

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

Sandia National Laboratories - Livermore  
Livermore, California



## I. Designation

I, Kathleen Sebelius, Secretary of the U.S. Department of Health and Human Services (HHS), 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.

[Signature on File]  
Kathleen Sebelius

December 12, 2013  
Date

## II. Employee Class Definition

All employees of the Department of Energy, its predecessor agencies, and their contractors and subcontractors who worked in any area at the Sandia National Laboratories-Livermore in Livermore, California, from October 1, 1957, through December 31, 1994, 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.

NIOSH determined that there is insufficient information to estimate the radiation doses that the class received with sufficient accuracy under the two abovementioned situations. 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 November 12, 2013.

## IV. Designation Findings

### Infeasibility of Estimating Radiation Doses with Sufficient Accuracy

The Secretary designates the class of employees covered by this report based upon the findings summarized below.

#### Internal Feasibility

- The principal sources of internal radiation for members of the proposed class include exposure to depleted uranium, tritium, uranium tritide, uranium hydrides, thorium, and highly enriched uranium. Primary sources of potential internal doses to depleted uranium were from machining performed in the Weapons Laboratory Facility Complex. Tritium, uranium tritide, and uranium hydride dose sources were associated with research activities taking place within the Tritium Research Laboratory. Highly enriched uranium and thorium may have been involved in classified activities at other site locations and also resulted in potential internal doses.
- NIOSH has access to records suggesting that tritium and uranium urinalyses were performed for workers within the Tritium Research Laboratory and those machining depleted uranium. NIOSH does not, however, have access to all internal monitoring results or complete source term and process records, nor can it assess what fraction of the records are available at the site prior to 1995.
- Therefore, NIOSH finds that it is not feasible to estimate, with sufficient accuracy, the total internal dose for workers at the Sandia National Laboratories-Livermore in Livermore, California, from October 1, 1957, through December 31, 1994.

#### External Feasibility

- The principal sources of external radiation doses for members of the proposed class include exposures to highly enriched uranium, uranium hydrides, thorium, Radiography Facility isotope sources, and potentially other radionuclides from classified work.
- NIOSH has access to records suggesting that external monitoring was performed for many site workers. NIOSH does not, however, have access to all external monitoring results or complete source term and process records at the site prior to 1995.
- Therefore, NIOSH finds that it is not feasible to estimate, with sufficient accuracy, the total external dose for workers at the Sandia National Laboratories-Livermore in Livermore, California, from October 1, 1957, through December 31, 1994.
- NIOSH finds that it is likely feasible to reconstruct occupational medical dose with sufficient accuracy for Sandia National Laboratories-Livermore workers at the site up through 1989, using claimant-favorable assumptions in the Technical Basis Document, Summary Site Profile for Sandia National Laboratories in Livermore, California (ORAUT-TKBS-0053, Rev. 00) After 1989, medical x-rays are not applicable because they were performed offsite.
- 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). Therefore, dose reconstructions for individuals employed at Sandia National Laboratories-Livermore during the period from October 1, 1957, through December 31, 1994, but who do not qualify for inclusion in the SEC, may be performed using these data, as appropriate.

- 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.
- NIOSH lacks sufficient information, which includes internal and external personnel monitoring data, process data, and radiological source term information, to allow it to estimate with sufficient accuracy the potential internal and external exposures to radionuclides, which include but are not limited to uranium, uranium tritides and hydrides, tritium, and thorium, as well as potential exposures from radiological classified activities for workers at the Sandia National Laboratories-Livermore in Livermore, California, from October 1, 1957, through December 31, 1994.
- The NIOSH Director concurred with the Board and recommended the proposed class for addition to the SEC.

#### 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 NIOSH’s 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. §§ 7384l(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. § 7384l(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.