

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
Nevada Test Site
Mercury, Nevada



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.

April 5, 2010
Date

[Signature on file]
Kathleen Sebelius

II. Employee Class Definition

All employees of the Department of Energy, its predecessor agencies, and its contractors and subcontractors who worked at the Nevada Test Site, from January 1, 1963 through December 31, 1992, 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 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 March 8, 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.

- NIOSH determined that members of this class may have received internal and external radiation exposures from a variety of radionuclides that may have been present during various operations at the site.
- NIOSH has identified exposure scenarios involving varying job titles/duties and work activities, such as drill-backs, post-test work activities, and construction or other soil-disturbing activities in areas that had been contaminated by previous tests. While a large number of radiological technicians and security personnel were routinely sampled for bioassay at NTS, a substantial fraction of other job titles/duties group of bioassay samples appear to have been collected on a more event or incident-driven basis. Prior to 1993, NIOSH has not been able to locate sufficient documented evidence, other than anecdotal information, to describe a consistent rationale behind the collection of personnel bioassay samples or to indicate that sampling occurred consistently in the situations where it was required. Because of this, NIOSH cannot conclusively determine that doses to all of these potentially-exposed individuals were detected by the bioassay program.
- NIOSH has identified data gaps that exist in the electronically-available bioassay data for certain radionuclides and time periods.
- Because of the episodic nature of NTS exposures, a co-worker model that is useful in reconstructing chronic intake scenarios would not necessarily be representative of the exposure patterns of the NTS workforce.
- The reconstruction of NTS internal doses is also complicated by the variety of the radionuclides to which workers may have been exposed. As indicated in the NTS Site Profile, the potential radionuclide source term included (but is not limited to): plutonium, americium, uranium, thorium, radium, iodine, and other fission products. For workers with no bioassay records, and who had the potential for exposure, NIOSH would have to definitively establish the relative mixture of the exposure source term.
- NIOSH lacks sufficient information, which includes specific biological monitoring data, sufficient air monitoring information, sufficient process and radiological source information, that would allow it to estimate the potential internal exposures to various radionuclides to which the proposed class may have been subject at NTS during the period from January 1, 1963 through December 31, 1992.
- Although NIOSH found that it is not possible to completely reconstruct internal radiation doses for the proposed class, NIOSH intends to use any internal and external monitoring data that may be 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 NTS during the period from January 1, 1963 through December 31, 1992, but who do not qualify for inclusion in the SEC, may be performed using these data as appropriate.

- NIOSH has access to sufficient personnel monitoring and workplace monitoring data to reconstruct external exposures for all monitored workers.
- NIOSH does believe it is possible to reconstruct with sufficient accuracy all external and 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.
- 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/(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.