all compounds	$4x10^{5}$	$1x10^{6}$	$6x10^{-4}$	$2x10^{-6}$	-	-
			($5x10^{5}$) St. wall	-	-	-	$7x10^{-3}$	$7x10^{-2}$
56	Barium-131	D, all compounds	$3x10^{3}$	$8x10^{3}$	$3x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
56	Barium-133m	D, all compounds	$2x10^{3}$	$9x10^{3}$	$4x10^{-6}$	$1x10^{-8}$	-	-
			($3x10^{3}$) LLI wall	-	-	-	$4x10^{-5}$	$4x10^{-4}$

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
56	Barium-133	D, all compounds	$2x10^3$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
56	Barium-135m	D, all compounds	$3x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
56	Barium-139[2]	D, all compounds	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
56	Barium-140	D, all compounds	$5x10^2$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
56	Barium-141[2]	D, all compounds	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
56	Barium-142[2]	D, all compounds	$5x10^4$	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$
57	Lanthanum-131[2]	D, all compounds except those given for W	$5x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		W, oxides and hydroxides	-	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	-	-
57	Lanthanum-132	D, see ^{131}La	$3x10^3$	$1x10^4$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{131}La	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
57	Lanthanum-135	D, see ^{131}La	$4x10^4$	$1x10^5$	$4x10^{-5}$	$1x10^{-7}$	$5x10^{-4}$	$5x10^{-3}$
		W, see ^{131}La	-	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
57	Lanthanum-137	D, see ^{131}La	$1x10^4$	$6x10^1$	$3x10^{-8}$	-	$2x10^{-4}$	$2x10^{-3}$
			-	($8x10^1$) Liver	-	$1x10^{-10}$	-	-
		W, see ^{131}La	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-

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Enclosure 1

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
57	Lanthanum-138	D, see ^{131}La	$9x10^2$	$4x10^0$	$1x10^{-9}$	$5x10^{-12}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{131}La	-	$1x10^1$	$6x10^{-9}$	$2x10^{-11}$	-	-
57	Lanthanum-140	D, see ^{131}La	$6x10^2$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$9x10^{-6}$	$9x10^{-5}$
		W, see ^{131}La	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
57	Lanthanum-141	D, see ^{131}La	$4x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
		W, see ^{131}La	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
57	Lanthanum-142[2]	D, see ^{131}La	$8x10^3$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{131}La	-	$3x10^4$	$1x10^{-5}$	$5x10^{-8}$	-	-
57	Lanthanum-143[2]	D, see ^{131}La	$4x10^4$	$1x10^5$	$4x10^{-5}$	$1x10^{-7}$	$5x10^{-4}$	$5x10^{-3}$
		W, see ^{131}La	-	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
58	Cerium-134	W, all compounds except those given for Y	$5x10^2$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	$7x10^{-6}$	$7x10^{-5}$
		Y, oxides, hydroxides and fluorides	-	$7x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-
58	Cerium-135	W, see ^{134}Ce	$2x10^3$	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{134}Ce	-	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-
58	Cerium-137m	W, see ^{134}Ce	$2x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{134}Ce	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-

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Enclosure 1

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
58	Cerium-137	W, see ^{134}Ce	$5x10^4$	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$
		Y, see ^{134}Ce	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
58	Cerium-139	W, see ^{134}Ce	$5x10^3$	$8x10^2$	$3x10^{-7}$	$1x10^{-9}$	$7x10^{-5}$	$7x10^{-4}$
		Y, see ^{134}Ce	-	$7x10^2$	$3x10^{-7}$	$9x10^{-9}$	-	-
58	Cerium-141	W, see ^{134}Ce	$2x10^3$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{134}Ce	-	$6x10^2$	$2x10^{-7}$	$8x10^{-10}$	-	-
58	Cerium-143	W, see ^{134}Ce	$1x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{134}Ce	-	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	-	-
58	Cerium-144	W, see ^{134}Ce	$2x10^2$	$3x10^1$	$1x10^{-8}$	$4x10^{-11}$	$3x10^{-6}$	$3x10^{-5}$
		Y, see ^{134}Ce	-	$1x10^1$	$6x10^{-9}$	$2x10^{-11}$	-	-
59	Praseodymium-136[2]	W, all compounds except those given for Y	$5x10^4$	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		Y, oxides, hydroxides, carbides and fluorides	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
59	Praseodymium-137[2]	W, see ^{136}Pr	$4x10^4$	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	$5x10^{-4}$	$5x10^{-3}$
		Y, see ^{136}Pr	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
59	Praseodymium-138m	W, see ^{136}Pr	$1x10^4$	$5x10^4$	$2x10^{-5}$	$8x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		Y, see ^{136}Pr	-	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
59	Praseodymium-139	W, see ^{136}Pr	$4x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		Y, see ^{136}Pr	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
59	Praseodymium-142m[2]	W, see ^{136}Pr	$8x10^4$	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		Y, see ^{136}Pr	-	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
59	Praseodymium-142	W, see ^{136}Pr	$1x10^3$	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{136}Pr	-	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
59	Praseodymium-143	W, see ^{136}Pr	$9x10^2$	$8x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
			($1x10^3$) LLI wall	-	-	-	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{136}Pr	-	$7x10^2$	$3x10^{-7}$	$9x10^{-10}$	-	-
59	Praseodymium-144[2]	W, see ^{136}Pr	$3x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
			($5x10^4$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
		Y, see ^{136}Pr	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
59	Praseodymium-145	W, see ^{136}Pr	$3x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		Y, see ^{136}Pr	-	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
59	Praseodymium-147[2]	W, see ^{136}Pr	$5x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
		Y, see ^{136}Pr	-	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
60	Neodymium-136[2]	W, all compounds except those given for Y	$1x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		Y, oxides, hydroxides, carbides and fluorides	-	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-
60	Neodymium-138	W, see ^{136}Nd	$2x10^3$	$6x10^3$	$3x10^{-6}$	$9x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{136}Nd	-	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	-	-
60	Neodymium-139m	W, see ^{136}Nd	$5x10^3$	$2x10^4$	$7x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		Y, see ^{136}Nd	-	$1x10^4$	$6x10^{-6}$	$2x10^{-8}$	-	-
60	Neodymium-139[2]	W, see ^{136}Nd	$9x10^4$	$3x10^5$	$1x10^{-4}$	$5x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		Y, see ^{136}Nd	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
60	Neodymium-141	W, see ^{136}Nd	$2x10^5$	$7x10^5$	$3x10^{-4}$	$1x10^{-6}$	$2x10^{-3}$	$2x10^{-2}$
		Y, see ^{136}Nd	-	$6x10^5$	$3x10^{-4}$	$8x10^{-7}$	-	-
60	Neodymium-147	W, see ^{136}Nd	$1x10^3$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{136}Nd	-	$8x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
60	Neodymium-149[2]	W, see ^{136}Nd	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		Y, see ^{136}Nd	-	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	-	-
60	Neodymium-151[2]	W, see ^{136}Nd	$7x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
		Y, see ^{136}Nd	-	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
61	Promethium-141[2]	W, all compounds except those given for Y	$5x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$
		Y, oxides, hydroxides, carbides and fluorides	-	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	-	-
61	Promethium-143	W, see ^{141}Pm	$5x10^3$	$6x10^2$	$2x10^{-7}$	$8x10^{-10}$	$7x10^{-5}$	$7x10^{-4}$
		Y, see ^{141}Pm	-	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
61	Promethium-144	W, see ^{141}Pm	$1x10^3$	$1x10^2$	$5x10^{-8}$	$2x10^{-10}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{141}Pm	-	$1x10^2$	$5x10^{-8}$	$2x10^{-10}$	-	-
61	Promethium-145	W, see ^{141}Pm	$1x10^4$	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	$1x10^{-4}$	$1x10^{-3}$
		Y, see ^{141}Pm	-	$2x10^2$	$8x10^{-8}$	$3x10^{-10}$	-	-
61	Promethium-146	W, see ^{141}Pm	$2x10^3$	$5x10^1$	$2x10^{-8}$	$7x10^{-11}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{141}Pm	-	$4x10^1$	$2x10^{-8}$	$6x10^{-11}$	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
61	Promethium-147	W, see ^{141}Pm	4×10^{3}	1×10^{2}	5×10^{-8}	-	6×10^{-5}	6×10^{-4}
			-	(2×10^{2}) Bone surf	-	3×10^{-10}	-	-
		Y, see ^{141}Pm	-	1×10^{2}	6×10^{-8}	2×10^{-10}	-	-
61	Promethium-148m	W, see ^{141}Pm	7×10^{2}	3×10^{2}	1×10^{-7}	4×10^{-10}	1×10^{-5}	1×10^{-4}
		Y, see ^{141}Pm	-	3×10^{2}	1×10^{-7}	4×10^{-10}	-	-
61	Promethium-148	W, see ^{141}Pm	4×10^{2}	5×10^{2}	2×10^{-7}	8×10^{-10}	6×10^{-6}	6×10^{-5}
		Y, see ^{141}Pm	-	5×10^{2}	2×10^{-7}	7×10^{-10}	-	-
61	Promethium-149	W, see ^{141}Pm	1×10^{3}	2×10^{3}	8×10^{-7}	3×10^{-9}	2×10^{-5}	2×10^{-4}
		Y, see ^{141}Pm	-	2×10^{3}	8×10^{-7}	3×10^{-9}	-	-
61	Promethium-150	W, see ^{141}Pm	5×10^{3}	2×10^{4}	8×10^{-6}	3×10^{-8}	7×10^{-5}	7×10^{-4}
		Y, see ^{141}Pm	-	2×10^{4}	7×10^{-6}	2×10^{-8}	-	-
61	Promethium-151	W, see ^{141}Pm	2×10^{3}	4×10^{3}	1×10^{-6}	5×10^{-9}	2×10^{-5}	2×10^{-4}
		Y, see ^{141}Pm	-	3×10^{3}	1×10^{-6}	4×10^{-9}	-	-
62	Samarium-141m[2]	W, all compounds	3×10^{4}	1×10^{5}	4×10^{-5}	1×10^{-7}	4×10^{-4}	4×10^{-3}
62	Samarium-141[2]	W, all compounds	5×10^{4}	2×10^{5}	8×10^{-5}	3×10^{-7}	6×10^{-4}	6×10^{-3}
62	Samarium-142[2]	W, all compounds	8×10^{3}	3×10^{4}	1×10^{-5}	4×10^{-8}	1×10^{-4}	1×10^{-3}

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
62	Samarium-145	W, all compounds	6×10^{3}	5×10^{2}	2×10^{-7}	7×10^{-10}	8×10^{-5}	8×10^{-4}
62	Samarium-146	W, all compounds	1×10^{1}	4×10^{-2}	1×10^{-11}	-	-	-
			(2×10^{1}) Bone surf.	(5×10^{-2}) Bone surf.	-	8×10^{-14}	3×10^{-7}	3×10^{-6}
62	Samarium-147	W, all compounds	2×10^{1}	4×10^{-2}	2×10^{-11}	-	-	-
			(3×10^{1}) Bone surf.	(8×10^{-2}) Bone surf.	-	1×10^{-13}	4×10^{-7}	4×10^{-6}
62	Samarium-151	W, all compounds	1×10^{4}	1×10^{2}	4×10^{-8}	-	2×10^{-4}	2×10^{-3}
			-	(2×10^{2}) Bone surf	-	3×10^{-10}	-	-
62	Samarium-153	W, all compounds	2×10^{3}	3×10^{3}	1×10^{-6}	4×10^{-9}	2×10^{-5}	2×10^{-4}
62	Samarium-155[2]	W, all compounds	6×10^{4}	2×10^{5}	9×10^{-5}	3×10^{-7}	-	-
			(8×10^{4}) St. wall	-	-	-	1×10^{-3}	1×10^{-2}
62	Samarium-156	W, all compounds	5×10^{3}	9×10^{3}	4×10^{-6}	1×10^{-8}	7×10^{-5}	7×10^{-4}
63	Europium-145	W, all compounds	2×10^{3}	2×10^{3}	8×10^{-7}	3×10^{-9}	2×10^{-5}	2×10^{-4}
63	Europium-146	W, all compounds	1×10^{3}	1×10^{3}	5×10^{-7}	2×10^{-9}	1×10^{-5}	1×10^{-4}
63	Europium-147	W, all compounds	3×10^{3}	2×10^{3}	7×10^{-7}	2×10^{-9}	4×10^{-5}	4×10^{-4}

