

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 from

BWX Technologies, Inc.
Lynchburg, Virginia



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.

July 13, 2010
Date

[Signature on file]
Kathleen Sebelius

II. Employee Class Definition

All Atomic Weapons Employer employees who worked at BWX Technologies, Inc., in Lynchburg, Virginia from January 1, 1959 through December 31, 1959; and/or from January 1, 1968 through December 31, 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 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 June 16, 2010.

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 lacks sufficient biological monitoring data, air monitoring information, and process and radiological source term information to allow it to estimate with sufficient accuracy the potential internal exposures to fission and activation products, uranium, and thorium to which the proposed class may have been subjected.
- NIOSH finds that it is likely feasible to reconstruct occupational medical dose for BWX Technologies, Inc. (BWXT), workers with sufficient accuracy.
- Principal sources of internal and external radiation for members of the proposed class included exposures to fission and activation products, uranium of varying degrees of enrichment, and thorium. Associated BWXT operations included fuel fabrication, uranium recovery, and commercial reactor and laboratory operations.
- Urine sampling at BWXT during the 1959 AWE period used fluorometric analysis for evaluating uranium exposures to workers; such analysis is insufficient for the evaluation of enriched uranium intakes unless enrichment values are known. Data available to NIOSH do not provide adequate enrichment values for 1959.
- BWXT did not directly monitor worker exposures to thorium using bioassay. Thorium intakes may be inferred from bioassay-derived uranium intakes if the relative activities of thorium and uranium can be established; however, the records available to NIOSH for 1959 do not definitively show that thorium was always used in conjunction with uranium at BWXT.
- For individuals who worked where high-activity commercial materials were handled and stored, personnel internal dose monitoring records were not found for the first AWE operational period (1959).
- NIOSH does not have access to sufficient personnel monitoring, workplace monitoring, or source term data to estimate unmonitored internal exposures for BWXT workers during the periods of AWE operations from January 1, 1959 through December 31, 1959, and/or from January 1, 1968 through December 31, 1972, regardless of assigned work location.
- 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 reconstruct radiation doses for the proposed class, NIOSH intends to use any internal and external monitoring data that may become available (and that can be interpreted using existing NIOSH dose reconstruction processes or procedures) for an individual claim. Dose reconstructions for individuals employed at BWXT during the periods from January 1, 1959 through December 31, 1959; and/or January 1, 1968 through December 31, 1972, but who do not qualify for inclusion in the SEC, may be performed using these data as appropriate.
- NIOSH finds that reconstruction of medical dose is likely to be feasible by using claimant-favorable assumptions in the Technical Information Bulletin, *Dose Reconstruction from Occupationally Related Diagnostic X-Ray Procedures* (ORAUT-OTIB-0006).
- 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.