

**CHAPTER 90. COAL REFUSE DISPOSAL**

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**Authority**

The provisions of this Chapter 90 issued and amended under The Clean Streams Law (35 P.S. §§ 691.1—691.1001); the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1—1396.31); the Coal Refuse Disposal Control Act (52 P.S. §§ 30.51—30.66); Article XIX-A of The Administrative Code of 1929 (71 P.S. §§ 510-1—510-108); amended under section 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. § 1396.4b(a)); section 3.2 of the Coal Refuse Disposal Control Act (52 P.S. § 30.53b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20), unless otherwise noted.

**Cross References**

This chapter cited in 25 Pa. Code § 86.1 (relating to definitions); 25 Pa. Code § 86.2 (relating to scope); 25 Pa. Code § 86.12 (relating to continued operation under interim permits); 25 Pa. Code § 86.13 (relating to compliance with permits); 25 Pa. Code § 86.16 (relating to application contents); 25 Pa. Code § 86.38 (relating to criteria for approval or denial: existing structures); 25 Pa. Code § 86.131 (relating to scope); 25 Pa. Code § 86.174 (relating to standards for release of bonds); 25 Pa. Code § 86.194 (relating to system for assessment of penalties); 25 Pa. Code § 86.201 (relating to procedures for assessment of civil penalties); 25 Pa. Code § 87.73 (relating to dams, ponds, embankments and impoundments); 25 Pa. Code § 87.74 (relating to coal refuse disposal); 25 Pa. Code § 87.131 (relating to disposal of excess spoil); 25 Pa. Code § 89.5 (relating to definitions); 25 Pa. Code § 89.39 (relating to underground development wastes and excess excavated material); 25 Pa. Code § 89.58 (relating to pollution-forming materials); 25 Pa. Code § 89.173 (relating to performance standards); 25 Pa. Code § 90.93 (relating to casing and sealing of drilled holes and underground workings); 25 Pa. Code § 92a.11 (relating to other chapters applicable); 25 Pa. Code § 92a.12 (relating to treatment requirements); 25 Pa. Code § 102.8 (relating to PCSM requirements); 25 Pa. Code § 102.14 (relating to riparian buffer requirements); 25 Pa. Code § 290.101 (relating to general requirements for beneficial use); and 25 Pa. Code § 290.104 (relating to beneficial use at coal mining activity sites).

**Subchapter A. GENERAL PERMIT AND APPLICATION REQUIREMENTS FOR COAL REFUSE DISPOSAL**

Sec.  
90.1. Definitions.

- 90.2. Scope.
- 90.3. General requirements: permit.
- 90.4. [Reserved].
- 90.5. Site selection and permitting.

#### Cross References

This subchapter cited in 25 Pa. Code § 90.301 (relating to scope); 25 Pa. Code § 90.304 (relating to application for authorization); 25 Pa. Code § 90.305 (relating to application approval or denial); and 25 Pa. Code § 90.306 (relating to operational requirements).

### § 90.1. Definitions.

The following words and terms, when used in this chapter, have the following meanings, unless the context clearly indicates otherwise:

*Abandoned*—An operation where no coal refuse has been disposed or area reclaimed for 6 months, verified by monthly reports submitted to the Department by the operator or by inspections made by the Department, unless an operator within 30 days after receipt of notification by the Secretary terming an operation abandoned submits sufficient evidence to the Secretary that the operation is in fact not abandoned and submits a timetable satisfactory to the Secretary regarding plans for the reactivation of the operation.

*Access roads*—Roads located and constructed, reconstructed, improved or maintained for minimal and infrequent use to transport equipment and personnel to current and future coal disposal activities. The term includes the entire area within the right-of-way, including the roadbed, shoulders, parking and side areas, approaches, structures and ditches.

*Acid drainage*—Water with a pH of less than 6.0 and in which total acidity exceeds total alkalinity, discharged from an active, inactive or abandoned coal refuse disposal and reclamation operation or from an area affected by coal refuse disposal activities.

*Acid-forming materials*—Earth materials that contain sulfide minerals or other materials which, if exposed to air, water or weathering processes, form acids that may create acid drainage.

*Adjacent area*—Land located outside the permit area, where air, surface or groundwater, fish, wildlife, vegetation or other resources protected by this chapter may be adversely impacted by coal refuse disposal activities.

*Affected area*—Land or water upon or in which coal refuse disposal activities are conducted or located. The term includes land in which the natural land surface has been disturbed as a result of or incidental to the surface activities of the operator, including, but not limited to, private ways and roads appurte-

nant to the area, land excavations, workings, refuse banks, spoil banks, culm banks, tailings, repair areas, storage areas, processing areas, shipping areas and areas in which structures, facilities, equipment, machines, tools or other materials or property which result from or are used in, coal refuse disposal operations are situated. The term also includes lands affected by the construction of new roads or the improvement or substantial use of an existing road to gain access to the site or for hauling from the site.

*Aquifer*—A zone, stratum or group of strata that can store and transmit water in sufficient quantities for a specific use.

*Best technology currently available*—Equipment, devices, systems, methods or techniques which will:

(i) Prevent, to the extent possible, additional contributions of suspended solids to stream flow or runoff outside the permit area, but in no event result in contributions of suspended solids in excess of requirements set by applicable State or Federal laws.

(ii) Minimize, to the extent possible, disturbances and adverse impacts on fish, wildlife and related environmental values, and achieve enhancement of those resources when practicable. The term includes equipment, devices, systems, methods or techniques which are currently available anywhere as determined by the Secretary, even if they are not in routine use. The term includes, but is not limited to, construction practices, siting requirements, vegetative selection and planting requirements, scheduling of activities, and design of sedimentation ponds in accordance with this chapter.

*Coal processing waste*—Earth materials which are separated and wasted from the product coal during cleaning, concentrating or other processing or preparation of coal.

*Coal refuse*—Any waste coal, rock, shale, slurry, culm, gob, boney, slate, clay and related materials, associated with or near a coal seam, which are either brought aboveground or otherwise removed from a coal mine in the process of mining coal or which are separated from coal during the cleaning or preparation operations. The term includes underground development wastes, coal processing wastes, excess spoil, but does not mean overburden from surface mining activities.

*Coal refuse disposal*—The storage, placement or disposal of coal refuse. The term includes engineered features integral to the placement of the coal refuse including relocations or diversions of stream segments contained within the proposed fill area and the construction of required systems to prevent adverse impacts to surface water and groundwater and to prevent precipitation from contacting the coal refuse.

*Coal refuse disposal area*—A general area or plot of land used as a place for disposal of, dumping or storage of coal refuse, including one or more coal refuse disposal piles, and all land thereby affected, including, but not limited to, any deposit of coal refuse on or buried in the earth and intended as perma-

ment disposal of or long-term storage of the material, and all other land area in which the natural land surface has been disturbed as a result of or incidental to the coal refuse disposal activities of the operator, including, but not limited to, private ways or roads appurtenant to any such area, land excavations, workings, tailings, repair areas, storage areas, processing areas, shipping areas and areas in which structures, facilities, equipment, machines, tools or other materials or property which result from, or are used in, coal refuse disposal operations are situated. The term does not include coal refuse deposited within an active mine itself or coal refuse never removed from a mine.

*Coal refuse disposal pile*—A deposit of coal refuse on or buried in the earth and intended as permanent disposal of or long-term storage of such material, but not including coal refuse deposited within a mine itself or coal refuse never removed from a mine. Continuous deposits of coal refuse shall be considered as a single coal refuse disposal pile.

*Combustible material*—aterial that is capable of burning, either by fire or through oxidation, accompanied by the evolution of heat and a significant temperature rise.

*Compaction*—The increase of the density of a material by reducing the voids between the particles, generally accomplished by controlled placement and mechanical effort, such as from repeated application of wheel, track or roller loads from heavy equipment.

*Cropland*—Land used for the production of adapted crops for harvest, alone or in a rotation with grasses and legumes, including row crops, small grain crops, hay crops, nursery crops, orchard crops and other similar agronomic or horticultural crops.

*Degree*—The inclination from the horizontal.

*Disturbed area*—An area where vegetation, topsoil or overburden is removed or upon which topsoil, spoil, coal processing waste or noncoal waste is placed by coal refuse disposal activities. Those areas are classified as disturbed until reclamation is complete and the bond or other assurance of performance required by Chapter 86 Subchapter F (relating to bonding and insurance requirements) is released.

*Diversion*—A channel, embankment or other manmade structure constructed at a controlled slope to divert water from one area to another.

*Downslope*—The land surface between the projected outcrop of the lowest coalbed being mined along each highwall and a valley floor.