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
63	Europium-148	W, all compounds	$1x10^{3}$	$4x10^{2}$	$1x10^{-7}$	$5x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
63	Europium-149	W, all compounds	$1x10^{4}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-4}$	$2x10^{-3}$
63	Europium-150 (12.62h)	W, all compounds	$3x10^{3}$	$8x10^{3}$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
63	Europium-150 (34.2y)	W, all compounds	$8x10^{2}$	$2x10^{1}$	$8x10^{-9}$	$3x10^{-11}$	$1x10^{-5}$	$1x10^{-4}$
63	Europium-152m	W, all compounds	$3x10^{3}$	$6x10^{3}$	$3x10^{-6}$	$9x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
63	Europium-152	W, all compounds	$8x10^{2}$	$2x10^{1}$	$1x10^{-8}$	$3x10^{-11}$	$1x10^{-5}$	$1x10^{-4}$
63	Europium-154	W, all compounds	$5x10^{2}$	$2x10^{1}$	$8x10^{-9}$	$3x10^{-11}$	$7x10^{-6}$	$7x10^{-5}$
63	Europium-155	W, all compounds	$4x10^{3}$	$9x10^{1}$	$4x10^{-8}$	-	$5x10^{-5}$	$5x10^{-4}$
			-	($1x10^{2}$) Bone surf.	-	$2x10^{-10}$	-	-
63	Europium-156	W, all compounds	$6x10^{2}$	$5x10^{2}$	$2x10^{-7}$	$6x10^{-10}$	$8x10^{-6}$	$8x10^{-5}$
63	Europium-157	W, all compounds	$2x10^{3}$	$5x10^{3}$	$2x10^{-6}$	$7x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
63	Europium-158[2]	W, all compounds	$2x10^{4}$	$6x10^{4}$	$2x10^{-5}$	$8x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
64	Gadolinium-145[2]	D, all compounds except those given for W	$5x10^{4}$	$2x10^{5}$	$6x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		W, oxides, hydroxides, and fluorides	-	$2x10^{5}$	$7x10^{-5}$	$2x10^{-7}$	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
64	Gadolinium-146	D, see ^{145}Gd	$1x10^{3}$	$1x10^{2}$	$5x10^{-8}$	$2x10^{-10}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{145}Gd	-	$3x10^{2}$	$1x10^{-7}$	$4x10^{-10}$	-	-
64	Gadolinium-147	D, see ^{145}Gd	$2x10^{3}$	$4x10^{3}$	$2x10^{-6}$	$6x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{145}Gd	-	$4x10^{3}$	$1x10^{-6}$	$5x10^{-9}$	-	-
64	Gadolinium-148	D, see ^{145}Gd	$1x10^{1}$	$8x10^{-3}$	$3x10^{-12}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{145}Gd	-	$3x10^{-2}$	$1x10^{-11}$	-	-	-
			-	($5x10^{2}$) Bone surf.	-	$8x10^{-14}$	-	-
64	Gadolinium-149	D, see ^{145}Gd	$3x10^{3}$	$2x10^{3}$	$9x10^{-7}$	$3x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{145}Gd	-	$2x10^{3}$	$1x10^{-6}$	$3x10^{-9}$	-	-
64	Gadolinium-151	D, see ^{145}Gd	$6x10^{3}$	$4x10^{2}$	$2x10^{-7}$	-	$9x10^{-5}$	$9x10^{-4}$
			-	($5x10^{2}$) Bone surf.	-	$8x10^{-10}$	-	-
		W, see ^{145}Gd	-	$1x10^{3}$	$5x10^{-7}$	$2x10^{-9}$	-	-
64	Gadolinium-152	D, see ^{145}Gd	$2x10^{1}$	$1x10^{-2}$	$4x10^{-12}$	-	-	-
			($3x10^{1}$) Bone surf.	($2x10^{-2}$) Bone surf.	-	$3x10^{-14}$	$4x10^{-7}$	$4x10^{-6}$
		W, see ^{145}Gd	-	$4x10^{-2}$	$2x10^{-11}$	-	-	-
			-	($8x10^{-2}$) Bone surf.	-	$1x10^{-13}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
64	Gadolinium-153	D, see ^{145}Gd	$5x10^3$	$1x10^2$	$6x10^{-8}$	-	$6x10^{-5}$	$6x10^{-4}$
			-	($2x10^2$) Bone surf.	-	$3x10^{-10}$	-	-
		W, see ^{145}Gd	-	$6x10^2$	$2x10^{-7}$	$8x10^{-10}$	-	-
64	Gadolinium-159	D, see ^{145}Gd	$3x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{145}Gd	-	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	-	-
65	Terbium-147[2]	W, all compounds	$9x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
65	Terbium-149	W, all compounds	$5x10^3$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	$7x10^{-5}$	$7x10^{-4}$
65	Terbium-150	W, all compounds	$5x10^3$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
65	Terbium-151	W, all compounds	$4x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
65	Terbium-153	W, all compounds	$5x10^3$	$7x10^3$	$3x10^{-6}$	$1x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
65	Terbium-154	W, all compounds	$2x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
65	Terbium-155	W, all compounds	$6x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$8x10^{-5}$	$8x10^{-4}$
65	Terbium-156m (5.0 h)	W, all compounds	$2x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
65	Terbium-156m (24.4 h)	W, all compounds	$7x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
65	Terbium-156	W, all compounds	$1x10^3$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
65	Terbium-157	W, all compounds	$5x10^4$	$3x10^2$	$1x10^{-7}$	-	$6x10^{-4}$	$6x10^{-3}$
			-	($5x10^2$) Bone surf.	-	$8x10^{-10}$	-	-
65	Terbium-158	W, all compounds	$1x10^3$	$2x10^1$	$8x10^{-9}$	$3x10^{-11}$	$2x10^{-5}$	$2x10^{-4}$
65	Terbium-160	W, all compounds	$8x10^2$	$2x10^2$	$9x10^{-8}$	$3x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
65	Terbium-161	W, all compounds	$2x10^3$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
66	Dysprosium-155	W, all compounds	$9x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
66	Dysprosium-157	W, all compounds	$2x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
66	Dysprosium-159	W, all compounds	$1x10^4$	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	$2x10^{-4}$	$2x10^{-3}$
66	Dysprosium-165	W, all compounds	$1x10^4$	$5x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
66	Dysprosium-166	W, all compounds	$6x10^2$	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
			($8x10^2$) LLI wall	-	-	-	$1x10^{-5}$	$1x10^{-4}$
67	Holmium-155[2]	W, all compounds	$4x10^4$	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
67	Holmium-157[2]	W, all compounds	$3x10^5$	$1x10^6$	$6x10^{-4}$	$2x10^{-6}$	$4x10^{-3}$	$4x10^{-2}$
67	Holmium-159[2]	W, all compounds	$2x10^5$	$1x10^6$	$4x10^{-4}$	$1x10^{-6}$	$3x10^{-3}$	$3x10^{-2}$
67	Holmium-161	W, all compounds	$1x10^5$	$4x10^5$	$2x10^{-4}$	$6x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
67	Holmium-162m[2]	W, all compounds	$5x10^4$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$
67	Holmium-162[2]	W, all compounds	$5x10^5$	$2x10^6$	$1x10^{-3}$	$3x10^{-6}$	-	-
			($8x10^5$) St. wall	-	-	-	$1x10^{-2}$	$1x10^{-1}$
67	Holmium-164m[2]	W, all compounds	$1x10^5$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
67	Holmium-164[2]	W, all compounds	$2x10^5$	$6x10^5$	$3x10^{-4}$	$9x10^{-7}$	$3x10^{-3}$	$3x10^{-2}$
67	Holmium-166m	W, all compounds	$6x10^2$	$7x10^0$	$3x10^{-9}$	$1x10^{-11}$	$9x10^{-6}$	$9x10^{-5}$
67	Holmium-166	W, all compounds	$9x10^2$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
67	Holmium-167	W, all compounds	$2x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
68	Erbium-161	W, all compounds	$2x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
68	Erbium-165	W, all compounds	$6x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
68	Erbium-169	W, all compounds	$3x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
68	Erbium-171	W, all compounds	$4x10^3$	$1x10^4$	$4x10^{-6}$	$1x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
68	Erbium-172	W, all compounds	$1x10^3$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
69	Thulium-162[2]	W, all compounds	$7x10^4$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
69	Thulium-166	W, all compounds	$4x10^3$	$1x10^4$	$6x10^{-6}$	$2x10^{-8}$	$6x10^{-5}$	$6x10^{-4}$
69	Thulium-167	W, all compounds	$2x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
69	Thulium-170	W, all compounds	$8x10^2$	$2x10^2$	$9x10^{-8}$	$3x10^{-10}$	-	-
			($1x10^3$) LLI wall	-	-	-	$1x10^{-5}$	$1x10^{-4}$
69	Thulium-171	W, all compounds	$1x10^4$	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	$1x10^{-4}$	$1x10^{-3}$
69	Thulium-172	W, all compounds	$7x10^2$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
69	Thulium-173	W, all compounds	$4x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$6x10^{-5}$	$6x10^{-4}$
69	Thulium-175[2]	W, all compounds	$7x10^4$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
70	Ytterbium-162[2]	W, all compounds except those given for Y	$7x10^4$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		Y, oxides, hydroxides, and fluorides	-	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	-	-
70	Ytterbium-166	W, see ^{162}Yb	$1x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{162}Yb	-	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
70	Ytterbium-167[2]	W, see ^{162}Yb	$3x10^5$	$8x10^5$	$3x10^{-4}$	$1x10^{-6}$	$4x10^{-3}$	$4x10^{-2}$
		Y, see ^{162}Yb	-	$7x10^5$	$3x10^{-4}$	$1x10^{-6}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
70	Ytterbium-169	W, see ^{162}Yb	$2x10^3$	$8x10^2$	$4x10^{-7}$	$1x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{162}Yb	-	$7x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
70	Ytterbium-175	W, see ^{162}Yb	$3x10^3$	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		Y, see ^{162}Yb	-	$3x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-
70	Ytterbium-177[2]	W, see ^{162}Yb	$2x10^4$	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{162}Yb	-	$5x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
70	Ytterbium-178[2]	W, see ^{162}Yb	$1x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{162}Yb	-	$4x10^4$	$2x10^{-5}$	$5x10^{-8}$	-	-
71	Lutetium-169	W, all compounds except those given for Y	$3x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, oxides, hydroxides, and fluorides	-	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
71	Lutetium-170	W, see ^{170}Lu	$1x10^3$	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{170}Lu	-	$2x10^3$	$8x10^{-7}$	$1x10^{-9}$	-	-
71	Lutetium-171	W, see ^{170}Lu	$2x10^3$	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{170}Lu	-	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
71	Lutetium-172	W, see ^{170}Lu	$1x10^3$	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{170}Lu	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
71	Lutetium-173	W, see ^{170}Lu	$5x10^3$	$3x10^2$	$1x10^{-7}$	-	$7x10^{-5}$	$7x10^{-4}$
			-	$(5x10^2)$ Bone surf.	-	$8x10^{-10}$	-	-
		Y, see ^{170}Lu	-	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	-	-
71	Lutetium-174m	W, see ^{170}Lu	$2x10^3$	$2x10^2$	$1x10^{-7}$	-	-	-
			$(3x10^3)$ LLI wall	$(3x10^2)$ Bone surf.	-	$4x10^{-10}$	$4x10^{-5}$	$4x10^{-4}$
		Y, see ^{170}Lu	-	$2x10^2$	$9x10^{-8}$	$3x10^{-10}$	-	-
71	Lutetium-174	W, see ^{170}Lu	$5x10^3$	$1x10^2$	$5x10^{-8}$	-	$7x10^{-5}$	$7x10^{-4}$
			-	$(2x10^2)$ Bone surf.	-	$3x10^{-10}$	-	-
		Y, see ^{170}Lu	-	$2x10^2$	$6x10^{-8}$	$2x10^{-10}$	-	-
71	Lutetium-176m	W, see ^{170}Lu	$8x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		Y, see ^{170}Lu	-	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	-	-
71	Lutetium-176	W, see ^{170}Lu	$7x10^2$	$5x10^0$	$2x10^{-9}$	-	$1x10^{-5}$	$1x10^{-4}$
			-	$(1x10^1)$ Bone surf.	-	$2x10^{-11}$	-	-
		Y, see ^{170}Lu	-	$8x10^0$	$3x10^{-9}$	$1x10^{-11}$	-	-
71	Lutetium-177m	W, see ^{170}Lu	$7x10^2$	$1x10^2$	$5x10^{-8}$	$2x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{170}Lu	-	$8x10^1$	$3x10^{-8}$	$1x10^{-10}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
71	Lutetium-177	W, see ^{170}Lu	$2x10^3$	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{170}Lu	-	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	-	-
71	Lutetium-178m[2]	W, see ^{170}Lu	$5x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$7x\ 0^{-4}$	$7x10^{-3}$
		Y, see ^{170}Lu	-	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	-	-
71	Lutetium-178[2]	W, see ^{170}Lu	$4x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
			($5x10^4$) St. wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
		Y, see ^{170}Lu	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
71	Lutetium-179	W, see ^{170}Lu	$6x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$9x10^{-5}$	$9x10^{-4}$
		Y, see ^{170}Lu	-	$2x10^4$	$6x10^{-6}$	$2x10^{-8}$	-	-
72	Hafnium-170	D, all compounds except those given for W	$3x10^3$	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, oxides, hydroxides, halides, carbides, and nitrates	-	$5x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
72	Hafnium-172	D, see ^{170}Hf	$1x10^3$	$9x10^0$	$4x10^{-9}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($2x10^1$) Bone surf.	-	$3x10^{-11}$	-	-
		W, see ^{170}Hf	-	$4x10^1$	$2x10^{-8}$	-	-	-
			-	($5x10^1$) Bone surf.	-	$8x10^{-11}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
72	Hafnium-173	D, see ^{170}Hf	$5x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{170}Hf	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
72	Hafnium-175	D, see ^{170}Hf	$3x10^3$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{170}Hf	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
72	Hafnium-177m[2]	D, see ^{170}Hf	$2x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{170}Hf	-	$9x10^4$	$4x10^{-5}$	$1x10^{-7}$	-	-
72	Hafnium-178m	D, see ^{170}Hf	$3x10^2$	$1x10^0$	$5x10^{-10}$	-	$3x10^{-6}$	$3x10^{-5}$
			-	($2x10^0$) Bone surf.	-	$3x10^{-12}$	-	-
		W, see ^{170}Hf	-	$5x10^0$	$2x10^{-9}$	-	-	-
			-	($8x10^0$) Bone surf.	-	$1x10^{-11}$	-	-
72	Hafnium-179m	D, see ^{170}Hf	$1x10^3$	$3x10^2$	$1x10^{-7}$	-	$1x10^{-5}$	$1x10^{-4}$
			-	($5x10^2$) Bone surf.	-	$8x10^{-10}$	-	-
		W, see ^{170}Hf	-	$6x10^2$	$3x10^{-7}$	$8x10^{-10}$	-	-
72	Hafnium-180m	D, see ^{170}Hf	$7x10^3$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{170}Hf	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
72	Hafnium-181	D, see ^{170}Hf	$1x10^{3}$	$2x10^{2}$	$7x10^{-8}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($3x10^{2}$) Bone surf.	-	$4x10^{-10}$	-	-
		W, see ^{170}Hf	-	$4x10^{2}$	$2x10^{-7}$	$6x10^{-10}$	-	-
72	Hafnium-182m[2]	D, see ^{170}Hf	$4x10^{4}$	$9x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	$5x10^{-4}$	$5x10^{-3}$
		W, see ^{170}Hf	-	$2x10^{5}$	$6x10^{-5}$	$2x10^{-7}$	-	-
72	Hafnium-182	D, see ^{170}Hf	$2x10^{2}$	$8x10^{-1}$	$3x10^{-10}$	-	-	-
			($3x10^{2}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$4x10^{-6}$	$4x10^{-5}$
		W, see ^{170}Hf	-	$3x10^{0}$	$1x10^{-9}$	-	-	-
			-	($8x10^{0}$) Bone surf.	-	$1x10^{-11}$	-	-
72	Hafnium-183[2]	D, see ^{170}Hf	$2x10^{4}$	$5x10^{4}$	$2x10^{-5}$	$6x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{170}Hf	-	$6x10^{4}$	$2x10^{-5}$	$8x10^{-8}$	-	-
72	Hafnium-184	D, see ^{170}Hf	$2x10^{3}$	$8x10^{3}$	$3x10^{-6}$	$1x10^{-8}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{170}Hf	-	$6x10^{3}$	$3x10^{-6}$	$9x10^{-9}$	-	-
73	Tantalum-172[2]	W, all compounds except those given for Y	$4x10^{4}$	$1x10^{5}$	$5x10^{-5}$	$2x10^{-7}$	$5x10^{-4}$	$5x10^{-3}$
		Y, elemental Ta, oxides, hydroxides, halides, carbides, nitrates, and nitrides	-	$1x10^{5}$	$4x10^{-5}$	$1x10^{-7}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
73	Tantalum-173	W, see ^{172}Ta	$7x10^{3}$	$2x10^{4}$	$8x10^{-6}$	$3x10^{-8}$	$9x10^{-5}$	$9x10^{-4}$
		Y, see ^{172}Ta	-	$2x10^{4}$	$7x10^{-6}$	$2x10^{-8}$	-	-
73	Tantalum-174[2]	W, see ^{172}Ta	$3x10^{4}$	$1x10^{5}$	$4x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
		Y, see ^{172}Ta	-	$9x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	-	-
73	Tantalum-175	W, see ^{172}Ta	$6x10^{3}$	$2x10^{4}$	$7x10^{-6}$	$2x10^{-8}$	$8x10^{-5}$	$8x10^{-4}$
		Y, see ^{172}Ta	-	$1x10^{4}$	$6x10^{-6}$	$2x10^{-8}$	-	-
73	Tantalum-176	W, see ^{172}Ta	$4x10^{3}$	$1x10^{4}$	$5x10^{-6}$	$2x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
		Y, see ^{172}Ta	-	$1x10^{4}$	$5x10^{-6}$	$2x10^{-8}$	-	-
73	Tantalum-177	W, see ^{172}Ta	$1x10^{4}$	$2x10^{4}$	$8x10^{-6}$	$3x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{172}Ta	-	$2x10^{4}$	$7x10^{-6}$	$2x10^{-8}$	-	-
73	Tantalum-178	W, see ^{172}Ta	$2x10^{4}$	$9x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{172}Ta	-	$7x10^{4}$	$3x10^{-5}$	$1x10^{-7}$	-	-
73	Tantalum-179	W, see ^{172}Ta	$2x10^{4}$	$5x10^{3}$	$2x10^{-6}$	$7x10^{-9}$	$3x10^{-4}$	$3x10^{-3}$
		Y, see ^{172}Ta	-	$9x10^{2}$	$4x10^{-7}$	$1x10^{-9}$	-	-
73	Tartalum-180m	W, see ^{172}Ta	$2x10^{4}$	$7x10^{4}$	$3x10^{-5}$	$9x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		Y, see ^{172}Ta	-	$6x10^{4}$	$2x10^{-5}$	$8x10^{-8}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
73	Tantalum-180	W, see ^{172}Ta	1×10^{3}	4×10^{2}	2×10^{-7}	6×10^{-10}	2×10^{-5}	2×10^{-4}
		Y, see ^{172}Ta	-	2×10^{1}	1×10^{-8}	3×10^{-11}	-	-
73	Tantalum-182m[2]	W, see ^{172}Ta	2×10^{5}	5×10^{5}	2×10^{-4}	7×10^{-7}	2×10^{-3}	2×10^{-2}
		Y, see ^{172}Ta	-	4×10^{5}	2×10^{-4}	6×10^{-7}	-	-
73	Tantalum-182	W, see ^{172}Ta	8×10^{2}	3×10^{2}	1×10^{-7}	4×10^{-10}	1×10^{-5}	1×10^{-4}
		Y, see ^{172}Ta	-	1×10^{2}	6×10^{-8}	2×10^{-10}	-	-
73	Tantalum-183	W, see ^{172}Ta	9×10^{2}	1×10^{3}	5×10^{-7}	2×10^{-9}	-	-
			(1×10^{2}) LLI wall	-	-	-	1×10^{-5}	1×10^{-4}
		Y, see ^{172}Ta	-	1×10^{3}	4×10^{-7}	1×10^{-9}	-	-
73	Tantalum-184	W, see ^{172}Ta	2×10^{3}	5×10^{3}	2×10^{-6}	7×10^{-9}	3×10^{-5}	3×10^{-4}
		Y, see ^{172}Ta	-	5×10^{3}	2×10^{-6}	7×10^{-9}	-	-
73	Tantalum-185[2]	W, see ^{172}Ta	3×10^{4}	7×10^{4}	3×10^{-5}	1×10^{-7}	4×10^{-4}	4×10^{-3}
		Y, see ^{172}Ta	-	6×10^{4}	3×10^{-5}	9×10^{-8}	-	-
73	Tantalum-186[2]	W, see ^{172}Ta	5×10^{4}	2×10^{5}	1×10^{-4}	3×10^{-7}	-	-
			(8×10^{4}) St. wall	-	-	-	1×10^{-3}	1×10^{-2}
		Y, see ^{172}Ta	-	2×10^{5}	9×10^{-5}	3×10^{-7}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
74	Tungsten-176	D, all compounds	1×10^{4}	6×10^{4}	2×10^{-5}	7×10^{-8}	1×10^{-4}	1×10^{-3}
74	Tungsten-177	D, all compounds	2×10^{4}	9×10^{4}	4×10^{-5}	1×10^{-7}	3×10^{-4}	3×10^{-3}
74	Tungsten-178	D, all compounds	5×10^{3}	2×10^{4}	8×10^{-6}	3×10^{-8}	7×10^{-5}	7×10^{-4}
74	Tungsten-179[2]	D, all compounds	5×10^{5}	2×10^{6}	7×10^{-4}	2×10^{-6}	7×10^{-3}	7×10^{-2}
74	Tungsten-181	D, all compounds	2×10^{4}	3×10^{4}	1×10^{-5}	5×10^{-8}	2×10^{-4}	2×10^{-3}
74	Tungsten-185	D, all compounds	2×10^{3}	7×10^{3}	3×10^{-6}	9×10^{-9}	-	-
			(3×10^{3}) LLI wall	-	-	-	4×10^{-5}	4×10^{-4}
74	Tungsten-187	D, all compounds	2×10^{3}	9×10^{3}	4×10^{-6}	1×10^{-8}	3×10^{-5}	3×10^{-4}
74	Tungsten-188	D, all compounds	4×10^{2}	1×10^{3}	5×10^{-5}	2×10^{-9}	-	-
			(5×10^{2}) LLI wall	-	-	-	7×10^{-6}	7×10^{-5}
75	Rhenium-177[2]	D, all compounds except those given for W	9×10^{4}	3×10^{5}	1×10^{-4}	4×10^{-7}	1×10^{-3}	1×10^{-2}
		W, oxides, hydroxides, and nitrates	-	4×10^{5}	1×10^{-4}	5×10^{-7}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
75	Rhenium-178	D, see ^{177}Re	7×10^{4}	3×10^{5}	1×10^{-4}	4×10^{-7}	-	-
			(1×10^{5}) St. wall	-	-	-	1×10^{-3}	1×10^{-2}
		W, see ^{177}Re	-	3×10^{5}	1×10^{-4}	4×10^{-7}	-	-
75	Rhenium-181	D, see ^{177}Re	5×10^{3}	9×10^{3}	4×10^{-6}	1×10^{-8}	7×10^{-5}	7×10^{-4}
		W, see ^{177}Re	-	9×10^{3}	4×10^{-6}	1×10^{-8}	-	-
75	Rhenium-182 (12.7 h)	D, see ^{177}Re	7×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	9×10^{-5}	9×10^{-4}
		W, see ^{177}Re	-	2×10^{4}	6×10^{-6}	2×10^{-8}	-	-
75	Rhenium-182 (64.0 h)	D, see ^{177}Re	1×10^{3}	2×10^{3}	1×10^{-6}	3×10^{-9}	2×10^{-5}	2×10^{-4}
		W, see ^{177}Re	-	2×10^{3}	9×10^{-7}	3×10^{-9}	-	-
75	Rhenium-184m	D, see ^{177}Re	2×10^{3}	3×10^{3}	1×10^{-6}	4×10^{-9}	3×10^{-5}	3×10^{-4}
		W, see ^{177}Re	-	4×10^{2}	2×10^{-7}	6×10^{-10}	-	-
75	Rhenium-184	D, see ^{177}Re	2×10^{3}	4×10^{3}	1×10^{-6}	5×10^{-9}	3×10^{-5}	3×10^{-4}
		W, see ^{177}Re	-	1×10^{3}	6×10^{-7}	2×10^{-9}	-	-
75	Rhenium-186m	D, see ^{177}Re	1×10^{3}	2×10^{3}	7×10^{-7}	-	-	-
			(2×10^{3}) St. wall	(2×10^{3}) St. wall	-	3×10^{-9}	2×10^{-5}	2×10^{-4}
		W, see ^{177}Re	-	2×10^{2}	6×10^{-8}	2×10^{-10}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
75	Rhenium-186	D, see ^{177}Re	2×10^{3}	3×10^{3}	1×10^{-6}	4×10^{-9}	3×10^{-5}	3×10^{-4}
		W, see ^{177}Re	-	2×10^{3}	7×10^{-7}	2×10^{-9}	-	-
75	Rhenium-187	D, see ^{177}Re	6×10^{5}	8×10^{5}	4×10^{-4}	1×10^{-6}	8×10^{-3}	8×10^{-2}
		W, see ^{177}Re	-	1×10^{5}	4×10^{-5}	1×10^{-7}	-	-
75	Rhenium-188m[2]	D, see ^{177}Re	8×10^{4}	1×10^{5}	6×10^{-5}	2×10^{-7}	1×10^{-3}	1×10^{-2}
		W, see ^{177}Re	-	1×10^{5}	6×10^{-5}	2×10^{-7}	-	-
75	Rhenium-188	D, see ^{177}Re	2×10^{3}	3×10^{3}	1×10^{-6}	4×10^{-9}	2×10^{-5}	2×10^{-4}
		W, see ^{177}Re	-	3×10^{3}	1×10^{-6}	4×10^{-9}	-	-
75	Rhenium-189	D, see ^{177}Re	3×10^{3}	5×10^{3}	2×10^{-6}	7×10^{-9}	4×10^{-5}	4×10^{-4}
		W, see ^{177}Re	-	4×10^{3}	2×10^{-6}	6×10^{-9}	-	-
76	Osmium-180	D, all compounds except those given for W and Y	1×10^{5}	4×10^{5}	2×10^{-4}	5×10^{-7}	1×10^{-3}	1×10^{-2}
		W, halides and nitrates	-	5×10^{5}	2×10^{-4}	7×10^{-7}	-	-
		Y, oxides and hydroxides	-	5×10^{5}	2×10^{-4}	6×10^{-7}	-	-
76	Osmium-181[2]	D, see ^{180}Os	1×10^{4}	4×10^{4}	2×10^{-5}	6×10^{-8}	2×10^{-4}	2×10^{-3}
		W, see ^{180}Os	-	5×10^{4}	2×10^{-5}	6×10^{-8}	-	-
		Y, see ^{180}Os	-	4×10^{4}	2×10^{-5}	6×10^{-8}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
76	Osmium-182	D, see ^{180}Os	$2x10^3$	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{180}Os	-	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
		Y, see ^{180}Os	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-
76	Osmium-185	D, see ^{180}Os	$2x10^3$	$5x10^2$	$2x10^{-7}$	$7x10^{-10}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{180}Os	-	$8x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
		Y, see ^{180}Os	-	$8x10^2$	$3x10^{-7}$	$1x10^{-9}$	-	-
76	Osmium-189m	D, see ^{180}Os	$8x10^4$	$2x10^5$	$1x10^{-4}$	$3x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
		W, see ^{180}Os	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
		Y, see ^{180}Os	-	$2x10^5$	$7x10^{-5}$	$2x10^{-7}$	-	-
76	Osmium-191m	D, see ^{180}Os	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{180}Os	-	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	-	-
		Y, see ^{180}Os	-	$2x10^4$	$7x10^{-6}$	$2x10^{-8}$	-	-
76	Osmium-191	D, see ^{180}Os	$2x10^3$	$2x10^3$	$9x10^{-7}$	$3x10^{-8}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{180}Os	-	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	-	-
		Y, see ^{180}Os	-	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
76	Osmium-193	D, see ^{180}Os	$2x10^3$	$5x10^3$	$2x10^{-6}$	$6x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{180}Os	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
		Y, see ^{180}Os	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
76	Osmium-194	D, see ^{180}Os	$4x10^2$	$4x10^1$	$2x10^{-8}$	$6x10^{-11}$	$6x10^{-6}$	$6x10^{-5}$
		W, see ^{180}Os	-	$6x10^1$	$2x10^{-8}$	$8x10^{-11}$	-	-
		Y, see ^{180}Os	-	$8x10^0$	$3x10^{-9}$	$1x10^{-11}$	-	-
77	Iridium-182	D, all compounds except those given for W and Y	$4x10^4$	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	$6x10^{-4}$	$6x10^{-3}$
		W, halides, nitrates, and metallic iridium	-	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
		Y, oxides and hydroxides	-	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	-	-
77	Iridium-184	D, see ^{182}Ir	$8x10^3$	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{182}Ir	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
		Y, see ^{182}Ir	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
77	Iridium-185	D, see ^{182}Ir	$5x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{182}Ir	-	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	-	-
		Y, see ^{182}Ir	-	$1x10^4$	$4x10^{-6}$	$1x10^{-8}$	-	-
77	Iridium-186	D, see ^{182}Ir	$2x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{182}Ir	-	$6x10^3$	$3x10^{-6}$	$9x10^{-9}$	-	-
		Y, see ^{182}Ir	-	$6x10^3$	$2x10^{-6}$	$8x10^{-9}$	-	-
77	Iridium-187	D, see ^{182}Ir	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{182}Ir	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
		Y, see ^{182}Ir	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
77	Iridium-188	D, see ^{182}Ir	$2x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{182}Ir	-	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-
		Y, see ^{182}Ir	-	$3x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-
77	Iridium-189	D, see ^{182}Ir	$5x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{182}Ir	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-
		Y, see ^{182}Ir	-	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	-	-
77	Iridium-190m[2]	D, see ^{182}Ir	$2x10^5$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$2x10^{-3}$	$2x10^{-2}$
		W, see ^{182}Ir	-	$2x10^5$	$9x10^{-5}$	$3x10^{-7}$	-	-
		Y, see ^{182}Ir	-	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	-	-
77	Iridium-190	D, see ^{182}Ir	$1x10^3$	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{182}Ir	-	$1x10^3$	$4x10^{-7}$	$1x10^{-9}$	-	-
		Y, see ^{182}Ir	-	$9x10^2$	$4x10^{-7}$	$1x10^{-9}$	-	-
77	Iridium-192m	D, see ^{182}Ir	$3x10^3$	$9x10^1$	$4x10^{-8}$	$1x10^{-10}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{182}Ir	-	$2x10^2$	$9x10^{-8}$	$3x10^{-10}$	-	-
		Y, see ^{182}Ir	-	$2x10^1$	$6x10^{-9}$	$2x10^{-11}$	-	-
77	Iridium-192	D, see ^{182}Ir	$9x10^2$	$3x10^2$	$1x10^{-7}$	$4x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{182}Ir	-	$4x10^2$	$2x10^{-7}$	$5x10^{-10}$	-	-
		Y, see ^{182}Ir	-	$2x10^2$	$9x10^{-8}$	$3x10^{-10}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
77	Iridium-194m	D, see ^{182}Ir	$6x10^2$	$9x10^1$	$4x10^{-8}$	$1x10^{-10}$	$9x10^{-6}$	$9x10^{-5}$
		W, see ^{182}Ir	-	$2x10^2$	$7x10^{-8}$	$2x10^{-10}$	-	-
		Y, see ^{182}Ir	-	$1x10^2$	$4x10^{-8}$	$1x10^{-10}$	-	-
77	Iridium-194	D, see ^{182}Ir	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{182}Ir	-	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	-	-
		Y, see ^{182}Ir	-	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
77	Iridium-195m	D, see ^{182}Ir	$8x10^3$	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{182}Ir	-	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	-	-
		Y, see ^{182}Ir	-	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	-	-
77	Iridium-195	D, see ^{182}Ir	$1x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{182}Ir	-	$5x10^4$	$2x10^{-5}$	$7x10^{-8}$	-	-
		Y, see ^{182}Ir	-	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	-	-
78	Platinum-186	D, all compounds	$1x10^4$	$4x10^4$	$2x10^{-5}$	$5x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
78	Platinum-188	D, all compounds	$2x10^3$	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
78	Platinum-189	D, all compounds	$1x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
78	Platinum-191	D, all compounds	$4x10^3$	$8x10^3$	$4x10^{-6}$	$1x10^{-8}$	$5x10^{-5}$	$5x10^{-4}$
78	Platinum-193m	D, all compounds	$3x10^3$	$6x10^3$	$3x10^{-6}$	$8x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
78	Platinum-193	D, all compounds	$4x10^4$	$2x10^4$	$1x10^{-5}$	$3x10^{-8}$	-	-
			($5x10^4$) LLI wall	-	-	-	$7x10^{-4}$	$7x10^{-3}$
78	Platinum-195m	D, all compounds	$2x10^3$	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
78	Platinum-197m[2]	D, all compounds	$2x10^4$	$4x10^4$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
78	Platinum-197	D, all compounds	$3x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
78	Platinum-199[2]	D, all compounds	$5x10^4$	$1x10^5$	$6x10^{-5}$	$2x10^{-7}$	$7x10^{-4}$	$7x10^3$
78	Platinum-200	D, all compounds	$1x10^3$	$3x10^3$	$1x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
79	Gold-193	D, all compounds except those given for W and Y	$9x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, halides and nitrates	-	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	-	-
		Y, oxides and hydroxides	-	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	-	-
79	Gold-194	D, see ^{193}Au	$3x10^3$	$8x10^3$	$3x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{193}Au	-	$5x10^3$	$2x10^{-6}$	$8x10^{-9}$	-	-
		Y, see ^{193}Au	-	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	-	-
79	Gold-195	D, see ^{193}Au	$5x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{193}Au	-	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	-	-
		Y, see ^{193}Au	-	$4x10^2$	$2x10^{-7}$	$6x10^{-10}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
79	Gold-198m	D, see ^{193}Au	$1x10^3$	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{193}Au	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
		Y, see ^{193}Au	-	$1x10^3$	$5x10^{-7}$	$2x10^{-9}$	-	-
79	Gold-198	D, see ^{193}Au	$1x10^3$	$4x10^3$	$2x10^{-6}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($2x10^3$) Blad. wall	-	-	$2x10^{-9}$	-
		W, see ^{193}Au	-	$2x10^3$	$8x10^{-7}$	$3x10^{-9}$	-	-
		Y, see ^{193}Au	-	$2x10^3$	$7x10^{-7}$	$2x10^{-9}$	-	-
79	Gold-199	D, see ^{193}Au	$3x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$4x10^{-5}$	$4x10^{-4}$
		W, see ^{193}Au	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-
		Y, see ^{193}Au	-	$4x10^3$	$2x10^{-6}$	$5x10^{-9}$	-	-
79	Gold-200m	D, see ^{193}Au	$1x10^3$	$4x10^3$	$1x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{193}Au	-	$3x10^3$	$1x10^{-6}$	$4x10^{-9}$	-	-
		Y, see ^{193}Au	-	$2x10^3$	$1x10^{-6}$	$3x10^{-9}$	-	-
79	Gold-200[2]	D, see ^{193}Au	$3x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
		W, see ^{193}Au	-	$8x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-
		Y, see ^{193}Au	-	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
79	Gold-201[2]	D, see ^{193}Au	7×10^{4}	2×10^{5}	9×10^{-5}	3×10^{-7}	1×10^{-3}	1×10^{-2}
		W, see ^{193}Au	-	2×10^{5}	1×10^{-4}	3×10^{-7}	-	-
		Y, see ^{193}Au	-	2×10^{5}	9×10^{-5}	3×10^{-7}	-	-
80	Mercury-193m	Vapor	-	8×10^{3}	4×10^{-6}	1×10^{-8}	-	-
		Organic	4×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	6×10^{-5}	6×10^{-4}
		D, sulfates	3×10^{3}	9×10^{3}	4×10^{-6}	1×10^{-8}	4×10^{-5}	4×10^{-4}
		W, oxides, hydroxides, halides, nitrates, and sulfides	-	8×10^{3}	3×10^{-6}	1×10^{-8}	-	-
80	Mercury-193	Vapor	-	3×10^{4}	1×10^{-5}	4×10^{-8}	-	-
		Organic	2×10^{4}	6×10^{4}	3×10^{-5}	9×10^{-8}	2×10^{-4}	2×10^{-3}
		D, see ^{193m}Hg	2×10^{4}	4×10^{4}	2×10^{-5}	6×10^{-8}	2×10^{-4}	2×10^{-3}
		W, see ^{193m}Hg	-	4×10^{4}	2×10^{-5}	6×10^{-8}	-	-
80	Mercury-194	Vapor	-	3×10^{1}	1×10^{-8}	4×10^{-11}	-	-
		Organic	2×10^{1}	3×10^{1}	1×10^{-8}	4×10^{-11}	2×10^{-7}	2×10^{-6}
		D, see ^{193m}Hg	8×10^{2}	4×10^{1}	2×10^{-8}	6×10^{-11}	1×10^{-5}	1×10^{-4}
		W, see ^{193m}Hg	-	1×10^{2}	5×10^{-8}	2×10^{-10}	-	-
80	Mercury-195m	Vapor	-	4×10^{3}	2×10^{-6}	6×10^{-9}	-	-
		Organic	3×10^{3}	6×10^{3}	3×10^{-6}	8×10^{-9}	4×10^{-5}	4×10^{-4}
		D, see ^{193m}Hg	2×10^{3}	5×10^{3}	2×10^{-6}	7×10^{-9}	3×10^{-5}	3×10^{-4}
		W, see ^{193m}Hg	-	4×10^{3}	2×10^{-6}	5×10^{-9}	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
80	Mercury-195	Vapor	-	3×10^{4}	1×10^{-5}	4×10^{-8}	-	-
		Organic	2×10^{4}	5×10^{4}	2×10^{-5}	6×10^{-8}	2×10^{-4}	2×10^{-3}
		D, see ^{193m}Hg	1×10^{4}	4×10^{4}	1×10^{-5}	5×10^{-8}	2×10^{-4}	2×10^{-3}
		W, see ^{193m}Hg	-	3×10^{4}	1×10^{-5}	5×10^{-8}	-	-
80	Mercury-197m	Vapor	-	5×10^{3}	2×10^{-6}	7×10^{-9}	-	-
		Organic	4×10^{3}	9×10^{3}	4×10^{-6}	1×10^{-8}	5×10^{-5}	5×10^{-4}
		D, see ^{193m}Hg	3×10^{3}	7×10^{3}	3×10^{-6}	1×10^{-8}	4×10^{-5}	4×10^{-4}
		W, see ^{193m}Hg	-	5×10^{3}	2×10^{-6}	7×10^{-9}	-	-
80	Mercury-197	Vapor	-	8×10^{3}	4×10^{-6}	1×10^{-8}	-	-
		Organic	7×10^{3}	1×10^{4}	6×10^{-6}	2×10^{-8}	9×10^{-5}	9×10^{-4}
		D, see ^{193m}Hg	6×10^{3}	1×10^{4}	5×10^{-6}	2×10^{-8}	8×10^{-5}	8×10^{-4}
		W, see ^{193m}Hg	-	9×10^{3}	4×10^{-6}	1×10^{-8}	-	-
80	Mercury-199m[2]	Vapor	-	8×10^{4}	3×10^{-5}	1×10^{-7}	-	-
		Organic	6×10^{4}	2×10^{5}	7×10^{-5}	2×10^{-7}	9×10^{-4}	9×10^{-3}
		D, see ^{193m}Hg	6×10^{4}	1×10^{5}	6×10^{-5}	2×10^{-7}	8×10^{-4}	8×10^{-3}
		W, see ^{193m}Hg	-	2×10^{5}	7×10^{-5}	2×10^{-7}	-	-
80	Mercury-203	Vapor	-	8×10^{2}	4×10^{-7}	1×10^{-9}	-	-
		Organic	5×10^{2}	8×10^{2}	3×10^{-7}	1×10^{-9}	7×10^{-6}	7×10^{-5}
		D, see ^{193m}Hg	2×10^{3}	1×10^{3}	5×10^{-7}	2×10^{-9}	3×10^{-5}	3×10^{-4}
		W, see ^{193m}Hg	-	1×10^{3}	5×10^{-7}	2×10^{-9}	-	-

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
81	Thallium-194m[2]	D, all compounds	$5x10^4$	$2x10^5$	$6x10^{-5}$	$2x10^{-7}$	-	-
			($8x10^4$) St. wall	-	-	-	$1x10^{-3}$	$1x10^{-2}$
81	Thallium-194[2]	D, all compounds	$3x10^5$	$6x10^5$	$2x10^{-4}$	$8x10^{-7}$	$3x10^{-3}$	$3x10^{-2}$
81	Thallium-195[2]	D, all compounds	$6x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
81	Thallium-197	D, all compounds	$7x10^4$	$1x10^5$	$5x10^{-5}$	$2x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
81	Thallium-198m[2]	D, all compounds	$3x10^4$	$5x10^4$	$2x10^{-5}$	$8x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
81	Thallium-198	D, all compounds	$2x10^4$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
81	Thallium-199	D, all compounds	$6x10^4$	$8x10^4$	$4x10^{-5}$	$1x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
81	Thallium-200	D, all compounds	$8x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
81	Thallium-201	D, all compounds	$2x10^4$	$2x10^4$	$9x10^{-6}$	$3x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
81	Thallium-202	D, all compounds	$4x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$5x10^{-5}$	$5x10^{-4}$
81	Thallium-204	D, all compounds	$2x10^3$	$2x10^3$	$9x10^{-7}$	$3x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
82	Lead-195m[2]	D, all compounds	$6x10^4$	$2x10^5$	$8x10^{-5}$	$3x10^{-7}$	$8x10^{-4}$	$8x10^{-3}$
82	Lead-196	D, all compounds	$3x10^4$	$6x10^4$	$3x10^{-5}$	$9x10^{-8}$	$4x10^{-4}$	$4x10^{-3}$
8.	Lead-199[2]	D, all compounds	$2x10^4$	$7x10^4$	$3x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
82	Lead-200	D, all compounds	$3x10^3$	$6x10^3$	$3x10^{-6}$	$9x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
82	Lead-201	D, all compounds	$7x10^3$	$2x10^4$	$8x10^{-6}$	$3x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
82	Lead-202m	D, all compounds	$9x10^3$	$3x10^4$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
82	Lead-202	D, all compounds	$1x10^2$	$5x10^1$	$2x10^{-8}$	$7x10^{-11}$	$2x10^{-6}$	$2x10^{-5}$
82	Lead-203	D, all compounds	$5x10^3$	$9x10^3$	$4x10^{-6}$	$1x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$
82	Lead-205	D, all compounds	$4x10^3$	$1x10^3$	$6x10^{-7}$	$2x10^{-9}$	$5x10^{-5}$	$5x10^{-4}$
82	Lead-209	D, all compounds	$2x10^4$	$6x10^4$	$2x10^{-5}$	$8x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
82	Lead-210	D, all compounds	$6x10^{-1}$	$2x10^{-1}$	$1x10^{-10}$	-	-	-
			($1x10^0$) Bone surf.	($3x10^{-1}$) Bone surf.	-	$4x10^{-13}$	$1x10^{-8}$	$1x10^{-7}$
82	Lead-211	D, all compounds	$1x10^4$	$6x10^2$	$3x10^{-7}$	$9x10^{-10}$	$2x10^{-4}$	$2x10^{-3}$
82	Lead-212	D, all compounds	$8x10^1$	$3x10^1$	$1x10^{-8}$	$5x10^{-11}$	-	-
			($1x10^2$) Bone surf.	-	-	-	$2x10^{-6}$	$2x10^{-5}$
82	Lead-214	D, all compounds	$9x10^3$	$8x10^2$	$3x10^{-7}$	$1x10^{-9}$	$1x10^{-4}$	$1x10^{-3}$
83	Bismuth-200[2]	D, nitrates	$3x10^4$	$8x10^4$	$4x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
		W, all other compounds	-	$1x10^5$	$4x10^{-5}$	$1x10^{-7}$	-	-

