

HHS Designation of Additional Members of the
Special Exposure Cohort
Under the
Energy Employees Occupational Illness Compensation Program Act of 2000

Designating a Class of Employees

Savannah River Site
Aiken, South Carolina



I. Designation

I, Kathleen Sebelius, Secretary of Health and Human Services, designate the class of employees defined in Section II of this report for addition to the Special Exposure Cohort (SEC), as authorized under the Energy Employees Occupational Illness Compensation Program Act of 2000 (EEOICPA), 42 U.S.C. § 7384q.

February 2, 2012
Date

[Signature on File]
Kathleen Sebelius

II. Employee Class Definition

All employees of the Department of Energy, its predecessor agencies, and their contractors and subcontractors who worked at the Savannah River Site from January 1, 1953, through September 30, 1972, for a number of work days aggregating at least 250 work days, occurring either solely under this employment or in combination with work days within the parameters established for one or more other classes of employees included in the Special Exposure Cohort.

III. Designation Criteria and Recommendations

Pursuant to 42 U.S.C. § 7384q, for the class defined in Section II of this report, the Secretary has determined, and the Advisory Board on Radiation and Worker Health (Board) has recommended, that

- (1) it is not feasible to estimate with sufficient accuracy the radiation dose that the class received; and
- (2) there is a reasonable likelihood that such radiation dose may have endangered the health of members of the class.

The SEC final rule states in 42 C.F.R. § 83.13(c)(1) that it is feasible in two situations to estimate the radiation dose that the class received with sufficient accuracy. First, the rule states that radiation doses may be estimated with sufficient accuracy if NIOSH has established that it has access to sufficient information to estimate the maximum radiation dose for every type of cancer for which radiation doses are reconstructed that could have been incurred under plausible circumstances by any member of the class. Alternatively, radiation doses may be estimated with sufficient accuracy if NIOSH has established that it has access to sufficient information to estimate the radiation doses of members of the class more precisely than a maximum dose estimate.

The Board, pursuant to 42 U.S.C. § 7384q, advised the Secretary to designate the class as an addition to the SEC in a letter received by the Secretary on January 4, 2012.

IV. Designation Findings

Feasibility of Estimating Radiation Doses with Sufficient Accuracy

The Secretary established the feasibility determination for the class of employees covered by this report based upon the findings summarized below.

- NIOSH evaluated the feasibility for completing dose reconstructions for all construction workers who worked in any thorium area at the Savannah River Site from January 1, 1953, through December 31, 1972, and determined that some members of this class, as well as some non-construction-worker employees of the Savannah River Site may have received internal and external radiation exposures from thorium operations performed at the site.
- NIOSH determined that members of this class may have received internal radiation exposures from inhalation and ingestion of thorium during the thorium related operations involving unencapsulated radionuclides during fabrication, research and development activities of reactor fuel components, and associated chemical separation operations performed in the 773A (Savannah River Laboratory) and TNX (Separations Pilot Plant) buildings at the Savannah River Site.
- NIOSH has determined, based on its assessment of thorium exposures, that there is a lack of sufficient thorium personnel and area monitoring data within the 773A and TNX buildings from the onset of thorium operations in 1953 through the end of thorium research activities in those locations in 1972. The monitoring data deficiency extends only to the work with unencapsulated thorium.
- NIOSH has determined that the monitoring data deficiency extends only to the work with unencapsulated thorium. Workers with the potential to be exposed to unencapsulated thorium in these buildings can be identified through external monitoring records by having: (1) at least one of the following dosimetry codes: A, G, CMX, TNX, D2, Y, or the code is blank or illegible indicating issuance from an unknown or indeterminable location and worked at the Savannah River Site from January 1, 1953, through December 31, 1957; or (2) at least one of the following dosimetry codes: 5A, 5C, 6B through 6Z, 12D through 12H, 12J through 12Z, or 000 indicating issuance from an unknown location and worked at the Savannah River Site from January 1, 1958, through September 30, 1972. NIOSH concluded that personnel were required to wear a dosimeter in order to have access to those parts of 773A and TNX where the unencapsulated thorium was handled.
- NIOSH finds it is feasible to reconstruct the doses received from potential exposures to thorium (metal) and its progeny or encapsulated thorium for workers assigned to other areas including the 300 Area, the Savannah River Site R,P,K,L,C reactors (100 area), and F and H Separation Canyons (200 area). There was no exposure to thorium in the heavy water plant (400 area).

