

this section, contain provisions to preclude the probability of future impoundment of water, sediment, or slurry.

(b) An abandonment plan does not have to contain a provision to preclude the future impoundment of water if the plan is approved by the District Manager and documentation is included in the abandonment plan to ensure that the following requirements are met:

(1) A registered professional engineer, knowledgeable in the principles of dam design and in the design and construction of the structure, shall certify that it substantially conforms to the approved design plan and specifications and that there are no apparent defects.

(2) The current owner or prospective owner shall certify a willingness and ability to assume responsibility for operation and maintenance of the structure.

(3) A permit or approval for the continued existence of the impoundment or impounding structure shall be obtained from the Federal or State agency responsible for dam safety.

[57 FR 7472, Mar. 2, 1992]

§ 77.217 Definitions.

For the purpose of §§ 77.214 through 77.216-5, the term:

(a) *Abandoned* as applied to any refuse pile or impoundment and impounding structure means that work on such pile or structure has been completed in accordance with a plan for abandonment approved by the District Manager.

(b) *Area-capacity curves* means graphic curves which readily show the reservoir water surface area, in acres, at different elevations from the bottom of the reservoir to the maximum water surface, and the capacity or volume, in acre-feet, of the water contained in the reservoir at various elevations.

(c) *Impounding structure* means a structure which is used to impound water, sediment, or slurry, or any combination of such materials.

(d) *Probable maximum precipitation* means the value for a particular area which represents an envelopment of depth-duration-area rainfall relations for all storm types affecting that area adjusted meteorologically to maximum conditions.

(e) *Refuse pile* means a deposit of coal mine waste which may contain a mixture of coal, shale, claystone, siltstone, sandstone, limestone, and related materials that are excavated during mining operations or separated from mined coal and disposed of on the surface as waste byproducts of either coal mining or preparation operations. *Refuse pile* does not mean temporary spoil piles of removed overburden material associated with surface mining operations.

(f) *Safety factor* means the ratio of the forces tending to resist the failure of a structure to the forces tending to cause such failure as determined by accepted engineering practice.

(Secs. 101, 508, Pub. L. 91-173, 83 Stat. 745, 803 (30 U.S.C. 811, 957))

[40 FR 41778, Sept. 9, 1975]

Subpart D—Thermal Dryers

§ 77.300 Thermal dryers; general.

On and after July 1, 1971 dryer systems used for drying coal at high temperatures, hereinafter referred to as thermal dryers, including rotary dryers, continuous carrier dyes, vertical tray, and cascade dryers, multilouver dryers, suspension or flash dryers, and fluidized bed dryers, shall be maintained and operated in accordance with the provision of § 77.301 to § 77.306.

[36 FR 9364, May 22, 1971, as amended at 36 FR 13143, July 15, 1971]

§ 77.301 Dryer heating units; operation.

(a) Dryer heating units shall be operated to provide reasonably complete combustion before heated gases are allowed to enter hot gas inlets.

(b) Dryer heating units which are fired by pulverized coal, shall be operated and maintained in accordance with the recommended standards set forth in the National Fire Protection Association Handbook, 12th Edition, Section 9, "Installation of Pulverized Fuel Systems," 1962.

§ 77.302 Bypass stacks.

Thermal dryer systems shall include a bypass stack, relief stack or individual discharge stack provided with automatic venting which will permit gases from the dryer heating unit to

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bypass the heating chamber and vent to the outside atmosphere during any shutdown operation.

§ 77.303 Hot gas inlet chamber dropout doors.

Thermal dryer systems which employ a hot gas inlet chamber shall be equipped with drop-out doors at the bottom of the inlet chamber or with other effective means which permit coal, fly-ash, or other heated material to fall from the chamber.

§ 77.304 Explosion release vents.

Drying chambers, dry-dust collectors, ductwork connecting dryers to dust collectors, and ductwork between dust collectors and discharge stacks shall be protected with explosion release vents which open directly to the outside atmosphere, and all such vents shall be:

- (a) Hinged to prevent dislodgment;
- (b) Designed and constructed to permit checking and testing by manual operation; and
- (c) Equal in size to the cross-sectional area of the collector vortex finder when used to vent dry dust collectors.

§ 77.305 Access to drying chambers, hot gas inlet chambers and ductwork; installation and maintenance.

Drying chambers, hot gas inlet chambers and all ductwork in which coal dust may accumulate shall be equipped with tight sealing access doors which shall remain latched during dryer operation to prevent the emission of coal dust and the loss of fluidizing air.

§ 77.306 Fire protection.

Based on the need for fire protection measures in connection with the particular design of the thermal dryer, an authorized representative of the Secretary may require any of the following measures to be employed:

- (a) Water sprays automatically actuated by rises in temperature to prevent fire, installed inside the thermal dryer systems, and such sprays shall be designed to provide for manual operation in the event of power failure.
- (b) Fog nozzles, or other no less effective means, installed inside the thermal dryer systems to provide addi-

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tional moisture or an artificial drying load within the drying system when the system is being started or shut-down.

(c) The water system of each thermal dryer shall be interconnected to a supply of compressed air which permits constant or frequent purging of all water sprays and fog nozzles or other no less effective means of purging shall be provided.

§ 77.307 Thermal dryers; location and installation; general.

(a) Thermal dryer systems erected or installed at any coal mine after June 30, 1971 shall be located at least 100 feet from any underground coal mine opening, and 100 feet from any surface installation where the heat, sparks, flames, or coal dust from the system might cause a fire or explosion.

(b) Thermal dryer systems erected or installed after June 30, 1971 may be covered by roofs, however, such systems shall not be otherwise enclosed unless necessary to protect the health and safety of persons employed at the mine. Where such systems are enclosed, they shall be located in separate fireproof structures of heavy construction with explosion pressure release devices (such as hinged wall panels, window sashes, or louvers); which provide at least 1 square foot of area for each 80 cubic feet of space volume and which are distributed as uniformly as possible throughout the structure.

§ 77.308 Structures housing other facilities; use of partitions.

Thermal dryer systems installed after June 30, 1971 in any structure which also houses a tippie, cleaning plant, or other operating facility shall be separated from all other working areas of such structure by a substantial partition capable of providing greater resistance to explosion pressures than the exterior wall or walls of the structure. The partition shall also include substantial, self-closing fire doors at all entrances to the areas adjoining the dryer system.

§ 77.309 Visual check of system equipment.

Frequent visual checks shall be made by the operator of the thermal dryer