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
83	Bismuth-201[2]	D, see ^{200}Bi	$1x10^{4}$	$3x10^{4}$	$1x10^{-5}$	$4x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{200}Bi	-	$4x10^{4}$	$2x10^{-5}$	$5x10^{-8}$	-	-
83	Bismuth-202[2]	D, see ^{200}Bi	$1x10^{4}$	$4x10^{4}$	$2x10^{-5}$	$6x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{200}Bi	-	$8x10^{4}$	$3x10^{-5}$	$1x10^{-7}$	-	-
83	Bismuth-203	D, see ^{200}Bi	$2x10^{3}$	$7x10^{3}$	$3x10^{-6}$	$9x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		W, see ^{200}Bi	-	$6x10^{3}$	$3x10^{-6}$	$8x10^{-9}$	-	-
83	Bismuth-205	D, see ^{200}Bi	$1x10^{3}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{200}Bi	-	$1x10^{3}$	$5x10^{-7}$	$2x10^{-9}$	-	-
83	Bismuth-206	D, see ^{200}Bi	$6x10^{2}$	$1x10^{3}$	$6x10^{-7}$	$2x10^{-9}$	$9x10^{-6}$	$9x10^{-5}$
		W, see ^{200}Bi	-	$9x10^{2}$	$4x10^{-7}$	$1x10^{-9}$	-	-
83	Bismuth-207	D, see ^{200}Bi	$1x10^{3}$	$2x10^{3}$	$7x10^{-7}$	$2x10^{-9}$	$1x10^{-5}$	$1x10^{-4}$
		W, see ^{200}Bi	-	$4x10^{2}$	$1x10^{-7}$	$5x10^{-10}$	-	-
83	Bismuth-210m	D, see ^{200}Bi	$4x10^{1}$	$5x10^{0}$	$2x10^{-9}$	$6x10^{-12}$	$6x10^{-7}$	$6x10^{-6}$
		W, see ^{200}Bi	-	$7x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
83	Bismuth-210	D, see ^{200}Bi	$8x10^{2}$	$2x10^{2}$	$1x10^{-7}$	-	$1x10^{-5}$	$1x10^{-4}$
			-	($3x10^{2}$) Kidneys	-	$4x10^{-10}$	-	-
		W, see ^{200}Bi	-	$3x10^{1}$	$1x10^{-8}$	$4x10^{-11}$	-	-

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
83	Bismuth-212	D, see ^{200}Bi	$5x10^{3}$	$2x10^{2}$	$1x10^{-7}$	$3x10^{-10}$	$7x10^{-5}$	$7x10^{-4}$
		W, see ^{200}Bi	-	$3x10^{2}$	$1x10^{-7}$	$4x10^{-10}$	-	-
83	Bismuth-213	D, see ^{200}Bi	$7x10^{3}$	$3x10^{2}$	$1x10^{-7}$	$4x10^{-10}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{200}Bi	-	$4x10^{2}$	$1x10^{-7}$	$5x10^{-10}$	-	-
83	Bismuth-214	D, see ^{200}Bi	$2x10^{4}$	$8x10^{2}$	$3x10^{-7}$	$1x10^{-9}$	$2x10^{-4}$	$2x10^{-3}$
		W, see ^{200}Bi	-	$9x10^{2}$	$4x10^{-7}$	$1x10^{-9}$	-	-
84	Polonium-203[2]	D, all compounds except those given for W	$3x10^{4}$	$6x10^{4}$	$3x10^{-5}$	$9x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, oxides, hydroxides and nitrates	-	$9x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	-	-
84	Polonium-205[2]	D, see ^{203}Po	$2x10^{4}$	$4x10^{4}$	$2x10^{-5}$	$5x10^{-8}$	$3x10^{-4}$	$3x10^{-3}$
		W, see ^{203}Po	-	$7x10^{4}$	$3x10^{-5}$	$1x10^{-7}$	-	-
84	Polonium-207	D, see ^{203}Po	$8x10^{3}$	$3x10^{4}$	$1x10^{-5}$	$4x10^{-8}$	$1x10^{-4}$	$1x10^{-3}$
		W, see ^{203}Po	-	$3x10^{4}$	$1x10^{-5}$	$4x10^{-8}$	-	-
84	Polonium-210	D, see ^{203}Po	$3x10^{0}$	$6x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	$4x10^{-8}$	$4x10^{-7}$
		W, see ^{203}Po	-	$6x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
85	Astatine-207	D, halides	$6x10^{3}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$8x10^{-5}$	$8x10^{-4}$
		W	-	$2x10^{3}$	$9x10^{-7}$	$3x10^{-9}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
85	Astatine-211	D, halides	$1x10^{2}$	$8x10^{1}$	$3x10^{-8}$	$1x10^{-10}$	$2x10^{-6}$	$2x10^{-5}$
		W	-	$5x10^{1}$	$2x10^{-8}$	$7x10^{-11}$	-	-
86	Radon-220	With daughters removed	-	$2x10^{4}$	$7x10^{-6}$	$2x10^{-8}$	-	-
		With daughters present	-	$2x10^{1}$ (or 14 working level months)	$9x10^{-9}$ (or 1.2 working level)	$3x10^{-11}$	-	-
86	Radon-222	With daughters removed	-	$1x10^{4}$	$4x10^{-6}$	$1x10^{-8}$	-	-
		With daughters present	-	$1x10^{2}$ (or 4 working level months)	$3x10^{-8}$ (or 0.33 working level)	$1x10^{-10}$	-	-
87	Francium-222	D, all compounds	2x103	$5x10^{2}$	$2x10^{-7}$	$6x10^{-10}$	$3x10^{-5}$	$3x10^{-4}$
87	Francium-223	D, all compounds	$6x10^{2}$	$8x10^{2}$	$3x10^{-7}$	$1x10^{-9}$	$8x10^{-6}$	$8x10^{-5}$
88	Radium-223	W, all compounds	$5x10^{0}$	$7x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
			($8x10^{0}$) Bone surf.	-	-	-	$1x10^{-7}$	$1x10^{-6}$
88	Radium-224	W, all compounds	$8x10^{0}$	$2x10^{0}$	$7x10^{-10}$	$2x10^{-12}$	-	-
			($2x10^{1}$) Bone surf.	-	-	-	$2x10^{-7}$	$2x10^{-6}$
88	Radium-225	W, all compounds	$8x10^{0}$	$7x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
			($2x10^{1}$) Bone surf.	-	-	-	$2x10^{-7}$	$2x10^{-6}$

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
88	Radium-226	W, all compounds	$2x10^{0}$	$6x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
			($5x10^{0}$) Bone surf.	-	-	-	$7x10^{-8}$	$7x10^{-7}$
88	Radium-227[2]	W, all compounds	$2x10^{4}$	$1x10^{4}$	$6x10^{-6}$	-	$2x10^{-4}$	$2x10^{-3}$
			-	($2x10^{4}$) Bone surf.	-	$3x10^{-8}$	-	-
88	Radium-228	W, all compounds	$2x10^{0}$	$1x10^{0}$	$5x10^{-10}$	$2x10^{-12}$	-	-
			($3x10^{0}$) Bone surf:	-	-	-	$4x10^{-8}$	$4x10^{7}$
89	Actinium-224	D, all compounds except those given for W and Y	$2x10^{3}$	$3x10^{1}$	$1x10^{-8}$	$4x10^{-11}$	$3x10^{-5}$	$3x10^{-4}$
		W, halides and nitrates	-	$5x10^{1}$	$2x10^{-8}$	$7x10^{-11}$	-	-
		Y, oxides and hydroxides	-	$5x10^{1}$	$2x10^{-8}$	$6x10^{-11}$	-	-
89	Actinium-225	D, see ^{224}Ac	$5x10^{1}$	$3x10^{-1}$	$1x10^{-10}$	-	$7x10^{-7}$	$7x10^{-6}$
			-	($5x10^{-1}$) Bone surf.	-	$8x10^{-13}$	-	-
		W, see ^{224}Ac	-	$6x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
		Y, see ^{224}Ac	-	$6x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
89	Actinium-226	D, see ^{224}Ac	$1x10^{2}$	$3x10^{0}$	$1x10^{-9}$	$5x10^{-12}$	$2x10^{-6}$	$2x10^{-5}$
		W, see ^{224}Ac	-	$5x10^{0}$	$2x10^{-9}$	$7x10^{-12}$	-	-
		Y, see ^{224}Ac	-	$5x10^{0}$	$2x10^{-9}$	$6x10^{-12}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
89	Actinium-227	D, see ^{224}Ac	$2x10^{-1}$	$4x10^{-4}$	$2x10^{-13}$	-	-	-
			($3x10^{-1}$) Bone surf.	($8x10^{-4}$) Bone surf.	-	$1x10^{-15}$	$4x10^{-9}$	$4x10^{-8}$
		W, see ^{224}Ac	-	$2x10^{-3}$	$7x10^{-13}$	-	-	-
			-	($3x10^{-3}$) Bone surf.	-	$4x10^{-15}$	-	-
		Y, see ^{224}Ac	-	$4x10^{-3}$	$2x10^{-12}$	$5x10^{-15}$	-	-
89	Actinium-228	D, see ^{224}Ac	$2x10^{3}$	$9x10^{0}$	$4x10^{-9}$	-	$3x10^{-5}$	$3x10^{-4}$
			-	($2x10^{1}$) Bone surf.	-	$2x10^{-11}$	-	-
		W, see ^{224}Ac	-	$4x10^{1}$	$2x10^{-8}$	-	-	-
			-	($5x10^{1}$) Bone surf.	-	$8x10^{-11}$	-	-
		Y, see ^{224}Ac	-	$4x10^{1}$	$2x10^{-8}$	$6x10^{-11}$	-	-
90	Thorium-226	W, all compounds except those given for Y	$5x10^{3}$	$2x10^{2}$	$6x10^{-8}$	$2x10^{-10}$	$7x10^{-5}$	$7x10^{-4}$
		Y, oxides and hydroxides	-	$1x10^{2}$	$6x10^{-8}$	$2x10^{-10}$	-	-
90	Thorium-227	W, see ^{226}Th	$1x10^{2}$	$3x10^{-1}$	$1x10^{-10}$	$5x10^{-13}$	$2x10^{-6}$	$2x10^{-5}$
		Y, see ^{226}Th	-	$3x10^{-1}$	$1x10^{-10}$	$4x10^{-13}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
90	Thorium-228	W, see ^{226}Th	$6x10^{0}$	$1x10^{-2}$	$4x10^{-12}$	-	-	-
			($1x10^{1}$) Bone surf.	($2x10^{-2}$) Bone surf.	-	$3x10^{-14}$	$2x10^{-7}$	$2x10^{-6}$
		Y, see ^{226}Th	-	$2x10^{-2}$	$7x10^{-12}$	$2x10^{-14}$	-	-
90	Thorium-229	W, see ^{226}Th	$6x10^{-1}$	$9x10^{-4}$	$4x10^{-13}$	-	-	-
			($1x10^{0}$) Bone surf.	($2x10^{-3}$) Bone surf.	-	$3x10^{-15}$	$2x10^{-8}$	$2x10^{-7}$
		Y, see ^{226}Th	-	$2x10^{-3}$	$1x10^{-12}$	-	-	-
			-	($3x10^{-3}$) Bone surf.	-	$4x10^{-15}$	-	-
90	Thorium-230	W, see ^{226}Th	$4x10^{0}$	$6x10^{-3}$	$3x10^{-12}$	-	-	-
			($1x10^{1}$) Bone surf.	($2x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$1x10^{-7}$	$1x10^{-6}$
		Y, see ^{226}Th	-	$2x10^{-2}$	$6x10^{-12}$	$3x10^{-14}$	-	-
90	Thorium-231	W, see ^{226}Th	$4x10^{3}$	$6x10^{3}$	$3x10^{-6}$	$9x10^{-9}$	$5x10^{-5}$	$5x10^{-4}$
		Y, see ^{226}Th	-	$6x10^{3}$	$3x10^{-6}$	$9x10^{-9}$	-	-
90	Thorium-232	W, see ^{226}Th	$7x10^{-1}$	$1x10^{-3}$	$5x10^{-13}$	-	-	-
			($2x10^{0}$) Bone surf.	($3x10^{-3}$) Bone surf.	-	$4x10^{-15}$	$3x10^{-8}$	$3x10^{-7}$
		Y, see ^{226}Th	-	$3x10^{-3}$	$1x10^{-12}$	-	-	-
			-	($5x10^{-3}$) Bone surf.	-	$8x10^{-15}$	-	-

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
90	Thorium-234	W, see ^{226}Th	$3x10^{2}$	$2x10^{2}$	$8x10^{-8}$	$3x10^{-10}$	$4x10^{-6}$	$4x10^{-5}$
		Y, see ^{226}Th	-	$2x10^{2}$	$6x10^{-8}$	$2x10^{-10}$	-	-
91	Protactinium-227	W, all compounds except those given for Y	$4x10^{3}$	$1x10^{2}$	$5x10^{-8}$	$2x10^{-10}$	$5x10^{-5}$	$5x10^{-4}$
		Y, oxides and hydroxides	-	$1x10^{2}$	$4x10^{-8}$	$1x10^{-10}$	-	-
91	Protactinium-228	W, see ^{227}Pa	$1x10^{3}$	$1x10^{1}$	$5x10^{-9}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($2x10^{1}$) Bone surf.	-	$3x10^{-11}$	-	-
		Y, see ^{227}Pa	-	$1x10^{1}$	$5x10^{-9}$	$2x10^{-11}$	-	-
91	Protactinium-230	W, see ^{227}Pa	$6x10^{2}$	$5x10^{0}$	$2x10^{-9}$	$7x10^{-12}$	-	-
			($8x10^{2}$) Bone surf.	-	-	-	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{227}Pa	-	$4x10^{0}$	$1x10^{-9}$	$5x10^{-12}$	-	-
91	Protactinium-231	W, see ^{227}Pa	$2x10^{-1}$	$2x10^{-3}$	$6x10^{-13}$	-	-	-
			($5x10^{-1}$) Bone surf.	($3x10^{-3}$) Bone surf.	-	$4x10^{-15}$	$7x10^{-9}$	$7x10^{-8}$
		Y, see ^{227}Pa	-	$4x10^{-3}$	$2x10^{-12}$	-	-	-
			-	($5x10^{-3}$) Bone surf.	-	$8x10^{-15}$	-	-

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
91	Protactinium-232	W, see ^{227}Pa	$1x10^{3}$	$2x10^{1}$	$9x10^{-9}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($5x10^{1}$) Bone surf.	-	$8x10^{-11}$	-	-
		Y, see ^{227}Pa	-	$6x10^{1}$	$2x10^{-8}$	-	-	-
			-	($8x10^{1}$) Bone surf.	-	$1x10^{-10}$	-	-
91	Protactinium-233	W, see ^{227}Pa	$1x10^{3}$	$7x10^{2}$	$3x10^{-7}$	$1x10^{-9}$	-	-
			($2x10^{3}$) LLI wall	-	-	-	$2x10^{-5}$	$2x10^{-4}$
		Y, see ^{227}Pa	-	$6x10^{2}$	$2x10^{-7}$	$8x10^{-10}$	-	-
91	Protactinium-234	W, see ^{227}Pa	$2x10^{3}$	$8x10^{3}$	$3x10^{-6}$	$1x10^{-8}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{227}Pa	-	$7x10^{3}$	$3x10^{-6}$	$9x10^{-9}$	-	-
92	Uranium-230	D, UF_6, UO_2F_2, $UO_2(NO_3)_2$	$4x10^{0}$	$4x10^{-1}$	$2x10^{-10}$	$6x10^{-13}$	-	-
			($5x10^{0}$) Bone surf.	-	-	-	$7x10^{-8}$	$7x10^{-7}$
		W, UO_3, UF_4, UCl_4	-	$4x10^{-1}$	$1x10^{-10}$	$5x10^{-13}$	-	-
		Y, UO_2, U_3O_8	-	$3x10^{-1}$	$1x10^{-10}$	$4x10^{-13}$	-	-
92	Uranium-231	D, see ^{230}U	$4x10^{3}$	$8x10^{3}$	$3x10^{-6}$	$1x10^{-8}$	$6x10^{-5}$	$6x10^{-4}$
		W, see ^{230}U	-	$6x10^{3}$	$2x10^{-6}$	$8x10^{-9}$	-	-
		Y, see ^{230}U	-	$5x10^{3}$	$2x10^{-6}$	$6x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
92	Uranium-232	D, see ^{230}U	$2x10^{0}$	$2x10^{-1}$	$9x10^{-11}$	-	-	-
			($3x10^{0}$) Bone surf.	($5x10^{-1}$) Bone surf.	-	$8x10^{-13}$	$4x10^{-8}$	$4x10^{-7}$
		W, see ^{230}U	-	$4x10^{-1}$	$2x10^{-10}$	$5x10^{-13}$	-	-
		Y, see ^{230}U	-	$8x10^{-3}$	$3x10^{-12}$	$1x10^{-14}$	-	-
92	Uranium-233	D, see ^{230}U	$1x10^{1}$	$1x10^{0}$	$5x10^{-10}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{230}U	-	$7x10^{-1}$	$3x10^{-10}$	$1x10^{-12}$	-	-
		Y, see ^{230}U	-	$4x10^{-2}$	$2x10^{-11}$	$5x10^{-14}$	-	-
92	Uranium-234[3]	D, see ^{230}U	$1x10^{1}$	$1x10^{0}$	$5x10^{-10}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{230}U	-	$7x10^{-1}$	$3x10^{-10}$	$1x10^{-12}$	-	-
		Y, see ^{230}U	-	$4x10^{-2}$	$2x10^{-11}$	$5x10^{-14}$	-	-
92	Uranium-235[3]	D, see ^{230}U	$1x10^{1}$	$1x10^{0}$	$6x10^{-10}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{230}U	-	$8x10^{-1}$	$3x10^{-10}$	$1x10^{-12}$	-	-
		Y, see ^{230}U	-	$4x10^{-2}$	$2x10^{-11}$	$6x10^{-14}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
92	Uranium-236	D, see ^{230}U	$1x10^{1}$	$1x10^{0}$	$5x10^{-10}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{230}U	-	$8x10^{-1}$	$3x10^{-10}$	$1x10^{-12}$	-	-
		Y, see ^{230}U	-	$4x10^{-2}$	$2x10^{-11}$	$5x10^{-14}$	-	-
92	Uranium-237	D, see ^{230}U	$2x10^{3}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{230}U	-	$2x10^{3}$	$7x10^{-7}$	$2x10^{-9}$	-	-
		Y, see ^{230}U	-	$1x10^{3}$	$6x10^{-7}$	$2x10^{-9}$	-	-
92	Uranium-238[3]	D, see ^{230}U	$1x10^{1}$	$1x10^{0}$	$6x10^{-10}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{230}U	-	$8x10^{-1}$	$3x10^{-10}$	$1x10^{-12}$	-	-
		Y, see ^{230}U	-	$4x10^{-2}$	$2x10^{-11}$	$6x10^{-14}$	-	-
92	Uranium-239[2]	D, see ^{230}U	$7x10^{4}$	$2x10^{5}$	$8x10^{-5}$	$3x10^{-7}$	$9x10^{-4}$	$9x10^{-3}$
		W, see ^{230}U	-	$2x10^{5}$	$7x10^{-5}$	$2x10^{-7}$	-	-
		Y, see ^{230}U	-	$2x10^{5}$	$6x10^{-5}$	$2x10^{-7}$	-	-
92	Uranium-240	D, see ^{230}U	$1x10^{3}$	$4x10^{3}$	$2x10^{-6}$	$5x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
		W, see ^{230}U	-	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	-	-
		Y, see ^{230}U	-	$2x10^{3}$	$1x10^{-6}$	$3x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
92	Uranium-natural[3]	D, see ^{230}U	$1x10^{1}$	$1x10^{0}$	$5x10^{-10}$	-	-	-
			($2x10^{1}$) Bone surf.	($2x10^{0}$) Bone surf.	-	$3x10^{-12}$	$3x10^{-7}$	$3x10^{-6}$
		W, see ^{230}U	-	$8x10^{-1}$	$3x10^{-10}$	$9x10^{-13}$	-	-
		Y, see ^{230}U	-	$5x10^{-2}$	$2x10^{-11}$	$9x10^{-14}$	-	-
93	Neptunium-232[2]	W, all compounds	$3x10^{4}$	$2x10^{3}$	$1x10^{-6}$	-	-	-
			($5x10^{4}$) Bone surf.	($5x10^{3}$) Bone surf.	-	$8x10^{-9}$	$7x10^{-4}$	$7x10^{-3}$
93	Neptunium-233[2]	W, all compounds	$8x10^{5}$	$3x10^{6}$	$1x10^{-3}$	$5x10^{-6}$	$1x10^{-2}$	$1x10^{-1}$
93	Neptunium-234	W, all compounds	$2x10^{3}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
93	Neptunium-235	W, all compounds	$1x10^{4}$	$1x10^{3}$	$5x10^{-7}$	$2x10^{-9}$	$2x10^{-4}$	$2x10^{-3}$
93	Neptunium-236 ($1.15x10^{5}$ y)	W, all compounds	$4x10^{-1}$	$3x10^{-2}$	$1x10^{-11}$	-	-	-
			($5x10^{-1}$) Bone surf.	($5x10^{-2}$) Bone surf.	-	$8x10^{-14}$	$7x10^{-9}$	$7x10^{-8}$
93	Neptunium-236 (22.5 h)	W, all compounds	$5x10^{2}$	$4x10^{1}$	$2x10^{-8}$	-	-	-
			($8x10^{2}$) Bone surf.	($8x10^{1}$) Bone surf.	-	$1x10^{-10}$	$1x10^{-5}$	$1x10^{-4}$
93	Neptunium-237	W, all compounds	$7x10^{-2}$	$6x10^{-3}$	$2x10^{-12}$	-	-	-
			($1x10^{-1}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$2x10^{-9}$	$2x10^{-8}$

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
93	Neptunium-238	W, all compounds	$8x10^{2}$	$9x10^{1}$	$4x10^{-8}$	-	$1x10^{-5}$	$1x10^{-4}$
			-	($2x10^{2}$) Bone surf.	-	$2x10^{-10}$	-	-
93	Neptunium-239	W, all compounds	$2x10^{3}$	$2x10^{3}$	$1x10^{-6}$	$3x10^{-9}$	$2x10^{-5}$	$2x10^{-4}$
93	Neptunium-240[2]	W, all compounds	$2x10^{4}$	$8x10^{4}$	$4x10^{-5}$	$1x10^{-7}$	$3x10^{-4}$	$3x10^{-3}$
94	Plutonium-234	W, all compounds except PuO_2	$9x10^{3}$	$2x10^{2}$	$9x10^{-8}$	$3x10^{-10}$	$1x10^{-4}$	$1x10^{-3}$
		Y, PuO_2	-	$2x10^{2}$	$8x10^{-8}$	$3x10^{-10}$	-	-
94	Plutonium-235[2]	W, see ^{234}Pu	$9x10^{5}$	$3x10^{6}$	$1x10^{-3}$	$4x10^{-6}$	$1x10^{-2}$	$1x10^{-1}$
		Y, see ^{234}Pu	-	$3x10^{6}$	$1x10^{-3}$	$4x10^{-6}$	-	-
94	Plutonium-236	W, see ^{234}Pu	$2x10^{1}$	$2x10^{-2}$	$8x10^{-12}$	-	-	-
			($3x10^{1}$) Bone surf.	($3x10^{-2}$) Bone surf.	-	$4x10^{-14}$	$4x10^{-7}$	$4x10^{-6}$
		Y, see ^{234}Pu	-	$4x10^{-2}$	$2x10^{-11}$	$5x10^{-14}$	-	-
94	Plutonium-237	W, see ^{234}Pu	$1x10^{4}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{234}Pu	-	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	-	-
94	Plutonium-238	W, see ^{234}Pu	$7x10^{0}$	$6x10^{-3}$	$3x10^{-12}$	-	-	-
			($1x10^{1}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$2x10^{-7}$	$2x10^{-6}$
		Y, see ^{234}Pu	-	$2x10^{-2}$	$7x10^{-12}$	$2x10^{-14}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
94	Plutonium-239	W, see ^{234}Pu	$6x10^0$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($1x10^1$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$1x10^{-7}$	$1x10^{-6}$
		Y, see ^{234}Pu	-	$1x10^{-2}$	$6x10^{-12}$	-	-	-
			-	($2x10^{-2}$) Bone surf.	-	$2x10^{-14}$	-	-
94	Plutonium-240	W, see ^{234}Pu	$6x10^0$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($1x10^1$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$1x10^{-7}$	$1x10^{-6}$
		Y, see ^{234}Pu	-	$1x10^{-2}$	$6x10^{-12}$	-	-	-
			-	($2x10^{-2}$) Bone surf.	-	$2x10^{-14}$	-	-
94	Plutonium-241	W, see ^{234}Pu	$3x10^2$	$3x10^{-1}$	$1x10^{-10}$	-	-	-
			($5x10^2$) Bone surf.	($5x10^{-1}$) Bone surf.	-	$8x10^{-13}$	$7x10^{-6}$	$7x10^{-5}$
		Y, see ^{234}Pu	-	$6x10^{-1}$	$3x10^{-10}$	-	-	-
			-	($8x10^{-1}$) Bone surf.	-	$1x10^{-12}$	-	-

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Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
94	Plutonium-242	W, see ^{234}Pu	$7x10^0$	$6x10^{-3}$	$2x10^{-12}$	-	-	-
			($1x10^1$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$2x10^{-7}$	$2x10^{-6}$
		Y, see ^{234}Pu	-	$1x10^{-2}$	$6x10^{-12}$	-	-	-
			-	($2x10^{-2}$) Bone surf.	-	$2x10^{-14}$	-	-
94	Plutonium-243	W, see ^{234}Pu	$2x10^4$	$4x10^4$	$1x10^{-5}$	$5x10^{-8}$	$2x10^{-4}$	$2x10^{-3}$
		Y, see ^{234}Pu	-	$4x10^4$	$2x10^{-5}$	$5x10^{-8}$	-	-
94	Plutonium-244	W, see ^{234}Pu	$7x10^0$	$6x10^{-3}$	$2x10^{-12}$	-	-	-
			($1x10^1$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$2x10^{-7}$	$2x10^{-6}$
		Y, see ^{234}Pu	-	$2x10^{-2}$	$6x10^{-12}$	$2x10^{-14}$	-	-
94	Plutonium-245	W, see ^{234}Pu	$2x10^3$	$5x10^3$	$2x10^{-6}$	$7x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
		Y, see ^{234}Pu	-	$4x10^3$	$2x10^{-6}$	$6x10^{-9}$	-	-
95	Americium-237[2]	W, all compounds	$8x10^4$	$3x10^5$	$1x10^{-4}$	$4x10^{-7}$	$1x10^{-3}$	$1x10^{-2}$
95	Americium-238[2]	W, all compounds	$4x10^4$	$3x10^3$	$1x10^{-6}$	-	$6x10^{-4}$	$6x10^{-3}$
			-	($5x10^3$) Bone surf.	-	$8x10^{-9}$	-	-
95	Americium-239	W, all compounds	$5x10^3$	$1x10^4$	$5x10^{-6}$	$2x10^{-8}$	$7x10^{-5}$	$7x10^{-4}$

