



## Department of Energy

Germantown, MD 20874-1290

JAN 3 1996

Dr. D. Clark Gibbs  
General Manager  
Energy Technology Engineering Center  
P.O. Box 7930  
Canoga Park, California 91309

Dear Dr. Gibbs:

This responds to your request for exemption from a provision contained in Title 10, Code of Federal Regulations, Part 835 (10 CFR 835), "Occupational Radiation Protection." Specifically, this response concerns your request for an exemption from the requirement (835.702(e)) that efforts shall be made to obtain records of prior years occupational internal and external exposure.

Based on our review of the materials that you provided to us, we have determined that rather than an exemption from the requirement of 835.702(e), a clarification of an acceptable approach to implementation of this provision to meet the intended purpose of the provision is needed.

Your exemption request maintains that 835.702(e) requires dose histories be compiled for all workers and that your company is not adequately staffed to support this level of exposure history compilation. Your request notes that granting the exemption request will save the Department of Energy (DOE) the expenditure of administrating funds compiling dose histories for individuals who are not likely to exceed 100 millirem (mrem) in a calendar year.

DOE recently provided relevant guidance in the Office of Worker Protection Programs and Hazards Management's (EH-52) Radiological Control Technical Position (RCTP) 95-04, Prior Years Exposure Records (enclosed). RCTP 95-04 states that "Records of prior years occupational exposure required by 10 CFR 835.702(e) need only be obtained for radiological workers." Radiological workers, as defined in 10 CFR 835.2(a), are general employees whose job assignment involves operation of radiation producing devices or work with radioactive materials (i.e., radiological work) or are likely to be routinely exposed to greater than 100 mrem during the year. The RCTP also states that lifetime dose records, which would include prior years exposure records, need not be maintained for radiological workers who are not likely to receive an occupational exposure greater than 100 mrem in a year. Accordingly, you are not required to compile dose histories or obtain prior year dose records for radiological workers who are not likely to exceed 100 mrem in a calendar year.

In addition, section IV.D.1.g of Implementation Guide G-10 CFR 835/C2, "External Dosimetry Program," provides guidance on what DOE considers to be a sufficient attempt to obtain these records.



RCTP 95-04 and this clarification letter describe a process that is somewhat more restrictive than that discussed in your exemption request. Your exemption request proposes attempting to obtain records of prior years exposure only after an individual exceeds 250 mrem in a calendar year. Based on subsequent discussion with your staff (reference the September 21, 1995, telephone conversation between Mr. Peter O'Connell (EH-52) and Dr. Phil Rutherford (Energy Technology Engineering Center)), we have determined that the guidance of only obtaining records of prior years exposure for radiological workers who are likely to receive an exposure in excess of 100 mrem in a year, as specific in RCTP 95-04, adequately addresses the basis of your exemption request.

We suggest that ETEC amend their radiation protection program to reflect the above information. The amendment would, in turn, need to be approved by DOE.

The DOE Office of Environmental Management (EM) staff concur with this response.

Sincerely,

  
Joseph E. Fitzgerald, Jr.  
Deputy Assistant Secretary  
Worker Health and Safety

Enclosure

cc w/enclosure:

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Department of Energy  
Office of Worker Protection Programs and Hazards  
Management  
Radiological Control Technical Position  
RCTP 95-04

Page 1

Prior Years Exposure Records

**Issue:**

Personnel transfers between facilities and employers in the nuclear industry complicate efforts to maintain occupational exposure records. In the absence of regulatory requirements for controlling an individual's lifetime dose, confusion exists regarding requirements for obtaining records of prior years doses and the level of effort necessary to obtain these records.

**Introduction:**

Title 10, Code of Federal Regulations, Part 835 (10 CFR 835), "*Occupational Radiation Protection*," establishes radiation protection standards, limits, and program requirements for protecting individuals from ionizing radiation resulting from the conduct of Department of Energy (DOE) activities. 10 CFR 835.702(e) requires that efforts be made to obtain records of prior years occupational internal and external exposure.

The "*DOE Radiological Control Manual*" (RadCon Manual), DOE/EH-0256T, contains additional requirements for obtaining prior years exposure records for individuals. Article 721 requires that records detailing an employee's pre-employment history and the associated occupational radiation dose be maintained.

