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 from

Bethlehem Steel Corporation Facility
Lackawanna, New York

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.

July 14, 2010
Date

[Signature on file]
Kathleen Sebelius

II. Employee Class Definition

All Atomic Weapons Employer employees who worked at the Bethlehem Steel Corporation facility in Lackawanna, New York from January 1, 1949 to December 31, 1952, 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 June 16, 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.

- The principal source of internal radiation exposures for members of the proposed class at the Bethlehem Steel Corporation was exposure to uranium.

- NIOSH evaluated the feasibility of completing dose reconstructions for all Atomic Weapons Employer personnel at the Bethlehem Steel Corporation facility who were monitored or should have been monitored for exposure to uranium during uranium rolling activities at the Bethlehem Steel Corporation, Lackawanna, New York facility from January 1, 1949 through December 31, 1952.

- NIOSH, in its Evaluation Report, found that the available monitoring records, process descriptions and source term data available were sufficient to complete dose reconstructions for the proposed class of employees. NIOSH, however, was unable to obtain any personnel or workplace monitoring data for a portion of the covered period at Bethlehem Steel. As an alternative, the Evaluation Report utilized monitoring information collected at another uranium metal handling facility, Simonds Saw and Steel, during roughly the same era as the work that was performed at Bethlehem Steel. The NIOSH finding that dose reconstruction was feasible was based on a presumed similarity of exposure between rolling operations at Simonds Saw and Steel and those at Bethlehem Steel. The use of exposure data from one site as representative of exposure at another site where exposure data are not available has come to be referred to in the EEOICPA program as the use of "surrogate" data.

- Subsequent to the completion of NIOSH's Evaluation Report, NIOSH and the Board began independently considering the use of surrogate data and possible ways to evaluate whether a particular use of surrogate data did, in fact, provide sufficiently accurate dose reconstructions. As a result, NIOSH published an Implementation Guide, OCAS-IG-004, "The Use of Data from Other Facilities in Completion of Dose Reconstructions under EEOICPA," which describes criteria that must be met in order for surrogate data use to be acceptable. At its May 2010 meeting, the Board adopted its own criteria for surrogate data use which are similar, although not identical, to the NIOSH criteria in IG-004.

- For the period from January 1, 1949 to December 31, 1950, NIOSH has very limited information concerning radiological activities at Bethlehem Steel, and has no information about the uranium source term. Specifically, NIOSH has no data on how much uranium was handled or how long it was present at the Bethlehem Steel facility. In addition, NIOSH has no personnel or workplace monitoring data. The Evaluation Report uses airborne radioactivity data from another site, Simonds Saw and Steel, as representative of what exposures

would have been at Bethlehem Steel. However, IG-004 requires that the source terms be similar between the surrogate site and the site for which doses are being reconstructed in order for the surrogate data use to be appropriate. The original NIOSH model for reconstructing exposures at Bethlehem Steel depended on presumed frequencies and durations of rolling operations. Since this information is not known, the Bethlehem Steel source term cannot be compared to the Simonds Saw and Steel source term, thus the surrogate data use cannot be considered appropriate.

- For the period from January 1, 1951 to December 31, 1952, the issue of concern is the dust and fume exposure to individuals involved in the activity of cutting cobbles (waste pieces of uranium rod generated during rolling operations). There are very limited data available concerning cobble cutting at Bethlehem Steel and no personnel or air sampling data related to uranium cobble cutting. There are no data available to NIOSH from possibly similar torch cutting activities involving uranium. In order to reconstruct exposures due to cobble cutting, the Evaluation Report used a combination of the following information: an airborne concentration that was judged to be the highest concentration of airborne dust that the atmosphere can sustain for an extended period; data collected on the cutting of stainless steel pipe of 5 cm diameter and 0.4 cm wall thickness to estimate the time required for cutting a uranium cobble; and worker estimates of how often cobbles had to be cut in order to estimate exposures from cobble cutting. NIOSH lacks technical support for the position that the airborne concentration used in the Evaluation Report represents what was present at Bethlehem Steel. Cobble cutting at Bethlehem Steel was a fairly infrequent activity, performed by relatively few individuals. However, it was performed in the middle of the plant, without any barriers or exclusion area. Therefore, NIOSH cannot determine the extent to which this activity affected the exposure of other workers in the facility.

- The principal source of external radiation exposure for members of the proposed class was exposure to uranium.

- From January 1, 1949 to December 31, 1950, NIOSH does not have sufficient information about the uranium source term at Bethlehem Steel. Therefore external exposures to uranium cannot be reconstructed during that time.

- From January 1, 1951 to December 31, 1952, NIOSH does have information about uranium source term, so a dose model can be developed to reconstruct external doses during that time.

- NIOSH believes it is possible to reconstruct with sufficient accuracy occupational medical X-ray dose for the evaluated period.

- 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 reconstruct radiation doses for the proposed class, NIOSH intends to use any internal and external monitoring data that may become available (and that can be interpreted using existing NIOSH dose reconstruction processes or procedures) for an individual claim. Dose reconstructions for individuals employed at the Bethlehem Steel Corporation facility during the period from January 1, 1949 through December 31, 1952, but who do not qualify for inclusion in the SEC, may be performed using these data as appropriate.

- NIOSH finds that it is feasible to estimate, with sufficient accuracy, occupational medical dose for this class of employees using the assumptions and applicable protocols in the complex-wide Technical Information Bulletin, *Dose Reconstruction from Occupationally Related Diagnostic X-Ray Procedures* (ORAUT-OTIB-0006).

- The Board recommended the proposed class for addition to the SEC and the NIOSH Director concurred with its recommendation.

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), the NIOSH Director 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), the NIOSH Director 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) The Board and the NIOSH Director 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 NIOSH Director concurred with the Board'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.