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February 16, 2011

Ms. Jacqueline D. Rogers
U.S. Department of Energy
Office of Health, Safety and Security
Office of Workers Safety and Health Policy
1000 Independence Avenue, SW
Washington, DC 20585

Dear Ms. Rogers:

Department of Energy Request for Information – Chronic Beryllium Disease Prevention Program

Enclosed are Honeywell FM&T responses to the Department of Energy's request for information and comments on issues related to its current chronic beryllium disease prevention program (73 Fed. Reg. 80734, December 23, 2010). Honeywell FM&T is the management and operating contractor for the Department of Energy National Nuclear Security Administration Kansas City Plant. The Kansas City Site Office will provide comments under separate cover.

Sincerely,

A handwritten signature in black ink, appearing to read 'C. Valle'.

Curtis L. Valle
Manager, HS&E

Enclosure

cc: C. C. Gentile, FM&T
D. J. Fitzpatrick, FM&T
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2-16-2011

Honeywell Federal Manufacturing and Technologies (FM&T)
Comments to the Office of Health Safety and Security, Department of Energy
Action: Request for information 10 CFR 850

1. DOE currently defers to the Occupational Safety and Health Administration (OSHA) for establishing the permissible exposure limits (PEL) and uses an action level as the administrative level to assure that controls are implemented to prevent exposures from exceeding the permissible exposure limits. Should the Department continue to use the OSHA PEL? Please explain your answer and provide evidence to support your answer.

FM&T Comments: Over the past 10 years since the promulgation of 10 CFR 850, the research regarding airborne exposure to beryllium suggests that the OSHA PEL is not adequately protective of worker health. Although DOE may have statutory authority to promulgate more restrictive levels, OSHA, NIOSH, ACGIH and DOE should collaborate and agree as to what is protective of the health of the American workers. Once a limit is agreed upon there also should be an industry accepted sampling method specified for determining results.

2. Should the Department use the 2010 ACGIH threshold limit value (TLV) of 0.05 [g/m³ (8-hour time-weighted average of 0.05 microgram of beryllium, in inhalable particulate matter, per cubic meter of air), for its allowable exposure limit? Please explain your answer and provide evidence to support your answer.

FM&T Comments: The 2010 TLV is approaching the laboratory level of detection. It does not appear agreement exists between the Government agencies chartered to perform the research and set exposure limits. More collaboration between these agencies is needed along with a specified, consistent, and technically feasible sampling methodology for all to use. For example, the inclusion of sample cassette wall deposits in analysis, as has been proposed in various forums, was not used in establishing the 2010 TLV.

3. Should an airborne action level that is different from the 2010 ACGIH TLV for beryllium (8-hour time-weighted average of 0.05 microgram of beryllium, in inhalable particulate matter, per cubic meter of air) be established? If so, what should be the level? Please explain each of your answers and provide evidence to support your answers.

FM&T Comments: A different airborne action level may need to be established. The current TLV is nearing detection capabilities. The current DOE Action level of 0.2 ug/m³ may be appropriate; however, an Action Level approaching the TLV would be more practical than establishment of the TLV as an Occupational Exposure Limit due to limits of laboratory levels of detection and the lack of a standard sampling and analysis protocol for 0.05 ug/m³ inhalable.

4. In the past DOE encouraged, but did not require, the use of wet wipes rather than dry wipes for surface monitoring. DOE's experience with wipe testing leads the Department to consider requiring the use of wet wipes, unless the employer demonstrates that using wet wipes may cause an undesirable alteration of the surface, in order to achieve greater comparability of results across the DOE complex and in response to studies demonstrating that wet wipes capture more of the surface contamination than do dry wipes. Should the Department require the use of wet wipes? Please explain your answer and provide evidence to support your answer.

FM&T Comments: The inconsistency of surface wipe methodologies across the DOE is problematic. If DOE continues to require swipe sampling, a standard method should be used. Wet wipes using water would be more representative of beryllium residue present on surfaces vs. dry wipes. In general, the presence of surface contamination does not have a good correlation to the development of beryllium sensitization or CBD.

5. Since the use of wipe sampling is not a common occupational safety and health requirement, how do current wipe sampling protocols aid exposure assessments and the protection of beryllium workers? How reliable and accurate are current sampling and analytical methods for beryllium wipe samples? Please explain your answers and provide evidence to support your answers.