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			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
95	Americium-240	W, all compounds	$2x10^{3}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
95	Americium-241	W, all compounds	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
95	Americium-242m	W, all compounds	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
95	Americium-242	W, all compounds	$5x10^{3}$	$8x10^{1}$	$3x10^{-8}$	$1x10^{-10}$	$6x10^{-5}$	$6x10^{-4}$
95	Americium-243	W, all compounds	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
95	Americium-244m[2]	W, all compounds	$6x10^{4}$	$4x10^{3}$	$2x10^{-6}$	-	-	-
			($8x10^{4}$) St. wall	($5x10^{3}$) Bone surf.	-	$8x10^{-9}$	$1x10^{-3}$	$1x10^{-2}$
95	Americium-244	W, all compounds	$3x10^{3}$	$2x10^{2}$	$7x10^{-8}$	-	$4x10^{-5}$	$4x10^{-4}$
			-	($3x10^{2}$) Bone surf.	-	$4x10^{-10}$	-	-
95	Americium-245	W, all compounds	$3x10^{4}$	$8x10^{4}$	$3x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
95	Americium-246m[2]	W, all compounds	$5x10^{4}$	$2x10^{5}$	$7x10^{-5}$	$2x10^{-7}$	$7x10^{-4}$	$7x10^{-3}$

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
95	Americium-246[2]	W, all compounds	$3x10^{4}$	$1x10^{5}$	$4x10^{-5}$	$1x10^{-7}$	$4x10^{-4}$	$4x10^{-3}$
96	Curium-238	W, all compounds	$2x10^{4}$	$1x10^{3}$	$4x10^{-7}$	$1x10^{-9}$	$2x10^{-4}$	$2x10^{-3}$
96	Curium-240	W, all compounds	$1x10^{2}$	$5x10^{-1}$	$2x10^{-10}$	$8x10^{-13}$	$2x10^{-6}$	$2x10^{-5}$
96	Curium-241	W, all compounds	$1x10^{3}$	$2x10^{1}$	$9x10^{-9}$	-	$2x10^{-5}$	$2x10^{-4}$
			-	($3x10^{1}$) Bone surf.	-	$4x10^{-11}$	-	-
96	Curium-242	W, all compounds	$6x10^{1}$	$3x10^{-1}$	$1x10^{-10}$	$4x10^{-13}$	-	-
			($8x10^{1}$) Bone surf.	-	-	-	$1x10^{-6}$	$1x10^{-5}$
96	Curium-243	W, all compounds	$2x10^{0}$	$8x10^{-3}$	$4x10^{-12}$	-	-	-
			($3x10^{0}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$4x10^{-8}$	$4x10^{-7}$
96	Curium-244	W, all compounds	$2x10^{0}$	$1x10^{-2}$	$4x10^{-12}$	-	-	-
			($5x10^{0}$) Bone surf.	($2x10^{-2}$) Bone surf.	-	$3x10^{-14}$	$7x10^{-8}$	$7x10^{-7}$
96	Curium-245	W, all compounds	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($8x10^{-3}$) Bone surf.	-	$1x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomi No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
96	Curium-246	W, all compounds	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($8x10^{-3}$) Bone surf.	-	$1x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
96	Curium-247	W, all compounds	$1x10^{0}$	$6x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($1x10^{-2}$) Bone surf.	-	$2x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
96	Curium-248	W, all compounds	$4x10^{-1}$	$1x10^{-3}$	$6x10^{-13}$	-	-	-
			($5x10^{-1}$) Bone surf.	($2x10^{-3}$) Bone surf.	-	$3x10^{-15}$	$7x10^{-9}$	$7x10^{-8}$
96	Curium-249[2]	W, all compounds	$5x10^{4}$	$2x10^{4}$	$6x10^{-6}$	$3x10^{-8}$	$7x10^{-4}$	$7x10^{-3}$
97	Berkelium-245	W, all compounds	$2x10^{3}$	$1x10^{3}$	$5x10^{-7}$	$2x10^{-9}$	$3x10^{-5}$	$3x10^{-4}$
97	Berkelium-246	W, all compounds	$3x10^{3}$	$3x10^{3}$	$1x10^{-6}$	$4x10^{-9}$	$4x10^{-5}$	$4x10^{-4}$
97	Berke ium-247	W, all compounds	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($8x10^{-3}$) Bone surf.	-	$1x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
97	Berkelium-249	W, all compounds	$5x10^{2}$	$2x10^{0}$	$9x10^{-10}$	-	-	-
			($8x10^{2}$) Bone surf.	($3x10^{0}$) Bone surf.	-	$4x10^{-12}$	$1x10^{-5}$	$1x10^{-4}$

			Table 1 OCCUPATIONAL VALUES			Table 2 REFERENCE LEVEL CONCENTRATIONS		Table 3 RELEASE TO SEWERAGE
Atomic No.	Radionuclide	Class	Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Monthly Average (μCi/ml)
97	Berkelium-250	W, all compounds	$1x10^{4}$	$4x10^{2}$	$2x10^{-7}$	-	$1x10^{-4}$	$1x10^{-3}$
			-	($8x10^{2}$) Bone surf.	-	$1x10^{-9}$	-	-
98	Californium-244	W, all compounds except those given for Y	$3x10^{4}$	$6x10^{2}$	$2x10^{-7}$	$8x10^{-10}$	$3x10^{-4}$	$3x10^{-3}$
		Y, oxides and hydroxides	-	$6x10^{2}$	$2x10^{-7}$	$8x10^{-10}$	-	-
98	Californium-246	W, see ^{244}Cf	$4x10^{2}$	$1x10^{1}$	$4x10^{-9}$	$1x10^{-11}$	-	-
			($5x10^{2}$) LLI wall	-	-	-	$7x10^{-6}$	$7x10^{-5}$
		Y, see ^{244}Cf	-	$9x10^{0}$	$4x10^{-9}$	$1x10^{-11}$	-	-
98	Cal fornium-248	W, see ^{244}Cf	$2x10^{1}$	$9x10^{-2}$	$4x10^{-11}$	-	-	-
			($3x10^{1}$) Bone surf.	($1x10^{-1}$) Bone surf.	-	$2x10^{-13}$	$4x10^{-7}$	$4x10^{-6}$
		Y, see ^{244}Cf	-	$1x10^{-1}$	$5x10^{-11}$	$2x10^{-13}$	-	-
98	Californium-249	W, see ^{244}Cf	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($8x10^{-3}$) Bone surf.	-	$1x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
		Y, see ^{244}Cf	-	$1x10^{-2}$	$5x10^{-12}$	$2x10^{-14}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
98	Californium-250	W, see ^{244}Cf	$3x10^{0}$	$1x10^{-2}$	$5x10^{-12}$	-	-	-
			($5x10^{0}$) Bone surf.	($2x10^{-2}$) Bone surf.	-	$3x10^{-14}$	$7x10^{-8}$	$7x10^{-7}$
		Y, see ^{244}Cf	-	$3x10^{-2}$	$1x10^{-11}$	$4x10^{-14}$	-	-
98	Californium-251	W, see ^{244}Cf	$1x10^{0}$	$5x10^{-3}$	$2x10^{-12}$	-	-	-
			($2x10^{0}$) Bone surf.	($8x10^{-3}$) Bone surf.	-	$1x10^{-14}$	$3x10^{-8}$	$3x10^{-7}$
		Y, see ^{244}Cf	-	$1x10^{-2}$	$5x10^{-12}$	$2x10^{-14}$	-	-
98	Californium-252	W, see ^{244}Cf	$6x10^{0}$	$3x10^{-2}$	$1x10^{-11}$	-	-	-
			($1x10^{1}$) Bone surf.	($5x10^{-2}$) Bone surf.	-	$8x10^{-14}$	$1x10^{-7}$	$1x10^{-6}$
		Y, see ^{244}Cf	-	$4x10^{-2}$	$2x10^{-11}$	$5x10^{-14}$	-	-
98	Californium-253	W, see ^{244}Cf	$6x10^{2}$	$2x10^{0}$	$8x10^{-10}$	$3x10^{-12}$	-	-
			($8x10^{2}$) Bone surf.	-	-	-	$1x10^{-5}$	$1x10^{-4}$
		Y, see ^{244}Cf	-	$2x10^{0}$	$7x10^{-10}$	$2x10^{-12}$	-	-
98	Californium-254	W, see ^{244}Cf	$3x10^{0}$	$2x10^{-2}$	$9x10^{-12}$	$3x10^{-14}$	$4x10^{-8}$	$4x10^{-7}$
		Y, see ^{244}Cf	-	$2x10^{-2}$	$7x10^{-12}$	$2x10^{-14}$	-	-
99	Einsteinium-250	W, all compounds	$5x10^{4}$	$7x10^{2}$	$3x10^{-7}$	-	$7x10^{-4}$	$7x10^{-3}$
			-	($1x10^{3}$) Bone surf.	-	$2x10^{-9}$	-	-

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
99	Einsteinium-251	W, all compounds	$7x10^{3}$	$1x10^{3}$	$5x10^{-7}$	$2x10^{-9}$	$1x10^{-4}$	$1x10^{-3}$
99	Einsteinium-253	W, all compounds	$2x10^{2}$	$2x10^{0}$	$6x10^{-10}$	$2x10^{-12}$	$3x10^{-6}$	$3x10^{-5}$
99	Einsteinium-254m	W, all compounds	$3x10^{2}$	$1x10^{1}$	$4x10^{-9}$	$1x10^{-11}$	$4x10^{-6}$	$4x10^{-5}$
99	Einsteinium-254	W, all compounds	$2x10^{1}$	$1x10^{-1}$	$4x10^{-11}$	$1x10^{-13}$	-	-
			($3x10^{1}$) Bone surf.	-	-	-	$4x10^{-7}$	$4x10^{-6}$
100	Fermium-252	W, all compounds	$5x10^{2}$	$1x10^{1}$	$5x10^{-9}$	$2x10^{-11}$	$7x10^{-6}$	$7x10^{-5}$
100	Fermium-253	W, all compounds	$1x10^{3}$	$1x10^{1}$	$4x10^{-9}$	$1x10^{-11}$	$2x10^{-5}$	$2x10^{-4}$
100	Fermium-254	W, all compounds	$3x10^{3}$	$1x10^{2}$	$4x10^{-8}$	$1x10^{-10}$	$4x10^{-5}$	$4x10^{-4}$
100	Fermium-255	W, all compounds	$5x10^{2}$	$2x10^{1}$	$9x10^{-9}$	$3x10^{-11}$	$7x10^{-6}$	$7x10^{-5}$
100	Fermium-257	W, all compounds	$5x10^{1}$	$2x10^{-1}$	$1x10^{-10}$	$3x10^{-13}$	-	-
			($8x10^{1}$) Bone surf.	-	-	-	$1x10^{-6}$	$1x10^{-5}$
101	Mendelevium-257	W, all compounds	$9x10^{3}$	$1x10^{2}$	$4x10^{-8}$	$1x10^{-10}$	$1x10^{-4}$	$1x10^{-3}$
101	Mendelevium-258	W, all compounds	$7x10^{1}$	$3x10^{-1}$	$1x10^{-10}$	$5x10^{-13}$	$1x10^{-6}$	$1x10^{-5}$

Atomic No.	Radionuclide	Class	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (µCi)	Col. 2- Inhalation ALI (µCi)	Col. 3- DAC (µCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (µCi/ml)	Col. 2- Water (µCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (µCi/ml)
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life less than 2 hours	Submersion[1]	-	$2x10^{2}$	$1x10^{-7}$	$1x10^{-9}$	-	-
-	Any single radionuclide not listed above with decay mode other than alpha emission or spontaneous fission and with radioactive half-life greater than 2 hours	. . . . .	-	$2x10^{-1}$	$1x10^{-10}$	$1x10^{-12}$	$1x10^{-8}$	$1x10^{-7}$
-	Any single radionuclide not listed above which decays by alpha emission or spontaneous fission, or any mixture for which either the identity or the concentration of any radionuclide in the mixture is not known.	. . . . .	-	$4x10^{-4}$	$2x10^{-13}$	$1x10^{-15}$	$2x10^{-9}$	$2x10^{-8}$

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[1]"Submersion" means that values given are for submersion in a semispherical infinite cloud of airborne material.

[2]These radionuclides have radiological half-lives less than 2 hours. The total dose equivalent received during operations with these radionuclides might include a significant contribution from external exposure. The DAC values for all radionuclides other than those designated Class "Submersion", are based upon the committed effective dose equivalent due to the intake of the radionuclide into the body and do NOT include potentially significant contributions to dose equivalent from external exposures. The licensee may substitute 1×10^{-7} µCi/ml for the listed DAC to account for the submersion dose prospectively, but should use individual monitoring devices or other radiation measuring instruments that measure external exposure to demonstrate compliance with the limits. (See § 20.203.)

[3]For soluble mixtures of U-238, U-234 and U-235 in air chemical toxicity may be the limiting factor. If the percent by weight (enrichment) of U-235 is not greater than 5, the concentration value for a 40-hour workweek is 0.2 milligrams uranium per cubic meter of air average. For any enrichment, the product of the average concentration and time of exposure during a 40-hour workweek shall not exceed $8x10^{-3}$ SA µCi-hr/ml, where SA is the specific activity of the uranium inhaled. The specific activity for natural uranium is $6.77x10^{-7}$ curies per gram U. The specific activity for other mixtures of U-238, U-235 and U-234, if not known, shall be: $SA=3.6x10^{-7}$ curies/gram U U-depleted. SA=(0.4+ [illegible] E+0.00[illegible] E^2) [illegible], where E > 0.72. E is the percentage by weight of U-235, expressed as percent.

Enclosure

NOTE:

1. If the identity of each radionuclide in a mixture is known but the concentration of one or more of the radionuclides in the mixture is not known, the DAC for the mixture shall be the most restrictive DAC of any radionuclide in the mixture.

2. If the identity of each radionuclide in the mixture is not known, but it is known that certain radionuclides specified in this appendix are not present in the mixture, the inhalation ALI, DAC, and reference level and sewage concentrations for the mixture are the lowest values specified in this appendix for any radionuclide which is not known to be absent from the mixture; or

Radionuclide	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (µCi)	Col. 2- Inhalation ALI (µCi)	Col. 3- DAC (µCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (µCi/ml)	Col. 2- Water (µCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (µCi/ml)
If it is known that Ac-227-D is not present	-	$7x10^{-4}$	$3x10^{-13}$	-	-	-
If, in addition, it is known that Ac-227-W,Y, Th-229-W,Y, Th-230-W, Th-232-W,Y, Pa-231-W,Y, Np-237-W, Pu-238-W, Pu-239-W, Pu-240-W, Pu-242-W, Pu-244-W, Am-241-W, Am-242m-W, Am-243-W, Cm-245-W, Cm-246-W, Cm-247-W, Cm-248-W, Bk-247-W, Cf-249-W, and Cf-251-W are not present	-	$7x10^{-3}$	$3x10^{-12}$	-	-	-
If, in addition, it is known that Sm-146-W, Sm-147-W, Gd-148-D,W, Gd-152-D,W, Th-228-W,Y, Th-230-Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, Np-236-W, Pu-236-W,Y, Pu-238-Y, Pu-239-Y, Pu-240-Y, Pu-242-Y, Pu-244-Y, Cm-243-W, Cm-244-W, Cf-249-Y, Cf-250-W,Y, Cf-251-Y, Cf-252-W,Y, and Cf-254-W,Y are not present	-	$7x10^{-2}$	$3x10^{-11}$	-	-	-
If, in addition, it is known that Pb-210-D, Po-210-D,W, Ra-226-W, Ac-225-D,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, Pu-241-W,Y, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W and Md-258-W are not present	-	$7x10^{-1}$	$3x10^{-10}$	-	-	-
If, in addition, it is known that Si-32-Y, Ti-44-Y, Sr-90-Y, Zr-93-D, Cd-113m-D, Cd-113-D, In-115-D,W, La-138-D, Lu-176-W, Hf-178m-D,W,						

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Radionuclide	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
Hf-182-D,W, Bi-210m-D,W, Ra-223-W, Ra-224-W, Ra-225-W, Ra-228-W, Ac-225-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present	-	7×10^{0}	3×10^{-9}	-	-	-
If it is known that Ac-227-D,W,Y, Th-229-W,Y, Th-232-W,Y, Pa-231-W,Y and Cm-248-W are not present	-	-	-	1×10^{-14}	-	-
If, in addition, it is known that Sm-146-W, Gd-148-D,W, Gd-152-D, Th-228-W,Y, Th-230-W,Y, U-232-Y, U-233-Y, U-234-Y, U-235-Y, U-236-Y, U-238-Y, U-Nat-Y, Np-236-W, Np-237-W, Pu-236-W,Y, Pu-238-W,Y, Pu-239-W,Y, Pu-240-W,Y, Pu-242-W,Y, Pu-244-W,Y, Am-241-W, Am-242m-W, Am-243-W, Cm-243-W, Cm-244-W, Cm-245-W, Cm-246-W, Cm-247-W, Bk-247-W, Cf-249-W,Y, Cf-250-W,Y, Cf-251-W,Y, Cf-252-W,Y, and Cf-254-W,Y are not present	-	-	-	1×10^{-13}	-	-
If, in addition, it is known that Sm-147-W, Gd-152-W, Pb-210-D, Bi-210m-W, Po-210-D,W, Ra-223-W, Ra-225-W, Ra-226-W, Ac-225-D,W,Y, Th-227-W,Y, U-230-D,W,Y, U-232-D,W, U-Nat-W, Pu-241-W, Cm-240-W, Cm-242-W, Cf-248-W,Y, Es-254-W, Fm-257-W, and Md-258-W are not present	-	-	-	1×10^{-12}	-	-
If, in addition, it is known that Si-32-Y, Ti-44-Y, Fe-60-D, Sr-90-Y, Cd-113m-D, Cd-113-D, In-115-D,W, La-139-D, Hf-178m-D,W, Hf-182-D, Bi-210m-D, Ra-224-W, Ra-228-W, Ac-226-D,W,Y, Pa-230-W,Y, U-233-D,W, U-234-D,W, U-235-D,W, U-236-D,W, U-238-D,W, U-Nat-D, Pu-241-Y, Bk-249-W, Cf-253-W,Y, and Es-253-W are not present	-	-	-	1×10^{-11}	-	-

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Radionuclide	Table 1 OCCUPATIONAL VALUES Col. 1- Oral Ingestion ALI (μCi)	Col. 2- Inhalation ALI (μCi)	Col. 3- DAC (μCi/ml)	Table 2 REFERENCE LEVEL CONCENTRATIONS Col. 1- Air (μCi/ml)	Col. 2- Water (μCi/ml)	Table 3 RELEASE TO SEWERAGE Monthly Average (μCi/ml)
If it is known that Ac-227, Pa-231, Np-236 (1.15×10^{5}y), Np-237 and Cm-248 are not present	-	-	-	-	1×10^{-8}	1×10^{-7}
If, in addition, it is known that Pb-210, Po-210, Ra-226, Ra-228, Th-229, Th-232, U-230, U-232, Am-241, Am-242m, Am-243, Cm-243, Cm-244, Cm-245, Cm-246, Cm-247, Bk-247, Cf-249, Cf-250, Cf-251, and Cf-254 are not present	-	-	-	-	1×10^{-7}	1×10^{-6}
If, in addition, it is known that Fe-60, Sr-90, Cd-113m, Cd-113, Cd-115, In-115, I-129, Cs-134, Sm-146, Sm-147, Gd-148, Gd-152, Hg-194 (organic), Bi-210, Ra-223, Ra-224, Ra-225, Ac-225, Th-228, Th-230, U-233, U-234, U-235, U-236, U-238, U-Nat, Pu-236, Pu-238, Pu-239, Pu-240, Pu-242, Pu-244, Cf-248, Cf-252, Es-254, and Md-258 are not present	-	-	-	-	1×10^{-6}	1×10^{-5}

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3 If a mixture of radionuclides consists of uranium and its daughters in ore dust (10 μm AMAD particle distribution assumed) prior to chemical separation of the uranium from the ore, the following values may be used for the DAC of the mixture: 6×10^{-11} μCi of gross alpha activity from uranium-238, uranium-234, thorium-230, and radium-226 per milliliter of air; 3×10^{-11} μCi of natural uranium per milliliter of air; or 45 micrograms of natural uranium per cubic meter of air.

4. If the identity and concentration of each radionuclide in a mixture are known, the limiting values should be derived as follows: Determine, for each radionuclide in the mixture, the ratio between the concentration present in the mixture and the concentration otherwise established in Appendix B for the specific radionuclide when not in a mixture. The sum of such ratios for all of the radionuclides in the mixture may not exceed "1" (i.e., "unity").

Example: If radionuclides "A," "B," and "C" are present in concentrations C_A, C_B, and C_C, and if the applicable DACs are DAC_A, DAC_B, and DAC_C, respectively, then the concentrations shall be limited so that the following relationship exists:

$$\frac{C_A}{DAC_A} + \frac{C_B}{DAC_B} + \frac{C_C}{DAC_C} \leq 1$$

Enclosure 1

APPENDIX C

QUANTITIES* REQUIRING LABELING

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Hydrogen-3	1,000	Chromium-48	1,000
Beryllium-7	1,000	Chromium-49	1,000
Beryllium-10	1	Chromium-51	1,000
Carbon-11	1,000	Manganese-51	1,000
Carbon-14	100	Manganese-52m	1,000
Fluorine-18	1,000	Manganese-52	100
Sodium-22	10	Manganese-53	1,000
Sodium-24	100	Manganese-54	100
Magnesium-28	100	Manganese-56	1,000
Aluminum-26	10	Iron-52	100
Silicon-31	1,000	Iron-55	100
Silicon-32	1	Iron-59	10
Phosphorus-32	10	Iron-60	1
Phosphorus-33	100	Cobalt-55	100
Sulfur-35	100	Cobalt-56	10
Chlorine-36	10	Cobalt-57	100
Chlorine-38	1,000	Cobalt-58m	1,000
Chlorine-39	1,000	Cobalt-58	100
Argon-39	1,000	Cobalt-60m	1,000
Argon-41	1,000	Cobalt-60	1
Potassium-40	10	Cobalt-61	1,000
Potassium-42	1,000	Cobalt-62m	1,000
Potassium-43	1,000	Nickel-56	100
Potassium-44	1,000	Nickel-57	100
Potassium-45	1,000	Nickel-59	100
Calcium-41	100	Nickel-63	100
Calcium-45	100	Nickel-65	1,000
Calcium-47	100	Nickel-66	10
Scandium-43	1,000	Copper-60	1,000
Scandium-44m	100	Copper-61	1,000
Scandium-44	100	Copper-64	1,000
Scandium-46	10	Copper-67	1,000
Scandium-47	100	Zinc-62	100
Scandium-48	100	Zinc-63	1,000
Scandium-49	1,000	Zinc-65	10
Titanium-44	1	Zinc-69m	100
Titanium-45	1,000	Zinc-69	1,000
Vanadium-47	1,000	Zinc-71m	1,000
Vanadium-48	100	Zinc-72	100
Vanadium-49	1,000	Gallium-65	1,000

*The quantities listed above were derived by taking 1/10th of the most restrictive ALI listed in Table 1, Columns 1 and 2 of Appendix B of this part, rounding to the nearest factor of ten, and arbitrarily constraining the values listed between 0.001 and 1,000 μCi.

APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Gallium-66	100	Krypton-85	1,000
Gallium-67	1,000	Krypton-87	1,000
Gallium-68	1,000	Krypton-88	1,000
Gallium-70	1,000	Rubidium-79	1,000
Gallium-72	100	Rubidium-81m	1,000
Gallium-73	1,000	Rubidium-81	1,000
Germanium-66	1,000	Rubidium-82m	1,000
Germanium-67	1,000	Rubidium-83	100
Germanium-68	10	Rubidium-84	100
Germanium-69	1,000	Rubidium-86	100
Germanium-71	1,000	Rubidium-87	100
Germanium-75	1,000	Rubidium-88	1,000
Germanium-77	1,000	Rubidium-89	1,000
Germanium-78	1,000	Strontium-80	100
Arsenic-69	1,000	Strontium-81	1,000
Arsenic-70	1,000	Strontium-83	100
Arsenic-71	100	Strontium-85m	1,000
Arsenic-72	100	Strontium-85	100
Arsenic-73	100	Strontium-87m	1,000
Arsenic-74	100	Strontium-89	10
Arsenic-76	100	Strontium-90	0.1
Arsenic-77	100	Strontium-91	100
Arsenic-78	1,000	Strontium-92	100
Selenium-70	1,000	Yttrium-86m	1,000
Selenium-73m	1,000	Yttrium-86	100
Selenium-73	100	Yttrium-87	100
Selenium-75	100	Yttrium-88	10
Selenium-79	100	Yttrium-90m	1,000
Selenium-81m	1,000	Yttrium-90	10
Selenium-81	1,000	Yttrium-91m	1,000
Selenium-83	1,000	Yttrium-91	10
Bromine-74m	1,000	Yttrium-92	100
Bromine-74	1,000	Yttrium-93	100
Bromine-75	1,000	Yttrium-94	1,000
Bromine-76	100	Yttrium-95	1,000
Bromine-77	1,000	Zirconium-86	100
Bromine-80m	1,000	Zirconium-88	10
Bromine-80	1,000	Zirconium-89	100
Bromine-82	100	Zirconium-93	1
Bromine-83	1,000	Zirconium-95	10
Bromine-84	1,000	Zirconium-97	100
Krypton-74	1,000	Niobium-88	1,000
Krypton-76	1,000	Niobium-89	
Krypton-77	1,000	(66 min)	1,000
Krypton-79	1,000	Niobium-89	
Krypton-81	1,000	(122 min)	1,000
Krypton-83m	1,000	Niobium-90	100
Krypton-85m	1,000	Niobium-93m	10

APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Niobium-94	1	Silver-104	1,000
Niobium-95m	100	Silver-105	100
Niobium-95	100	Silver-106m	100
Niobium-96	100	Silver-106	1,000
Niobium-97	1,000	Silver-108m	1
Niobium-98	1,000	Silver-110m	10
Molybdenum-90	100	Silver-111	100
Molybdenum-93m	100	Silver-112	100
Molydbenum-93	10	Silver-115	1,000
Molybdenum-99	100	Cadmium-104	1,000
Molybdenum-101	1,000	Cadmium-107	1,000
Technetium-93m	1,000	Cadmium-109	1
Technetium-93	1,000	Cadmium-113m	0.1
Technetium-94m	1,000	Cadmium-113	0.1
Technetium-94	1,000	Cadmium-115m	10
Technetium-96m	1,000	Cadmium-115	100
Technetium-96	100	Cadmium-117m	1,000
Technetium-97m	100	Cadmium-117	1,000
Technetium-97	1,000	Indium-109	1,000
Technetium-98	10	Indium-110m (69.1m)	1,000
Technetium-99m	1,000	Indium-110m (4.9h)	1,000
Technetium-99	100	Indium-111	100
Technetium-101	1,000	Indium-112	1,000
Technetium-104	1,000	Indium-113m	1,000
Ruthenium-94	1,000	Indium-114m	10
Ruthenium-97	1,000	Indium-115m	1,000
Ruthenium-103	100	Indium-115	0.1
Ruthenium-105	1,000	Indium-116m	1,000
Ruthenium-106	1	Indium-117m	1,000
Rhodium-99m	1,000	Indium-117	1,000
Rhodium-99	100	Indium-119m	1,000
Rhodium-100	100	Tin-110	100
Rhodium-101m	1,000	Tin-111	1,000
Rhodium-101	10	Tin 113	100
Rhodium-102m	10	Tin-117m	100
Rhodium-102	10	Tin-119m	100
Rhodium-103m	1,000	Tin-121m	100
Rhodium-105	100	Tin-121	1,000
Rhodium-106m	1,000	Tin-123m	1,000
Rhodium-107	1,000	Tin-123	10
Palladium-100	100	Tin-125	10
Palladium-101	1,000	Tin-126	10
Palladium-103	100	Tin-127	1,000
Palladium-107	10	Tin-128	1,000
Palladium-109	100	Antimony-115	1,000
Silver-102	1,000	Antimony-116m	1,000
Silver-103	1,000		
Silver-104m	1,000		

