

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  
Connecticut Aircraft Nuclear Engine Laboratory  
Middletown, Connecticut

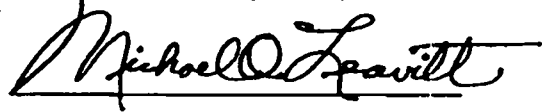


## I. Designation

I, Michael O. Leavitt, Secretary of Health and Human Services (Secretary), 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.

OCT 24 2008

Date



Michael O. Leavitt

## II. Employee Class Definition

All employees of the Department of Energy (DOE), its predecessor agencies, and DOE contractors or subcontractors who worked at the Connecticut Aircraft Nuclear Engine Laboratory in Middletown, CT, from January 1, 1958 through December 31, 1965, 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.

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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 September 24, 2008.

## 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 information, which includes specific biological monitoring data, sufficient air monitoring information, and sufficient process and radiological source information, to allow it to estimate with sufficient accuracy the potential internal and external exposures to uranium, plutonium, metal activation products and mixed fission products to which the proposed class may have been subjected.

NIOSH finds that it is likely feasible to reconstruct occupational medical dose for CANEL workers with sufficient accuracy.

- (1) Principal sources of internal radiation doses for members of the proposed class included exposures to uranium and plutonium. Additionally, there was also a potential internal exposure from metal activation and mixed fission products. Internal exposures could have resulted from inhalation and ingestion of dust generated by the uranium and plutonium operations or contaminated dust that was re-suspended by foot traffic.
- (2) NIOSH has obtained 20 uranium bioassay samples that were all collected on the same day. NIOSH found that these samples were insufficient to reconstruct the potential internal uranium exposure to the class.
- (3) NIOSH found no internal personnel monitoring data for plutonium, metal activation products or mixed fission products
- (4) NIOSH found no area monitoring data in the period defined by the class. No source term information has been identified to permit characterizing and evaluating thorium operations, and limited data exist for uranium operations.
- (5) Based on the lack of information on uranium, plutonium, metal activation products and mixed fission products exposures, NIOSH has determined that the internal dose cannot be reconstructed. Therefore, NIOSH has concluded that it cannot bound internal dose.
- (6) Although NIOSH has some annual summaries of whole-body exposure data, NIOSH does not have access to any individual monitoring data, nor is there sufficient information on site radiological monitoring practices and source terms to be able to use the summary information to bound external exposures from all sources and radiation types.
- (7) 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.

- (8) The Board concurred with the NIOSH evaluation and recommended the proposed class for addition to the SEC.
- (9) Although NIOSH found that it is not possible to completely reconstruct radiation doses for these employees, NIOSH intends to use any available internal and external monitoring data that may be available for an individual claim (and can be interpreted using existing NIOSH dose reconstruction processes or procedures). Further, NIOSH has determined that occupational medical dose for all workers can be reconstructed. Therefore, partial dose reconstructions for individuals with non-presumptive cancers or fewer than 250 days employment in the class period may be performed using these data as appropriate.

### 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-workday 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.