

Response to U.S. NRC comments

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We appreciate the concerns expressed by the U.S. Nuclear Regulatory Commission (NRC) about the use of the Radiation Exposure Information and Reporting System (REIRS) data in our recent paper (1) on multiple myeloma risk at the U.S. Department of Energy's Oak Ridge Gaseous Diffusion Plant. However, we believe that their statement regarding REIRS data and our study is subject to misinterpretation and requires additional information for clarity and

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full disclosure. For our study, occupational radiation exposures from external sources were estimated using information obtained primarily from exposure records collected from the study facility, i.e., the Oak Ridge Gaseous Diffusion Plant. We also examined other sources of exposure information, such as the Radiation Exposure Monitoring System (REMS) of the U.S. Department of Energy (DOE) and REIRS, to account for occupational exposures to our study participants that may have occurred during employment elsewhere. A search of REIRS revealed that NRC exposure records were not available for any of the study participants. Thus the sources of information on exposures from employment outside of the study facility included REIRS (as stated in our paper), although we did not obtain any identified exposure information from REIRS, as correctly pointed out by the NRC.

As acknowledged by the NRC, we believe that REIRS data may have an important role in the continued epidemiological examination of the effects of low-dose ionizing radiation. Unfortunately, these data have been used only sparingly in existing studies (2, 3). A potential obstacle to future studies is the current NRC requirement for obtaining individual consent from each study participant to access exposure records. Although we commend the NRC's efforts to protect the privacy of its workers, we are hopeful that other means will be considered in the future that improve access to these data for scientific purposes without unduly increasing the risk associated with the collection and distribution of sensitive information.

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