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APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Antimony-116	1,000	Iodine-131	1
Antimony-117	1,000	Iodine-132m	100
Antimony-118m	1,000	Iodine-132	100
Antimony-119	1,000	Iodine-133	10
Antimony-120		Iodine-134	1,000
(16m)	1,000	Iodine-135	100
Antimony-120		Xenon-120	1,000
(5.76d)	100	Xenon-121	1,000
Antimony-122	100	Xenon-122	1,000
Antimony-124m	1,000	Xenon-123	1,000
Antimony-124	10	Xenon-125	1,000
Antimony-125	100	Xenon-127	1,000
Antimony-126m	1,000	Xenon-129m	1,000
Antimony-126	100	Xenon-131m	1,000
Antimony-127	100	Xenon-133m	1,000
Antimony-128		Xenon-133	1,000
(10.4m)	1,000	Xenon-135m	1,000
Antimony-128		Xenon-135	1,000
(9.01h)	100	Xenon-138	1,000
Antimony-129	100	Cesium-125	1,000
Antimony-130	1,000	Cesium-127	1,000
Antimony-131	1,000	Cesium-129	1,000
Tellurium-116	1,000	Cesium-130	1,000
Tellurium-121m	10	Cesium-131	1,000
Tellurium-121	100	Cesium-132	100
Tellurium-123m	10	Cesium-134m	1,000
Tellurium-123	10	Cesium-134	10
Tellurium-125m	10	Cesium-135m	1,000
Tellurium-127m	10	Cesium-135	100
Tellurium-127	1,000	Cesium-136	10
Tellurium-129m	10	Cesium-137	10
Tellurium-129	1,000	Cesium-138	1,000
Tellurium-131m	10	Barium-126	1,000
Tellurium-131	100	Barium-128	100
Tellurium-132	10	Barium-131m	1,000
Tellurium-133m	100	Barium-131	100
Tellurium-133	1,000	Barium-133m	100
Tellurium-134	1,000	Barium-133	100
Iodine-120m	1,000	Barium-135m	100
Iodine-120	100	Barium-139	1,000
Iodine-121	1,000	Barium-140	100
Iodine-123	100	Barium-141	1,000
Iodine-124	10	Barium-142	1,000
Iodine-125	1	Lanthanum-131	1,000
Iodine-126	1	Lanthanum-132	100
Iodine-128	1,000	Lanthanum-135	1,000
Iodine-129	1	Lanthanum-137	10
Iodine-130	10	Lanthanum-138	1

APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Lanthanum-140	100	Samarium-153	100
Lanthanum-141	100	Samarium-155	1,000
Lanthanum-142	1,000	Samarium-156	1,000
Lanthanum-143	1,000	Europium-145	100
Cerium-134	100	Europium-146	100
Cerium-135	100	Europium-147	100
Cerium-137m	100	Europium-148	10
Cerium-137	1,000	Europium-149	100
Cerium-139	100	Europium-150	
Cerium-141	100	(12.62h)	100
Cerium-143	100	Europium-150	
Cerium-144	1	(34.2y)	1
Praseodymium-136	1,000	Europium-152m	100
Praseodymium-137	1,000	Europium-152	1
Praseodymium-138m	1,000	Europium-154	1
Praseodymium-139	1,000	Europium-155	10
Praseodymium-142m	1,000	Europium-156	100
Praseodymium-142	100	Europium-157	100
Praseodymium-143	100	Europium-158	1,000
Praseodymium-144	1,000	Gadolinium-145	1,000
Praseodymium-145	100	Gadolinium-146	10
Praseodymium-147	1,000	Gadolinium-147	100
Neodymium-136	1,000	Gadolinium-148	0.001
Neodymium-138	100	Gadolinium-149	100
Neodymium-139m	1,000	Gadolinium-151	10
Neodymium-139	1,000	Gadolinium-152	0.001
Neodymium-141	1,000	Gadolinium-153	10
Neodymium-147	100	Gadolinium-159	100
Neodymium-149	1,000	Terbium-147	1,000
Neodymium-151	1,000	Terbium-149	100
Promethium-141	1,000	Terbium-150	1,000
Promethium-143	100	Terbium-151	100
Promethium-144	10	Terbium-153	1,000
Promethium-145	10	Terbium-154	100
Promethium-146	1	Terbium-155	1,000
Promethium-147	10	Terbium-156m	
Promethium-148m	10	(5.0h)	1,000
Promethium-148	10	Terbium-156m	
Promethium-149	100	(24.4h)	1,000
Promethium-150	1,000	Terbium-156	100
Promethium-151	100	Terbium-157	10
Samarium-141m	1,000	Terbium-158	1
Samarium-141	1,000	Terbium-160	10
Samarium-142	1,000	Terbium-161	100
Samarium-145	100	Dysprosium-155	1,000
Samarium-146	1	Dysprosium-157	1,000
Samarium-147	0.001	Dysprosium-159	100
Samarium-151	10	Dysprosium-165	1,000

APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Dysprosium-166	100	Hafnium-173	1,000
Holmium-155	1,000	Hafnium-175	100
Holmium-157	1,000	Hafnium-177m	1,000
Holmium-159	1,000	Hafnium-178m	0.1
Holmium-161	1,000	Hafnium-179m	10
Holmium-162m	1,000	Hafnium-180m	1,000
Holmium-162	1,000	Hafnium-181	10
Holmium-164m	1,000	Hafnium-182m	1,000
Holmium-164	1,000	Hafnium-182	0.1
Holmium-166m	1	Hafnium-183	1,000
Holmium-166	100	Hafnium-184	100
Holmium-167	1,000	Tantalum-172	1,000
Erbium-161	1,000	Tantalum-173	1,000
Erbium-165	1,000	Tantalum-174	1,000
Erbium-169	100	Tantalum-175	1,000
Erbium-171	100	Tantalum-176	100
Erbium-172	100	Tantalum-177	1,000
Thulium-162	1,000	Tantalum-178	1,000
Thulium-166	100	Tantalum-179	100
Thulium-167	100	Tantalum-180m	1,000
Thulium-170	10	Tantalum-180	1
Thulium-171	10	Tantalum-182m	1,000
Thulium-172	100	Tantalum-182	10
Thulium-173	100	Tantalum-183	100
Thulium-175	1,000	Tantalum-184	100
Ytterbium-162	1,000	Tantalum-185	1,000
Ytterbium-166	100	Tantalum-186	1,000
Ytterbium-167	1,000	Tungsten-176	1,000
Ytterbium-169	100	Tungsten-177	1,000
Ytterbium-175	100	Tungsten-178	1,000
Ytterbium-177	1,000	Tungsten-179	1,000
Ytterbium-178	1,000	Tungsten-181	1,000
Lutetium-169	100	Tungsten-185	100
Lutetium-170	100	Tungsten-187	100
Lutetium-171	100	Tungsten-188	10
Lutetium-172	100	Rhenium-177	1,000
Lutetium-173	10	Rhenium-178	1,000
Lutetium-174m	10	Rhenium-181	1,000
Lutetium-174	10	Rhenium-182	
Lutetium-176m	1,000	(12.7h)	1,000
Lutetium-176	1	Rhenium-182	
Lutetium-177m	10	(64.0h)	100
Lutetium-177	100	Rhenium-184m	10
Lutetium-178m	1,000	Rhenium-184	100
Lutetium-178	1,000	Rhenium-186m	10
Lutetium-179	1,000	Rhenium-186	100
Hafnium-170	100	Rhenium-187	1,000
Hafnium-172	1	Rhenium-188m	1,000

APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Rhenium-188	100	Mercury-194	1
Rhenium-189	100	Mercury-195m	100
Osmium-180	1,000	Mercury-195	1,000
Osmium-181	1,000	Mercury-197m	100
Osmium-182	100	Mercury-197	1,000
Osmium-185	100	Mercury-199m	1,000
Osmium-189m	1,000	Mercury-203	100
Osmium-191m	1,000	Thallium-194m	1,000
Osmium-191	100	Thallium-194	1,000
Osmium-193	100	Thallium-195	1,000
Osmium-194	1	Thallium-197	1,000
Iridium-182	1,000	Thallium-198m	1,000
Iridium-184	1,000	Thallium-198	1,000
Iridium-185	1,000	Thallium-199	1,000
Iridium-186	100	Thallium-200	1,000
Iridium-187	1,000	Thallium-201	1,000
Iridium-188	100	Thallium-202	100
Iridium-189	100	Thallium-204	100
Iridium-190m	1,000	Lead-195m	1,000
Iridium-190	100	Lead-198	1,000
Iridium-192m	1	Lead-199	1,000
Iridium-192	10	Lead-200	100
Iridium-194m	10	Lead-201	1,000
Iridium-194	100	Lead-202m	1,000
Iridium-195m	1,000	Lead-202	10
Iridium-195	1,000	Lead-203	1,000
Platinum-186	1,000	Lead-205	100
Platinum-188	100	Lead-209	1,000
Platinum-189	1,000	Lead-210	0.01
Platinum-191	100	Lead-211	100
Platinum-193m	100	Lead-212	1
Platinum-193	1,000	Lead-214	100
Platinum-195m	100	Bismuth-200	1,000
Platinum-197m	1,000	Bismuth-201	1,000
Platinum-197	100	Bismuth-202	1,000
Platinum-199	1,000	Bismuth-203	100
Platinum-200	100	Bismuth-205	100
Gold-193	1,000	Bismuth-206	100
Gold-194	100	Bismuth-207	10
Gold-195	10	Bismuth-210m	0.1
Gold-198m	100	Bismuth-210	1
Gold-198	100	Bismuth-212	10
Gold-199	100	Bismuth-213	10
Gold-200m	100	Bismuth-214	100
Gold-200	1,000	Polonium-203	1,000
Gold-201	1,000	Polonium-205	1,000
Mercury-193m	100	Polonium-207	1,000
Mercury-193	1,000	Polonium-210	0.1

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APPENDIX C (continued)

Radionuclide	Quantity (μCi)	Radionuclide	Quantity (μCi)
Astatine-207	100	Neptunium-234	100
Astatine-211	10	Neptunium-235	100
Radon-220	1	Neptunium-236	
Radon-222	1	(1.15×10^5y)	0.001
Francium-222	100	Neptunium-236	
Francium-223	100	(22.5h)	1
Radium-223	0.1	Neptunium-237	0.001
Radium-224	0.1	Neptunium-238	10
Radium-225	0.1	Neptunium-239	100
Radium-226	0.1	Neptunium-240	1,000
Radium-227	1,000	Plutonium-234	10
Radium-228	0.1	Plutonium-235	1,000
Actinium-224	1	Plutonium-236	0.001
Actinium-225	0.01	Plutonium-237	100
Actinium-226	0.1	Plutonium-238	0.001
Actinium-227	0.001	Plutonium-239	0.001
Actinium-228	1	Plutonium-240	0.001
Thorium-226	10	Plutonium-241	0.01
Thorium-227	0.01	Plutonium-242	0.001
Thorium-228	0.001	Plutonium-243	1,000
Thorium-229	0.001	Plutonium-244	0.001
Thorium-230	0.001	Plutonium-245	100
Thorium-231	100	Americium-237	1,000
Thorium-232	0.001	Americium-238	100
Thorium-234	10	Americium-239	1,000
Thorium-natural[1]	0.001	Americium-240	100
Protactinium-227	10	Americium-241	0.001
Protactinium-228	1	Americium-242m	0.001
Protactinium-230	0.1	Americium-242	10
Protactinium-231	0.001	Americium-243	0.001
Protactinium-232	1	Americium-244m	100
Protactinium-233	100	Americium-244	10
Protactinium-234	100	Americium-245	1,000
Uranium-230	0.01	Americium-246m	1,000
Uranium-231	100	Americium-246	1,000
Uranium-232	0.001	Curium-238	100
Uranium-233	0.001	Curium-240	0.1
Uranium-234	0.001	Curium-241	1
Uranium-235	0.001	Curium-242	0.01
Uranium-236	0.001	Curium-243	0.001
Uranium-237	100	Curium-244	0.001
Uranium-238	0.001	Curium-245	0.001
Uranium-239	1,000	Curium-246	0.001
Uranium-240	100	Curium-247	0.001
Uranium-natural[2]	0.001	Curium-248	0.001
Neptunium-232	100	Curium-249	1,000
Neptunium-233	1,000	Berkelium-245	100

Radionuclide	Quant
Berkelium-246	100
Berkelium-247	0
Berkelium-249	0
Berkelium-250	10
Californium-244	100
Californium-246	1
Californium-248	0
Californium-249	0
Californium-250	0
Californium-251	0
Californium-252	0
Californium-253	0
Californium-254	0
Any alpha emitting radionuclide not listed above or mixtures of alpha emitters of unknown composition	0

[1]Based on alpha disintegr
products.

[2]Based on alpha disintegr

NOTE: For purposes of
there is involv
the limit for t
mine, for each
the quantity pr
established for
The sum of such
may not exceed

[7590-01]

APPENDIX C (continued)

antity (μCi)	Radionuclide	Quantity (μCi)
100	Einsteinium-250	100
0.001	Einsteinium-251	100
0.1	Einsteinium-253	0.1
10	Einsteinium-254m	1
100	Einsteinium-254	0.01
1	Fermium-252	1
0.01	Fermium-253	1
0.001	Fermium-254	10
0.001	Fermium-255	1
0.001	Fermium-257	0.01
0.001	Mendelevium-257	10
0.1	Mendelevium-258	0.01
0.001		
	Any radionuclide other than alpha emitting radionuclides not listed above, or mixtures of beta emitters of unknown	
0.001	composition	0.01

egration rate of Th-232, Th-230 and their daughter

egration rate of U-238, U-234 and U-235.

of §§ 20.902(e), 20.904(c), and 20.1201(a) where
olved a combination of radionuclides in known amounts,
r the combination should be derived as follows: deter-
ch radionuclide in the combination, the ratio between
present in the combination and the limit otherwise
for the specific radionuclide when not in combination.
uch ratios for all the radionuclides in the combination
ed "1" (i.e., "unity").

UNITED STATES NUCLEAR

Region 1: Connecticut, Delaware, District of Columbia, Maine, Maryland, Massachusetts, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, and Vermont.	U K
Region II: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, Puerto Rico, South Carolina, Tennessee, Virginia, Virgin Islands, and West Virginia.	U S A
Region III: Illinois, Indiana, Iowa, Michigan, Minnesota, Missouri, Ohio, and Wisconsin.	U G
Region IV: Arkansas, Colorado, Idaho, Kansas, Louisiana, Montana, Nebraska, New Mexico, North Dakota, Oklahoma, South Dakota, Texas, Utah, and Wyoming.	U S A
Region IV: Field Office	U U 7 P D
Region V: Alaska, Arizona, California, Hawaii, Nevada, Oregon, Washington, and U.S. territories and possessions in the Pacific.	U S W

APPENDIX D

AR REGULATORY COMMISSION REGIONAL OFFICES

Address	Telephone (24 hours a day)
USNRC, 631 Park Avenue King of Prussia, PA 19406	(215)337-5000, (FTS) 488-1000.
USNRC, 101 Marietta Street Suite 2900 Atlanta, GA 30303	(404)221-4503, (FTS) 242-4503.
USNRC, 799 Roosevelt Road Glen Ellyn, IL 60137	(312)790-5500, (FTS) 388-5500.
USNRC, 611 Ryan Plaza Drive Suite 1000 Arlington, TX 76011	(817)860-8100, (FTS) 728-8100.
USNRC, Region IV Uranium Recovery Field Office 730 Simms Street, Suite 100A P.O. Box 25325 Denver, CO 80225	(303)234-7232, (FTS) 234-7232.
USNRC, 1450 Maria Lane Suite 210 Walnut Creek, CA 94596	(415)943-3700, (FTS) 463-3700.

APPENDIX E

MATHEMATICAL EXPRESSIONS FOR DEMONSTRATING COMPLIANCE WITH SELECTED DOSE LIMITS AND REFERENCE LEVELS

I. REFERENCE FOR SUBPART C - OCCUPATIONAL DOSE LIMITS AND REFERENCE LEVELS

A. Reference for § 20.201 Occupational dose limits for adults.

(1) The annual limit is the more limiting of--

(i) The sum of the (external) deep dose equivalent to the whole body and the (internal) committed effective dose equivalent being equal to 5 rems. Expressed mathematically:

$$H_d + \Sigma_T w_T H_{c,T} = 5 \text{ (rems)}$$

or

$$\frac{H_d}{5 \text{ (rems)}} + \frac{\Sigma_T w_T H_{c,T}}{5 \text{ (rems)}} = 1$$

where:

H_d is the deep dose equivalent (rems) for the year (Dose equivalents to the extremities, the skin, and the lens of the eye are not considered in computing the whole body dose equivalent);

$w_T H_{c,T}$ is the committed effective dose equivalent for an organ or tissue, T, from radionuclides taken into the body during the year;

w_T is the weighting factor which is the proportion of the risk of stochastic effects resulting from irradiation of tissue, T, to the total risk of stochastic effects when the whole body is irradiated uniformly;

$H_{c,T}$ is the committed dose equivalent for a tissue, T, over a specified time interval; and

Σ_T is the sum of the committed effective dose equivalent for all organs or tissues which receive a significant dose relative to the total dose to all organs or tissues; or

(ii) The sum of the deep dose equivalent and the committed dose equivalent being equal to 50 rems to an organ or tissue other than the lens of the eye. Expressed mathematically:

$$H_d + H_{c,T} = 50 \text{ (rems)}$$

B. Reference for § 20.202 Compliance with requirements for summation of external and internal doses.

(1) Intake by Inhalation.

If the only intake of radionuclides is by inhalation, the annual limit is not exceeded--

(i) If the sum of the fraction of the external deep dose equivalent limit and the sum of the fractions of the ALI by inhalation of each radionuclide during the year do not exceed unity. Expressed mathematically:

$$\frac{H_d}{5 \text{ (rems)}} + \Sigma_j \frac{I_{i,j}}{(ALI)_{i,j}} \leq 1$$

where:

H_d is the deep dose equivalent (rems) for the year;

$I_{i,j}$ is the intake of radionuclide j during the year by inhalation, i;

$(ALI)_{i,j}$ is the annual limit of intake of radionuclide j by inhalation, i; and

Σ_j is the summation of the ratios for all radionuclides included in the intake.

or

(ii) If the sum of the fraction of the deep dose equivalent limit and the sum of the fractions of the derived air concentration (DAC) of each radionuclide inhaled during the year do not exceed unity. Expressed mathematically:

$$\frac{H_d}{5\ (\text{rems})} + \Sigma_j \frac{AC_j \times t}{(DAC)_j \times 2000\ (\text{hours})} \leq 1$$

where:

AC_j is the average air concentration of radionuclide j over the duration of exposure during the year;

t is the duration of exposure (hours) during the year; and

$(DAC)_j$ is the derived air concentration for radionuclide j.

or

(iii) If the sum of the fraction of the deep dose equivalent limit and the sum of the committed effective dose equivalents to all significantly irradiated[1] organs or tissues, T, calculated from bioassay data and using appropriate biological models, expressed as a fraction of the annual dose limit, does not exceed unity. Expressed mathematically:

$$\frac{H_d}{5\ (\text{rems})} + \Sigma_j \Sigma_T \frac{w_T H_{c,T}}{5\ (\text{rems})} \leq 1$$

[1]An organ or tissue is "significantly irradiated" if, for that organ or tissue, the weighted value per unit intake is greater than 10% of the maximum weighted value of $H_{c,T}$ per unit intake in any organ or tissue.

(2) Intake by oral ingestion.

If the occupationally exposed individuals also receive substantial intakes of radionuclides by oral ingestion, an additional term shall be added to the left side of the inequalities in paragraph B(1) of this reference. Expressed mathematically:

$$\Sigma_j \frac{I_{o,j}}{(ALI)_{o,j}}$$

where:

$I_{o,j}$ is the amount of radionuclide j taken into the body by oral ingestion, o, during the year; and

$(ALI)_{o,j}$ is the annual limit of oral ingestion of radionuclide j.

II. REFERENCE FOR SUBPART D - RADIATION DOSE LIMITS AND REFERENCE LEVELS FOR INDIVIDUAL MEMBERS OF THE PUBLIC

A. Reference for § 20.301 Dose limits for individual members of the public.

(a) The annual dose limit for individual members of the public from all known sources is not exceeded if the inequalities in paragraph I.B(1) and (2) of this appendix, adjusted for the contributions to intake from water and food contaminated as a result of releases in effluents, do not exceed 1/10.

(b) If the exposed population includes children, the ALIs, which were derived for adults, shall be adjusted for age-specific transfer factors. Expressed mathematically:

$$\Sigma_\ell \left\{ \frac{H_d}{5\ (\text{rems})} + \Sigma_j \left[\frac{I_{i,j}}{C_1\ (ALI)_{i,j}} + \Sigma_k \frac{I_{o,j,k}}{C_2\ (ALI)_{j,k}} \right] \right\} \leq \frac{1}{10}$$

where:

Σ_ℓ indicates that all sources, ℓ, of exposure except natural background and medical treatment are evaluated and summed;

Σ_k indicates that the evaluations are made for each water and food pathway, k, and summed;

$I_{o,j,k}$ is the annual intake of radionuclide j by oral ingestion, o, through pathway k;

$(ALI)_{o,j,k}$ is the annual limit of intake of radionuclide j by oral ingestion for adults;

C_1, C_2 are age-specific transfer factors used to adjust the annual limits of intake, which were derived for adults, so that they are applicable to other age groups. Values of C_1 and C_2 are each tentatively assumed to equal 0.5 to account for minors; and

$\frac{1}{10}$ is the fraction of the annual occupational limit which is permitted for individual members of the public.

B. Reference for § 20.303 Reference level for the exposure of individual members of the public.

If a licensee demonstrates that the effective dose equivalent to the individual likely to be the highest exposed is within the 0.1 rem annual reference level, the licensee meets the 0.5 rem annual limit. The licensee may demonstrate operation within the 0.1 rem annual reference level if the sum of the fractions obtained by--

(a) Dividing the whole body annual deep dose equivalent, in units of rem, by the annual dose limit of 5 rems;

(b) Summing all of the fractional parts of the inhalation ALIs (or DACs) of all radionuclides inhaled during the year; and

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(c) Summing all of the fractional parts of the oral ingestion ALIs of all radionuclides taken into the body by oral ingestion during the year, does not exceed 1/50. If the exposed population includes children, both the ALIs for inhalation and the ALIs for oral ingestion, which were derived for adults, shall be adjusted for age-specific transfer factors. Expressed mathematically:

$$\frac{H_d}{5\ (\text{rems})} + \Sigma_j \left[\frac{I_{i,j}}{C_1(ALI)_{i,j}} + \Sigma_k \frac{I_{o,j,k}}{C_2(ALI)_{o,j,k}} \right] \leq \frac{1}{50}$$

or

$$\frac{H_d}{5\ (\text{rems})} + \Sigma_j \left[\frac{3(AC)_j}{C_1(DAC)_j} + \Sigma_k \frac{I_{o,j,k}}{C_2(ALI)_{o,j,k}} \right] \leq \frac{1}{50}$$

where:

3 is a factor which adjusts for the difference in exposure time and inhalation rate between workers and individuals in the public; $[2 \times 10^7\ (\text{ml/24 hours}) \div 1 \times 10^7\ (\text{ml/8 hours})] \times [7\ \text{days/wk} \div 5\ \text{days/wk}] \times [52\ (\text{wks/yr}) \div 50\ (\text{wks/yr})] = 2 \times \frac{7}{5} \times \frac{52}{50} \cong 3$; and

1/50 is the fraction of the annual occupational limit which is represented by the 0.1 rem annual reference level.

Appendix F—Requirements for Low Level Waste Transfer for Disposal at Land Disposal Facilities and Manifests

I. Manifest

The shipment manifest shall contain the name, address, and telephone number of the person generating the waste. The manifest shall also include the name, address, and telephone number or the name and EPA hazardous waste identification number of the person transporting the waste to the land disposal facility. The manifest must also indicate as completely as practicable: a physical description of the waste; the volume; radionuclide identity and quantity; the total radioactivity; and the principal chemical form. The solidification agent must be specified. Waste containing more than 0.1% chelating agents by weight must be identified and the weight percentage of the chelating agent estimated. Wastes classified as Class A, Class B, or Class C in § 61.55 of this chapter must be clearly identified as such in the manifest. The total quantity of the radionuclides H-3, C-14, Tc-99 and I-129 must be shown. The manifest required by this paragraph may be shipping papers used to meet Department of Transportation or Environmental Protection Agency regulations or requirements of the receiver, provided all the required information is included. Copies of manifests required by this section may be legible carbon copies or legible photocopies.

II. Certification

The waste generator shall include in the shipment manifest a certification that the transported materials are properly classified, described, packaged, marked, and labeled and are in proper condition for transportation according to the applicable regulations of the Department of Transportation and the Commission. An authorized representative of the waste generator shall sign and date the manifest.

III. Control and Tracking

A. Any generating licensee who transfers radioactive waste to a land disposal facility or a licensed waste collector shall comply with the requirements in paragraphs A.1 through 8 of this section. Any generating licensee who transfers waste to a licensed waste processor who treats or repackages waste shall comply with the requirements of paragraphs A.4 through 8 of this section. A licensee shall:

1. Prepare all wastes so that the waste is classified according to § 61.55 and meets the waste characteristics requirements in § 61.56 of this chapter;

2. Label each package of waste to identify whether it is Class A waste, Class B waste, or Class C waste, in accordance with § 61.55 of this chapter;

3. Conduct a quality control program to assure compliance with §§ 61.55 and 61.56 of this chapter; the program must include management evaluation of audits;

4. Prepare shipping manifests to meet the requirements of sections I and II of this appendix;

5. Forward a copy of the manifest to the intended recipient, at the time of shipment; or, deliver to a collector at the time the waste is collected, obtaining acknowledgement of receipt in the form of a signed copy of the manifest or equivalent documentation from the collector;

6. Include one copy of the manifest with the shipment;

7. Retain a copy of the manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by Parts 30, 40, and 70 of this chapter; and,

8. For any shipments or any part of a shipment for which acknowledgement of receipt has not been received within the times set forth in this section, conduct an investigation in accordance with paragraph E of this appendix.

B. Any waste collector licensee who handles only prepackaged waste shall:

1. Acknowledge receipt of the waste from the generator within one week of receipt by returning a signed copy of the manifest or equivalent documentation;

2. Prepare a new manifest to reflect consolidated shipments; the new manifest shall serve as a listing or index for the detailed generator manifests. Copies of the generator manifests shall be a part of the new manifest. The waste collector may prepare a new manifest without attaching the generator manifests, provided the new manifest contains for each package the information specified in section II of this appendix. The collector licensee shall certify that nothing has been done to the waste which would invalidate the generator's certification;

3. Forward a copy of the new manifest to the land disposal facility operator at the time of shipment;

4. Include the new manifest with the shipment to the disposal site;

5. Retain a copy of the manifest and documentation of acknowledgement of receipt as the record of transfer of licensed material as required by Parts 30, 40, and 70 of this chapter, and retain information from generator manifests until disposition is authorized by the Commission; and

6. For any shipments or any part of a shipment for which acknowledgement of receipt is not received within the times set forth in this section, conduct an investigation in accordance with paragraph E of this section.

C. Any licensed waste processor who treats or repackages wastes shall:

1. Acknowledge receipt of the waste from the generator within one week of receipt by returning a signed copy of the manifest or equivalent documentation;

2. Prepare a new manifest that meets the requirements of sections II and III of this appendix. Preparation of the new manifest reflects that the processor is responsible for the waste;

3. Prepare all wastes so that the waste is classified according to § 61.55 and meets the waste characteristics requirements in § 61.56 of this chapter;

4. Label each package of waste to identify whether it is Class A waste, Class B waste, or Class C waste, in accordance with §§ 61.55 and 61.57 of this chapter;

5. Conduct a quality control program to assure compliance with §§ 61.55 and 61.56 of this chapter. The program shall include management evaluation of audits;

6. Foward a copy of the new manifest to the disposal site operator or waste collector at the time of shipment, or deliver to a collector at the time the waste is collected, obtaining acknowledgement of receipt in the form of a signed copy of the manifest or equivalent documentation by the collector;

7. Include the new manifest with the shipment;

8. Retain copies of original manifests and new manifests and documentation of acknowledgement of receipt as the record of transfer of licensed material required by Parts 30, 40, and 70 of this chapter; and

9. For any shipment or part of a shipment for which acknowledgement is not received within the times set forth in this section, conduct an investigation in accordance with paragraph E of this section.