*Dry weather flow*—The base flow or surface discharge from an area or treatment facility which occurs immediately prior to a precipitation event and which resumes 24 hours after the precipitation event ends.

*Embankment*—An artificial deposit of material that is raised above the natural surface of the land and used to contain, divert or store water; support roads or railways; or for other similar purposes.

*Ephemeral stream*—A water conveyance which lacks substrates associated with flowing waters and flows only in direct response to precipitation in the immediate watershed or in response to melting snowpack and which is always above the local water table.

*Fugitive dust*—Particulate matter not emitted from a duct or stack which becomes airborne due to the forces of wind or coal refuse disposal activities or both. During coal refuse disposal activities, it may include emissions from haul roads; wind erosion of exposed surfaces, storage piles and spoil piles; reclamation operations; and other activities in which material is either removed, stored, transported or redistributed.

*Ground cover*—The area of ground covered by the combined aerial parts of vegetation and the litter that is produced naturally onsite, expressed as a percentage of the total area of measurement.

*Groundwater*—All subsurface waters of the Commonwealth.

*Haul roads*—

(i) The term includes the following:

(A) Roads that are planned, designed, located, constructed, reconstructed or improved, utilized and maintained for the transportation of equipment, fuel, personnel, coal, spoil and other operating resources from a public road to points within the coal refuse disposal area or between principal operations on the site, but not including roads within the coal refuse piles, banks and dams.

(B) Roads, including public roads, which are constructed, reconstructed, improved, maintained or substantially used as an integral part of the coal mining activities.

(ii) The term includes the entire area within the right-of-way, including the roadbed, shoulders, parking and side areas, approaches, structures and ditches.

*Historically used for cropland*—One of the following:

(i) Lands that have been used for cropland for any 5 years or more out of the 10 years immediately preceding the acquisition, including purchase, lease or option, of the land for the purpose of conducting or allowing, through resale, lease or option, the conduct of coal refuse disposal activities.

(ii) Lands that the Department determines, on the basis of additional cropland history of the surrounding lands and the lands under consideration, that the permit area is clearly cropland but falls outside the specific 5-years-in-10 criterion. In which case, the regulations from prime farmland may be applied to include more years of cropland history only to increase the prime farmland acreage to be preserved.

(iii) Lands that would likely have been used as cropland for any 5 out of the last 10 years immediately preceding such acquisition but for the same fact of ownership or control of the land unrelated to the productivity of the land.

*Hydrologic balance*—The relationship between the quality and quantity of water inflow to, water outflow from, and water storage in a hydrologic unit, such as a drainage basin, aquifer, soil zone, lake or reservoir. It encompasses the dynamic relationships among precipitation, runoff, evaporation and changes in groundwater and surface water storage.

*Hydrologic regime*—The entire state of water movement in a given area. It is a function of the climate and includes the phenomena by which water first occurs as atmospheric water vapor, passes into a liquid or solid form, falls as precipitation, moves along or into the ground surface, and returns to the atmosphere as vapor by means of evaporation and transpiration.

*Impoundment*—A closed basin, naturally formed or artificially built, which is dammed or excavated for the retention of water, sediment or waste.

*Intermittent stream*—A body of water flowing in a channel or bed composed primarily of substrates associated with flowing water which, during periods of the year, is below the local water table and obtains its flow from both surface runoff and groundwater discharges.

*Land*—The surface of the land upon which coal refuse disposal activities are conducted.

*Land use*—Specific uses or management-related activities, rather than the vegetation or cover of the land. Land uses may be identified in combination when joint or seasonal uses occur. Changes of land use from one of the following categories to another shall be considered as a change to an alternative land use which is subject to approval by the Department.

(i) *Cropland*. Land use for the production of adapted crops for harvest, alone or in a rotation with grasses and legumes, and includes row crops, small grain crops, hay crops, nursery crops, orchard crops and other similar agronomic or horticultural crops. Land used for facilities in support of cropland farming operations which is adjacent to or an integral part of these operations is also included for purposes of these land use categories.

(ii) *Pastureland or land occasionally cut for hay*. Land used primarily for the long-term production of adapted, domesticated forage plants to be grazed by livestock or occasionally cut and cured for livestock feed. Land used for facilities in support of pastureland or land occasionally cut for hay which is adjacent to or an integral part of these operations is also included.

(iii) *Forestland*. Land used for the long-term production of wood, wood fiber or wood-derived products; watershed protection; site stabilization; or for the production, protection and management of species of fish and wildlife. Land used for facilities in support of forestry and watershed management operations which is adjacent to or an integral part of these operations is also included.

(iv) *Commercial Forestland*. Land used and managed primarily for the long-term production of wood, wood fiber or wood-derived products. Land

used for facilities in support of forest harvest and management operations which is adjacent to or an integral part of these operations is also included.

(v) *Residential*. Includes single- and multiple-family housing, mobile home parks and other residential lodgings. Land used for facilities in support of residential operations which is adjacent to or an integral part of these operations is also included. Support facilities include, but are not limited to, vehicle parking and open space that directly relate to the residential use.

(vi) *Industrial/commercial*. Land used for the following:

(A) Extraction or transformation of materials for fabrication of products, wholesaling of products or for long-term storage of products. This includes heavy and light manufacturing facilities such as lumber and wood processing, chemical manufacturing, petroleum refining and fabricated metal products manufacturing. Land used for facilities in support of these operations which is adjacent to or an integral part of that operation is also included. Support facilities include, but are not limited to, rail, road and other transportation facilities.

(B) Retail or trade of goods or services, including hotels, motels, stores, restaurants and other commercial establishments. Land used for facilities in support of commercial operations which is adjacent to or an integral part of these operations is also included. Support facilities include, but are not limited to, parking, storage or shipping facilities.

(vii) *Recreation*. Land used for developed recreation facilities such as parks, camps, and other developed recreational uses.

(viii) *Fish and wildlife habitat*. Land and water used wholly or partially for the production, protection or management of species of fish or wildlife.

(ix) *Developed water resources*. Includes land used for storing water for beneficial uses such as stockponds, irrigation, fire protection, flood control and water supply.

(x) *Unmanaged natural habitat*—Idle land which does not require a specific management plan after the reclamation and revegetation have been accomplished.

*Maintain*—The maintenance of the site for as long as necessary after completion of the operation to prevent health, safety or pollution hazards or nuisances from occurring. The term includes, but is not limited to, repair of cracks or fissures, repair of areas where settling occurs, repair of erosion areas, treatment of acid drainage or runoff, extinguishment of fires or hot spots, reseeding and soil treatment until adequate vegetative cover is established.

*Moist bulk density*—The weight of soil (oven dry) per unit volume. Volume is measured when the soil is at field moisture capacity—1/3 bar moisture tension. Weight is determined after drying the soil at 105° C.

*Mulch*—Vegetation residue or other suitable materials that are placed on the soil surface to aid in soil stabilization and soil moisture conservation, thus providing microclimatic conditions suitable for seed germination and plant growth.

*Noxious plants*—Species that have been included on the official Pennsylvania list of noxious plants for the Commonwealth.

*Operator*—A person operating a coal refuse disposal area, or part thereof.

*Outslope*—The face of the spoil or embankment sloping downward from the highest elevation to the toe.

*Overburden*—The strata or material overlying a coal deposit or in between coal deposits in its natural state, and means the material before or after its removal by mining.

*Perennial stream*—A body of water flowing in a channel or bed composed primarily of substrates associated with flowing waters and is capable, in the absence of pollution or other manmade stream disturbances, of supporting a benthic macroinvertebrate community which is composed of two or more recognizable taxonomic groups of organisms which are large enough to be seen by the unaided eye and can be retained by a United States Standard No. 30 sieve—28 meshes per inch, 0.595 millimeter openings—and live at least part of their life cycles within or upon available substrates in a body of water or water transport system.

*Permanent diversion*—A diversion which is to remain after coal refuse disposal activities are completed which has been approved for retention by the Department.

*Permit area*—The land and water within the boundaries of the permit which are designated on the permit application maps, as approved by the Department. The area shall include all areas which are or will be affected by the coal refuse disposal activities during the term of the permit.

*Precipitation event*—A quantity of water resulting from drizzle, rain, snow, sleet or hail in a limited period of time. It may be expressed in terms of recurrence interval. As used in this chapter, precipitation event also includes that quantity of water emanating from snow cover as snow melt in a limited period of time.

*Prime farmland*—Those lands which are defined by the Secretary of the United States Department of Agriculture in 7 CFR 657 (relating to prime and unique farmlands), and which have been historically used for cropland as that phrase is defined in this section.

