Frequency and Quality of Radiation Monitoring of Construction Workers at Two Gaseous Diffusion Plants

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ABSTRACT: **Construction workers were and are considered temporary workers at many construction sites. Since World War II, large numbers of construction workers were employed at U.S. Department of Energy nuclear weapons sites for periods ranging from a few days to over 30 years. These workers performed tasks during new construction and maintenance, repair, renovation, and demolition of existing facilities. Such tasks may involve emergency situations, and may entail opportunities for significant radiation exposures. This paper provides data from interviews with more than 750 construction workers at two gaseous diffusion plants (GDPs) at Paducah, Kentucky, and Portsmouth, Ohio regarding radiation monitoring practices. The aim was to determine the extent to which workers believed they were monitored during tasks involving potential radiation exposures. The adequacy of monitoring practices is important for two reasons: (*a*) Protecting workers from exposures: Construction workers were employed by sub-contractors, and may frequently been excluded from safety and health programs provided to permanent employees; and (*b*) Supporting claims for compensation: The Energy Employees Occupational Illness Compensation Program Act (EEOICPA) requires dose reconstruction of radiation exposures for most workers who file a claim regarding cancer. The use of monitoring data for radiation to qualify a worker means that there should be valid and complete monitoring during the work time at the various nuclear plants or workers may be unfairly denied compensation. The worker interviews from Paducah and Portsmouth were considered especially useful because these sites were designated as Special Exposure Cohorts (SECs) and the workers did not have to have a dose reconstruction to qualify for compensation for most cancers. Therefore, their responses were less likely to be affected by compensation concerns. Interview questions included asking for**

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