U.S. Department of Labor

Assistant Secretary for
Occupational Safety and Health
Washington, D.C. 20210

AUG 27 1998

Mr. Peter Brush
Acting Assistant Secretary
Environment, Safety and Health
U.S. Department of Energy
EH - 1
19901 Germantown Road
Germantown, MD 20874-1290

Dear Assistant Secretary Brush:

At the request of Jacqueline D. Rogers of the U.S. Department of Energy's (DOE) Office of Environment, Safety and Health, the Occupational Safety and Health Administration's (OSHA), Directorate of Health Standards Programs has reviewed a draft of DOE's Chronic Beryllium Disease Prevention Program (CBDPP) Notice of Proposed Rulemaking. It is our understanding that this document is currently being reviewed by the Office of Management and Budget (OMB) and that input provided by OSHA will be considered by DOE prior to publication of the Notice of Proposed Rulemaking.

DOE should be commended for its leadership role in proposing regulation of occupational exposure to beryllium in the DOE complex. We are pleased that DOE considers chronic beryllium disease prevention to be a top occupational health priority. DOE's less stringent rulemaking process, as compared to OSHA's requirements for determinations of significant risk, substantial risk reduction, and economic and technologic feasibility, may provide an opportunity for DOE to move more quickly than OSHA to regulate this highly toxic substance. OSHA fully supports DOE's efforts to regulate beryllium exposure and protect workers at DOE sites from contracting chronic beryllium disease.

OSHA's primary concern with the proposed rule, however, is DOE's decision to retain the current OSHA 8-hour time-weighted average (TWA) permissible exposure limit (PEL) of 2 $\mu g/m^3$. In explaining this decision, DOE states that the "occupational health community, including OSHA . . ., does not at this time have sufficient exposure and health effects data to establish a new 8-hour TWA exposure limit for beryllium . . ." OSHA, however, has recently included occupational exposure to beryllium on its regulatory agenda. OSHA's intention is to proceed with a full rulemaking on this substance which will, in part, presumably lower the PEL. OSHA is taking this action because we now believe that our 2 $\mu g/m^3$ PEL does not adequately protect beryllium-exposed workers from developing chronic beryllium disease, and there are adequate exposure and health effects data to support this rulemaking. In 1975, OSHA proposed to lower the PEL for beryllium from 2 $\mu g/m^3$ to 1 $\mu g/m^3$ based on information that beryllium was carcinogenic in experimental animals. That rulemaking was never completed, but as you know,

the International Agency for Research on Cancer (IARC) concluded in 1993 that beryllium caused lung cancer in humans. I urge you not to rely on a PEL that was developed by the Atomic Energy Commission in 1949 and adopted by OSHA in 1971, and which is currently the subject of OSHA rulemaking.

Data on chronic beryllium disease from DOE facilities, as presented in the CBDPP Notice of Proposed Rulemaking, documents the inadequacy of the 2 $\mu g/m^3$ PEL. For example, the results of medical screening of beryllium-exposed workers at selected DOE sites, through December 1997, identifies 4% of the individuals examined at Y-12 as sensitized to beryllium as determined by the beryllium lymphocyte proliferation test (Be-LPT). Similarly, 3.5% of the workers examined at Rocky Flats were found to have positive Be-LPT results.

Furthermore, data in the DOE notice of proposed rulemaking indicate that the highest exposure levels to beryllium at Rocky Flats are, on average, below the 2 $\mu g/m^3$ PEL. Yet, beryllium machinists at Rocky Flats, experienced an incidence rate of 9.4% for chronic beryllium disease. The reported evidence of exposure and disease at the Y-12 beryllia ceramic machine shop is also compelling. Cases of chronic beryllium disease have occurred in machinists where 90% of the personal exposure samples found levels of beryllium to be below the detection limit of 0.01 $\mu g/m^3$. In addition, other reports published in the scientific literature also seem to indicate that chronic beryllium disease may occur as a result of beryllium exposure below the 2 $\mu g/m^3$ limit.

DOE also reports that survey results of its sites document the majority of current exposure levels to be below the 2 $\mu g/m^3$ PEL. As indicated in DOE's proposal, two DOE facilities currently employ an action level of 0.5 $\mu g/m^3$, another uses an "administrative warning range" of 0.2 to 2.0 $\mu g/m^3$, and six others use an action level of 1.0 $\mu g/m^3$. Since DOE recognizes that the 2 $\mu g/m^3$ PEL does not protect workers from either sensitization or chronic beryllium disease, it has proposed an action level of 0.5 $\mu g/m^3$. These data seem to indicate that it should be feasible to achieve levels of beryllium well below OSHA's current 2 $\mu g/m^3$ limit. Thus, OSHA urges DOE to consider the promulgation of an 8-hour TWA PEL at the lowest feasible level in order to protect workers from developing chronic beryllium disease.

Viewed from OSHA's regulatory perspective, these DOE study results document risk of sensitization to beryllium of 35-40 per 1,000 workers and risk of chronic beryllium disease to machinists of 94 per 1,000. Since OSHA would attempt to regulate risks of sensitization and chronic beryllium disease to levels of 1 per 1,000 exposed workers over an occupational lifetime (45 years), at a minimum, if doing so were reasonable, OSHA views the risk at these DOE sites as unacceptably high and as scientific evidence for a lower PEL. Additionally, the DOE sites have demonstrated both economic and technologic feasibility to achieve levels of beryllium exposure well below the current OSHA 2 $\mu g/m^3$ PEL. However, OSHA recognizes that DOE is not bound by these rulemaking criteria, and that DOE may, in fact, be required to consider other criteria for this rulemaking.

Comments on other portions of the proposed rule will be sent under separate cover directly to Ms. Rogers. Should you have any questions regarding OSHA's comments, please direct them to

Dr. Adam Finkel, Director, Health Standards Programs at 202-219-7075. Thank you for the opportunity to provide comments at this stage of the rulemaking process.

Sincerely,

Charles N. Jeffress
Assistant Secretary