*Public recreational impoundment*—A closed basin, naturally formed or artificially built, which is dammed or excavated for the retention of water and which is owned, rented or leased by the Federal government, the Commonwealth or a political subdivision of this Commonwealth and which is used for swimming, boating, water skiing, hunting, fishing, skating or other similar activities.

*Recharge capacity*—The ability of the soils and underlying materials to allow precipitation and runoff to infiltrate and reach the zone of saturation.

*Reclamation*—Those actions taken to restore the area affected by coal refuse disposal activities as required by this chapter.



*Recurrence interval*—The interval of time in which a precipitation event is expected to occur once, on the average. For example, the 10-year, 24-hour precipitation event is expected to occur on the average once in 10 years.

*Safety factor*—The ratio of the available shear strength to the developed shear stress, or the ratio of the sum of the resisting forces to the sum of the loading or driving forces, as determined by accepted engineering practices.

*Sedimentation pond*—A primary sediment control structure designed, constructed and maintained in accordance with Subchapter D (relating to performance standard for coal refuse disposal) and including, but not limited to, a barrier, dam or excavated depression which detains water runoff to allow sediment to settle out. The term does not include secondary sedimentation control structures, such as straw dikes, riprap, check dams, mulches, dugouts and other measures that reduce overland flow velocity, reduce runoff volume or trap sediment, to the extent that the secondary sedimentation structures drain to a sedimentation pond.

*Slope*—Average inclination of a surface, measured from the horizontal, generally expressed as the ratio of a unit of vertical distance to a given number of units of horizontal distance, such as 1v:5h. It may also be expressed as a percent or in degrees.

*Soil horizons*—Contrasting layers of soil parallel or nearly parallel to the land surface. Soil horizons are differentiated on the basis of field characteristics and laboratory data. The three major soil horizons are as follows:

(i) *A horizon*. The uppermost mineral layer, often called the surface soil or topsoil. It is the part of the soil in which organic matter is most abundant, and leaching of soluble salts and soil elements is typically the greatest.

(ii) *B horizon*. The layer that typically is immediately beneath the A horizon and often called the subsoil. This middle layer commonly contains more clay, iron or aluminum than the A or C horizons.

(iii) *C horizon*. The deepest layer of soil profile. It consists of loose material or weathered rock that is relatively unaffected by biologic activity and closely resembles the parent material.

*Soil survey*—A field classification and laboratory analysis resulting in a map showing the geographic distribution of different kinds of soils and an accompanying report that describes, classifies and interprets the soils for use. Soil surveys shall meet the standards of the National Cooperative Soil Survey.

*Stability*—The maintenance of a condition which prevents danger to the safety, health or welfare of persons, property or public roads or highways because of slippage, shifting or sliding of coal refuse deposited on coal refuse disposal areas.

*Stabilize*—To reduce movement of soil, spoil piles or areas of disturbed earth by modifying the geometry of the mass, or by otherwise modifying physical or chemical properties, such as by providing a protective surface coating.

*Steep slope*—A slope of more than 20 degrees or a lesser slope designated by the Department after consideration of soil, climate and other characteristics of the region.

*Stratum (strata)*—A section of geologic formation that consists throughout of approximately the same kind of rock material; a stratum may consist of an indefinite number of beds.

*Substrates*—Inorganic sediments which are 0.05 millimeter in diameter or larger, and include sands, granules, pebbles, cobbles or boulders, based on Wentworth's Classification.

*Suspended solids*—Expressed as milligrams per liter, are organic or inorganic materials carried or held in suspension in water which are retained by a standard glass fiber filter in the procedure outlined by the regulations of the EPA for wastewater and analyses, 40 CFR 136 (relating to guidelines establishing test procedures for the analysis of pollutants).

*Temporary diversion*—A diversion of a stream or overland flow which is used during coal refuse disposal activities and not approved by the Department to remain after reclamation as part of the approved postmining land use.

*Topsoil*—The A soil horizon layer of the three major soil horizons.

*Toxic-forming materials*—Earth materials or wastes which, if acted upon by air, water, weathering or microbiological processes, are likely to produce chemical or physical conditions in soils or water that are detrimental to biota or uses of water.

*Water table*—The upper surface of a zone of saturation, where the body of groundwater is not confined by an overlying impermeable zone.

#### Source

The provisions of this § 90.1 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended February 17, 1984, 14 Pa.B. 524, effective August 4, 1984, 14 Pa.B. 2860; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial pages (245179) to (245183), (207921) to (207922) and (244277) to (244279).

### § 90.2. Scope.

This chapter specifies certain specific rules and procedures for those persons who engage in coal refuse disposal activities. General rules and procedures for those who engage in coal refuse disposal activities are found in Chapter 86 (relating to surface and underground coal mining: general).

#### Source

The provisions of this § 90.2 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.3. General requirements: permit.**

(a) The person who conducts coal refuse disposal activities shall maximize, to the extent technologically and economically feasible and consistent with applicable deep mine safety requirements, the underground disposal of refuse in abandoned, inactive or active deep mines, or in abandoned or unreclaimed surface mines. The application shall include a statement specifying whether or not disposal of coal refuse in abandoned, inactive or active deep mines or in abandoned or unreclaimed surface mines is proposed for the operation and, if not, outlining the technical, economic and safety considerations prohibiting such disposal.

(b) A person who conducts coal refuse disposal activities shall comply with the requirements of this chapter and Chapter 86 (relating to surface and underground coal mining: general), except, however:

(1) Disposal of coal refuse in an active surface coal mine shall comply with Chapter 87 (relating to surface mining of coal) and §§ 90.125 and 90.128 (relating to coal refuse disposal: construction requirements; and coal refuse disposal: active surface mines).

(2) Disposal of coal refuse in an abandoned, inactive or active underground coal mine shall comply with Chapter 89 (relating to underground mining of coal and coal preparation facilities), with subsection (a) and with § 90.127 (relating to coal refuse disposal: disposal in underground coal mines).

**Source**

The provisions of this § 90.3 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.4. [Reserved].****Source**

The provisions of this § 90.4 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; reserved June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial page (148997).

**§ 90.5. Site selection and permitting.**

(a) Prior to applying for a permit to conduct coal refuse disposal activities, the applicant shall comply with Subchapter E (relating to site selection). The Department's technical guidance document Number 563-2113-660, titled *Coal Refuse Disposal—Site Selection*, shall be used as guidance for selecting a coal refuse disposal site.

(b) After the Department has approved a site in accordance with Subchapter E, the applicant may apply for a permit for coal refuse disposal activities in accordance with Chapters 86 and 88 (relating to surface and underground coal mining: general; and anthracite coal) and this chapter.

**Source**

The provisions of this § 90.5 adopted July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735.

**Cross References**

This section cited in 25 Pa. Code § 88.281 (relating to requirements).

**Subchapter B. MINIMUM ENVIRONMENTAL RESOURCES  
INFORMATION REQUIRED IN PERMIT APPLICATIONS FOR COAL  
REFUSE DISPOSAL**

Sec.	
90.11.	General.
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90.15.	Alternative water supply information.
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90.17.	Vegetation information.
90.18.	Fish and wildlife resources information.
90.19.	[Reserved].
90.20.	Land use information.
90.21.	Maps and cross sections.
90.22.	Prime farmland investigation.

**Cross References**

This subchapter cited in 25 Pa. Code § 90.301 (relating to scope); 25 Pa. Code § 90.304 (relating to application for authorization); 25 Pa. Code § 90.305 (relating to application approval or denial); and 25 Pa. Code § 90.306 (relating to operational requirements).

**§ 90.11. General.**

- (a) Each coal refuse disposal permit application shall include a description of:
- (1) The location and extent of the proposed coal refuse disposal activities for which a permit is being sought and an identification of the size and sequence of those lands adjacent to the proposed permit area for which it is anticipated that individual permits for coal refuse disposal will be sought.
  - (2) The existing or predisposal environmental resources within the proposed permit and adjacent area that may be affected by the proposed coal refuse disposal activities. The description shall include the information required in this subchapter.
  - (3) The nature of archaeological, cultural and historic resources listed on or eligible for listing on the National Register of Historic Places and known archaeological sites within and adjacent to the proposed permit area. The description shall be based on available information, including, but not limited to, data of the Historical and Museum Commission and local archaeological, historic and cultural preservation agencies. The Department may require the

applicant to identify and evaluate important historic and archaeological resources that may be eligible for listing on the National Register of Historic Places, through one or more of the following:

- (i) The collection of additional information.
  - (ii) The conducting of field investigations.
  - (iii) Other appropriate analysis.
- (4) The geology, hydrology and water quality and quantity of lands within the proposed permit area, the adjacent area and the general area. The description shall conform with the following:
- (i) Information on hydrology, water quality and quantity, and geology related to hydrology of areas outside the proposed permit area and within the general area may be obtained from an appropriate Federal or State agency.
  - (ii) The applicant shall gather and submit this information to the Department as part of the permit application, if this information is not available from those agencies.
  - (iii) The permit will not be approved by the Department until this information is made available in the application.
- (b) The information required in this section may be developed using modeling techniques, but the Department may require verification of models.

