

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  
General Steel Industries  
Granite city, Illinois



## I. Determination

I, Kathleen Sebelius, Secretary of the Department of Health and Human Services (HSS), 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.

[Signature on File]

March 6, 2013

Kathleen Sebelius

Date

## II. Employee Class Definition

All individuals who worked in any location at the General Steel Industries site, located at 1417 State Street, Granite City, Illinois, from January 1, 1953, through June 30, 1966, and/or during the residual radiation period from July 1, 1966, through December 31, 1992.

## 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. NIOSH determined that it has access to sufficient information to reconstruct radiation doses incurred by the class of employees covered by this report with sufficient accuracy.

In a letter received by the Secretary on February 4, 2013, 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 General Steel Industries (GSI), Granite City, Illinois, 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 principal sources of internal radiation doses for members of the proposed class include inhalation and ingestion of uranium dust from handling uranium metal, fission and activation products from handling and examining the uranium following x-ray operations, and activation products from steel castings handled and examined following x-ray operations
- NIOSH evaluated the potential exposures from possible intakes of radioactive material at GSI based on air-monitoring data from other facilities for the operational period. Internal exposures from the residual period were estimated by modeling the resuspension of surface contamination levels to determine airborne levels that would bound intakes for GSI.
- A principal source of external radiation doses for members of the proposed class was from activities associated with the betatron machines. Based on workers' film badge doses and modeled exposures using Monte Carlo techniques, NIOSH has determined that it is possible to plausibly bound external doses associated with the evaluation of uranium and steel using the betatron.
- Additional sources of external exposure were associated with radiography operations. Using source strength and distance, radiographers would determine the exposure time necessary to expose film to produce a valid x-ray. NIOSH, using similar techniques, can estimate the dose to the radiographer and others that may be in the vicinity. This technique provides reasonable approaches to conservatively bound external doses.
- External dose during the residual contamination period at GSI is limited to the radiation emitted from residual uranium contamination (OCAS-IG-003). With no mechanical manipulation of the uranium (i.e., cutting, grinding, or machining) and no high-temperature applications, contamination can be estimated using data from other sites that worked with uranium metal.
- Although no specific information regarding occupational medical dose has been identified for GSI, the dose associated with medical x-ray exams, if required as a condition of employment, can be bounded by using the assumptions in the complex-wide Technical Information Bulletin, Dose Reconstruction from Occupationally Related Diagnostic X-Ray Procedures (ORAUT-OTIB-0006). NIOSH believes this methodology supports its ability to bound the occupational medical x-ray doses for GSI.
- In sum, 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; or (2) estimate the internal and external radiation doses to members of the evaluated class more precisely than a maximum dose estimate.

- The Board concurred with NIOSH's determination.

#### Health Endangerment

Because the Secretary established that it is feasible to estimate with sufficient accuracy the radiation doses encountered by GSI, Granite City, Illinois, 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.