

Department of Energy

§ 850.22

appropriate for the beryllium activities covered by the CBDPP to further reduce exposure below the permissible exposure limit prescribed in § 850.22.

§ 850.12 Implementation.

(a) The responsible employer must manage and control beryllium exposures in all DOE beryllium activities consistent with the approved CBDPP.

(b) No person employed by DOE or a DOE contractor may take or cause any action inconsistent with the requirements of:

- (1) This part,
- (2) An approved CBDPP, and
- (3) Any other Federal statute or regulation concerning the exposure of workers to beryllium at DOE facilities.

(c) No task involving potential exposure to airborne beryllium that is outside the scope of the existing CBDPP may be initiated until an update of the CBDPP is approved by the Head of DOE Field Element, except in an unexpected situation and, then, only upon approval of the Head of DOE Field Element.

(d) Nothing in this part precludes a responsible employer from taking any additional protective action that it determines to be necessary to protect the health and safety of workers.

(e) Nothing in this part affects the responsibilities of DOE officials under the Federal Employee Occupational Safety and Health Program (29 CFR part 1960) and related DOE directives.

§ 850.13 Compliance.

(a) The responsible employer must conduct activities in compliance with its CBDPP.

(b) The responsible employer must achieve compliance with all elements of its CBDPP no later than January 7, 2002.

(c) With respect to a particular beryllium activity, the contractor in charge of the activity is responsible for complying with this part. If no contractor is responsible for a beryllium activity, DOE must ensure implementation of, and compliance with, this part.

Subpart C—Specific Program Requirements

§ 850.20 Baseline beryllium inventory.

(a) The responsible employer must develop a baseline inventory of the locations of beryllium operations and other locations of potential beryllium contamination, and identify the workers exposed or potentially exposed to beryllium at those locations.

(b) In conducting the baseline inventory, the responsible employer must:

- (1) Review current and historical records;
- (2) Interview workers;
- (3) Document the characteristics and locations of beryllium at the facility; and
- (4) Conduct air, surface, and bulk sampling.

(c) The responsible employer must ensure that:

- (1) The baseline beryllium inventory is managed by a qualified individual (e.g., a certified industrial hygienist); and
- (2) The individuals assigned to this task have sufficient knowledge and experience to perform such activities properly.

§ 850.21 Hazard assessment.

(a) If the baseline inventory establishes the presence of beryllium, the responsible employer must conduct a beryllium hazard assessment that includes an analysis of existing conditions, exposure data, medical surveillance trends, and the exposure potential of planned activities. The exposure determinants, characteristics and exposure potential of activities must be prioritized so that the activities with the greatest risks of exposure are evaluated first.

(b) The responsible employer must ensure that:

- (1) The hazard assessment is managed by a qualified individual (e.g., a certified industrial hygienist); and
- (2) The individuals assigned to this task have sufficient knowledge and experience to perform such activities properly.

§ 850.22 Permissible exposure limit.

The responsible employer must assure that no worker is exposed to an

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airborne concentration of beryllium greater than the permissible exposure limit established in 29 CFR 1910.1000, as measured in the worker's breathing zone by personal monitoring, or a more stringent TWA PEL that may be promulgated by the Occupational Safety and Health Administration as a health standard.

§ 850.23 Action level.

(a) The responsible employer must include in its CBDPP an action level that is no greater than 0.2 µg/m³, calculated as an 8-hour TWA exposure, as measured in the worker's breathing zone by personal monitoring.

(b) If an airborne concentration of beryllium is at or above the action level, the responsible employer must implement §§ 850.24(c) (periodic monitoring), 850.25 (exposure reduction and minimization), 850.26 (regulated areas), 850.27 (hygiene facilities and practices), 850.28 (respiratory protection), 850.29 (protective clothing and equipment), and 850.38 (warning signs) of this part.

§ 850.24 Exposure monitoring.

(a) *General.* The responsible employer must ensure that:

(1) Exposure monitoring is managed by a qualified individual (e.g., a certified industrial hygienist); and

(2) The individuals assigned to this task have sufficient industrial hygiene knowledge and experience to perform such activities properly.

(b) *Initial monitoring.* The responsible employer must perform initial monitoring in areas that may have airborne beryllium, as shown by the baseline inventory and hazard assessment. The responsible employer must apply statistically-based monitoring strategies to obtain a sufficient number of sample results to adequately characterize exposures, before reducing or terminating monitoring.

(1) The responsible employer must determine workers' 8-hour TWA exposure levels by conducting personal breathing zone sampling.

(2) Exposure monitoring results obtained within the 12 months preceding the effective date of this part may be used to satisfy this requirement if the measurements were made as provided in paragraph (b)(1) of this section.

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(c) *Periodic exposure monitoring.* The responsible employer must conduct periodic monitoring of workers who work in areas where airborne concentrations of beryllium are at or above the action level. The monitoring must be conducted in a manner and at a frequency necessary to represent workers' exposure, as specified in the CBDPP. This periodic exposure monitoring must be performed at least every 3 months (quarterly).

(d) *Additional exposure monitoring.* The responsible employer must perform additional monitoring if operations, maintenance or procedures change, or when the responsible employer has any reason to suspect such a change has occurred.

(e) *Accuracy of monitoring.* The responsible employer must use a method of monitoring and analysis that has an accuracy of not less than plus or minus 25 percent, with a confidence level of 95 percent, for airborne concentrations of beryllium at the action level.

(f) *Analysis.* The responsible employer must have all samples collected to satisfy the monitoring requirements of this part analyzed in a laboratory accredited for metals by the American Industrial Hygiene Association (AIHA) or a laboratory that demonstrates quality assurance for metals analysis that is equivalent to AIHA accreditation.

(g) *Notification of monitoring results.* (1) The responsible employer must, within 10 working days after receipt of any monitoring results, notify the affected workers of monitoring results in writing. This notification of monitoring results must be:

(i) Made personally to the affected worker; or

(ii) Posted in location(s) that is readily accessible to the affected worker, but in a manner that does not identify the individual to other workers.

(2) If the monitoring results indicate that a worker's exposure is at or above the action level, the responsible employer must include in the notice:

(i) A statement that the action level has been met or exceeded; and

(ii) A description of the corrective action being taken by the responsible