#### Source

The provisions of this § 90.11 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended February 17, 1984, 14 Pa.B. 524, effective August 4, 1984, 14 Pa.B. 2860; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075. Immediately preceding text appears at serial page (159068).

#### § 90.12. Geology.

- (a) The application shall include a description of the areal and structural geology within the proposed permit and adjacent area, including the lithology of the strata that influence the occurrence, availability, movement and quality of groundwater that may be affected by the coal refuse disposal. For lands within the proposed permit and adjacent areas, the applicant shall provide a description of the geology with complementing maps and cross sections and the results of test borings. The description shall include the strata down to and including any aquifer that may be affected. At a minimum, the description shall include:
- (1) The location and quality of subsurface water.
  - (2) The depth, lithology and structure of near-surface bedrock.
  - (3) The location, identification and status of mining and coal refuse disposal operations within or adjacent to the proposed permit area.
  - (4) A description of any glacial, alluvial or colluvial deposits or other unconsolidated deposits that are present within or beneath the proposed permit area, including their thickness and location.

- (5) A description of any mine workings that are present beneath the proposed permit area.
  - (6) The attitude and characteristics of joints, cleats, fracture zones and faults within the permit and adjacent areas.
  - (7) The location and identification of all coal seam croplines within the permit area.
  - (8) A description of the physical characteristics of soils within the permit area.
  - (9) A description of aquifers that are present beneath the proposed permit area.
- (b) Maps, cross-sections and geologic descriptions required by this section shall be prepared and certified by a qualified registered professional geologist.

#### Source

The provisions of this § 90.12 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial pages (207928) to (207929).

#### Cross References

This section cited in 25 Pa. Code § 90.21 (relating to maps and cross sections).

### § 90.13. Groundwater information.

The application shall contain a description of the premining or baseline groundwater hydrology of the proposed permit and adjacent area, including the following:

- (1) The results of a groundwater inventory of existing wells, springs and other valuable groundwater resources, providing information on location, quality, quantity, depth to water and usage of the groundwater for the proposed permit and potentially impacted offsite areas. Information on water availability and occurrence, and alternate water supplies shall be emphasized and water quality information relating to suitability for existing predisposal use shall be provided. At a minimum, water quality descriptions shall include total dissolved solids or specific conductance corrected to 25°C, pH, total iron, total manganese, alkalinity, acidity and sulfates.
- (2) Other information on the baseline hydrogeologic properties of the groundwater system shall be included with the application. The Department may require information on indicator parameters such as pumping test, lithologic and piezometer data or that other appropriate information be provided. The application shall include a description of the groundwater flow system as it relates to the design and operation of the proposed groundwater and surface water protection system as described in § 90.50 (relating to design criteria: groundwater and surface water protection system).

**Authority**

The provisions of this § 90.13 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.13 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial page (180920).

**§ 90.14. Surface water information.**

(a) Surface water information shall contain a description of the surface waters, including the name of the watershed which will receive water discharges, the location of surface water bodies such as streams, lakes, ponds and springs, deep mine discharges and seeps, the locations of water discharges into a surface body of water and descriptions of surface drainage systems sufficient to identify the seasonal variations in water quantity and quality within the proposed permit and adjacent areas.

(b) Surface water information shall include the following:

(1) The surface elevations and rate of flow of springs, seeps and deep mine discharges located within and adjacent to the proposed permit area.

(2) Minimum, maximum and average discharge conditions, which identify critical low flows and peak discharge rates of streams sufficient to identify seasonal variations.

(3) Water quality data to identify the characteristics of surface waters in, discharging into or which will receive flows of surface or groundwater from the proposed permit area, sufficient to identify seasonal variations, showing:

(i) Total dissolved solids in milligrams per liter or specific conductance in micromhos per centimeter corrected to 25°C.

(ii) Total suspended solids in milligrams per liter.

(iii) Acidity in milligrams per liter.

(iv) Alkalinity in milligrams per liter.

(v) pH in standard units.

(vi) Total iron in milligrams per liter.

(vii) Total manganese in milligrams per liter.

(viii) Sulfates in milligrams per liter.

(ix) Total aluminum in milligrams per liter.

(x) Other information as the Department determines is relevant.

**Authority**

The provisions of this § 90.14 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

## 90-14.1





**Source**

The provisions of this § 90.14 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (180921) to (180922).

**§ 90.15. Alternative water supply information.**

The application shall identify the extent to which the proposed coal refuse disposal activities may result in contamination, diminution or interruption of an underground or surface source of water within the proposed permit or adjacent area for domestic, agricultural, industrial or other legitimate use. If contamination, diminution or interruption results, then the description shall identify the alternate sources of water supply that could be developed to replace the existing sources.

**Source**

The provisions of this § 90.15 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.16. Climatological information.**

When requested by the Department, the application shall contain a statement of the climatological factors that are representative of the proposed permit area. The statement shall contain the information the Department deems relevant to ensure compliance with the requirements of this chapter.

**Source**

The provisions of this § 90.16 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.17. Vegetation information.**

(a) Each application shall contain a description of the extent of cover, in percent ground cover, of the natural vegetation within the proposed permit area. When the postmining land use is wildlife habitat, the description shall include information adequate to establish the stocking standards of § 90.159(b)(2)(iii) (relating to revegetation: standards for successful revegetation). When requested by the Department, the application shall contain a map or aerial photograph that delineates existing vegetation types and a description of the plant communities within the proposed permit and adjacent area.

(b) When a map or aerial photograph is required, sufficient adjacent areas shall be included to allow evaluation of vegetation as important habitat for fish and wildlife.

**Source**

The provisions of this § 90.17 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.18. Fish and wildlife resources information.**

An application shall include fish and wildlife resources information for the proposed permit area and adjacent area.

(1) The scope and level of detail for the information shall be determined by the Department in consultation with State and Federal agencies with responsibilities for fish and wildlife and shall be sufficient to design the protection and enhancement plan required under § 90.48 (relating to fish and wildlife protection and enhancement plan).

(2) Site-specific resource information necessary to address the respective species or habitats shall be required when the proposed permit area or adjacent area is likely to include one or more of the following:

(i) Listed or proposed endangered or threatened species of plants or animals or their critical habitats listed by the United States Secretary of the Interior under the Endangered Species Act of 1973, act of December 28, 1973 (Pub. L. No. 93-205, 87 Stat. 884), or species or habitats protected by State law or regulations, including those species listed as threatened or endangered by the Game Commission and the Fish Commission.

(ii) Habitats of unusually high value for fish and wildlife such as important streams, wetlands, riparian areas, cliffs supporting raptors, areas offering special shelter or protection, migration routes or reproduction and wintering areas.

(iii) Other species or habitats identified through agency consultation as requiring special protection under State or Federal law.

**Source**

The provisions of this § 90.18 adopted June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149002) to (149003).

**Cross References**

This section cited in 25 Pa. Code § 90.48 (relating to fish and wildlife protection and enhancement plan).

**§ 90.19. [Reserved].****Source**

The provisions of this § 90.19 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.20. Land use information.**

(a) The application shall contain a map and a statement of the uses, condition, capability and productivity of land within the proposed permit area, including:

(1) The uses of the land existing at the time of application and, if the land use has changed within 5 years prior to time of applications, the prior use of land. If the land has been previously used for coal refuse disposal activities or mined and not reclaimed, the uses which preceded any coal refuse disposal activities or mining, if known.

(2) The capability of the land prior to any coal refuse disposal activities or mining to support a variety of uses, giving consideration to soil and foundation characteristics, topography, vegetative cover and hydrology.

(3) The productivity of cropland, pastureland or land occasionally cut for hay, commercial forest land, expressed as average yield of food, fiber, forage or wood products. The productivity shall be determined by yield data or estimates for similar sites based on current data from the United States Department of Agriculture or the Pennsylvania Department of Agriculture.

(b) The application shall contain a description of the existing land uses and land use classifications under local law, if any, of the proposed permit and adjacent areas.

**Source**

The provisions of this § 90.20 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.21. Maps and cross sections.**

(a) The application shall contain maps and plans of the proposed permit and adjacent area showing the following:

(1) The boundaries of lands and names of present owners of record of those lands, both surface and subsurface, included in or contiguous to the permit area.

