

## Department of Energy

## § 835.502

respiratory protective devices for protection against airborne radionuclides have been prescribed.

(b) Real-time air monitoring shall be performed as necessary to detect and provide warning of airborne radioactivity concentrations that warrant immediate action to terminate inhalation of airborne radioactive material.

[63 FR 59683, Nov. 4, 1998]

### § 835.404 [Reserved]

### § 835.405 Receipt of packages containing radioactive material.

(a) If packages containing quantities of radioactive material in excess of a Type A quantity (as defined at 10 CFR 71.4) are expected to be received from radioactive material transportation, arrangements shall be made to either:

(1) Take possession of the package when the carrier offers it for delivery; or

(2) Receive notification as soon as practicable after arrival of the package at the carrier's terminal and to take possession of the package expeditiously after receiving such notification.

(b) Upon receipt from radioactive material transportation, external surfaces of packages known to contain radioactive material shall be monitored if the package:

(1) Is labeled with a Radioactive White I, Yellow II, or Yellow III label (as specified at 49 CFR 172.403 and 172.436-440); or

(2) Has been transported as low specific activity material (as defined at 10 CFR 71.4) on an exclusive use vehicle (as defined at 10 CFR 71.4); or

(3) Has evidence of degradation, such as packages that are crushed, wet, or damaged.

(c) The monitoring required by paragraph (b) of this section shall include:

(1) Measurements of removable contamination levels, unless the package contains only special form (as defined at 10 CFR 71.4) or gaseous radioactive material; and

(2) Measurements of the radiation levels, unless the package contains less than a Type A quantity (as defined at 10 CFR 71.4) of radioactive material.

(d) The monitoring required by paragraph (b) of this section shall be completed as soon as practicable following

receipt of the package, but not later than 8 hours after the beginning of the working day following receipt of the package.

[63 FR 59683, Nov. 4, 1998]

## Subpart F—Entry Control Program

### § 835.501 Radiological areas.

(a) Personnel entry control shall be maintained for each radiological area.

(b) The degree of control shall be commensurate with existing and potential radiological hazards within the area.

(c) One or more of the following methods shall be used to ensure control:

(1) Signs and barricades;

(2) Control devices on entrances;

(3) Conspicuous visual and/or audible alarms;

(4) Locked entrance ways; or

(5) Administrative controls.

(d) Written authorizations shall be required to control entry into and perform work within radiological areas. These authorizations shall specify radiation protection measures commensurate with the existing and potential hazards.

(e) No control(s) shall be installed at any radiological area exit that would prevent rapid evacuation of personnel under emergency conditions.

[58 FR 65485, Dec. 14, 1993, as amended at 63 FR 59684, Nov. 4, 1998]

### § 835.502 High and very high radiation areas.

(a) The following measures shall be implemented for each entry into a high radiation area:

(1) The area shall be monitored as necessary during access to determine the exposure rates to which the individuals are exposed; and

(2) Each individual shall be monitored by a supplemental dosimetry device or other means capable of providing an immediate estimate of the individual's integrated deep dose equivalent during the entry.

(b) *Physical controls.* One or more of the following features shall be used for each entrance or access point to a high radiation area where radiation levels

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exist such that an individual could exceed a deep dose equivalent to the whole body of 1 rem (0.01 sievert) in any one hour at 30 centimeters from the source or from any surface that the radiation penetrates:

(1) A control device that prevents entry to the area when high radiation levels exist or upon entry causes the radiation level to be reduced below that level defining a high radiation area;

(2) A device that functions automatically to prevent use or operation of the radiation source or field while individuals are in the area;

(3) A control device that energizes a conspicuous visible or audible alarm signal so that the individual entering the high radiation area and the supervisor of the activity are made aware of the entry;

(4) Entryways that are locked. During periods when access to the area is required, positive control over each entry is maintained;

(5) Continuous direct or electronic surveillance that is capable of preventing unauthorized entry;

(6) A control device that will automatically generate audible and visual alarm signals to alert personnel in the area before use or operation of the radiation source and in sufficient time to permit evacuation of the area or activation of a secondary control device that will prevent use or operation of the source.

(c) *Very high radiation areas.* In addition to the above requirements, additional measures shall be implemented to ensure individuals are not able to gain unauthorized or inadvertent access to very high radiation areas.

(d) No control(s) shall be established in a high or very high radiation area that would prevent rapid evacuation of personnel.

[58 FR 65485, Dec. 14, 1993, as amended at 63 FR 59684, Nov. 4, 1998]

## Subpart G—Posting and Labeling

### § 835.601 General requirements.

(a) Except as otherwise provided in this subpart, postings and labels required by this subpart shall include the standard radiation warning trefoil in

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black or magenta imposed upon a yellow background.

(b) Signs required by this subpart shall be clearly and conspicuously posted and may include radiological protection instructions.

(c) The posting and labeling requirements in this subpart may be modified to reflect the special considerations of DOE activities conducted at private residences or businesses. Such modifications shall provide the same level of protection to individuals as the existing provisions in this subpart.

[63 FR 59684, Nov. 4, 1998]

### § 835.602 Controlled areas.

(a) Each access point to a controlled area (as defined at § 835.2) shall be posted whenever radiological areas or radioactive material areas exist in the area. Individuals who enter only controlled areas without entering radiological areas or radioactive material areas are not expected to receive a total effective dose equivalent of more than 0.1 rem (0.001 sievert) in a year.

(b) Signs used for this purpose may be selected by the contractor to avoid conflict with local security requirements.

[58 FR 65485, Dec. 14, 1993, as amended at 63 FR 59684, Nov. 4, 1998]

### § 835.603 Radiological areas and radioactive material areas.

Each access point to radiological areas and radioactive material areas (as defined at § 835.2) shall be posted with conspicuous signs bearing the wording provided in this section.

(a) *Radiation area.* The words “Caution, Radiation Area” shall be posted at each radiation area.

(b) *High radiation area.* The words “Caution, High Radiation Area” or “Danger, High Radiation Area” shall be posted at each high radiation area.

(c) *Very high radiation area.* The words “Grave Danger, Very High Radiation Area” shall be posted at each very high radiation area.

(d) *Airborne radioactivity area.* The words “Caution, Airborne Radioactivity Area” or “Danger, Airborne Radioactivity Area” shall be posted at each airborne radioactivity area.