

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

Pantex Plant
Amarillo, Texas



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.

[Signature on File]
Kathleen Sebelius

September 30, 2013
Date

II. Employee Class Definition

All employees of the Department of Energy, its predecessor agencies, and their contractors and subcontractors who worked at the Pantex Plant in Amarillo, Texas from January 1, 1984, through December 31, 1991, 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 SEC.

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 September 3, 2013.

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 sources of internal radiation doses for members of the proposed class were tritium, uranium, and thorium.

- Doses from tritium could be reconstructed using the available tritium bioassay data; however, it is not feasible to reconstruct internal doses from uranium and thorium.
- NIOSH lacks sufficient uranium urinalysis samples for the years 1984-1990. Although NIOSH has obtained 301 samples collected from workers in 1990 in response to concerns about contamination resulting from the final disassembly of the W28 weapons system, there is evidence (such as worker interviews and presence of enriched uranium in urinalysis samples) suggesting that the W28 weapons system may not constitute the highest uranium exposure potential among all other operations at Pantex. Additionally, the routine bioassay program at Pantex was not fully implemented in 1990. Therefore, an intake calculation based on the urinalysis results from W28 workers would not bound uranium exposures for all workers at Pantex.
- NIOSH also lacks dose reconstruction methods for bounding thorium internal exposures. NIOSH initially proposed to estimate thorium intakes during the years 1984-1991 at 2% of uranium intakes. For the years 1984-1990, reconstruction of thorium internal exposures is not feasible because they depended on intakes of uranium which, as discussed above, could not be reconstructed. For the year 1991, NIOSH could not use the measurements of airborne thorium and uranium taken during the mid-90's because those measurements do not represent the exposure level in 1991. Consequently, NIOSH could not reconstruct dose for internal thorium exposure for 1984-1991.
- Consequently, the Board concluded, and the NIOSH Director concurred, that NIOSH lacks sufficient information, which includes specific biological monitoring data, air monitoring information, process and radiological source information, and surrogate data from similar operations at other sites that would allow it to estimate the internal uranium exposures for the time period from January 1, 1984, through December 31, 1990, and the internal thorium exposures for the time period from January 1, 1984 through December 31, 1991. In sum, reconstruction for the total internal dose is not feasible for all workers at the Pantex Plant from January 1, 1984, through December 31, 1991.

- The principal sources of external radiation doses for members of the proposed class were plutonium pits and depleted uranium and thorium components. Secondary sources of external exposure included other radioactive materials present in smaller quantities (typically microcurie levels) as calibration sources or in larger quantities (up to curie levels) as radiography sources (ORAUT-TKBS-0013-2).
- NIOSH concluded it is feasible, using methods available in existing NIOSH procedures, to reconstruct external radiation doses, including the x-ray dose, when appropriate, for all Pantex workers from January 1, 1984, through December 31, 1991.
- The Board concurred with NIOSH that external doses could be reconstructed for all years, using the available external monitoring data for Pantex workers, adjusted during some periods to account for the performance of the monitoring devices.
- Although NIOSH now finds that it is not possible to completely reconstruct internal radiation doses for the period from January 1, 1984, through December 31, 1991, NIOSH intends to use any internal 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 the Pantex Plant during the period from January 1, 1984, through December 31, 1991, 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 recommended, and the NIOSH Director concurred with, 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), 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. §§ 7384l(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. § 7384l(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.