

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

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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.

January 6, 2011  
Date

[Signature on file]  
Kathleen Sebelius

## II. Employee Class Definition

All Atomic Weapons Employer employees who worked at BWX Technologies, Inc., in Lynchburg, Virginia during the period from January 1, 1985 through November 30, 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.

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 December 10, 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 determined that members of this class may have received internal and external radiation exposures to fission and activation products, uranium of varying degrees of enrichment, and thorium that may have been present during fuel fabrication, uranium recovery, and commercial reactor and laboratory operations at the site.
- NIOSH finds that it 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 for BWX Technologies, Inc. (BWXT) workers during the period of AWE operations from January 1, 1985 through November 30, 1994.
- NIOSH determined that the BWXT internal monitoring data generated during the 1980s were too limited to bound internal doses to unmonitored workers. Specifically, findings by the Nuclear Regulatory Commission (NRC) in the 1980s noted that the plans, procedures and records for BWXT were so sparse that it was impossible for NRC to audit the facility at that time.
- NIOSH also determined that bioassay results provided to BWXT by the facility's bioassay vendor, Controls for Environmental Pollution (CEP), are inadequate for dose reconstruction from February 1, 1991 through November 1994. DOE determined in 1994 that CEP falsified bioassay analysis results for a DOE client, and NIOSH therefore considers bioassay results reported by CEP to BWXT (specifically, BWXT *in vitro* bioassay results between February 1, 1991 and December 1, 1994) to be inadequate for BWXT dose reconstruction.
- In its previous evaluation of petition SEC-00169, NIOSH concluded that external dose reconstruction is feasible at BWXT for the latter two AWE operational periods (1968 through 1972, and 1985 through 2001). This current evaluation found no evidence to the contrary.
- 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 employees who worked at BWXT in Lynchburg, Virginia, during the evaluated period, NIOSH intends to use any reliable 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). Dose reconstructions for individuals employed at BWXT during the period from January 1, 1985 through November 30, 1994, who do not qualify for inclusion in the SEC, may be performed using these data as appropriate.
- NIOSH finds that it is feasible to reconstruct occupational medical dose for BWXT workers with sufficient accuracy 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.