FM&T Comments: Since a standard swipe methodology has not been established, sampling and analytical results are not reliable, consistent or comparable across the DOE sites. As would be expected, experience at the Kansas City Plant is that wet wipes using water are reliable and accurate enough to demonstrate that cleaning surfaces reduces beryllium contamination. While swipe sampling provides data regarding surface residues it does not necessarily provide much useful data to determine a worker's exposure level. There are also many variables such as the matrix of the residue being sampled. It also does not appear that good correlations have been made as to levels of surface residues and airborne exposures. Workers and the media have focused attention on wipe sampling results as the indicator of what is "safe". DOE facilities have come under scrutiny for surface sampling results that do not accurately represent the potential for beryllium sensitization or development of CBD. Surface sampling is prohibitively expensive when used for the release of low value equipment – cheaper to dispose than sample. For higher value equipment, initial sampling, cleaning (multiple) if necessary, and verification sampling also is prohibitively expensive. It is therefore cheaper to dispose of good equipment that private industry routinely sells.

6. What is the best method for sampling and analyzing inhalable beryllium? Please explain your answers and provide evidence to support your answers.

FM&T Comments: The Kansas City Plant has not conducted research with various sampling methodologies for evaluating inhalable beryllium that would provide data to support a particular method.

7. How should total fraction exposure data be compared to inhalable fraction exposure measurements? Please explain your answer and provide evidence to support your answer.

FM&T Comments: The Kansas City Plant has not conducted any research that would provide data to support an answer.

8. Should surface area action levels be established, or should DOE consider controlling the health risk of surface levels by establishing a low airborne action level that precludes beryllium settling out on surfaces, and administrative controls that prevent the buildup of beryllium on surfaces? If surface area action levels are established, what should be the DOE surface area action levels? If a low airborne action level should be established in lieu of the surface area action level, what should that airborne action level be? What, if any, additional administrative controls to prevent the buildup on surfaces should be established? Please explain each of your answers and provide evidence to support your answers.

FM&T Comments: DOE should consider establishing a low airborne action level in lieu of a surface standard. A “visibly clean” administrative surface level should be established similar to OSHA’s carcinogen standard. Experience at the Kansas City Plant with cleaning equipment surfaces indicates that multiple cleanings are required to approach and/or achieve the free release limit of 0.2 ug/100cm² using biased sampling. The fact that beryllium is ubiquitous in the environment and is also contained in non-regulated metals makes surface sampling less reliable for use in employee exposure assessment and compliance assurance.

9. Should warning labels be required for the transfer, to either another DOE entity or to an entity to whom this rule does not apply, of items with surface areas that are free of removable surface levels of beryllium but which may contain surface contamination that is inaccessible or has been sealed with hard-to-remove substances, *e.g.*, paint? Please explain your answer and provide evidence to support your answer.

FM&T Comments: Warning labels should not be required if cleanliness levels have been achieved. A superior knowledge statement should accompany the transfer of equipment that has processed beryllium informing recipients of potential exposures. A “visibly clean” standard may be appropriate. Currently, any equipment that is labeled is destined for disposal as even a scrap metal dealer will not accept it with the labeling that is currently required.

10. Should the Department establish both surface level and aggressive air sampling criteria (modeled after the U.S. Environmental Protection Agency’s aggressive air sampling criteria to clear an area after asbestos abatement) for releasing areas in a facility, or should the Department consider establishing only the aggressive air sampling criteria? Please explain your answers and provide evidence to support your answers.

FM&T Comments: Aggressive air sampling would be more representative than surface sampling for a worker’s airborne exposure which is the most concerning route of

exposure. If aggressive air monitoring is selected as the criteria for clearing a facility, surface sampling should not be required. The Kansas City Plant (KCP) Aggressive Air Monitoring Project and published report (previously made available to DOE) would support this approach. However, establishing and executing an aggressive air monitoring project for each discreet area of a facility would be cost prohibitive, as demonstrated in the KCP Project.

11. Currently, after the site occupational medicine director has determined that a beryllium worker should be medically removed from exposure to beryllium, the worker must consent to the removal. Should the Department continue to require the worker's consent for medical removal, or require mandatory medical removal? Please explain your answers.

FM&T Comments: The current beryllium lymphocyte test appears to have flaws which can lead to inaccurate results. Being medically removed from beryllium exposure could have an adverse impact on a worker's job and compensation. If the employer is appropriately controlling beryllium exposures through engineering controls, administrative controls and PPE, it should not adversely affect the worker's health if the worker decides to continue to work with beryllium. Additionally, if medical removal becomes mandatory, it will discourage workers from entering the voluntary medical surveillance program and eliminate the possible early detection of CBD. The DOE should continue to require the worker's consent for medical removal.