- NIOSH lacks sufficient information, which includes specific biological monitoring data, sufficient air monitoring information, sufficient process and radiological source information, and surrogate data from similar operations at other sites that would allow it to estimate the potential internal radiological exposures for all workers who worked with unencapsulated thorium in the 773A and TNX buildings at the Savannah River Site from January 1, 1953, through December 31, 1972. NIOSH determined that members of this class may have received internal and external radiation exposures from thorium operations performed at the site through September 1972.
- Principal sources of external radiation for members of the Savannah River Site proposed class included exposures to various radionuclides at the facility. This could have included beta-gamma and neutron exposures during fabrication, research and development activities of reactor fuel components, and associated chemical separation operations.
- NIOSH has determined that it has access to sufficient external monitoring data, and associated medical monitoring data, for all personnel during all time periods at the Savannah River Site facility. NIOSH has identified that it can bound, or reconstruct with sufficient accuracy, the external and occupational medical dose for all Savannah River Site workers.
- NIOSH has documented that it cannot complete the dose reconstructions related to this petition with sufficient accuracy for the employees who worked at the 773A and TNX buildings at the Savannah River Site from January 1, 1953, through September 30, 1972.
- The Board also found that available personnel and monitoring records were not adequate to identify all employees who worked and may have worked in those areas of the Savannah River Site and for whom dose reconstructions are not feasible. Hence, the Board recommended a class definition that includes all employees at the Savannah River Site during the time period in question notwithstanding available personnel and monitoring records. This Board recommendation has been accepted and the class definition adjusted accordingly.
- Pursuant to 42 C.F.R. § 83.13(c)(1), NIOSH determined that there is insufficient information to either: (1) estimate the maximum radiation dose, for every type of cancer for which radiation doses are reconstructed, that could have been incurred under plausible circumstances by any member of the class; or (2) estimate the radiation doses of members of the class more precisely than a maximum dose estimate.
- Although NIOSH found that it is not possible to completely reconstruct radiation doses for the proposed class, NIOSH intends to use any internal and external monitoring data that may become available for an individual claim (and that can be interpreted using existing NIOSH dose reconstruction processes or procedures) to support a partial dose reconstruction for non-presumptive cancers and/or cases that have less than 250 work days of employment.

- The Board recommended the proposed class for addition to the SEC and the NIOSH Director concurred with its recommendation.

V. Health Endangerment

The Secretary established the health endangerment determination for the class of employees covered by this report based upon the findings summarized below.

- (1) Pursuant to 42 C.F.R. § 83.13(c)(3), NIOSH established that there is a reasonable likelihood that such radiation doses may have endangered the health of members of the class. Pursuant to 42 C.F.R. § 83.13(c)(3)(ii), NIOSH specified a minimum duration of employment to satisfy this health endangerment criterion as “having been employed for a number of work days aggregating at least 250 work days within the parameters established for this class or in combination with work days within the parameters (excluding aggregate work day requirements) established for one or more other classes of employees in the Cohort.”
- (2) NIOSH did not identify any evidence from the petitioners or from other resources that would establish that the class was exposed to radiation during a discrete incident likely to have involved exceptionally high-level exposures, such as a nuclear criticality incident, as defined under 42 C.F.R. § 83.13(c)(3)(i).
- (3) The Board concurred with the NIOSH finding that the health of the class may have been endangered and defined the class according to the 250-work day requirement specified under 42 C.F.R. § 83.13(c)(3)(ii).

V. Effect and Effective Date of Designation

The Secretary submits this report on the designation of one additional class to the SEC for review by Congress, pursuant to 42 U.S.C. §§ 7384(14)(C)(ii) and 7384q(c)(2)(A), as amended by the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Pub. L. No. 108-375 (codified as amended in scattered sections of 42 U.S.C.). Pursuant to 42 U.S.C. § 7384(14)(C)(ii), as amended by the Ronald W. Reagan National Defense Authorization Act for Fiscal Year 2005, Pub. L. No. 108-375 (codified as amended in scattered sections of 42 U.S.C.), the designation in this report will become effective 30 days after the date of this report’s submission to Congress “unless Congress otherwise provides.”

VI. Administrative Review of Designation

The health endangerment determination of the designation provided in this report may be subject to an administrative review within HHS, pursuant to 42 C.F.R. § 83.18(a). On the basis of such a review, if the Secretary decides to expand the class of employees covered by this designation, the Secretary would transmit a supplementary report to Congress providing the expanded employee class definition and the criteria and findings on which the decision was based.