(2) The boundaries of land within the proposed permit area which the applicant has the legal right to enter and begin coal refuse disposal activities.

(3) The boundaries of the land to be affected.

(4) The boundaries of the areas proposed to be affected over the estimated total life of the coal refuse disposal activities, with a description of size, sequence and timing of development of the site.

(5) The location, names of the owners and present occupants, and the current use of the buildings on and within 1,000 feet of the outer perimeter of the proposed permit area.

(6) The location of surface and subsurface manmade features within, passing through, or passing over the proposed permit area, including, but not limited to, major electric transmission lines and pipelines.

(7) The locations and names of public water supply intakes within a 10 mile distance downstream of each discharge, and the locations of water discharges into a surface body of water within the permit and adjacent area. Public water supplies on or within 1/2 mile of the permit area and private water supplies on or within 1,000 feet of the proposed permit area.

(8) Each public road location in or within 100 feet of the proposed permit area.

(9) The boundaries of public parks and locations of cultural or historical resources listed on or eligible for listing on the National Register of Historic Places and known archaeological sites within the permit and adjacent areas.

(10) Each public or private cemetery or Indian burial ground located in or within 100 feet of the proposed permit area.

(11) Land within the proposed permit area and adjacent area which is within the boundaries of any units of the National Trails System or the Wild and Scenic Rivers System, including study rivers designated under section 5(a) of the Wild and Scenic Rivers Act (16 U.S.C.A. § 1276(a)).

(12) The surface elevations and the locations of test borings and core samplings.

(13) The locations of existing and proposed monitoring stations used to gather data on water quality and quantity, fish and wildlife, and air quality, if required, in preparation of the application.

(14) A cross section of the strata described in § 90.12 (relating to geology).

(15) Coal crop lines and the contours of the coal to be mined in the permit and adjacent areas.

(16) The location and extent of known workings of active, inactive or abandoned underground mines, including identification of the coal seams mined and mine openings to the surface within the proposed permit and adjacent areas.

(17) The portrayal of major aquifers on cross sections.

(18) The location of surface water bodies such as streams, lakes, ponds, springs, constructed or natural drains, and irrigation ditches within the proposed permit and adjacent areas.

(19) The location and extent of existing or previously surface-mined areas within the proposed permit area, including the coal seams mined.

(20) The location and areal extent of storage and disposal areas of spoil, coal refuse, underground development waste and noncoal and of dams, embankments, other impoundments and water treatment and air pollution control facilities within the proposed permit area, and state whether or not owned or operated by applicant.

(21) The location and depth, if available, of gas and oil wells within the proposed permit area and water wells in the permit area and adjacent areas.

(22) Sufficient slope measurements to adequately represent the existing land surface configuration of the area affected by coal refuse disposal activities. Slope measurements shall take into account natural variations in slope, to pro-

vide accurate representation of the range of natural slopes and reflect geomorphic differences of the area to be disturbed.

(23) Landslides within areas to be affected by coal refuse disposal activities.

(24) The location of each haul road and access road and appropriate cross sections, design drawings and specifications for road widths, gradients, surfacing materials, cuts, fill embankments, culverts, bridges, drainage ditches and drainage structures for each road to be constructed, used or maintained within the proposed permit area.

(25) Other relevant information required by the Department.

(b) Maps, plans and cross sections required by this section shall be accurately surveyed and on a scale satisfactory to the Department, but not less than 1:25,000 and in a manner satisfactory to the Department. The maps or plans and cross sections shall be prepared and certified by a qualified registered professional engineer, or qualified registered professional geologist with assistance from experts in related fields.

#### Authority

The provisions of this § 90.21 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.21 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (180924) to (180927).

### § 90.22. Prime farmland investigation.

(a) The applicant shall conduct a preapplication investigation of the area proposed to be affected by coal refuse disposal activities to determine whether lands within the area may be prime farmland.

(b) Land will not be considered prime farmland when the applicant can demonstrate one or more of the following:

(1) The land has not been historically used as cropland.

(2) Other factors exist, such as a very rocky surface, or the land is flooded during the growing season more than once in 2 years and the flooding has reduced crop yields.

(3) The slope of the land is 10% or greater.

(4) The land is not irrigated or naturally subirrigated.

(5) There are no soil map units that have been designated prime farmland by the United States Soil Conservation Service, on the basis of a soil survey of the lands proposed to be affected by coal refuse disposal activities.

(c) If the investigation establishes that the lands are not prime farmland, the applicant shall submit with the permit application a request for a negative determination which shows that the land for which the negative determination is sought meets one or more of the criteria in subsection (b).

(d) If the investigation indicates that lands within the proposed area to be affected by coal refuse disposal activities may be prime farmlands, the applicant shall contact the United States Soil Conservation Service to determine if these lands have a soil survey and whether the applicable soil map units have been designated prime farmlands. If a soil survey has not been made for these lands, the applicant shall cause a survey to be made.

(1) When a soil survey as required in this subsection contains soil map units which have been designated as prime farmlands, the applicant shall submit a soil survey of the proposed permit area according to the standards of the National Cooperative Soil Survey and in accordance with the procedures in the *United States Department of Agriculture Handbooks 436 (Soil Taxonomy, 1975) and 18 (Soil Survey Manual, 1951)*. The soil survey shall include a map unit and representative soil profile description as determined by the United States Soil Conservation Service for each prime farmland soil within the proposed permit area, unless other representative descriptions from the locality, prepared in conjunction with the National Cooperative Soil Survey, are available and their use is approved by the State Conservationist, United States Soil Conservation Service.

(2) When a soil survey as required in this subsection contains soil map units which have not been designated, after review by the United States Soil Conservation Service, as prime farmland, the applicant shall submit a request for negative determination for nondesignated land with the permit application establishing compliance with subsection (b).

#### Source

The provisions of this § 90.22 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149006) to (149007).

#### Cross References

This section cited in 25 Pa. Code § 86.37 (relating to criteria for permit approval or denial); 25 Pa. Code § 90.45 (relating to prime farmland); and 25 Pa. Code § 90.165 (relating to prime farmland: revegetation).

**Subchapter C. MINIMUM OPERATION AND RECLAMATION  
PLAN INFORMATION REQUIRED IN APPLICATIONS  
FOR COAL REFUSE DISPOSAL**

Sec.	
90.31.	General requirements.
90.32.	Existing structures.
90.33.	Reclamation plan.
90.34.	Reclamation: postdisposal land use.
90.35.	Protection of the hydrologic balance.
90.36.	Stream diversions, water obstructions and encroachments.
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90.38.	Diversions.
90.39.	Ponds, impoundments, banks, dams, embankments, piles and fills.
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90.42.	Subsidence control plan.
90.43.	Blasting plan.
90.44.	Air pollution control plan.
90.45.	Prime farmland.
90.46.	Maps and plans.
90.47.	Haul roads, access roads and other transportation facilities.
90.48.	Fish and wildlife protection and enhancement plan.
90.49.	Stream buffer zone variance.
90.50.	Design criteria: groundwater and surface water protection system.

**Cross Reference**

This subchapter cited in 25 Pa. Code § 90.301 (relating to scope); 25 Pa. Code § 90.304 (relating to application for authorization); 25 Pa. Code § 90.305 (relating to application approval or denial); and 25 Pa. Code § 90.306 (relating to operational requirements).

**§ 90.31. General requirements.**

An application shall contain a description of the coal refuse disposal activities proposed to be conducted during the life of the coal refuse disposal operations within the proposed permit area, including, at a minimum, the following:

- (1) A narrative description of the type and method of coal refuse disposal procedures and proposed engineering techniques and the major equipment to be used during operations.
- (2) A narrative explaining the construction, modification, use, maintenance and removal of the following facilities and structures, unless retention of the facility or structure is necessary for postdisposal land use as specified in § 90.166 (relating to postdisposal land use):
  - (i) Dams, embankments and other impoundments.
  - (ii) Overburden and topsoil handling and storage areas.
  - (iii) Coal removal, handling, storage, cleaning, processing and transportation areas and structures.
  - (iv) Spoil, coal refuse, mine development waste and noncoal waste removal, handling, storage, transportation and disposal areas and structures.
  - (v) Mine facilities.

- (vi) Water and air pollution control facilities.
- (vii) Erosion and sediment control facilities.

(3) A description of the measures to be employed to ensure that all debris, potential acid-forming and potential toxic-forming materials, and materials constituting a fire hazard are disposed of in accordance with this chapter and a description of the contingency plans which have been developed to preclude combustion of the materials.

