

HHS Determination Concerning a Petition to Add Members to the  
Special Exposure Cohort  
under the  
Energy Employees Occupational Illness Compensation Program Act of  
2000

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Determination Concerning a Petition for Employees from  
Mound Plant  
Miamisburg, Ohio



## I. Determination

I, Kathleen Sebelius, Secretary of Health and Human Services (Secretary), have determined that the employees defined in Section II of this report do not meet the statutory criteria 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, Department of Energy contractors, or subcontractors who worked in any area at the Mound Plant in Miamisburg, Ohio, during the period from March 1, 1959, through December 31, 2007, except for workers who fall within the Special Exposure Cohort (SEC) classes established by SEC petitions 00171 and 00207.

## III. Decision Criteria and Recommendations

Pursuant to 42 U.S.C. § 7384q, to designate a class for addition to the SEC, the Secretary must determine, upon recommendation of the Advisory Board on Radiation and Worker Health (Board), 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.

In a letter received by the Secretary on November 7, 2012, the Board, pursuant to 42 U.S.C. § 7384q, agreed with the following NIOSH findings, effectively advising the Secretary that radiation dose can be reconstructed with sufficient accuracy for certain Mound Plant employees in accordance with provisions of EEOICPA and the SEC final rule.

## IV. Determination 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 Mound Plant was involved in radiological activities relating to the development and manufacture of nuclear weapons initiators and other weapons components, as well as tritium recovery, isotope separations, the development of heat sources, and a variety of nuclear materials processing.
- The principal source of internal and external radiation doses for members of the evaluated class associated with the operations performed at the Mound Plant included exposures to polonium, plutonium, and tritium. These exposures were considered primary because they were existed in larger quantities and were use more widespread across the site. Secondary radionuclides of concern at Mound included uranium and thorium and their progeny, americium, curium, actinium, various radium and radon isotopes, and protactinium.
- NIOSH determined that internal exposures during the operational period, for radionuclides other than those associated with existing Mound Plant SEC classes, can be bounded using available data fore the site. In its *SEC-00090 Evaluation Report*, NIOSH demonstrated that employees with the greatest potential for internal intake were monitored, and determined that the available bioassay data can be used to reconstruct potential internal radiation doses for those employees
- For radionuclides for which exposures were routinely monitored, NIOSH has established coworker models that will be used to reconstruct internal doses for those workers who were potentially exposed, but not monitored. For reconstruction of internal exposures to research quantities of radionuclides that were infrequently monitored, NIOSH will rely on the available bioassay data in combination with available air concentration measurements and process information.
- NIOSH determined that all external exposures, including occupational medical exposures, for all workers and periods at the Mound site can be reconstructed using available data from the site. In its *SEC-00090 Evaluation Report*, NIOSH demonstrated that external monitoring data and medical X-ray data exists for Mound Plant employees, and determined that the available data can be used to reconstruct potential external radiation doses for all employees over the evaluated period at the Mound Plant. Because all workers entering radiation-controlled areas were required to wear a dosimeter, NIOSH has determined that those receiving exposures in controlled areas were monitored. For unmonitored individuals (i.e., those working outside of controlled areas, claimant-favorable assumptions for on-site ambient doses are applied as part of the estimate.
- NIOSH determined that it has access to sufficient site-specific information to either (1) estimate the maximum internal and 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 evaluated class, excluding

those members of previously approved Mound Plant Special Exposure Cohort classes; or (2) estimate the internal and external radiation doses to members of the evaluated class more precisely than a maximum dose estimate, March 1, 1959, through December 31, 2007, except for workers who fall within the Special Exposure Cohort (SEC) classes established by SEC petition 00171 and 00207.

- The Board concurred with the NIOSH findings.

### Health Endangerment

Because the Secretary established that it is feasible to estimate with sufficient accuracy the radiation doses encountered by Weldon Spring employees as specified in this class, a determination of health endangerment is not required.

## V. Effect of the Determination

Members of the class of employees covered by this determination and their survivors continue to be eligible to submit claims for compensation under EEOICPA. As required for cancer claims covering other DOE and Atomic Weapons Employer employees (or Atomic Weapons Employees) not included in the SEC, qualified cancer claims under Part B of EEOICPA for members of this class will be adjudicated by the Department of Labor, in part on the basis of radiation dose reconstructions which will be conducted by NIOSH.

## VI. Administrative Review of Determination

The determination 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 designate the class of employees covered by this determination, in part or in whole, as an addition to the SEC, the Secretary would transmit a new report to Congress providing the designation and the criteria and findings on which the decision was based.