D. The land disposal facility operator shall:

1. Acknowledge receipt of the waste within one week of receipt by returning a signed copy of the manifest or equivalent documentation to the shipper. The shipper to be notified is the licensee who last possessed the waste and transferred the waste to the operator. The returned copy of the manifest or equivalent documentation shall indicate any discrepancies between materials listed on the manifest and materials received;

2. Maintain copies of all completed manifests or equivalent documentation until the Commission authorizes their disposition; and

3. Notify the shipper (i.e., the generator, the collector, or processor) and the Director of the nearest Commission Regional Office listed in Appendix D of this part when any shipment or part of a shipment has not arrived within 60 days after the advance manifest was received.

E. Any shipment or part of a shipment for which acknowledgement is not received within the times set forth in this section, must:

1. Be investigated by the shipper if the shipper has not received notification of receipt within 20 days after transfer; and

2. Be traced and reported. The investigation shall include tracing the shipment and filing a report with the nearest Commission Regional Office listed in Appendix D of this part. Each licensee who conducts a trace investigation shall file a written report with the appropriate NRC Regional office within 2 weeks of completion of the investigation.

The following amendments are also proposed to other parts of the regulations in this chapter.

PART 19—NOTICES, INSTRUCTIONS, AND REPORTS TO WORKERS; INSPECTIONS

2. The authority citation for Part 19 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

3. Section 19.3 is amended by revising paragraph (e) to read as follows:

§ 19.3 Definitions.

* * * * *

(e) "Restricted area" means an area, access to which is limited by the licensee for the purpose of protecting individuals against undue risks from exposure to radiation and radioactive materials. Restricted area does not include areas used as residential quarters, but separate rooms in a residential building may be set apart as a restricted area.

§ 19.13 [Amended]

4. In § 19.13(b) the reference to "§20.401(a) and (c)"is changed to read "§ 20.1106."

5. In § 19.13(d) the reference to "§ 20.405 or § 20.408" is changed to read "§§ 20.1202, 20.1203, 20.1204, or 20.1207."

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

6. The authority citation for Part 30 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

§ 30.51 [Amended]

7. In § 30.51(c)(4) the reference to "§ 20.401(c)" is changed to read "§ 20.1108."

PART 31—GENERAL DOMESTIC LICENSES FOR BYPRODUCT MATERIAL

8. The authority citation for Part 31 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

§ 31.5 [Amended]

9. In § 31.5(c)(10) the reference to "§§ 20.402 and 20.403" is changed to read "§§ 20.1201 and 20.1202."

§ 31.7 [Amended]

10. In § 31.7(b) the reference to §§ 20.402 and 20.403" is changed to read "§§ 20.1201 and 20.1202."

§ 31.10 [Amended]

11. In § 31.10(b)(1) the reference to "§ 20.301" is changed to read "§ 20.1001."

12. In § 31.10(b)(3) the reference to "§§ 20.301, 20.402, and 20.403" is changed to read "§§ 20.1001, 20.1201, and 20.1202."

§ 31.11 [Amended]

13. In § 31.11(c)(5) the reference to "§ 20.301" is changed to read "§ 20.1001."

14. In § 31.11(f) the reference to "§ 20.301, 20.402, and 20.403" is changed to read "§§ 20.1001, 20.1201, and 20.1202."

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

15. The authority citation for Part 32 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

16. Section 32.51 is amended by revising paragraphs (a)(2)(ii) and (c) to read as follows:

§ 32.51 Byproduct material contained in devices for use under § 31.5; requirements for license to manufacture or initially transfer.

(a) * * *

(2) * * *

(ii) Under ordinary conditions of handling, storage and use of the device, the byproduct material contained in the device will not be released or inadvertently removed from the device, and it is unlikely that any person will receive in any period of one calendar year a dose in excess of 10 percent of the annual limits specified in § 20.201(a) of this chapter; and

* * * * *

(c) In the event the applicant desires that the general licensee under § 31.5 of this chapter, or under equivalent regulations of an Agreement State, be authorized to install the device, collect the sample to be analyzed by a specific licensee for leakage of radioactive material, service the device, test the on-off mechanism and indicator, or remove the device from installation, the applicant shall include in the application written instruction to be followed by the general licensee, estimated calendar quarter doses associated with such activity or activities and the bases for such estimates. The submitted information shall demonstrate that performance of such activity or activities by an individual untrained in radiological protection, in addition to other handling, storage, and use of devices under the general license, is unlikely to cause that individual to receive a calendar year dose in excess of 10 percent of the annual limits specified in § 20.201(a) of this chapter.

§ 32.61 [Amended]

17. In § 32.61(d) the reference to "§ 20.203(a)" is changed to read "§ 20.901(a)."

§ 32.71 [Amended]

18. In § 32.71(c)(2) the reference to "§ 20.203(a)(1)" is changed to read "§ 20.901(a)."

19. In § 32.71(e) the reference to "§ 20.301" is changed to read "§ 20.1001."

PART 34—LICENSES FOR RADIOGRAPHY AND RADIATION SAFETY REQUIREMENTS FOR RADIOGRAPHIC OPERATIONS

20. The authority citation for Part 34 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

§ 34.29 [Amended]

21. In § 34.29(a) the reference to "§ 20.203(c)(2)(ii), (2)(iii), or (4)" is changed to read "§ 20.601(a)(2), (3), or (4)."

§ 34.41 [Amended]

22. In § 34.41(a) the reference to "§ 20.203(c)(2)" is changed to read "§ 20.601(a) (1), (2), or (3)."

§ 34.42 [Amended]

23. In § 34.42 the reference to "§ 20.204(c)" is changed to read "§ 20.903(b)" and the reference to "§ 20.203(b) and (c)(1)" is changed to read "§ 20.902(a) and (b)."

PART 40—DOMESTIC LICENSING OF SOURCE MATERIAL

24. The authority citation for Part 40 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

25. Section § 40.34 is amended by revising paragraph (a)(2) to read as follows:

§ 40.34 Special requirements for issuance of specific licenses.

(a) * * *

(2) The applicant submits sufficient information relating to the design, manufacture, prototype testing, quality control procedures, labeling or marking, proposed uses, and potential hazards of the industrial product or device to provide reasonable assurance that possession, use, or transfer of the depleted uranium in the product or device is not likely to cause any individual to receive in any period of one calendar year a radiation dose in excess of 10 percent of the annual limits specified in § 20.201(a) of this chapter; and

* * * * *

§ 40.61 [Amended]

26. In § 40.61(c)(4) the reference to "§ 20.401(c)" is changed to read "§ 20.1108."

PART 50—DOMESTIC LICENSING OF PRODUCTION AND UTILIZATION FACILITIES

27. The authority citation for Part 50 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

28. Section 50.34 is amended by revising paragraph (f)(2)(viii) to read as follows:

§ 50.34 Contents of applications; technical information.

* * * * *

(f) * * *

(2) * * *

(viii) Provide a capability to promptly obtain and analyze samples from the reactor coolant system and containment that may contain TID 14844 source term radioactive materials without radiation exposures to any individual exceeding 5 rems to the whole-body or 50 rems to the extremities. Materials to be analyzed and quantified include certain radionuclides that are indicators of the degree of core damage (e.g., noble gases, iodines and cesiums, and non-volatile isotopes), hydrogen in the containment atmosphere, dissolved gases, chloride, and boron concentrations. (II.B.3)

* * * * *

29. In § 50.36a(a) the reference to "§ 20.106" is changed to read "§§ 20.301 and 20.303," and paragraph (b) is revised to read as follows:

§ 50.36a Technical specifications on effluents from nuclear power reactors.

* * * * *

(b) In establishing and implementing the operating procedures described in paragraph (a) of this section, the licensee shall be guided by the following considerations: Experience with the design, construction and operation of nuclear power reactors indicates that compliance with the technical specifications described in this section will keep average annual releases of radioactive material in effluents and their resultant committed effective dose equivalents at small percentages of the values specified in §§ 20.301 and 20.303 of this chapter and in the operating license. At the same time, the licensee is permitted the flexibility of operation, compatible with considerations of health and safety, to assure that the public is provided a dependable source of power even under unusual operating conditions which may temporarily result in releases higher than such small percentages, but still within the committed effective dose equivalent values specified in §§ 20.301 and 20.303 of this chapter and the operating license. It is expected that in using this operational flexibility under unusual operating conditions, the licensee will exert his best efforts to keep levels of radioactive material in effluents as low as is reasonably achievable. The guides set out in Appendix I provide numerical guidance on limiting conditions for operation for light-water-cooled nuclear power reactors to meet the requirement that radioactive materials in effluents released to unrestricted areas be kept as low as is reasonably achievable.

30. In § 50.72 in paragraph (a), Footnote 1, the reference to "§ 20.205, § 20.403" is changed to read "§ 20.905, § 20.1202," and paragraphs (b)(2)(iv) (A) and (B) are revised to read as follows:

§ 50.72 Immediate notification requirements for operating nuclear power reactors.

* * * * *

(b) * * *

(2) * * *

(iv) (A) Any airborne release that results in concentrations in unrestricted areas that exceed 10 times the applicable reference level concentration specified in Appendix B, Table 2, Column 1 of Part 20 of this chapter, when averaged over a time period of one hour.

(B) Any liquid effluent release that exceeds 10 times the applicable reference level concentration specified in Appendix B, Table 2, Column 2, of Part 20 of this chapter at the point of entry into the receiving waters (i.e., unrestricted area) for all radionuclides except tritium and dissolved noble gases, when averaged over a time period of one hour. (Immediate notifications made under this paragraph also satisfy the requirements of paragraph (a)(2) and (b)(2) of § 20.1202 of this chapter).

31. Section 50.73 is amended by revising paragraphs (a)(2)(viii) (A) and (B) and (ix) to read as follows:

§ 50.73 Licensee event reports.

(a) * * *

(2) * * *

(viii) (A) Any airborne radioactivity release that exceeded 10 times the applicable reference level concentrations specified in Appendix B, Table 2, Column 1, of Part 20 of this chapter, in unrestricted areas, when averaged over a time period of one hour.

(B) Any liquid effluent release that exceeded 10 times the applicable reference level concentrations specified in Appendix B, Table 2, Column 2, of Part 20 of this chapter at the point of entry into the receiving water (i.e., unrestricted area) for all radionuclides except tritium and dissolved noble gases, when averaged over a time period of one hour.

(ix) Reports submitted to the Commission in accordance with paragraph (a)(2)(viii) of this section also meet the effluent release reporting requirements of § 20.1203(a)(5) of this chapter.

* * * * *

PART 61—LICENSING REQUIREMENTS FOR LAND DISPOSAL OF RADIOACTIVE WASTE

32. The authority citation for Part 61 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

§ 61.52 [Amended]

33. In § 61.52(a)(6) the reference to "§ 20.105" is changed to read "§§ 20.301 and 20.303."

PART 70—DOMESTIC LICENSING OF SPECIAL NUCLEAR MATERIAL

34. The authority citation for Part 70 continues to read as follows:

Authority: Sec. 161, as amended (42 U.S.C. 2201); sec. 201, as amended (42 U.S.C. 5481).

§ 70.51 [Amended]

35. In § 70.51(b)(6) the reference to "§ 20.401(c)" is changed to read "§ 20.1108."

Dated at Washington, DC, this 4th day of December 1985.

For the Nuclear Regulatory Commission.

Samuel J. Chilk,

Secretary of the Commission.

Revised NRC Form 4—Occupational Radiation Exposure History

Revised NRC Form 4 is appended for the convenience of those who may wish to comment on the proposed regulations. It is not a part of the regulations. However, the Commission does solicit comments on its content. If the proposed regulations are adopted and codified in Title 10 of the Code of Federal Regulations, the form will be used by licensees, in accordance with § 20.1104, for recording the occupational radiation exposure history of each individual who enters the licensee's restricted or controlled area and is likely to receive or actually receives an annual dose in excess of 30% of the limits in § 20.201(a).

BILLING CODE 1505—01-M

FORM NRC-4 OCCUPATIONAL RADIATION EXPOSURE HISTORY

1. NAME (Print - Last, First, Middle)	2. SOCIAL SECURITY NO.	3.

			SUMMATION OF DOSE	
5. Previous employments involving radiation exposure - list name and address of employer	6. Dates of employment (from - To)	7. Periods of Exposure	8. Lens of Eye (rems)	9. Skin (rems)
			15. Total	16. Total

21. Remarks

22. CERTIFICATION: I certify that the exposure history listed in Col
best of my knowledge and belief.

Employee Signatur

23. COUNTER CERTIFICATION: I certify that the exposure history and the infor
best of my knowlege and belief.

Employer Signatur

Enclosure 1

BILLING CODE 7590-01-C

. DATE OF BIRTH	4. NAME, ADDRESS, & LICENSE # OF LICENSEE

OSE EQUIVALENT					
	10. Extremities (rems)	11. Whole Body (rems)	12. Over Exposures (rems)	13. Planned Special Exposures (rems)	14. Record, Estimate, or Assumed (R,E, or A)
	17. Total	18. Total	19. Total	20. Total	

olumns 5, 6, and 7 is correct and complete to the

ure _____ Date _____

ormation on dose is correct and complete to the

ure _____ Date _____

[7590-01]

Instructions for Preparation of NRC Form 4

A separate copy of this form, or a clear and legible record containing all of the information required on this form, must be prepared by each licensee of the NRC for each individual who enters the licensee's restricted area under circumstances that might result in the individual receiving a dose requiring provision of individual monitoring devices or services under § 20.502 of "Standards for Protection Against Radiation," 10 CFR Part 20. The requirement for completion of this form is stated in § 20.1104.

The licensee shall make a reasonable effort to obtain: a record of all names and addresses of previous employers during employment periods involving radiation exposure; reports of the individual's previously accumulated occupational dose for each period of employment during the current calendar year; and, prior to permitting an individual to participate in a planned special exposure, all planned special exposures and overexposures received during the lifetime of the individual. The licensee may accept an up-to-date NRC Form 4 signed by the individual and countersigned by an appropriate official of the most recent employer or by the individual's current employer, if the individual is not employed by the licensee. The licensee shall use the dose information to control further exposure of the individual within the limits specified in §§ 20.201, 20.205, 20.206, and 20.207.

Listed below by item are instructions and additional information pertinent to completing this form:

Item 1. Self-explanatory.

Item 2. Self-explanatory, except that if the individual has no social security number the word "None" shall be inserted.

Item 3. Self-explanatory.

Item 4. Self-explanatory.

Item 5. List the name and address of each previous employer for all previous work involving occupational exposure to radiation. Start with the first employer and work forward in chronological order to the most recent employer. For periods of self-employment, insert the words "Self-employed."

Item 6. Give the dates of each employment listed in Item 5.

Item 7. List the periods during which occupational exposure to radiation occurred.

Item 8. Enter the dose equivalent to the lens of the eye. The entries shall be for each period of employment during the current calendar year only. The dose entered for the lens of the eye is the eye dose equivalent, unless the licensee evaluates the dose to the lens through whatever shielding is present, or unless the eyes are protected with shields having a tissue equivalent thickness of at least 700 mg/cm.^{2} In the latter case, the dose entered for the lens of the eye is the deep dose equivalent. Do not include the dose received during planned special exposures.

Item 9 and 10. Enter the dose equivalent to the skin and extremities, respectively. The entries shall be for each period of employment during the current calendar year only. The dose to the skin and extremities is the shallow dose equivalent, and shall be averaged over 10 cm^2 in the region of highest exposure. Do not include the dose received during planned special exposures.

Item 11. Enter the sum of the (whole-body, external) deep dose equivalent and the committed effective dose equivalent for each period of employment during the current calendar year. (The licensee may assess deep dose equivalent through a tissue equivalent absorber of 300 mg/cm^2 as for eye dose equivalent.) The licensee shall use the data obtained from the records of previous occupational exposures of the individual or, in the absence of records, in accordance with the provisions in § 20.1104. The licensee may use written estimates of dose provided to an individual at termination of employment pursuant to § 19.13(e) until the finally determined personnel monitoring data are available. The licensee shall include dose received as a result of over-exposures, accidents, and emergencies, but shall not include dose received during planned special exposures.

Item 12. Enter that portion of the summation of dose equivalent for each body part that has exceeded the annual limit for that body part in any year during the lifetime of the individual.

Item 13. Enter the summation of dose equivalent received during planned special exposures. Separate entries shall be made for whole body (WB), lens of eye (Eye), skin (Skin), and extremities (Ext). Note that the provisions for planned special exposures do not apply to the intake of radionuclides.

Item 14. Enter whether the data on doses were obtained from records (enter "R"), estimates of dose (enter "E") provided at termination of very recent employment in the absence of the finally determined dose, or assumed (enter "A") in the absence of records in accordance with § 20.1104.

Item 15. Self-explanatory.

Item 16. Self-explanatory.

Item 17. Self-explanatory.

Item 18. Self-explanatory.

Item 19. Self-explanatory.

Item 20. Self-explanatory.

Item 21. This space should be used to record any unusual or limiting information about the data recorded on the form. This should include data on intake of radionuclides prior to (effective date); particularly the kinds or quantities of radionuclides listed in Table 3, § 20.205. It could include notation of contribution to dose from multiple employments during a period, or dose received by the individual as a patient during medical diagnosis and therapy.

Item 22. The employee must certify that the information in Items 5, 6, and 7 is accurate and complete to the best of the individual's knowledge. The date is the date of the individual's signature.

Item 23. This certification may be used to implement the provision for acceptance of an up-to-date NRC Form 4 when countersigned by an appropriate official of the most recent or current employer (see § 20.1104(d)).

Revised NRC Form 5—Current Occupational Radiation Exposure

Revised NRC Form 5 is appended for the convenience of those who may wish to comment on the proposed regulations. It is not a part of the regulations. However, the Commission does solicit comments on its content. If the proposed regulations are adopted and codified in Title 10 of the Code of Federal Regulations, the form will be used as a current record of occupational radiation doses for each individual for whom personnel monitoring is required by § 20.502.

BILLING CODE 1505-01-M

NRC FORM 5
10 CFR 20

CURRENT OCCU
(See

1. NAME (Last, First, Middle)	2. SOCIAL SECURITY NO.	3. DAT (Mon

	EXTERNAL DOSE EQUIVALENT					INT
5. Monitoring Period (From - To)	6. Lens of Eye (rems)	7. Skin (rems)	8. Extrem-ities (rems)	9. Whole Body (rems)	10. Planned Special Exposures (rems)	11. Rad nuc (Na Cl

18. Remarks

BILLING CODE 7590-01-C

CUPATIONAL RADIATION EXPOSURE
e Instructions on Back)

DATE OF BIRTH (Month, Day, Year)	4. NAME, ADDRESS, AND LICENSE NO. OF LICENSEE

INTERNAL EFFECTIVE DOSE EQUIVALENT				SUMMATION OF EFFECTIVE DOSE EQUIVALENT		
11. Radio-nuclides (Name & Class)	12. Intake or Organ Burden (uCi)	13. % of Annual Limit	14. Committed Effective Dose Equivalent (rems)	15. For Monitoring Period (rems)	16. For Calendar Year (rems)	17. Over Exposures (rems)

Instructions for Preparation of NRC Form 5

The preparation and safekeeping of this form, or a clear and legible record containing all the information required on this form, is required by § 20.1106 of "Standards for Protection Against Radiation," 10 CFR Part 20, as a current record of occupational radiation doses. Such a record must be maintained for each individual for whom personnel monitoring is required by § 20.502.

Listed below by item are instructions and additional information pertinent to completing this form.

Item 1. Self-explanatory.

Item 2. Self-explanatory, except that if an individual has no social security number the word "None" shall be inserted.

Item 3. Self-explanatory.

Item 4. Self-explanatory.

Item 5. Enter the specific dates that the individual monitoring measurement was initiated and terminated. Entries shall be for periods of time not exceeding 1 calendar quarter. For individuals under continuous monitoring, doses received over a period less than a calendar quarter need not be separately entered on the form provided that the licensee maintains a current record of the dose received by the individual.

Item 6. Enter the external dose equivalent recorded for the lens of the eye. The dose to the lens of the eye is the eye dose equivalent, unless the licensee evaluates the dose to the lens through whatever shielding is present, or unless the eyes are protected with shields having a tissue equivalent thickness of at least 700 mg/cm^2. When the eyes are protected with shields having at least 700 mg/cm^2 the dose to the lens of the eye is the deep dose equivalent. Do not include the dose received during planned special exposures.

Items 7 and 8. Enter the external dose equivalent recorded for the skin and for the extremities, respectively. The dose to the skin and the extremities is the shallow dose equivalent, and shall be averaged over 10 cm^2 in the region of the highest exposure. Do not include the dose received during planned special exposures.

Item 9. Enter the external deep dose equivalent to the whole body. The licensee may assess deep dose equivalent through a tissue equivalent absorber of 300 mg/cm^2 as for eye dose equivalent. Include any dose received as a result of overexposures, accidents, and emergencies, but do not include doses received during planned special exposures.

Item 10. Enter the dose equivalent received during planned special exposures. Separate entries shall be made for whole body ("WB"), lens of the eye ("Eye"), skin ("Skin"), and extremities ("Ext"). Note that the provisions for planned special exposures do not apply to the intake of radionuclides.

Item 11. Identify the name and lung clearance class of each radionuclide to which the individual has been exposed. If the licensee does not choose to identify and determine the intake of each individual radionuclide in a mixture, or if the individual has been exposed to an unknown mixture of radionuclides, enter "Unknown Mixture." If the exact composition or the respective concentrations of radionuclides in a mixture is unknown, the licensee may treat the total activity taken into the body in terms of that radionuclide having the most limiting ALI and enter "Mixture" and the identity of the controlling radionuclide.

Item 12. Enter the best assessment of the amount of each radionuclide, in μCi, taken into the body of the individual during the monitoring period. If the licensee has used the provisions for mixtures in Item 11, enter the total activity taken into the body. It may be assumed that exposure to uniform concentrations (DAC) of a radionuclide listed in Appendix B, 10 CFR Part 20, for 2,000 hours (40 hours per week for 50 weeks per year, using an inhalation rate of 2×10^4 ml/minute) will result in an intake equal to the ALI. Exposure at uniform DAC for fractions of the 2,000 hours may be assumed to result in proportional fractions of the intake limit. If the provisions of § 20.205 for controlling exposures involving radionuclides with very long effective half-lives are used, enter the radionuclide burden in each significantly exposed organ as determined by bioassay. In this case, the calculational techniques, models, and any specific information on the physical and biochemical properties of the radionuclides involved and their behavior in the individual shall be specifically referenced or documented in the exposed individual's record.

Item 13. Calculate the percentage of the ALI represented by the intake of each radionuclide (Item 12) during the monitoring period and enter the sum of the percentages in Item 13. If one of the provisions for mixtures in Item 11 is used, calculate the percentage of the ALI listed for the most limiting radionuclide present in the mixture, or the ALI for Unknown Mixtures, listed in Appendix B, 10 CFR Part 20, as appropriate for the chosen provision. If the provisions of § 20.205 are used, enter the sum of the percentages of the annual dose limits represented by the weighted annual dose equivalents to each of the significantly exposed organs or tissues.

Item 14. Multiply the percentage value in Item 13 by 5 rems and enter the product in Item 14. This assumes that an intake equivalent to one ALI will result in a committed effective dose equivalent of 5 rems. If the provisions of § 20.205 are used, enter both the annual effective dose equivalent and the 50-year committed effective dose equivalent assoicated with the intake.

Item 15. Enter the sum of the external whole body deep dose equivalent (Item 9) and the internal committed effective dose equivalent (Item 14) received by the individual during the current monitoring period. If the provisions of § 20.205 are used also enter the sum of the external whole body deep dose equivalent and the internal effective dose equivalent.

Item 16. Add the effective dose equivalent summation (Item 15) for each monitoring period to the previous summation of effective dose equivalent recorded for the year and enter the new summation in Item 16.

Item 17. Enter that portion of the effective dose equivalent entered in Item 16 that exceeds the 5-rem annual limit.

Item 18. This space should be used to record any unusual or limiting information about the data recorded on the form. This could include data on intake of radionuclides prior to (effective date), notation of contribution to dose from multiple employments during a period, dose received by the individual as a patient during medical diagnosis and therapy or dose to the embryo/fetus of a declared pregnant woman.

[FR Doc. 85-29249 Filed 12-19-85; 8:45 am]

BILLING CODE 1505-01-M

federal register

Thursday
January 9, 1986

Part III

Department of Transportation

Federal Aviation Administration

14 CFR Parts 11 and 121

Emergency Medical Equipment Requirement; Final Rule

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Parts 11 and 121

[Docket No. 21369; Amdts. No. 11-29 and 121-188]

Emergency Medical Equipment

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: This amendment requires certificate holders to carry in their aircraft medical kits containing equipment for use in the diagnosis and treatment of medical emergencies that might occur during flight time. The amendment further requires each certificate holder to report such medical emergencies annually for 2 years after implementation of the rule and to describe how the medical kit was used, by whom, and the outcome of the medical emergency. The intended effect of this amendment is to enhance the potential for diagnosis and initial treatment of medical emergencies during flight time.

EFFECTIVE DATE: August 1, 1986.

FOR FURTHER INFORMATION CONTACT: Andrew F. Horne, Biomedical and Behavioral Sciences Division, (AAM-510), Office of Aviation Medicine, telephone (202) 426-3433, Federal Aviation Administration, 800 Independence Avenue SW., Washington, DC 20591.

Lawrence Bedore, Project Development Branch, (AFS-240), Air Transportation Division, Office of Flight Standards, telephone (202) 426-8096, Federal Aviation Administration, 800 Independence Avenue SW., Washington, D.C. 20591.

SUPPLEMENTARY INFORMATION:

Background

Section 121.309 of the Federal Aviation Regulations (FAR) provides, in pertinent part, that no person may operate an airplane unless it is equipped with approved first-aid kits for treatment of injuries likely to occur in flight or in minor accidents. These kits must be one to four in number (depending on the number of aircraft passenger seats), be distributed as evenly as practicable throughout the aircraft, and be readily accessible to the crewmembers. Each first-aid kit includes such items as antiseptic swabs, ammonia inhalants, various bandages, tape, splints, scissors, and burn compound.

By letter and petition dated March 3, 1981, Sidney M. Wolfe, M.D., and Eve Bargmann, M.D. Public Citizen Health Research Group of the Aviation Consumer Action Project (ACAP), 2000 P Street, NW., Washington, DC 20036, petitioned to amend §§ 121.309(d) and 121.333(e)(3) of the Federal Aviation Regulations (FAR) to require the carriage of emergency medical equipment in commercial flights in addition to that carried in the first-aid kit. That petition was published verbatim in the **Federal Register** on August 20, 1981 (46 FR 42278). The FAA received comments from 370 interested persons on that petition for rulemaking.

Those commenters expressing support of the proposal urge that U.S. air carriers be required to have on board their aircraft emergency medical equipment and medication that would enable crewmembers and/or medically qualified passengers to respond to any in-flight medical emergency.

A number of physicians describe their involvement in in-flight medical emergencies. Those emergencies include such conditions as myocardial infraction, allergic reaction to food, acute asthma, epileptic seizures, and childbirth. Several commenters provided suggestions as to the specific types of emergency equipment and medication that should be carried.

Those commenters opposing the proposal express concern about the potential added cost to the traveler and the possible use of medical equipment and/or medication by unqualified individuals.

The majority of physicians who commented on the ACAP petition agree that the first-aid kits now required on aircraft by Part 121 of the FAR are inadequate for purposes of diagnosing and treating most in-flight medical emergencies. These physicians strongly recommend that diagnostic equipment be provided on all flights as well as equipment and medication that may be used for the treatment of medical emergencies that may be expected to occur. Many of these physicians indicate the need for "good samaritan" legislation to protect from liability those that use the medical equipment to treat in-flight medical emergencies. Whether or not such protection would be desirable, it would require legislation and is beyond the scope of FAA rulemaking authority.