(4) A description, including appropriate cross sections and maps, of the measures to be used to seal or manage mine openings, and to plug, case, line or manage exploration holes, other boreholes, wells and other openings within the proposed permit area.

(5) A demonstration that the notification requirements of § 86.31(e) (relating to public notices of filing of permit application) have been satisfied.

#### Source

The provisions of this § 90.31 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (207937) to (207938).

### § 90.32. Existing structures.

(a) An application shall contain a description of each existing structure proposed to be used in connection with or to facilitate the coal refuse disposal activities, including:

- (1) Location.
- (2) Plans of the structure which describe its current condition.
- (3) Approximate dates on which construction of the existing structures was begun and completed.
- (4) A showing, including relevant monitoring data or other evidence, indicating whether the structure meets the performance standards or the design requirements of Subchapter D (relating to performance standard for coal refuse disposal).

(b) An application shall contain a compliance plan for each existing structure proposed to be modified or reconstructed for use in connection with or to facilitate the coal refuse disposal activities. The compliance plan shall include:

- (1) Design specifications for the modification or reconstruction of the structure to meet the design and performance standards of Subchapter D.
- (2) A construction schedule which shows dates for beginning and completing interim steps and final construction.
- (3) Provisions for monitoring the structure during and after modification or reconstruction to ensure that the performance standards of Subchapter D are met.
- (4) A showing that the risk of harm to the environment or to public health or safety is not significant during the period of modification or reconstruction.



**Source**

The provisions of this § 90.32 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.33. Reclamation plan.**

An application shall contain a plan for the reclamation of lands within the proposed permit area including, at a minimum, the following information:

- (1) A timetable for the accomplishment of each major step in the reclamation plan.
- (2) An estimate of the cost of the reclamation of the proposed operations required to be covered by a performance bond under Chapter 86 Subchapter F (relating to bonding and insurance requirements), with supporting calculations for the estimates.
- (3) A plan for backfilling, soil stabilization, compacting and grading, with contour maps or cross sections that show the anticipated final surface configuration of the proposed permit area in accordance with Subchapter D (relating to performance standard for coal refuse disposal).
- (4) A plan for removal, storage and redistribution of topsoil, subsoil and other material to meet the requirements of §§ 90.96—90.100.
- (5) A plan for revegetation as required in §§ 90.151—90.157, 90.159 and 90.160, including, but not limited to, descriptions of the following:
  - (i) Schedule of revegetation.
  - (ii) Species and amounts per acre of seeds and seedling to be used.
  - (iii) Methods to be used in planting and seeding.
  - (iv) Mulching techniques, if required by the Department.
  - (v) Irrigation, if appropriate, and pest and disease control measures, if any.
  - (vi) Measures proposed to be used to determine the success of revegetation as required in § 90.159 (relating to revegetation: standards for successful revegetation).
  - (vii) A soil testing plan for determining soil nutrients and liming requirements and evaluation of the results of topsoil handling and reclamation related to revegetation.

**Source**

The provisions of this § 90.33 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 86.149 (relating to determination of bond amount); and 25 Pa. Code § 90.161 (relating to prime farmland: special requirements).

**§ 90.34. Reclamation: postdisposal land use.**

- (a) An application shall contain a description of the proposed land use, following reclamation, of the lands to be affected within the proposed permit area

by coal refuse disposal activities, including a discussion of the utility and capacity of the reclaimed land to support a variety of alternative uses, and the relationship of the proposed use to existing land use policies and plans. This description shall explain the following:

- (1) How the proposed postdisposal land use is to be achieved, and the necessary support activities which may be needed to achieve the proposed land use.
  - (2) The detailed management plan to be implemented when pastureland is the postdisposal land use.
  - (3) Materials needed for approval of the alternative use under § 90.166 (relating to postdisposal land use).
  - (4) The consideration given to making all of the proposed coal refuse disposal activities consistent with surface owner plans and applicable Commonwealth and local land use plans and programs.
- (b) If an alternate land use is proposed, the description shall be accompanied by a copy of the comments concerning the proposed use from the legal or equitable owner of record of the surface areas to be affected by coal refuse disposal activities within the proposed permit area, and from the Commonwealth and local government agencies which would have to initiate, implement, approve or authorize the proposed use of the land following reclamation.

#### Source

The provisions of this § 90.34 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial pages (207939) to (207940).

#### Cross References

This section cited in 25 Pa. Code § 90.151 (relating to revegetation: general requirements); and 25 Pa. Code § 90.153 (relating to revegetation: introduced species).

### § 90.35. Protection of the hydrologic balance.

(a) An application shall contain a detailed description, with appropriate maps and cross-sections, of the measures to be taken during and after the proposed coal refuse disposal activities, in accordance with the performance standard of Subchapter D (relating to performance standard for coal refuse disposal), to ensure protection of:

- (1) The quality and quantity of the groundwater, both within the proposed permit area and adjacent areas, from adverse effects of the proposed coal refuse disposal activities.
  - (2) The rights of present users to surface and groundwater.
- (b) Each application shall also contain the following:

(1) A plan for the control, in accordance with Subchapter D, of surface and groundwater drainage into, through and out of the area proposed to be affected by coal refuse disposal activities.

(2) A plan for the treatment, in accordance with Subchapter D, of surface and groundwater drainage from the area to be affected by the proposed coal refuse disposal activities, and proposed quantitative limits on pollutants in discharges as provided in § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

(3) A plan for collecting, recording and reporting of groundwater and surface water quality and quantity data in accordance with §§ 90.115 and 90.116 (relating to hydrologic balance: groundwater monitoring; and hydrologic balance: surface water monitoring). The plan shall identify monitoring locations and sampling frequency, and logically relate to the determination of the probable hydrologic consequences in Subsection (c).

(c) A determination of the probable hydrologic consequences of the proposed coal refuse disposal activities on the proposed permit area and adjacent area, with respect to the hydrologic regime and the quantity and quality of water in surface and groundwater systems under all seasonal conditions, including total dissolved solids, total suspended solids, total iron, pH, total manganese, acidity, alkalinity, sulfates and other parameters required by the Department.

(d) A plan shall contain a description of possible alteration in the site development plan or method of disposal, in response to adverse impacts on the hydrologic balance as indicated by the groundwater monitoring system.

#### Authority

The provisions of this § 90.35 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.35 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (149011) to (149012).

#### Cross References

This section cited in 25 Pa. Code § 86.37 (relating to criteria for permit approval or denial); and 25 Pa. Code § 90.116 (relating to hydrologic balance: surface water monitoring).

### § 90.36. Stream diversions, water obstructions and encroachments.

An application shall contain the necessary information to demonstrate how each proposed water obstruction and encroachment will meet the requirement of Chapter 105 (relating to dam safety and waterway management) and § 90.105 (relating to stream channel diversions).

**Source**

The provisions of this § 90.36 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.37. Erosion and sedimentation control.**

An application shall contain the necessary information to demonstrate how each proposed sediment control measure for the coal refuse disposal operation will meet the requirements of Chapter 102 (relating to erosion and sediment control) and § 90.106 (relating to hydrologic balance: erosion and sedimentation control).

**Source**

The provisions of this § 90.37 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.38. Diversions.**

An application shall show the manner in which the applicant plans to direct water from entering the operation in accordance with § 90.104 (relating to hydrologic balance: diversions).

**Source**

The provisions of this § 90.38 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.39. Ponds, impoundments, banks, dams, embankments, piles and fills.**

(a) An application shall include a plan for each proposed sedimentation pond, water impoundment, and coal processing waste bank, dam, embankment, pile or fill within the proposed permit area. The plan shall:

- (1) Be prepared by, or under the direction of, a qualified registered professional engineer, except as indicated in § 90.112(b)(1) (relating to hydrologic balance: dams, ponds, embankments, and impoundments—design, construction and maintenance).
- (2) Contain a description, map and cross section of the structure and its location.
- (3) Contain hydrologic and geologic information required to assess the hydrologic impact of the structure.
- (4) Contain a survey describing the potential effect on the structure from subsidence of the subsurface strata resulting from past and proposed underground mining operations.
- (5) Contain a certification statement which includes a schedule setting forth the dates when any detailed design plans for structures that are not submitted within the general plan will be submitted to the Department. The Department will have approved, in writing, the detailed design plan for a structure before construction of the structure begins.

