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

Nuclear Metals Inc.
(or a subsequent owner)

West Concord, Massachusetts

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	[Signature on File]
Date	Kathleen Sebelius

II. Employee Class Definition

All Atomic Weapons Employees who worked at the facility owned by Nuclear Metals, Inc. (or a subsequent owner) in West Concord, Massachusetts, during the period from October 29, 1958, through December 31, 1979, 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 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 principal sources of internal radiation for members of the Nuclear Metals Inc. proposed class included exposures to natural, depleted, and enriched uranium, thorium oxides and metals existing either separately or as alloys, and uranium and thorium progeny. The primary modes of exposure were likely inhalation and ingestion, with entry through wounds also being possible during the processing of these metals.

- Internal exposure monitoring data available to NIOSH include: urine bioassay results for most years in the evaluation period except 1968, 1972, and 1975 (with the number of urinalysis results increasing dramatically from 1978 through 1983); approximately 500 lung counting results beginning in 1982; summary air data for the pre-1975 period giving only maximum, minimum, and average air concentrations; and 28,000 breathing zone and work area air sample results during the period 1980, through 1983.

- Based on NIOSH's evaluation of available data, NIOSH concluded that it is not feasible to reconstruction doses for internal exposure because: (1) the early bioassay program (pre-1980) results are often sparse and NIOSH cannot verify that available data represents the worse-case exposures; (2) early air sample data are limited and not equivalent to breathing zone sampling; (3) NIOSH did not locate any urine bioassay or air sample data for thorium operations; and (4) NIOSH did not locate thoron monitoring data or indications of a thoron monitoring program for the thorium sources.

- Therefore, NIOSH concludes that it is not feasible for NIOSH to reconstruct with sufficient accuracy the internal exposures to enriched uranium, thorium, uranium progeny, and thorium progeny, for Nuclear Metals, Inc. workers during the period from October 29, 1958, through December 31, 1979. NIOSH found that it may be feasible to reconstruct internal doses from natural and depleted uranium for employees during the recommended SEC period from October 29, 1958, through December 31, 1979, using available claimant and site monitoring data, and information in established procedures.

- NIOSH determined that the principal source of external radiation doses for members of the proposed Nuclear Metals Inc. class included exposures to gamma and beta radiation associated with handling and working in proximity to natural, depleted, and enriched uranium and thorium oxides and metals existing either separately or as alloys. NIOSH determined that external dose monitoring data available to NIOSH consist of film badge and thermoluminescent dosimeter results covering the entire operational period under evaluation. Based on its evaluation of the available external dose monitoring data, NIOSH concluded that

reconstruction of external doses is likely feasible for the period from October 29, 1958, through December 31, 1983.

- Based on its evaluation of the available external dose monitoring data, NIOSH concluded that reconstruction of external doses is likely feasible for the period from October 29, 1958, through December 31, 1983. NIOSH has also determined that adequate reconstruction of medical dose is feasible by using claimant-favorable assumptions and the technical information bulletin Dose Reconstruction from Occupational Medical X-Ray Procedures (ORAUT-OTIB-0006). Therefore, NIOSH concluded that reconstruction of external doses, including occupational medical doses, is likely feasible for the period from October 29, 1958, through December 31, 1983.

- NIOSH documented that it cannot complete the dose reconstructions for the employees who worked at the Nuclear Metals Inc., during the time period from October 29, 1958, through December 31, 1979. The basis of this finding demonstrates that NIOSH does not have access to sufficient information to estimate either the maximum radiation dose incurred by any member of the class or to estimate such radiation doses more precisely than a maximum dose estimate for that period.

- Although NIOSH found that it is not possible to completely reconstruct radiation doses for the proposed class, NIOSH intends to use any 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). Therefore, dose reconstructions for individuals employed at Nuclear Metals Inc., in West Concord, Massachusetts, during the period from October 29, 1958, through December 31, 1979, 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 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*l*(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*l*(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.