

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
Clarksville Modification Center, Ft. Campbell
Clarksville, Tennessee



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.

August 23, 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 Clarksville Modification Center, Ft. Campbell, in Clarksville, Tennessee, from August 1, 1949, through December 31, 1967, 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 August 1, 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.

- The principal sources of internal radiation exposures for members of the Clarksville Modification Center, Ft. Campbell proposed class included exposures to tritium as a gas, weapons-grade plutonium, highly-enriched uranium, depleted uranium, polonium-210 in a Po-Be neutron generator, and small activities of cesium-137 during the assembly, inspection, and disassembly of weapons components.
- NIOSH has found that air monitoring for tritium was called for in the plant operating procedures. However, NIOSH has been unable to locate recorded results of this monitoring. NIOSH has also identified a lack of information indicating urinalysis or other forms of internal monitoring were conducted to monitor for intakes of uranium, plutonium, or tritium.
- NIOSH has located very little documentation as to quantities of radiological materials shipped to the Clarksville Modification Center, Ft. Campbell, for processing or testing. It is clear from reports and worker communication that the Clarksville employees worked with uranium, tritium, and plutonium. However, without additional documentation, NIOSH is unable to ascertain the quantities or forms of the source materials that may have been used or stored on site at any time during the period under evaluation.
- In the absence of adequate internal dose monitoring criteria and adequate personnel monitoring data, NIOSH has not found sufficient general area air sampling, breathing zone air sampling, site survey, or source term information to allow it to bound potential internal exposures, or to demonstrate that workers were adequately monitored for potential exposures. Therefore, NIOSH finds that it is not feasible to estimate with sufficient accuracy the total internal dose for workers at the Clarksville Modification Center, Ft. Campbell, in Clarksville, Tennessee, during the period from August 1, 1949, through December 31, 1967.
- The principal sources of external radiation exposures for members of the Clarksville Modification Center, Ft. Campbell proposed class included exposures to weapons-grade plutonium, highly-enriched uranium, depleted uranium, polonium-210 in a Po-Be neutron generator, a cobalt-60 radiography source, an iridium-192 radiography source, and small activities of cesium-137 during the assembly, inspection, and disassembly of weapons components.
- NIOSH determined that it has access to annual dosimetry reports for Clarksville Modification Center, Ft. Campbell from 1949 through 1959 and weekly report from 1960 through the end of operations in 1965. However, NIOSH intends to investigate the use of neutron-to-photon ratios based on data from similar operations to support reconstructing external neutron doses for members of the proposed class.

- NIOSH has also identified no information describing the medical X-ray examination requirements for the evaluated period at the site. NIOSH intends to use the available methodology for the era to support reconstructing medical X-ray for members of the proposed class.
- Because the monitored individuals would have been those workers with direct exposure to the devices being maintained at the plant, it is reasonable to assume that these badges represent the maximally-exposed individuals. Based on this data availability, and the available dose reconstruction methods, NIOSH believes that is feasible to reconstruct external dose, including occupational medical doses, with sufficient accuracy for all Clarksville Modification Center, Ft. Campbell employees during the time period from August 1, 1949, through December 31, 1967.
- NIOSH finds that it has access to sufficient personnel and area monitoring data, and sufficient process and radiological source information, to support assessing external dose, including occupational medical dose, with sufficient accuracy. However, NIOSH lacks access to sufficient information and documentation that would allow it to estimate with sufficient accuracy the potential internal radiological exposures to which the proposed class may have been subjected at the Clarksville Modification Center, Ft. Campbell employees during the time period from August 1, 1949, through December 31, 1967.
- NIOSH has documented that it cannot complete the dose reconstructions related to this petition with sufficient accuracy for the employees who worked at the Clarksville Modification Center, Ft. Campbell employees during the time period from August 1, 1949, through December 31, 1967. The basis of this finding demonstrates that NIOSH does not have access to sufficient information to estimate either the maximum radiation dose incurred by any member of the class or to estimate such radiation doses more precisely than a maximum dose estimate for that period.
- Although NIOSH found that it is not possible to completely reconstruct radiation doses for employees who worked at the Clarksville Modification Center, Ft. Campbell employees during the time period from August 1, 1949 through December 31, 1967, NIOSH intends to reconstruct external exposures and use any internal monitoring data that may become available for an individual claim during this period (and that can be interpreted using existing NIOSH dose reconstruction processes or procedures) to support a partial dose reconstruction for individuals employed at the Clarksville Modification Center, Ft. Campbell, during the period from August 1, 1949, through December 31, 1967, but who do not qualify for inclusion in the SEC.

- 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.
- The Board concurred with the NIOSH evaluation 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. §§ 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.