- (6) Describe the operation and maintenance requirements for each structure.
- (7) Describe the timetable and plans to remove each structure, if appropriate.
- (8) Contain a geotechnical investigation design and construction requirements including a stability analysis if the structure is more than 20 feet in height as measured from the upstream toe of the embankment to the crest of the emergency spillway or has a storage volume of more than 20 acre feet.
  - (b) Sedimentation ponds, whether temporary or permanent, shall be designed in compliance with § 90.108 (relating to hydrologic balance: sedimentation ponds). A sedimentation pond or earthen structure which will remain on the proposed permit area as a permanent water impoundment shall also be designed to comply with § 90.112.
  - (c) Permanent and temporary impoundments shall be designed to comply with § 90.111 (relating to hydrologic balance: impoundments).
  - (d) Coal refuse piles, fills or banks shall be designed to comply with §§ 90.122—90.130.
  - (e) Coal refuse dams and embankments shall be designed to comply with §§ 90.112, 90.113, 90.122 and 90.124—90.130. A plan shall comply with the Mine Safety and Health Administration, 30 CFR 77.216-1 and 77.216-2 (relating to water, sediment, or slurry impoundments and impounding structures; identification; and water, sediment, or slurry impoundments and impounding structures; minimum plan requirements; changes or modifications; certification) and shall contain the results of a geotechnical investigation of the proposed dam or embankment foundation area to determine the structural competence of the foundation which will support the proposed dam or embankment structure and the impounded material. Each plan shall provide for the removal of impoundments constructed of or used to impound coal refuse as part of site reclamation.
  - (f) The geotechnical investigation shall be planned and supervised by an engineer or engineering geologist, for subsections (d) and (e), according to the following:
    - (1) The number, location and depth of borings and test pits shall be determined using current engineering practice for the size of the dam or embankment, quantity of material to be impounded and subsurface conditions.
    - (2) The character of the overburden and bedrock, the proposed abutment sites, and any adverse geotechnical conditions which may affect the particular dam, embankment or reservoir site shall be considered.
    - (3) Springs, seepage and groundwater flow observed or anticipated during wet periods in the area of the proposed dam or embankment shall be identified on each plan.
    - (4) Consideration shall be given to the possibility of mudflows, rock-debris falls or other landslides into the dam, embankment or impounded material.

- (5) A description of the waste being disposed of within the proposed permit area, including the following:
- (i) Physical, chemical and engineering stability properties of the coal refuse.
  - (ii) Acid-producing and toxic-forming potential of the coal refuse.

**Authority**

The provisions of this § 90.39 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.39 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended February 17, 1984, 14 Pa.B. 524, effective August 4, 1984, 14 Pa.B. 2860; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (149013) to (149014) and (180929).

**§ 90.40. Protection of public parks and historic places.**

(a) For publicly-owned parks or historic places listed on the National Register of Historic Places that may be adversely affected by the proposed coal refuse disposal activities, each application shall describe the measures to be used to accomplish the following:

- (1) Prevent adverse impacts and meet the requirements of Chapter 86, Subchapter D (relating to areas unsuitable for mining).
- (2) Minimize adverse impacts if valid existing rights exist or joint agency approval is to be obtained under Chapter 86, Subchapter D.

(b) The Department may require the applicant to protect historic or archaeological properties listed on or eligible for listing on the National Register of Historic Places through appropriate mitigation and treatment measures. Appropriate mitigation and treatment measures may be required to be taken after permit issuance, if the required measures are completed before the properties are affected by coal refuse disposal activity.

**Source**

The provisions of this § 90.40 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial page (207944).

**§ 90.41. Relocation or use of public roads.**

An application shall include a description and necessary drawings approved by the Department of Transportation or the municipality having jurisdiction of the road, if the applicant proposes to relocate a public road or conduct coal refuse

disposal activities within 100 feet of the right-of-way of any public road, except where the coal refuse disposal facility access or haul road joins that right-of-way.

**Source**

The provisions of this § 90.41 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.42. Subsidence control plan.**

An applicant shall describe what measures have been or will be taken to minimize subsidence beneath the coal refuse disposal area in order to insure the stability of the coal refuse disposal area.

**Source**

The provisions of this § 90.42 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.43. Blasting plan.**

An application shall include a blasting plan in accordance with § 87.64 (relating to blasting plan) if blasting will be needed for the proposed permit area, showing the manner in which the requirements of §§ 87.124—87.127 and 87.129 will be met.

**Source**

The provisions of this § 90.43 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.44. Air pollution control plan.**

An application shall include an air pollution control plan which includes the following:

- (1) A plan for fugitive dust control practices, as required under § 90.149 (relating to air resources protection), and, if applicable, how the requirements of Chapters 123 and 127 (relating to standards for contaminants; and construction, modification, reactivation and operation of sources) will be met.
- (2) If required by the Department, an air quality monitoring program to provide sufficient data to evaluate the effectiveness of the air pollution control plan.
- (3) A plan for monitoring the coal refuse disposal site for fires or hot spots and a plan for eliminating fires and hot spots.

**Source**

The provisions of this § 90.44 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.45. Prime farmland.**

A person who conducts, or intends to conduct, coal refuse disposal activities on prime farmlands historically used for cropland, in accordance with Subchapter E (relating to site selection), shall submit a plan, as part of the permit application, for the disposal and restoration of the land. The plan shall contain, at a minimum:

(1) The proposed method and type of equipment to be used for removal, storage and replacement of the soil in accordance with §§ 90.161—90.165.

(2) The proposed measures to be taken during soil reconstruction to prevent excessive compaction and achieve soil bulk densities which will result in the restored area being returned to equivalent or higher levels of yield as non-mined prime farmland in the surrounding area under equivalent levels of management.

(3) The location of areas to be used for the separate stockpiling of soil and plans for soil stabilization before redistribution.

(4) Documentation, if applicable, such as agricultural school studies or other scientific data from comparable areas, that supports the use of other suitable material, instead of the B or C soil horizon, to obtain on the restored area equivalent or higher levels of yield as nondisposal prime farmlands in the surrounding area under equivalent levels of management.

(5) Plans for seeding or cropping the final graded disturbed land and the conservation practices to be used to adequately control erosion and sedimentation and restoration of an adequate soil moisture regime, during the period from completion of regrading until release of the performance bond or equivalent guarantee under Chapter 86, Subchapter E (relating to coal exploration). Proper adjustments for seasons shall be proposed so that final graded land is not exposed to erosion during seasons when vegetation or conservation practices cannot be established due to weather conditions.

(6) Available agricultural school studies or other scientific data for areas with comparable soils, climate and management—including water management—that demonstrate that the proposed method of reclamation will achieve, within a reasonable time, equivalent or higher levels of yield after mining as existed before mining.

(7) A soil survey with description of soil mapping units and representative soil profile under § 90.22 (relating to prime farmland investigation). The soil profile description shall include, but not be limited to, soil horizon depths, pH and range of soil densities for each prime farmland soil unit within the proposed permit area. The Department may require the applicant to provide information on other physical and chemical soil properties as needed to make a determination that the operator has the technological capability to restore the prime farmland within the permit area to the soil reconstruction standards of §§ 90.161—90.165.



**Source**

The provisions of this § 90.45 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial pages (207946) to (207947).

**Cross References**

This section cited in 25 Pa. Code § 90.164 (relating to prime farmland: soil replacement); and 25 Pa. Code § 90.165 (relating to prime farmland: revegetation).

**§ 90.46. Maps and plans.**

An application shall contain maps, plans and cross sections of the proposed permit and adjacent areas showing the following:

- (1) The maps, plans and cross sections shall show the coal refuse disposal activities to be conducted and changes in a facility or feature to be caused by the proposed operations.
- (2) The following shall be shown for the proposed permit area:
  - (i) The buildings, utility corridors and facilities to be used.
  - (ii) Coal storage, cleaning and loading areas.
  - (iii) The topsoil, spoil, coal preparation waste, underground development waste and noncoal waste storage areas.
  - (iv) Water diversion, collection, conveyance, treatment, sedimentation and erosion control facilities, storage and discharge facilities to be used.
  - (v) Sources of waste and waste disposal facilities relating to coal processing or pollution control.
  - (vi) A facility to be used to protect and enhance fish and wildlife related environmental values.
  - (vii) A surface facility for explosive storage and handling.
  - (viii) The location of each sedimentation pond, permanent water impoundment, coal processing waste bank, coal processing waste dam and embankment and disposal areas for underground development waste and excess spoil or coal refuse.
  - (ix) The location of monitoring points.
  - (x) The location of each facility that will remain on the proposed permit area as a permanent feature, after the completion of coal refuse disposal activities.
  - (xi) The final contour configuration and elevations of coal refuse disposal areas.
  - (xii) A cross section through embankment, ponds, impoundments and dams.
  - (xiii) The extent of active and abandoned underground mining.
  - (xiv) Other information the Department deems relevant.

