

**Response to DOE Request for Information**  
**10 CFR Part 850**  
**[Docket No. HS–RM–10–CBDPP]**

Kenneth Meyer  
B&W Pantex  
Beryllium Program Manager  
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1. See answer to #2.
2. 10 CFR 850 establishes a chronic beryllium disease prevention program that is enforced under, and is an integral part of 10 CFR 851. It would therefore stand to reason that the 2005 ACGIH TLV for beryllium should be established as the occupation exposure limit (OEL) instead of the 2010 TLV, since the 2005 TLVs are incorporated by reference for other industrial hygiene aspects of 10 CFR 851. Under this approach the OEL would be updated when 10 CFR 851 is updated to reference a later revision of the TLVs. Since the 2005 TLV and the OSHA PEL are the same, this would not be an immediate change to the OEL. The action level should therefore remain unchanged.
3. If the 2005 TLV is used, the action level should remain as it is today. If the 2010 TLV is used, an action level is not needed and is not practical because the TLV of  $0.05 \mu\text{g}/\text{m}^3$  already pushes the limit of quantification (LOQ) using ICP analysis. At Pantex, Many operations involving beryllium are of short duration. These samples are usually sampled for the duration of the task (longer than a STEL, but less than full shift). Because of the short duration, a limited amount of air is drawn through the pump and the corresponding LOQ for the air concentration may be at or above the action level if it is set at less than  $0.05 \mu\text{g}/\text{m}^3$ .
4. Wet swipes should be established as the standard. A standardized correction factor for use with historical dry swipe data and in cases where dry swipes are required would be helpful.
5. Wipe samples are useful as indicators, but cannot be directly correlated with personnel exposures. At Pantex, surface sampling is used in pre-job evaluations to help determine whether the job may proceed without controls, or if PPE/air monitoring is needed. In situations where surface contamination is present, the professional judgment of the industrial hygienist performing the evaluation is important since there are numerous factors that affect the potential for generating airborne beryllium. Wipe samples are also indispensable in determining the degree to which an operation produces surface contamination, the effectiveness of controls and cleaning steps, and the release of items such as tooling between beryllium work areas and non-beryllium areas.
6. No comment

7. No comment
8. The establishment of action levels for surface contamination might be appropriate if they trigger the use of PPE for protection of exposed skin from the contamination. It would not be appropriate to use surface contamination levels as criteria for requiring respiratory protection. The surface contamination level is just one of the many variables that affect the propensity for re-entrainment of the particles into the air. Further, a surface contamination action level should not be used to trigger the establishment of a regulated area (as regulated areas are currently defined), since regulated areas include a requirement for respiratory protection.

The use of administrative controls is not a practical method to controlling surface contamination. This approach would inevitably lead to a “one size fits all” list of controls that would have to be applied to a diverse set of work conditions. This would result in forcing the implementation of controls in situations where they do not make sense and may even hinder the performance of the task. Further, the efficacy of setting airborne limits to prevent settling on surfaces has not been proven. It appears that the buildup can occur very gradually over time on undisturbed surfaces from even very low air concentrations. The housekeeping limit currently in place is working well at Pantex for the following reasons:

- It provides an objective limit for production personnel to target.
  - It has proven effective in preventing buildup of contamination in the immediate work area.
  - No airborne beryllium has been measured from processes that are at or below the housekeeping limit.
  - We are not experiencing a significant number of new cases of sensitization.
9. In those cases where there is a potential for significant inaccessible or sealed contamination, some sort of label might be appropriate. Perhaps a caution label explaining the hazard might be more appropriate than a danger label. However, at Pantex, we have found that in many instances, once the item has been cleaned, there is no potential for any significant residual contamination. In these cases, placing danger labels on the items has caused a considerable amount of confusion and undue consternation among employees and contractors (such as recyclers). Using danger labels on items that are no longer contaminated seems to lessen the effectiveness of labeling where there is a legitimate hazard.
  10. In general, aggressive air sampling for clearance has its merits. However, it may not be the most prudent approach to releasing beryllium work areas. At Pantex, the majority of the legacy contamination has been found in the ceiling area of work bays where it has settled out of the air on rafters, pipes, ducting, etc. This is an indication that the very small, light weight beryllium particles are easily carried by the room air currents. That being true, aggressive sampling could potentially spread localized contamination from a small work area throughout a large work bay or building.

11. No comment