

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

Mound Plant  
Miamisburg, Ohio



## I. Designation

I, Kathleen Sebelius, 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.

December 7, 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 Mound Plant in Miamisburg, Ohio, from September 1, 1972, through December 31, 1972, or from January 1, 1975, through December 31, 1976, 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 November 7, 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.

- NIOSH determined that members of this class may have received radiation exposures from radon isotopes and progeny originating from residual radioactive material associated with the Ra-Ac-Th process conducted in the SW Building. The technologically-enhanced radon emanated into Room SW-19 and was potentially distributed throughout the R and SW buildings.
- NIOSH found no workplace monitoring records after February 1955 relevant to the radon exposures in the R and SW buildings until air measurements were made in 1979 and 1980. NIOSH also lacks activity data for the residual Ra-Ac-Th source term affecting Room SW-19 and its subsequent distribution throughout the SW building and the corridor of the R building, that was contiguous with the SW building. Therefore, NIOSH has concluded that it lacks sufficient monitoring data and source term information to perform adequate individual dose reconstructions for workers during the periods under evaluation.
- From September 1, 1972, through December 31, 1972, and from January 1, 1975, through December 31, 1976, NIOSH cannot determine which employees at the Mound facility were exposed to radon in the R and SW buildings. Consequently, NIOSH finds that it is not feasible to estimate, with sufficient accuracy, internal exposures to radon and resulting doses for the class of employees covered by this evaluation.
- The principle sources of external exposure included beta, gamma, and neutron radiation emitted from a variety of research, development, analytical, recovery, and surveillance activities.
- Consistent with its findings associated with SEC-00090, NIOSH has established that it has access to sufficient information to: (1) estimate the maximum external 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 external radiation doses to members of the class more precisely than a maximum dose estimate.

- NIOSH determined in its evaluation that adequate reconstruction of medical dose is likely to be feasible by using bounding assumptions in the technical information bulletin, Dose Reconstruction from Occupational Medical X-Ray Procedures (ORAUT-OTIB-0006), and Mound technical basis documents, collectively referred to as ORAUT-TKBS-0016.
- Although NIOSH found that it is not possible to completely reconstruct radiation doses for the periods from September 1, 1972, through December 31, 1972, or from January 1, 1975, through December 31, 1976, NIOSH intends to use any 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 Mound during the periods from September 1, 1972, through December 31, 1972, or from January 1, 1975, through December 31, 1976, 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.
- The Board concurred with NIOSH's recommendation to add the proposed class of workers 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.