On March 14, 1985, the FAA published Notice of Proposed Rulemaking (NPRM) No. 85-9, Emergency Medical Equipment, in the **Federal Register** (50 FR 10444). This NPRM proposed amendments to Part 121 of the FAR enhancing the potential for care of medical emergencies occurring during flight time, and an amendment to Part 11 of the FAR on reporting and recordkeeping requirements pursuant to the Paperwork Reduction Act. These proposed amendments include the requirements for the carriage of a medical kit on each passenger-carrying flight that would contain equipment and drugs to provide basic life support during medical emergencies that might occur during flight time, additional crewmember training consisting of familiarization with the medical kit, and annual reports of in-flight medical emergencies resulting in use of the kit for a period of 2 years after the effective date of the rule.

In making this proposal, the FAA recognized that unresolved issues remain regarding medical kits to be carried in operations conducted under Part 121 of the regulations. Public comment was specifically invited in the notice on such matters as who would be considered qualified to use the proposed kit, the user's licensing requirements, and whether or not the kits should be required on all flights or limited to flights of long duration where diversion to a ground facility is not possible.

Analysis of Comments

The FAA received approximately 140 public comments in response to NPRM No. 85-9, Emergency Medical Equipment. It is noteworthy that the public response to the NPRM includes comments from several medical associations, air carrier associations, labor organizations, and air carrier certificate holders, as well as interested individuals and providers of equipment and consultant services. This is in contrast to the public response to the publication of the petition in 1981 when the comments were largely from individuals. Since that time, bills have been introduced in both the United States Senate and House of Representatives to require the carriage of medical equipment in commercial aircraft.

Of 46 individual physicians commenting on the NPRM, 44 support expanded medical kits. Some, however, believe that the proposed kit is too sophisticated and that some of the drugs should be deleted because of the potential for misuse. Some believe that the requirement should be limited to only certain air carriers conducting long over-water flights, and that responses to the reporting requirement should be used to determine the future need for medical kits on air carriers. Others recommend additional equipment and drugs ranging from bandages to cardiac monitor/defibrillators, and that a physician should be required on every

transoceanic flight. Some physicians believe that "good samaritan" protection from liability is necessary to ensure that physicians will voluntarily provide assistance in the event of a medical emergency.

Only two physician commenters are opposed to the proposed requirement for the carriage of medical kits on air carriers. One, while opposed to the kit, voices strong support for required reporting of all in-flight medical emergencies and believes that the data acquired would provide a basis for the development of "intelligent regulations." This physician also believes that the presence of the proposed medical equipment on board would result in a tendency "to try to make do with the available equipment," thereby delaying any decision for immediate landing. He states that such a delay may result in risk to the ill person greater than the benefit of the available medical equipment. Another physician states that a stethoscope and a blood pressure recording cuff might be provided, but opposes more equipment and drugs because of the likelihood of misuse.

Seven registered nurses commented on the NPRM. Of the five in favor of expanded medical kits, some are concerned about misuse of the equipment and drugs, and one believes that "good samaritan" protection from liability is necessary. Two believe that a registered nurse should be included in the cabin crew complement on every flight. Two registered nurses oppose the NPRM. Both are concerned that the possible misuse of the equipment may be more detrimental to the patient than the alternative of first-aid procedures and immediate diversion to a ground facility. One of the commenters said that, "No one can predict when a medical emergency will arise. Being in your own home, a car, a bus, a train, the supermarket, etc., does not carry a guarantee that emergency help will be available. Having drugs and equipment available will not guarantee reversal of a crisis situation either. Improper use of these items might prove more disastrous. No commercial airline should have to assume this responsibility."

There were numerous comments from non-medical individuals favoring medical kits being required on air carrier aircraft. Very few of these commenters, however, address such issues as who should be authorized to use the kits. Many comments are anecdotal in nature, relating the commenters' experiences or those of friends involved in medical emergencies which occurred in flight.

Seven non-medical individuals are opposed to the proposal. One questioned his personal physician regarding the NPRM. His physician was reportedly concerned with the proposed drugs and stated that they should be used only by a physician trained in their usage and that not all physicians would be qualified to use those drugs. He further stated that some of the drugs should be used only with sophisticated monitoring equipment which would not be available. One opposing commenter, a flight attendant, states that because of the low frequency of in-flight medical emergencies, the cost-benefit ratio and the possibility of misuse of the equipment, the requirement for medical kits is not warranted. Other non-medical individuals opposing the NPRM express concern about misuse of the kit and the possibility of those using the kit not being qualified. One believes that the risks of misdiagnosis and misapplied drugs far outweigh the small potential benefit of saving a life by use of that kit.

Nine providers of medical equipment and consultant services are in favor of expanded medical kits on air carrier aircrafts, as is the National Transportation Safety Board.

Four air carrier labor organizations responded to the NPRM. The Air Line Pilots Association (ALPA) favors the proposals, but indicates concern for issues not addressed. The expressed issue of most concern is that of liability for kit use and the need for "good samaritan" legislation to protect crewmembers and physicians who might provide in-flight medical assistance. The Airline Operations Control Society opposes the proposal for several reasons. They believe the surgical instruments could be used to hold a person hostage during a hijacking, the presence of the proposed drugs would result in security problems, and there would be a potential for misuse of the kit by an improperly trained person. This organization also believes that if the medical kits are to be required, "good samaritan" legislation is necessary to protect crewmembers as well as users of the kit. Two flight attendant unions favor the NPRM and also recommend an "expanded first-aid kit" for use by flight attendants. One of the flight attendant groups provides information on the carriage of medical equipment by certain European airlines, indicating that a physician's kit (similar to the medical kit proposed in NPRM 85-9) is "mandatory for flights in which an airport cannot be reached in 90 minutes," and that the first-aid kit (similar to those now required on United States air carrier aircraft) "is mandatory on every flight when an airport cannot be reached in 60 minutes."

Eight small air carriers operating under Part 121 of the Federal Aviation Regulations oppose the NPRM, most stating that their flights are short and that the probability of an individual qualified to use the kit being on board is not as high as it is among the large air carriers using larger aircraft and making longer flights. They raise issues including liability for us of the kit, security of the equipment and drugs, and training requirements for crewmembers. Several note that it would be necessary for an air carrier to employ a physician to procure the drugs and they are concerned with licensing requirements when the drugs must be replenished in another state.

Three air carrier associations responded with comments opposing the NPRM. The Air Transport Association (ATA), representing the major scheduled air carriers in the United States, questions the justification for the requirement for carriage of the medical equipment and drugs on air carrier aircraft. The ATA cites the American Medical Association (AMA) Commission on Emergency Medical Service's independent study to evaluate the problem of in-flight medical emergencies on commercial airlines. This study suggests that the frequency of life-threatening medical emergencies on commercial flights is not high. The study concludes that the first-aid kits currently carried are satisfactory. The ATA also raises such issues as liability for use of the medical equipment, security of the drugs, syringes and needles in the kit, who is qualified to use the kit, the U.S. Drug Enforcement Administration (DEA) regulatory requirements concerning controlled substances, and the concern that air carrier procurement of drugs will require employment of appropriately licensed physicians. The ATA further discusses the potential for misuse of the kit and the possibility that hesitation in diversion of a flight because of the presence of a kit could prove detrimental to the patient. ATA states that "proper consideration of this rule must await the results and analysis of the proposed 2-year reporting requirement to determine the need for carriage of medical kits."

Also commenting are the Regional Airline Association (RAA) and the National Air Carrier Association, Inc. (NACA). The RAA, representing approximately 100 "short haul" regional and commuter air carriers, objects to the requirement that their members operating under Part 121 carry the

proposed medical kit on their aircraft. These aircraft normally seat 31 to 50 passengers with 1 flight attendant crewmember and are never more than 30 minutes from an airport where professional and competent medical assistance can be obtained. The RAA further states that they are unaware of any in-flight medical emergencies in commuter/regional operations that would have benefitted from the proposed medical kit. Both the RAA and NACA raise the same issues of liability, security, potential for misuse, accountability for controlled substances, and need for a physician in order to procure the proposed drugs in the kit.

Seven associations representing physicians and two associations representing nurses responded to the NPRM with comments varying from full support to total opposition. Their responses also contain constructive criticism concerning the proposed contents of the kit.

The AMA cites the 1981 study by its Commission On Emergency Medical Services on in-flight medical emergencies aboard commercial air carriers, noted previously. The AMA also discusses its other activities in this area, including: its encouragement of physicians to carry medical kits when they travel that contain instruments and drugs with which they are familiar; AMA publications on the contraindications to air travel for persons suffering from certain illnesses and conditions; and, AMA support for federal legislation providing "good samaritan" immunity to physicians and other qualified individuals offering emergency medical assistance on board aircraft. The AMA comment includes opposition to the requirement for a medical kit containing surgical equipment and drugs because of its belief that the potential for misuse outweighs any benefit that might be gained through the availability of such equipment. The AMA supports expansion of the current kit to include stethoscope, sphygmomanometer, airways, splints, tongue blades, and flashlight.

The American College of Emergency Physicians does not support the NPRM as proposed. They believe that there are inadequate data and experience to support the list of medical equipment and drugs proposed either from a medical or cost-benefit perspective. They further state that these data are needed to ensure that an enhanced emergency medical kit best meets the needs of the flying public. They recommend that the FAA devise and implement a data collection system which generates detailed information concerning in-flight medical emergencies so that better decisions can be made about the contents of the emergency medical kit.

The Civil Aviation Medical Association (CAMA) opposes the requirement for medical kits on domestic flights and questions the need for such kits on transoceanic flights. CAMA expresses concern about the potential for misuse of the kit and raises issues including liability and the identification of qualified users of the kit. CAMA further states that most critical medical emergencies can be managed well with relatively simple cardiopulmonary resuscitation.

Four other physicians associations generally favor the proposal, two of which mention the importance of "good samaritan" protection from liability if the kit is to be used effectively. These associations are the American Academy of Family Physicians, the American College of Chest Surgeons, the American Society of Anesthesiologists, and the American Osteopathic Association.

The Emergency Nurses Associations (ENA) supports the general concept of expansion of the medical kit but does not believe controlled substances and most cardiac drugs should be included. The ENA recommends that nitroglycerin, epinephrine, and Benadryl (diphenhydramine) be included. The ENA also supports "good samaritan" protection from liability.

The American Association of Critical-Care Nurses (AACN) also support the general intent of the NPRM but expresses concern about the possibility of misuse of the medical equipment and/or drugs proposed. The AACN makes recommendations concerning recordkeeping and raises the question of how crewmembers will identify a qualified user of the kit. The AACN states that the proposed injectable cardiac drugs should not be included in the kit unless a cardiac monitor is available, and that qualification to use the kit should include special training in emergency care.

Discussion

After careful review and analysis of comments on the publication of both the ACAP petition and NPRM No. 85-9, several unresolved issues remain. Many commenters believe that "good samaritan" protection from liability is necessary for effective use of the proposed medical kit. Such protection would immunize any personnel who utilized the kit in the diagnosis and treatment of medical emergencies that might occur during flight time from the consequences of their own negligence. Many states have "good samaritan" laws in effect but there exists no provision in current Federal law affording such protection. It is not clear whether the Federal government should provide this protection, or it is properly a matter for state law. The applicability of state laws to personnel utilizing medical kits in an aircraft during flight time is also unclear.

Some commenters believe that the proposed requirement for the carriage of medical equipment should only apply to flights of long duration (such as transoceanic) where immediate diversion to a ground facility is not possible. Others believe that the equipment should be required on all flights.

In addition, all the drugs proposed in the NPRM require procurement by a licensed physician. Controlled substances present a special problem because of state and federal inventory and accountability requirements and the potential for misuse and pilferage.

With regard to these issues, the FAA has considered other significant information pertaining to the proposed requirement for the carriage of emergency medical equipment on air carrier aircraft. Of special note are concerns expressed by the Senate Commission on Commerce, Science and Transportation. In Senate Report 99-93 dated June 27, 1985, on the In-flight Medical Emergencies Act, the committee said:

> Although the Committee supports carriage of an enhanced medical kit aboard commercial aircraft, it is clear that these kits should not contain dangerous surgical instruments, such as scalpels or other incisive devices, or controlled substance, as defined in the Comprehensive Drug Abuse Prevention and Control Act of 1970 (21 U.S.C. 801 et seq.). These items, even in the most sophisticated of hospital emergency facilities, must be handled with extreme caution and only in conjunction with the elaborate diagnostic equipment and expertise available at such facilities. They are not suitable for carriage in an onboard medical kit.

In consideration of all the views expressed, the FAA has determined that the carriage of an expanded medical kit on passenger-carrying operations conducted under Part 121 of the regulations is appropriate. As noted above, it has been suggested that such kits need not be required on flights of short duration or those that seat a limited number of passengers. The FAA concludes, however, that the presence of kits on such flights is essential to ensure that appropriate medical equipment and medication are available for immediate use in the event of a medical emergency

involving any air carrier traveler. In so doing, it is recognized that the likelihood for use of the kit on such flights will be less than on flights which have a large number of passengers, are of longer duration, or where the flight cannot be readily diverted to a ground facility. Nevertheless, medical emergencies may occur on these flights and qualified medical personnel may be present to provide assistance. In addition, although ground facilities may be close by, some medical emergencies may result in loss of life, distraction of crewmembers; and disruption of flight routine, unless treatment is provided immediately.

While may commenters expressed the belief that "good samaritan" legislation is necessary to protect from liability those persons who use the kit, existing state "good samaritan" laws may apply in certain circumstances and, in any event, the FAA believes that the absence of such legislation does not justify a withdrawal of the proposal. In this respect, the FAA believes that, in the event of an emergency, qualified medical personnel will voluntarily come forward, just as they do now, to provide assistance and, when indicated, use the medical equipment and medication made available. We note that Congress is considering legislation regarding good samaritan laws.

The required contents of the medical kit are modified by the elimination of all surgical instruments and controlled drugs. This resolves or reduces many of the concerns regarding security, the potential for liability for use of the kit, the burden of required DEA recordkeeping and accountability, congressional concerns, and the objections of numerous commenters, as discussed previously. The surgical instruments eliminated consist of the hemostats, scalpel, surgical scissors, and the tracheal airway set. The controlled substances deleted consist of the morphine sulfate injection, amobarbital injection and diaszepam injection. Several prescription drugs that require monitoring equipment or which have a significant potential for misuse are also deleted. These consist of lidocaine HC1 injection, atropine sulfate injection, sodium bicarbonate injection, prochlorperazine injection, and aminophylline injection. Because of the retention of certain prescription drugs in the kit that are adequate for the short-term treatment of acute allergic reactions and bronchospasm, the FAA believes upon re-evaluation that the adrenocortical steroid injection is unnecessary and, therefore, this item is deleted. Because of the elimination of the parenteral cardiac drugs, the intravenous set and 5% dextrose injection, used for their administration, are not necessary. The prescription drugs retained in the kit consist of nitroglycerin tablets, epinephrine injection, diphenhydramine injection, and 50% dextrose injection. These drugs do not have the same potential for misuse or require monitoring equipment as do those drugs deleted. It is recognized that certificate holders will require the assistance of licensed physicians in obtaining these drugs. No flashlight is included in the kit since regulations currently require the carriage of operable flashlights as emergency equipment.

While modification of the contents of the proposed medical kit somewhat reduces its potential for use in providing basic life support during medical emergencies, the equipment and drugs retained still enhance the diagnostic and treatment capability of users of the kit. At the same time, the modification eliminates equipment and drugs which, if misused, could compromise the health of the passengers and the safety and security of the flight. The training requirement for crewmember familiarization with the emergency medical kit remains as proposed.

As recommended by numerous commenters, the rule requires the maintenance of records and the reporting of medical emergencies as proposed. An analysis of the results at the termination of the reporting requirement in 2 years will provide the FAA with information on medical emergencies occurring in flight so that any necessary changes can be made to the medical kits, training of personnel, or related matters.

The regulations do not specify who should be permitted to use the kit. The FAA has determined that resolution of this question must be left to each air carrier since it depends, to some extent, upon the nature of and circumstances surrounding each medical emergency.

The effective date of this rule has been established as the first day of the seventh month after publication in the **Federal Register.** Thus, 6 months is provided for each Part 121 air carrier to acquire appropriate medical kits, install the kits on each airplane, and develop procedures for the use, control, maintenance, recordkeeping, and reporting requirements associated with the kits.

Regulatory Evaluation

The total costs of implementing the amendment to require emergency medical kits include the cost of equipping existing passenger aircraft which will become subject to the rule, the installation of emergency medical kits in new aircraft manufactured during the 10-year period covered by this evaluation, physicians' services related to procuring the contents of the kits, the fuel penalty resulting from the added weight of the emergency medical kits, and the maintenance costs.

Certain costs of the rule are different than those of the NPRM. Since some contents of the proposed kit have been deleted in the rule, the cost for purchase and maintenance of the kit is lower than that stated in the NPRM. Also, the lighter weight of the kit reduced the fuel weight penalty. However, the cost for physicians' services related to procuring the contents of the kits is an additional cost which was not stated in the NPRM.

Each aircraft will be equipped with one emergency medical kit regardless of the number of individual first-aid kits on the aircraft. The FAA has estimated that such emergency medical kits can be purchased and installed for approximately $100 per unit. The cost of equipping existing passenger aircraft with emergency medical kits has been estimated to be approximately $233,000 (2,333 aircraft x $100).

Indications are that approximately 140 newly manufactured aircraft will be delivered annually for Part 121 passenger operations during the 10-year period following implementation of the rule. The total discounted present value is approximately $90,000 for equipping newly manufactured aircraft with emergency medical kits.

To determine the fuel costs for the additional weight of the emergency medical kits, the FAA estimates that during each year of the 10-year period following implementation of the proposal, an average of 3,103 emergency medical kits will be aboard passenger aircraft operated under Part 121. Each emergency medical kit weighs approximately 7 pounds, and each additional pound of weight will result in an estimated average fuel consumption of 15 gallons per year per aircraft. Based on a fuel price of 89.4 cents per gallon, each emergency medical kit will result in an average additional fuel cost of slightly more than $94 per year. The present value cost of the additional fuel consumption during the 10-year period is estimated to be $1,880,000.

Maintenance costs for the emergency medical kits are based on an average requirement of 2 person-hours in labor annually, assuming that the average wage rate (including benefits) will be $35 per hour and that 10 percent of the emergency medical kits will require replacement at a unit cost of $100. The present value of maintenance costs is

estimated to be approximately $1,600,000.

Modification of the requirements for instruction in the handling of emergency situations under § 121.417(b)(3)(iv), to include familiarization with the emergency medical kit, results in a negligible increment of training time. Therefore, no additional cost is ascribed to this modification.

Purchasing certain contents of the kits, including prescription drugs, makes necessary an additional cost for the periodic services of physicians. This cost is based on one physician's consultation per month at $250 per consultation to provide for a bulk purchase for prescription contents for the kits of a carrier operating under FAR Part 121. Currently, there are 80 carriers actually operating under Part 121, although more than 100 are certificated to do so at a particular time. The total discounted present value of consulting services 1 day per month at $250 per day for 80 carriers during the 10-year period is estimated to be $1,547,000. We note that many airlines currently employ, or contract with, physicians for medical services.

The costs for creating and maintaining records on how the required emergency medical kit was used, by whom, and the outcomes of medical emergencies are based on an expected average requirement of 1 person-hour in labor per medical emergency. The costs for submitting these records or a summary to the FAA is a negligible amount of time and expense for postage and handling of the reports. Although the amended § 121.715 requires record maintenance for 2 years, FAA anticipates that after 2 years these records will continue to be created and maintained voluntarily for other reasons, including standard policies and procedures relating to liability insurance and handling of prescription drugs. Assuming that the average wage rate (including benefits) will be $35 per hour, and that an average of 2,500 medical emergencies would occur in flight per year, the present value of in-flight medical emergency costs for creating and maintaining records is estimated to be approximately $564,000.

The present value of all estimated costs resulting from the emergency medical kit amendment during the 10-year period following implementation is $5,914,000.

The FAA cannot estimate easily the prospective number of lives that may be saved or the reduction of in-flight morbidity by providing additional equipment and medications, but some insight into the potential benefits can be gained from a major air carrier's experiences with in-flight deaths and in-flight medical emergencies. A major commercial air carrier under Part 121 has tracked in-flight deaths for approximately 4 decades.

The FAA has estimated the number of in-fligth deaths occurring annually for all carriers by calculating the proportion of the annual number of deaths in flight to the annual number of passengers carried by the major carriers. Then, the same proportion of annual "estimated in-flight deaths" is applied to the total annual number of passengers carried by all Part 121 carriers. Using this method of analysis, the FAA estimates that over a period of 4 decades, approximately 840 in-flight deaths occurred on all carriers. Moreover, the number of deaths in flight, as a proportion of passengers carried, has grown progressively smaller in successive years as the number of annual enplanements has increased at a rapid rate. The annual in-flight deaths vary in number within a small range, and the FAA further estimates that approximately 21 deaths currently occur in flight annually. These estimates are based upon historical information provided to the FAA by an air carrier. Public estimates of in-flight deaths range to 100 annually.

From historical information, the FAA estimates that a great majority of the in-flight passenger deaths are elderly people suffering from terminal illnesses such as cancer and heart disease. Many of these in-flight deaths occur quietly and without others being aware of the onset of the medical emergency. However, some in-flight deaths can be prevented with the new rules. The number who might be saved is uncertain, but based on fragmentary information obtained from airline data, the estimate is about 10 percent of in-flight deaths. Thus, according to FAA estimates (21) and public estimates (100), about 10 percent of the annual in-flight deaths, or 2 to 10 persons, might have been helped annually by an emergency medical kit.

For purposes of economic studies, the FAA values a life at $650,000 in 1983 dollars. The expected number of lives that could be saved over the 10-year period is 21 to 100. The expected present discounted value of the lives that could be saved over the 10-year period ranges from $8.4 million to $41.9 million. This is derived by discounting the value of life at a 10 percent rate.

Based on these estimates, the benefit/cost ratio ranges from a low value of 1.42 ($8.4 million ÷ $5.9 million) to a high of 6.76 ($41.9 million ÷ $5.9 million). The FAA's preliminary judgment is that the lower ratio will prevail. Clearly, information gained in the course of implementing the amendment will help in refining estimates about future costs and benefits.

Trade Impact

The amendment will have little or no impact on trade for both U.S. firms doing business in foreign countries and foreign firms doing business in the United States. The amendments will affect only U.S. air carriers because foreign air carriers are not subject to Part 121. Foreign air carriers are prohibited from operating between points within the United States; therefore, they will not gain any competitive advantage over the domestic operations of U.S. carriers. In international operations, foreign air carriers would realize some minor cost advantages over U.S. air carriers if the foreign countries do not require similar emergency medical equipment. However, these costs are negligible in comparison to the overall costs of providing international passenger services; therefore, the rule change will essentially have no trade impact.

Regulatory Flexibility Determination

The small entities affected by the amendment are the small air carriers which are regulated under Part 121. The FAA has published a size threshold of nine or fewer operating aircraft as a standard for small air carriers. According to FAA data for the period ended April 1983, 45 passenger air carriers which were subject to Part 121 operated nine or fewer aircraft.

The impact on small entities will be in direct proportion to the number of aircraft they will be required to equip with the emergency medical kit. The average annualized net compliance cost for a small carrier to meet the emergency medical kit requirements is estimated to be approximately $217 per aircraft. The FAA has adopted threshold values that define small entities and significant economic impact, and these values are stated in FAA Order 2100.14. The threshold values for economic impact are adjusted for inflation and are expressed here in 1983 dollars. The threshold value for small entity carriers is a maximum number of nine aircraft owned or operated. The threshold values for significant economic impact are an annualized cost of $47,506 for scheduled carriers and $3,314 for unscheduled carriers.

Since the annualized cost per aircraft is $217 per year, a small entity carrier with the maximum number of aircraft, nine, would not meet the cost impact criteria for either scheduled or unscheduled air carriers (9 x $217 is less

than $3,314). Therefore, this amendment is not expected to have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required.

Conclusion

Since the amendment contained in this document would enhance the potential for diagnosis and initial treatment of in-flight medical emergencies, and the amendment could possibly save two lives per year, the estimated benefits exceed the estimated costs of implementing this amendment. For the reasons discussed above, I certify that under the criteria of the Regulatory Flexibility Act, these amendments do not have a significant economic impact on a substantial number of small entities, and a regulatory flexibility analysis is not required. In addition, for the same reasons, the amendment does not involve a major rule under Executive Order 12291. Because it involves important DOT policy, the amendment is considered significant under DOT Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). A copy of the regulatory evaluation for this regulatory action is contained in the regulatory docket. A copy of it may be obtained by contacting the person identified under the caption **"FOR FURTHER INFORMATION CONTACT."**

Paperwork Reduction Act

Information collection requirements in this regulation (§ 121.715) have been approved by the Office of Management and Budget under the provisions of the Paperwork Reduction Act of 1980 (Pub. L. 96–511) and have been assigned OMB Control Number 2120–0523.

List of Subjects

14 CFR Part 11

Reporting and recordkeeping requirements, Air carriers, Air transportation.

14 CFR Part 121

Aviation safety, Safety, Air carriers, Air transportation, Aircraft, Drugs, Common carriers, Medical kits.

Adoption of the Amendment

In consideration of the foregoing, Parts 11 and 121 of the Federal Aviation Regulations (14 CFR Parts 11 and 121) are amended, as follows:

PART 11—GENERAL RULEMAKING PROCEDURES

1. The authority citation for Part 11 is revised to read as follows:

Authority: 49 U.S.C. 1341(a), 1343(d), 1348, 1354(a), 1401 through 1405, 1421 through 1431, 1481, 1502, 49 U.S.C. 106(g) (Revised Pub. L. 97–449, January 12, 1983).

2. By amending § 11.101 by adding a new OMB Control Number to the table in paragraph (b), as follows:

§ 11.101 OMB control numbers assigned pursuant to the Paperwork Reduction Act.

* * * * *

(b) * * *

121.715 2120–0523

PART 121—CERTIFICATION AND OPERATIONS: DOMESTIC, FLAG, AND SUPPLEMENTAL AIR CARRIERS AND COMMERCIAL OPERATORS OF LARGE AIRCRAFT

3. The authority citation for Part 121 is revised to read as follows:

Authority. 49 U.S.C. 1354 (a), 1355, 1356, 1357, 1401, 1421 through 1430, 1472, 1485, and 1502; 49 U.S.C. 106(g) (Revised, Pub. L. 97–449, January 12, 1983).

4. By amending § 121.309 by revising paragraph (d) to read as follows:

§ 121.309 Emergency equipment.

* * * * *

(d) *First-aid and emergency medical equipment.* Approved first-aid kits and, on passenger flights, an emergency medical kit for treatment of injuries or medical emergencies that might occur during flight time or in minor accidents must be provided and must meet the specifications and requirements of Appendix A.

* * * * *

5. By amending § 121.417 by revising paragraph (b)(3)(iv) as follows:

§ 121.417 Crewmember emergency training.

* * * * *

(b) * * *

(3) * * *

(iv) Illness, injury, or other abnormal situations involving passengers or crewmembers to include familiarization with the emergency medical kit; and

* * * * *

6. By adding a new § 121.715 as follows:

§ 121.715 In-flight medical emergency reports.

(a) For a period of 24 months commencing with the effective date of this rule, each certificate holder shall maintain records on each medical emergency occurring during flight time resulting in use of the emergency medical kit required under Appendix A, diversion of the aircraft, or death of a passenger or crewmember. These records shall include a description of how the medical kit was used, by whom, and the outcome of the medical emergency.

(b) The certificate holder shall submit these records, or a summary thereof, to its assigned FAA Principal Operations Inspector within 30 days after the end of each 12-month period during the 24 months specified in paragraph (a).

7. By amending Appendix A to Part 121 by revising the title, by adding a subheading before the current text, and by adding a new subheading and text, as follows:

Appendix A—First-Aid Kits and Emergency Medical Kits

First-Aid Kits

* * * * *

Emergency Medical Kits

The approved emergency medical kit required by § 121.309 for passenger flights must meet the following specifications and requirements:

(1) Approved emergency medical equipment shall be stored securely so as to keep it free from dust, moisture, and damaging temperatures.