**Discussion:**

Guidance to Federal agencies on occupational radiation protection, approved by the President in 1987, recommends that records of lifetime radiation exposure be maintained. The requirements of 10 CFR 835 are based, in part, upon this guidance.

Several provisions of 10 CFR 835 and the RadCon Manual require knowledge of an individual's prior years doses. 10 CFR 835.702(e) requires that efforts be made to obtain records of prior years occupational exposures. 10 CFR 835.204(b) requires that an individual's dose from all previous planned special exposures and all doses in excess of the occupational dose limits be determined prior to requesting that an individual participate in an authorized planned special exposure. Article 212.1 of the RadCon Manual establishes a lifetime control level, which requires knowledge of an individual's prior years doses. Article 721 requires that records of an employee's pre-employment associated occupational radiation dose be maintained.

### Prior Years Exposure Records

Section IV.D.1.g of the "*External Dosimetry Program Implementation Guide*" (IG), G-10 CFR 835/C2, provides guidance for implementation of 10 CFR 835.702(e) and RadCon Manual article 721. The IG indicates that three written requests to previous employers constitute sufficient effort. In addition, to comply with the lifetime control level established in RadCon Manual article 212, the IG recommends that a dose of 1 rem should be assigned for each prior year for which records were unavailable and the individual was engaged in activities that could have resulted in occupational radiation exposure. These notional lifetime dose values are only for the purpose of managing lifetime exposures and are not intended for use in epidemiological studies, medical evaluation programs, or primary doses of record.

10 CFR 835.702(c)(5)(iii) requires documentation of an individual's cumulative total effective dose equivalent (CTEDE). CTEDE is the sum of the total effective dose equivalents recorded for an individual for each year of employment at that DOE or DOE-contractor site or facility, effective January 1, 1989. The prior years occupational exposures documented in accordance with 10 CFR 835.702(e), i.e., those doses received at other facilities, DOE or non-DOE, are not included. However, those doses are included when demonstrating compliance with the lifetime control level, as required by RadCon Manual article 212.

#### Technical Position:

Based upon the information cited above and the requirements of 10 CFR 835 and the RadCon Manual:

- Records of prior years occupational exposure required by 10 CFR 835.204(b) need only be obtained for radiological workers who are chosen and elect to participate in a planned special exposure. Records of the individual's doses from all previous planned special exposures and all doses in excess of the occupational dose limits are required.
- Records of prior years occupational exposure required by 10 CFR 835.702(e) need only be obtained for radiological workers. Efforts taken to obtain these doses should be consistent with the guidance in this document. Efforts must be made to obtain records of all of the individual's prior years occupational doses.

Department of Energy  
Office of Worker Protection Programs and Hazards  
Management  
Radiological Control Technical Position  
RCTP 95-04

Page 3

Prior Years Exposure Records

- With respect to the RadCon Manual, the lifetime control level established in article 212.1 is applicable only to radiological workers because they are the only individuals expected to receive greater than 100 mrem in a year. Article 721 supports article 212 by specifying the types of information necessary to document an individual's prior years occupational doses.
- 10 CFR 835.801(a) and (b) require that annual dose reports and requested termination reports provide all of the information listed in section 702(c). This provision is supported by RadCon Manual article 781.3. However, the language in the RadCon Manual is not clear regarding requirements for reporting lifetime dose. Inclusion of lifetime dose information in annual and requested termination dose reports is not required. Consistent with 10 CFR 835, reporting of CTEDE is required. The language in the RadCon Manual will be clarified to reflect this position.
- Some radiological workers, such as Defense Nuclear Facilities Safety Board and DOE Headquarter's staff members, may have site access but not be expected to exceed 100 mrem in a year at the site. Maintenance of lifetime dose records for these individuals is not expected.

In documenting the Radiation Protection Program (RPP), contractors should state the efforts that they intend to implement to achieve compliance with 10 CFR 835.204(b) and 702(e). These efforts should be commensurate with those recommended in the *"External Dosimetry Program Implementation Guide."* The sufficiency of these efforts will be considered during the RPP review effort. The *"External Dosimetry Program Implementation Guide"* provides guidance with respect to prior years dose records that are unavailable.