U.S. Department of Health and Human Services Determination Concerning a Petition to Add Members to the Special Exposure Cohort under the Energy Employees Occupational Illness Compensation Program Act of 2000

Determination Concerning a Petition for Certain Employees from The Carborundum Company Buffalo Avenue, Niagara Falls, New York

I. Determination

I, Eric D. Hargan, Acting Secretary of Health and Human Services (Secretary) (HHS), 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.

November 8, 2017	[Signature on File]
Date	Eric D. Hargan, Acting Secretary

II. Employee Class Definition

All employees who worked in any area of the Carborundum Company facility on Buffalo Avenue, Niagara Falls, New York, from January 1, 1943, through December 31, 1976.

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 ("the 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 the National Institute for Occupational Safety and Health (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.

In a letter received by the Secretary on May 10, 2017, the Board, pursuant to 42 U.S.C. § 7384q, agreed with the following NIOSH findings, effectively advising the Secretary that radiation doses can be reconstructed with sufficient accuracy for this class of employees at the Carborundum Company 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:

- NIOSH has determined there are two distinct Atomic Weapons Employers (AWE) operational and residual contamination periods for the Carborundum Company. During the first operational period, which took place from June through September 1943, Carborundum developed techniques for grinding uranium metal. During the second operational period, which took place from January 1959 through December 1967, Carborundum developed ceramic nuclear fuel materials using uranium and plutonium. NIOSH did not find evidence that the Carborundum facility was decontaminated after the AWE operational periods. Therefore, the periods from October 1943 through December 1958, and January 1968 through December 1976 (the end of the petitioned period) are residual contamination periods.

- NIOSH has determined that the principal sources of internal radiation doses at the Carborundum Company for members of the class under evaluation were the potential inhalation and ingestion of plutonium and natural, depleted, and enriched uranium.

- NIOSH has not located any radiological monitoring information for the first AWE operational period. However, radiological monitoring data are available for many other facilities that performed similar operations on uranium metal. Using those data, NIOSH previously developed methods for reconstructing radiation dose from uranium metal work and published them in the Battelle-Technical Basis Document (TBD)-6000, *Site Profiles for Atomic Weapons Employers That Worked Uranium Metals.* These methods have been reviewed and approved for use by the Board for dose reconstructions at AWE sites similar to Carborundum.

- NIOSH does not have radiological monitoring data for the first residual contamination period from October 1943 through December 1958. NIOSH will use Battelle-TBD-6000 and other previously developed methods that are published in Oak Ridge Associated Universities Technical Information Bulletin (OTIB)-0070, *Technical Information Bulletin: Dose Reconstruction during Residual Radioactivity Periods at Atomic Weapons Employer Facilities, Revision 1*, to reconstruct internal radiation doses during this period. The methods in OTIB-0070 have also been reviewed and approved for use by the Board.

- NIOSH has obtained radiological air monitoring data for the uranium and plutonium activities during the second operational period, from January 1959 through December 1967. NIOSH will use those data to reconstruct internal radiation doses during Carborundum's second operational period.

- In order to reconstruct internal doses for the second residual contamination period, January 1968 through December 1976, NIOSH will estimate the contributions to those doses from

residual contamination remaining from each of the operational periods. NIOSH will use the methods from Battelle-TBD-6000 and OTIB-0070 to reconstruct internal doses due to contamination from the first operational period, and will use OTIB-0070 in conjunction with air monitoring data from the second operational period to reconstruct internal doses due to residual contamination in the second residual contamination period.

- NIOSH has determined that the principal sources of external radiation doses for members of the evaluated class at Carborundum were photon and beta (electron) radiation associated with the uranium metal and the uranium and plutonium ceramic materials that were used during the AWE operational periods.

- Since NIOSH does not have radiological monitoring information for any of the petitioned periods, it will use the methods contained in the Battelle-TIB-6000 and OTIB-0070 to reconstruct external doses during both operational and both residual contamination periods. Those documents contain methods for reconstructing external doses as well as internal doses. A review of documentation indicates that on-site medical x-rays were not required as a condition of employment during the first operational period.

- NIOSH will use information contained in ORAUT-OTIB-0006, *Dose Reconstruction from Occupational Medical X-Ray Procedures,* to reconstruct radiation doses for the second operational period at Carborundum that resulted from on-site medical screening x-rays required as a condition of employment.

In conclusion:

- NIOSH has established that it has access to sufficient information to: (1) estimate the maximum radiation dose, for every type of cancer for which radiation doses are reconstructed, that could have been incurred in plausible circumstances by any member of the class; or (2) estimate radiation doses more precisely than an estimate of maximum dose. Information available to NIOSH is sufficient to estimate the maximum internal and external potential exposure to members of the evaluated class under plausible circumstances during the specified time period from January 1, 1943, through December 31, 1976.

- The Board concurs with NIOSH's determination that dose reconstruction is feasible for the evaluated class of Carborundum Company workers during the specified time period from January 1, 1943, through December 31, 1976, and therefore should not be added to the SEC.

Health Endangerment

Because the Secretary established that it is feasible to estimate with sufficient accuracy the radiation doses encountered by Carborundum Company 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 Department of Energy 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 will transmit a new report to Congress providing the designation and the criteria and findings on which the decision was based.