(2) One approved emergency medical kit shall be provided for each aircraft during each passenger flight and shall be located so as to be readily accessible to crewmembers.

(3) The approved emergency medical kit must contain, as a minimum, the following appropriately maintained contents in the specified quantities:

Contents	Quantity
Sphygmomanometer	1
Stethoscope	1
Airways, oropharyngeal (3 sizes)	3
Syringes (sizes necessary to administer required drugs)	4
Needles (sizes necessary to administer required drugs)	6
50% Dextrose injection, 50cc	1
Epinephrine 1:1000, single dose ampule or equivalent	2
Diphenhydramine HCl injection, single dose ampule or equivalent	2
Nitroglycerin tablets	10
Basic instructions for use of the drugs in the kit	1

Issued in Washington, D.C. on December 31, 1985.

Donald D. Engen,

Administrator.

[FR Doc. 86–414 Filed 1–8–86; 8:45 am]

BILLING CODE 4910-13-M

federal register

Thursday
January 9, 1986

Part IV

Department of Transportation

Federal Aviation Administration

14 CFR Parts 61, 63, and 91
Submission to Alcohol Tests; Final Rule

DEPARTMENT OF TRANSPORTATION

14 CFR Parts 61, 63, and 91

[Docket No. 21956; Amdt. Nos. 61-76, 63-24, and 91-194]

Submission to Alcohol Tests

AGENCY: Federal Aviation Administration (FAA), DOT.

ACTION: Final rule.

SUMMARY: These amendments establish rules requiring aircraft crewmembers to submit to chemical tests for alcohol given by law enforcement officers under certain conditions. It is based, in part, on the National Transportation Safety Board (NTSB) determination that alcohol is a cause or factor in a significant number of aircraft accidents annually, many of which are fatal. The proposed amendment would facilitate the enforcement of the present alcohol regulations. It is intended to reduce aircraft accidents and incidents attributed to consumption of alcoholic beverages.

EFFECTIVE DATE: April 9, 1986.

FOR FURTHER INFORMATION CONTACT: Thomas E. Stuckey or John Lynch, Federal Aviation Administration, Office of Flight Standards, General Aviation and Commercial Division, Project Development Branch (AFS-850), 800 Independence Avenue SW., Washington, D.C. 20591; telephone (202) 426-8150.

SUPPLEMENTARY INFORMATION:

Background

Rules relating to the consumption of alcoholic beverages in connection with aircraft operations are set forth in § 91.11 of the federal aviation regulations (FAR) (14 CFR 91.11). This section provides that no person may act as a crewmember of a civil aircraft within 8 hours after the consumption of any alcoholic beverage, while under the influence of alcohol, or while having a blood alcohol level of .04 percent or more by weight.

"Crewmember" is defined in Part 1 of the FAR as "a person assigned to perform duty in an aircraft during flight time." This includes a pilot, flight engineer, flight navigator, or flight attendant.

The FAA is concerned about the serious hazard, during aircraft operations, resulting from impairment of the crewmembers' faculties due to alcohol. Even small amounts of alcohol affect judgment, coordination, performance, and reaction time. The FAA and other organizations have been quite successful in using educational programs to lower the accident rate due to alcohol abuse. In 1971, alcohol abuse was a contributing cause in 12.6 percent of the fatal general aviation accidents. Since then, the alcohol-related accident rate has declined steadily. In 1984, alcohol abuse was involved in only 4.8 percent of the fatal general aviation accidents.

Despite this progress resulting from the time and money which the FAA and other aviation organizations have devoted to their educational programs, alcohol abuse is still unacceptably high. Alcohol remains a factor or cause in a significant number of accidents each year. For example, in 1979, the National Transportation Safety Board (NTSB) investigated 34 general aviation accidents where alcohol impairment was determined to be a cause/factor; 30 of the 34 accidents were fatal.

On April 17, 1985, the FAA published a rule (Amdt. Nos. 61-74, 63-23, 65-29, and 91-188, 50 FR 15376) that established that no person may act as a flight crewmember with a blood alcohol level of .04 percent by weight or more. This rule is in addition to the current § 91.11 which prohibits any person from acting or attempting to act as a crewmember aboard a civil aircraft within 8 hours after the consumption of any alcoholic beverage or while under the influence of alcohol. This rule may be used to initiate enforcement action against a crewmember where witness statements alone are insufficient to establish a violation of the 8-hour rule or the under-the-influence rule. The rule also requires the crewmembers to furnish the Administrator with the results of any test that is performed that may indicate the percentage of alcohol in the blood when the tests have been taken within 4 hours after acting or attempting to act as a crewmember. Failure to furnish or authorize the release of the results may lead to sanctions.

When the FAA first proposed the rule, the agency intended to have FAA representatives conduct the alcohol tests. After further consideration, however, the agency decided that it would be impracticable to have representatives of the Administrator equipped and trained to carry out such tests. As a result, the FAA issued Supplemental Notice of Proposed Rulemaking (SNPRM) No. 81-9A (50 FR 15381, April 17, 1985), proposing that a crewmember of a civil aircraft be required in certain circumstances to submit to testing to indicate the percentage by weight of alcohol in the blood. Under the proposal, compliance with the request of a law enforcement officer, who was authorized under State or local law to conduct or otherwise obtain such a test, would be required if there was a reasonable basis to believe that the crewmember may have unlawfully used alcohol in connection with his or her crewmember duties. The proposal also made it clear that failure to submit to the test could result in denial of a new certificate or a rating or suspension or revocation of a certificate or rating. In addition, civil penalty action could be taken against the crewmember. Flight attendants, who do not hold airman certificates, would be subject to civil penalty action.

Under the proposal, the law enforcement officer conducting or obtaining the test would be acting under his or her own State or local authority. The Administrator did not propose to grant additional authority to State or local law enforcement officers. The rule would merely require the crewmember to cooperate with an otherwise lawful investigation by a law enforcement officer.

Fourteen comments were received as a result of the SNPRM. While all the commenters support the purpose of the proposed rule, some have reservations about parts of the rule. After considering the comments, the FAA has decided to adopt the rule with some changes which are discussed below.

Several commenters, including the NTSB, question the effectiveness of the rule until all states have "flying while impaired" rules. At present, 37 States have such rules. The FAA recognizes that this is a problem and will urge the remaining 13 States to enact such laws. Enough States, however, have such laws now to make this rule useful. The FAA has discussed the proposed rule with several organizations which represent state aviation officials and law enforcement officials. These groups generally expressed support for the proposed rule, stating that their members agree that it would be a useful tool in our collective efforts to combat the use of alcohol in aviation.

A number of commenters raise legal questions. One commenter asks whether the penalties for failing to submit to a test would be mandatory or whether the FAA would have discretion in each case. Notice 81-9A proposed making a refusal to submit to the test "grounds for" suspension or revocation of an airman certificate. Notice 81-9A proposed to make a person who refused to submit to an alcohol test ineligible for a new airman certificate or type rating for a period of a year after the date of the refusal. As proposed, the FAA would have had no choice but to deny an applicant who had refused to submit

to a test within the previous year. On further consideration, the FAA has decided it is advisable to have some flexibility in applying this rule. Accordingly, the rule as adopted makes the refusal to submit to the test "grounds for" denying a new certificate or rating. In the case of a refusal to submit to an alcohol test, however, the FAA anticipates that it generally will order the revocation of a certificate held or deny an application for a certificate or rating for up to 1 year.

Several commenters ask questions about the legal procedures by which the rule will be enforced. Some appear to believe that a refusal to submit to an alcohol test would result in immediate suspension or revocation of the crewmember's airman certificate. The statutory procedures by which the FAA may suspend or revoke certificates provide full procedural safeguards.

If a crewmember refused to submit to an alcohol test under the circumstances of this rule, the FAA could issue an order suspending or revoking the crewmember's airman certificate, or could seek to collect a civil penalty for the violation, or could deny any application for a new certificate or rating for up to 1 year after the refusal, or could use a combination of these sanctions. In non-emergency cases, before the FAA issues an order of suspension or revocation, it notifies the airman of the charges and gives him or her the opportunity to be heard. If, after this notice, the FAA issues an order of suspension or revocation, the crewmember may appeal to the NTSB under § 609 of the Federal Aviation Act of 1958, as amended (FA Act). If the airman appeals to the NTSB, a non-emergency order does not become effective unless and until the NTSB affirms the FAA order. If the FAA issues an emergency order, the airman must surrender his or her certificate immediately, but may appeal to the NTSB and obtain an expedited review of his or her case. Under these circumstances, the NTSB must then complete its review within 60 days.

Except for denials during suspension or within 1 year after revocation, a person who is denied an airman certificate or rating may petition the NTSB to review the denial under § 602 of the FA Act. As with all denials for failure to meet eligibility requirements, the FAA does not issue a certificate to an applicant who it has determined is disqualified unless and until the NTSB reverses the denial.

One commenter asks whether the test result would be deemed conclusive. As with all evidence, a breath test, urine test, or other test for blood alcohol level would have to be sufficiently reliable to be used as evidence of a violation. Except for emergency cases, prior to issuing the order, the FAA would give the crewmember the opportunity to answer the charges and be heard as to why the blood alcohol level (or any other evidence) should not be used to prove a violation of the alcohol rules. If the FAA should use the results of a blood alcohol test, the crewmember in all cases would have the opportunity, during an appeal to the NTSB, to prove that the test was not reliable. This would be true if the test were used to prove that the crewmember had acted or attempted to act as crewmember with .04 percent by weight or more alcohol in the blood in violation of § 91.11(a)(4), or used to help prove that the crewmember had acted or attempted to act as a crewmember within 8 hours after the consumption of an alcoholic beverage or while under the influence of alcohol in violation of § 91.11(a) (1) or (2).

Several commenters appear to assume that an alcohol test conducted as described in this rule would be the only kind of alcohol test that FAA might use to prove blood alcohol levels. This is in error. The FAA has used alcohol tests in the past to prove blood alcohol content. The FAA will continue to use any alcohol test, such as one conducted by a hospital or by a law enforcement officer, which is sufficiently reliable. For instance, if a law enforcement officer tested a crewmember while investigating a suspected violation of State law not connected with aviation, the FAA could use the test if the agency had evidence to show that the test reliably indicated the crewmember's blood alcohol level while he or she was acting or attempting to act as a crewmember. The rule adopted here deals with the circumstances under which a crewmember must submit to a test or face FAA penalties. The rule does not limit which alcohol tests may be used to prove that the crewmember violated the alcohol rules.

Two commenters believe constitutional vagueness problems exist with the phase "law enforcement officer." The proposed rule referred to a "test which the officer is authorized to obtain under state or local law." The preamble identified the officer as one who is authorized under state or local law to conduct or otherwise obtain a test indicating blood alcohol level. The rule as adopted also identifies the law enforcement officer as one who is "authorized under State or local law to conduct the test or to have the test conducted." In their statues, the States refer to persons with this authority by such names as "officer," "law enforcement officer," "police officer," and "peace officer." The term used in the rule can be understood by the ordinary person and therefore is not vague.

Several commenters object that the FAA is delegating its authority to State and local governments. These comments reveal a fundamental misunderstanding of the proposed rule. Under the proposal and the rule as adopted, the law enforcement officers will not be enforcing the FAA rules; they will be enforcing their own State and local laws. Airmen now may be subject to such State and local investigations. The rule will not add to or detract from the States' authority; it simply will require crewmembers to cooperate with lawful investigations under the stated circumstances. The final rule has been changed to make this clearer.

Some commenters maintain that the FAA is prohibited from requiring cooperation with State or local law enforcement investigations because the laws and procedures vary from State to State. The courts, however, have upheld several Federal laws which depend in whole or in part on the provisions of applicable State laws, which vary from State to State. For example, the Social Security Act uses the States' definitions of husband and wife to determine eligibility; the Federal Assimilative Crimes Act, dealing with crimes on Federal enclaves, adopts whatever local laws apply if no Federal law exists for the crime. That various State and local laws regarding alcohol testing may be different does not preclude FAA action requiring crewmembers to cooperate with lawful investigations by State and local law officers.

Another commenter suggests that this rule could hamper accident investigations in that law enforcement officers may hold or arrest a pilot for alleged violation of State alcohol laws while the FAA or NTSB is investigating the accident. The proposed rule, however, would make no changes in the State or local laws or policies in this respect, so it would not affect current practice. The FAA does not expect accident investigations to be hampered by this rule.

Some commenters note that, under some circumstances, *Miranda* warnings must be given to people before being questioned by police. Law enforcement officers give *Miranda* warnings to people at certain stages in an investigation to inform them of their right against self-incrimination and their right to be represented by a lawyer. Since the law enforcement officer will be investigating pursuant to State and

local laws, not FAA civil regulations, the question of *Miranda* warnings will be a matter of State or local prosecution, not an FAA matter. *Miranda* warnings are not required in connection with FAA civil, administrative proceedings.

One commenter argues that the proposed rule violates the Fourth Amendment to the Constitution. The Fourth Amendment forbids unreasonable searches and seizures. Again, it must be emphasized that the officers will be acting under their State and local laws, not under FAA authority. Many States have laws and procedures for obtaining alcohol tests which have been held reasonable and valid under the Fourth Amendment. The FAA rule would not affect the validity of these laws.

One commenter objects that the proposed rule would require the NTSB to render decisions of a quasi-criminal nature without adequate due process safeguards and states that the NTSB does not have the authority to render such decisions. The enforcement of FAA rules is a civil matter, not criminal. The existing statutory requirements and procedural rules provide the process that is due for such civil actions.

One commenter contends that the alcohol rule is an implied consent law that must be legislated and cannot be instituted by rulemaking but cites no authority for this argument. The FAA has adequate authority, under the FA Act, to issue this rule to promote safety in air commerce and the public interest. This is especially so in light of studies conclusively proving that the consumption of even small amounts of alcohol impairs a crewmember's ability to perform requisite duties.

One commenter voices concern that the rule would infringe on the privacy of airmen and cause public humiliation. The investigation by the law enforcement officer will be conducted under State or local laws and procedures, not FAA-required procedures. The law enforcement officer will be subject to State and local laws and policies regarding privacy. All FAA enforcement investigations adhere to statutes, departmental rules, and FAA guidelines regarding privacy. The FAA will issue guidelines to its inspectors to assist them in enforcing this rule, and will include guidance to protect privacy.

Several commenters raise questions about which crewmembers should be subject to the rule. Three commenters, representing air carrier pilots, oppose the inclusion of airline pilots under this rule on two grounds: (1) No airline accident has been traced to an alcohol-impaired pilot in over 20 years; (2) the rule might hamper the voluntary programs the air carriers and unions have sponsored to treat and rehabilitate pilots with alcohol and drug problems. The FAA disagrees. Airline and commercial pilots should not be exempt from alcohol rules directed toward all crewmembers. The FAA has revoked pilot certificates of airline transport pilots found to have operated passenger-carrying air carrier aircraft in violation of the alcohol rules. Clearly the FAA is justified in taking further steps to assist in enforcing the alcohol rules against airline and commercial pilots. There is no requirement or justification for awaiting a fatal accident before taking corrective regulatory action. Further, this rule will not interfere with current efforts to rehabilitate pilots with alcohol or drug problems. The rule will simply assist in obtaining evidence of suspected violations of the alcohol rules and, the agency expects, will also assist in deterring such violations.

Three commenters, including two flight attendant unions, object to the inclusion of flight attendants in this rule. They state that flight attendants have never been the cause of aviation accidents. In addition, they point out that, since flight attendants are not certificated, the FAA can only use civil penalties under this rule. As crewmembers who have important safety responsibilities, flight attendants should not be under the influence of drugs or alcohol while on duty. Flight attendants have been included in § 91.11 of the FAR since it was first adopted. Their inclusion in this final rule is consistent with the purpose of the regulation.

Two commenters want the blood alcohol content to be lowered to 0.0 percent. These concerns are being given consideration in another project and are not within the scope of this rulemaking.

One commenter wants the FAA to substitute for the proposed rules a program to educate crewmembers about the danger of flying while impaired. The FAA agrees that education of crewmembers about alcohol and drug abuse is important and has for years conducted seminars and distributed pamphlets on these dangers, but the rules adopted here must also be in force to assist the FAA in identifying those who do violate the alcohol rules.

Sections Affected

Sections 61.16 and 63.12a are being revised to make a refusal to submit to an alcohol test that is requested by a law enforcement officer under the terms of a new § 91.11(c)(1) grounds for suspension or revocation of a certificate or denial of a certificate or rating.

A paragraph is being added to § 91.11(c) to require crewmembers to submit to alcohol tests if a law enforcement officer requests such a test. The proposed rule inferred that the law enforcement officer would be, at least in part, requesting the test because he or she suspected a violation of the FAA alcohol rules. This is not intended. The proposed rule has been changed to make clear that the law enforcement officer would be making the request to investigate a suspected violation of State or local law. The State or local law would be one governing conduct the same as or substantially similar to conduct prohibited by the FAA's alcohol rules. For instance, if the State law prohibited reckless operation of an aircraft, that prohibition would be deemed to include operating an aircraft while under the influence of alcohol, because such conduct is reckless. A crewmember who was being investigated by a law enforcement officer for suspected flying under the influence of alcohol in violation of the State's reckless flying law would be required, under this rule, to submit to an alcohol test on request of the law officer.

The purpose of this rule is to require submission to a test only when the test may help indicate whether the crewmember has violated FAA rules. A crewmember's failure to submit to a test requested by a law enforcement officer under circumstances not described in this rule will be dealt with only by State or local authorities, not by the FAA.

Regulatory Evaluation

These rules will serve as enforcement tools. They will have no economic impact on crewmembers who are not suspected of failing to comply with the alcohol rules. The burden on those who will be requested to submit to an alcohol test will consist of a brief period of time spent undergoing the test. The time spent by the crewmember while being detained by the law enforcement officer during the on-site investigation will not be changed by these amendments. The various States and municipalities that enforce their own "flying while intoxicated" laws would require this detention anyway, so no additional time is being required by these amendments. Since these rules will have no impact on crewmembers, a regulatory evaluation is not warranted.

Conclusion

These amendments will enhance aviation safety by providing an additional enforcement tool and by adding additional deterrence to flying in

violation of the FAA's alcohol rules. The agency expects that these changes will reduce aviation accidents and save lives. Compliance with this amendment will have no economic impact on crewmembers. Accordingly, it has been determined that this is not a major regulation under Executive Order 12291. However, because of the public interest in this action, this amendment is significant under Department of Transportation Regulatory Policies and Procedures (44 FR 11034; February 26, 1979). Since this amendment will have no cost impact, I certify that under the criteria of the Regulatory Flexibility Act, these rules would not have a significant economic impact on small entities. A full regulatory evaluation has not been prepared because these amendments will have no cost impact.

List of Subjects

14 CFR Part 61

Airmen, Alcohol an alcoholic beverages, Aviation safety.

14 CFR Part 63

Aircraft, Airmen, Aviation safety.

14 CFR Part 91

Airmen, Aviation safety, Liquor.

Adoption of this Amendment

Accordingly, Parts 61, 63, and 91 of the Federal Aviation Regulations (14 CFR 61, 63, and 91) are amended as follows:

PART 61—CERTIFICATION: PILOTS AND FLIGHT INSTRUCTORS

1. The authority citation for Part 61 is revised to read as follows:

Authority: 49 U.S.C. 1354(a), 1355, 1421, 1422, 1427, 1429, and 1430; and 49 U.S.C. 106(g) (Revised, Pub. L. 97–449; January 12, 1983).

2. By revising § 61.16 to read as follows:

§ 61.16 Refusal to submit to an alcohol test or to furnish test results.

A refusal to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer in accordance with § 91.11(c) of this chapter, or a refusal to furnish or authorize the release of the test results requested by the Administrator in accordance with § 91.11 (c) or (d) of this chapter, is grounds for—

(a) Denial of an application for any certificate or rating issued under this part for a period of up to 1 year after the date of that refusal; or

(b) Suspension or revocation of any certificate or rating issued under this part.

PART 63—CERTIFICATION: CREWMEMBERS OTHER THAT PILOTS

3. The authority citation for Part 63 is revised to read as follows:

Authority: 49 U.S.C. 1354(a), 1355, 1421, 1422, 1427, 1429, and 1430; and 49 U.S.C. 106(g) (Revised, Pub. L. 97–449; January 12, 1983).

4. By revising § 63.12a to read as follows:

§ 63.12a Refusal to submit to an alcohol test or to furnish test results.

A refusal to submit to a test to indicate the percentage by weight of alcohol in the blood, when requested by a law enforcement officer in accordance with § 91.11(c) of this chapter, or a refusal to furnish or authorize the release of the test results when requested by the Administrator in accordance with § 91.11 (c) or (d) of this chapter, is grounds for—

(a) Denial of an application for any certificate or rating issued under this part for a period of up to 1 year after the date of that refusal; or

(b) Suspension or revocation of any certificate or rating issued under this part.

PART 91—GENERAL OPERATING AND FLIGHT RULES

5. The authority citation for Part 91 is revised to read as follows:

Authority: 49 U.S.C. 1301(7), 1303, 1344, 1348, 1352 through 1355, 1401, 1421 through 1431, 1471, 1472, 1502, 1510, 1522, and 2121 through 2145; Articles 12, 29, 31, and 32(a) of the Convention of International Civil Aviation (61 Stat. 1180); 42 U.S.C. 4321 *et seq.*; E.O. 11514; and 49 U.S.C. 106(g) (Revised, Pub. L. 97–449; January 12, 1983).

6. By amending § 91.11 by revising paragraph (c) to read as follows:

§ 91.11 Alcohol or drugs.

* * * * *

(c) A crewmember shall do the following:

(1) On request of a law enforcement officer, submit to a test to indicate the percentage by weight of alcohol in the blood, when—

(i) The law enforcement officer is authorized under State or local law to conduct the test or to have the test conducted; and

(ii) The law enforcement officer is requesting submission to the test to investigate a suspected violation of State or local law governing the same or substantially similar conduct prohibited by paragraph (a)(1), (a)(2), or (a)(4) of this section.

(2) Whenever the Administrator has a reasonable basis to believe that a person may have violated paragraph (a)(1), (a)(2), or (a)(4) of this section, that person shall, upon request by the Administrator, furnish the Administrator, or authorize any clinic, hospital, doctor, or other person to release to the Administrator, the results of each test taken within 4 hours after acting or attempting to act as a crewmember that indicates percentage by weight of alcohol in the blood.

* * * * *

Issued in Washington, D.C., on January 2, 1986.

Donald D. Engen,

Administrator.

[FR Doc. 86–415 Filed 1–8–86; 8:45 am]

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federal register

Thursday
January 9, 1986

Part V

Environmental Protection Agency

40 CFR Part 716

Toxic Substances; Health and Safety Data Reporting; Response to Comments on Hexachlorocyclopentadiene; Final Rule

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 716

[OPTS-84019A; FRL-2925-3]

Toxic Substances; Health and Safety Data Reporting; Response to Comments on Hexachlorocylopentadiene

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: EPA is revising the decision to remove hexachlorocyclopentadiene, CAS no. 77-47-4, (HCCPD) from the list of substances and mixtures in the section 8(d) model Health and Safety Data Reporting rule, 40 CFR Part 716. The decision is based on comments received in response to the final rule.

DATES: In accordance with 40 CFR 23.5 (50 FR 7271), this rule shall be promulgated for purposes of judicial review at 1 p.m. eastern standard time on January 10, 1986. This rule is effective on January 13, 1986.

FOR FURTHER INFORMATION CONTACT: Edward A. Klein, Director, TSCA Assistance Office (TS-799), Office of Toxic Substances, Environmental Protection Agency, Room E-543, 401 M Street SW., Washington, D.C. 20460, Toll free: (800-424-9065). In Washington, D.C.: (554-1404). Outside the USA: (Operator—202-554-1404).

SUPPLEMENTARY INFORMATION: EPA issued a final regulation terminating the reporting requirements for seven chemical substances listed under 40 CFR 716.17(a)(1), which published in the **Federal Register** of September 30, 1985 (50 FR 39667). The rule also provided that if a reasonable justification was identified for retaining a substance, EPA would revise the final rule prior to the final rule's effective date.

Written comments providing reasons for retaining any of the seven substances were to be submitted on or before November 29, 1985. Shortly after the rule's publication, EPA's Office of Air Quality Planning and Standards (OAQPS) notified the Office of Toxic Substances (OTS) of its continuing need to monitor and review health and safety studies on HCCPD and requested that OTS retain HCCPD on the section 8(d) model rule.

OAQPS's continuing need to assess information on HCCPD is the basis of its request that HCCPD be retained on the section 8(d) model rule. OAQPS issued a Notice of Intent Not to Regulate and Solicitation of Information on HCCPD published in the **Federal Register** of October 1, 1985 (50 FR 40154). The notice stated that due to the very limited potential for widespread human exposure to HCCPD, and the absence of information suggesting serious health effects of HCCPD at ambient concentrations, the development of regulations under the Clean Air Act for HCCPD was not currently warranted. However, there are two major sources of potentially significant exposure to HCCPD which are of concern. Additionally, comments received by OAQPS cause concerns about both the health effects and exposure estimates of HCCPD.

In its request that HCCPD not be dropped from the TSCA 8(d) model rule, OAQPS stated that the nature of an "intent not to regulate" decision under the Clean Air Act is based on preliminary health and exposure data. Generally, when a notice is published, a request for additional information is included. Any new information which is received in response to the request for information is reviewed. Even after the official comment period is closed, any pertinent new information which becomes available will be reviewed.

EPA considers this sufficient justification for retaining HCCPD on the section 8(d) list.

List of Subjects in 40 CFR Part 716

Chemicals, Environmental protection, Hazardous substances, Health and safety, Recordkeeping and reporting.

Therefore, EPA is now retaining hexachlorocyclopentadiene on the listing of substances under 40 CFR 716.17(a)(1), and the amendment to remove hexachlorocyclopentadiene, 77-47-4, from § 716.17(a)(1) published September 30, 1985, is withdrawn.

(15 U.S.C. 2607)

Dated: January 7, 1986.

John A. Moore,

Assistant Administrator, for Pesticides and Toxic Substances.

[FR Doc. 86-607 Filed 1-8-86; 10:19 am]

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Note: No public bills which have become law were received by the Office of the Federal Register for inclusion in today's **List of Public Laws.**

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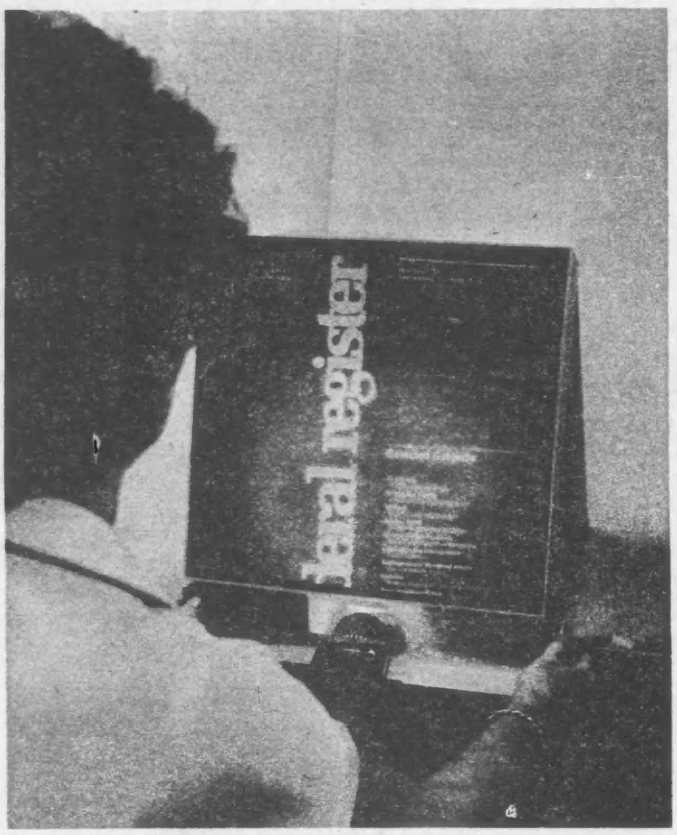

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