(3) Maps, plans and cross sections required by this section shall be prepared by, under the direction of and certified by a qualified registered professional engineer or qualified registered geologist with assistance from experts in related fields.

**Authority**

The provisions of this § 90.46 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.46 adopted July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (159082) to (159083).

**§ 90.47. Haul roads, access roads and other transportation facilities.**

For each haul road, access road or other transportation facility to be constructed, used or maintained within the proposed permit area, the application shall contain a description of the road or facility and appropriate maps, plans, cross sections and specifications to demonstrate compliance with §§ 90.134, 90.140 and 90.146 (relating to haul roads and access roads: general; haul roads and access roads: restoration; and other transportation facilities).

**Source**

The provisions of this § 90.47 adopted July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.48. Fish and wildlife protection and enhancement plan.**

(a) An application shall include a description of how, to the extent possible using the best technology currently available, the operator will minimize disturbances and adverse impacts on fish and wildlife and related environmental values, including compliance with the Endangered Species Act of 1973, act of December 28, 1973 (Pub. L. No. 93-205, 87 Stat. 884), during the coal refuse disposal activities and how enhancement of these resources will be achieved where practicable. This description shall:

- (1) Be consistent with the requirements of § 90.150 (relating to protection of fish, wildlife and related environmental values).
- (2) Apply, at a minimum, to species and habitats identified under § 90.18 (relating to fish and wildlife resources information).
- (3) Include the following:
  - (i) Protective measures that will be used during the active mining phase of operation. These measures may include the establishment of buffer zones,

the selective location and special design of haul roads and powerlines and the monitoring of surface water quality and quantity.

(ii) Enhancement measures that will be used during the reclamation and postmining phase of operation to develop aquatic and terrestrial habitat. These measures may include restoration of streams and other wetlands, retention of ponds and impoundments, establishment of vegetation for wildlife food and cover and the replacement of perches and nest boxes. If the plan does not include enhancement measures, a statement shall be given explaining why enhancement is not practicable.

(b) The Department will provide the resource information required under § 90.18 and the protection and enhancement plan required under subsection (a) to the Game Commission and the Fish Commission for their review. Upon request during the comment period, the Department will furnish the resource information to the United States Department of the Interior, Fish and Wildlife Service Regional or Field Office. This information will be provided within 10 days of receipt of the request from the Service.

#### Source

The provisions of this § 90.48 adopted June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149019) to (149020).

#### Cross References

This section cited in 25 Pa. Code § 90.18 (relating to fish and wildlife resources information).

### § 90.49. Stream buffer zone variance.

(a) *Stream buffer zone restriction.* Coal refuse disposal may not occur within 100 feet (30.48 meters) of the bank of a stream. The Department may grant a variance for disposal of coal refuse under subsection (c) if consistent with Subchapter E (relating to site selection).

(b) *Compliance required.* Surface mining operations supporting coal refuse disposal shall comply with § 86.102(12) (relating to areas where mining is prohibited or limited).

(c) *Variance.* The Department may grant a variance from the 100-foot (30.48-meter) stream buffer zone to dispose of coal refuse and to relocate or divert streams in the 100-foot (30.48-meter) stream buffer zone. The stream buffer zone is the area within 100 feet (30.48 meters) measured horizontally from the bank of any stream.

(1) Stream buffer zone variances will only be granted if the operator demonstrates to the satisfaction of the Department that, as a result of the variance, coal refuse disposal will not adversely affect water quality and quantity, or other environmental resources of the stream and will not cause or contribute to the violation of applicable State or Federal water quality standards.

(2) Prior to granting a variance, the operator shall be required to give public notice of the application in two newspapers of general circulation in the area once a week for 2 successive weeks.

(i) If a person files an exception to the proposed variance within 20 days of the last publication of the notice, the Department will conduct a public hearing with respect to the application within 30 days of receipt of the exception.

(ii) The Department will also consider information or comments submitted by the Fish and Boat Commission prior to taking action on a variance request.

(3) The variance will be issued as a written order specifying the methods and techniques that shall be employed to prevent or mitigate adverse impacts. Mitigation can include, but is not limited to, compensatory restoration and enhancements of nearby streams or stream segments.

#### Source

The provisions of this § 90.49 adopted July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735.

#### Cross References

This section cited in 25 Pa. Code § 88.281 (relating to requirements).

### **§ 90.50. Design criteria: groundwater and surface water protection system.**

(a) The application shall include a description of the system that will be installed to prevent adverse impacts to groundwater and surface water. The description shall include maps, plans and other information necessary to evaluate the design of the system.

(b) The application shall include a description of the system that will be installed to prevent precipitation from coming into contact with the coal refuse. The description shall include maps, plans and other information necessary to evaluate the design of the system. The coal refuse disposal operation shall be designed in phases to minimize the amount of time the entire coal refuse area is exposed to precipitation prior to the installation of the system to prevent precipitation from contacting the coal refuse. The application shall describe the design of the system for preventing precipitation from contacting coal refuse and how the system will be installed in accordance with the following:

(1) During routine coal refuse disposal as phases of the coal refuse disposal area reach capacity.

(2) During periods of temporary cessation as directed under § 90.167(d) (relating to cessation of operations: temporary).

(3) When the operation permanently ceases.

(c) The Department's technical guidance Document Number 563-2112-656, titled *Liners—Impoundments, Stockpiles, and Coal Refuse Disposal Areas*, shall

be used as guidance for designing coal refuse disposal sites incorporating earthen, admixed or synthetic liners or caps for preventing adverse impacts to groundwater and surface water and for preventing precipitation from contacting coal refuse.

(d) The application shall include a description of the measures to be taken to ensure the long-term functionality of the systems described in subsections (a) and (b). The description shall address the site's susceptibility to mine subsidence and the potential impacts of mine subsidence on the systems described in subsections (a) and (b). The description shall also address the potential for deterioration of components of the systems described in subsections (a) and (b) due to other physical or chemical processes including but not limited to attack from sulfate-laden or acidic groundwater and/or leachate.

#### Source

The provisions of this § 90.50 adopted July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735.

#### Cross References

This section cited in 25 Pa. Code § 88.281 (relating to requirements); and 25 Pa. Code § 90.13 (relating to groundwater information).

### Subchapter D. PERFORMANCE STANDARD FOR COAL REFUSE DISPOSAL

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#### Cross References

This subchapter cited in 25 Pa. Code § 86.38 (relating to criteria for approval or denial: existing structures); 25 Pa. Code § 90.1 (relating to definitions); 25 Pa. Code § 90.32 (relating to existing structures); 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.35 (relating to protection of the hydrologic balance); 25 Pa. Code § 90.304 (relating to application for authorization); and 25 Pa. Code § 90.305 (relating to application approval or denial).

### § 90.91. Requirements.

A person who conducts coal refuse disposal activities shall comply with the performance standards and design requirements of this subchapter, except as follows:

- (1) Disposal of coal refuse in an active surface mine shall comply with the performance standards set forth in Chapter 87 Subchapter D (relating to surface coal mines: minimum requirements for operation and reclamation plan) and §§ 90.125 and 90.128 (relating to coal refuse disposal: construction requirements; and coal refuse disposal: active surface mines).
- (2) Disposal of coal refuse in an abandoned or active underground coal mine shall comply with the requirements of Chapter 89 (relating to underground mining of coal and coal preparation facilities).

#### Source

The provisions of this § 90.91 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

### § 90.92. Signs and markers.

- (a) *Specifications.* Signs and markers shall:
  - (1) Be posted and maintained during the duration of the coal refuse disposal activities to which they pertain, and removed upon completion.
  - (2) Be clearly visible, readable and uniform throughout the operation.
  - (3) Be made of durable material.
  - (4) Conform to local zoning ordinances or codes.
- (b) *Coal refuse disposal facility and permit identification signs.* Requirements for coal refuse disposal facility and permit identification signs shall be as follows:

- (1) Identification signs shall be displayed at each point of access from public roads to the area where coal refuse disposal activities are permitted.
- (2) Signs shall show the name, business address and telephone number of the operator and the identification number of the current permits authorizing coal refuse disposal activities.
- (3) Signs shall be retained and maintained until after the release of all bonds for the permit area.
- (c) *Perimeter markers.* The operator shall clearly mark the perimeter of the areas to be affected prior to initial coal refuse disposal activities.
- (d) *Buffer zone markers.* Stream buffer zones shall be marked along the boundaries of the areas not to be disturbed as required under § 86.102 (relating to areas where mining is prohibited or limited).
- (e) *Topsoil markers.* When topsoil or other vegetation-supporting material is segregated and stockpiled as required under § 90.98 (relating to topsoil: storage), the stockpiled material shall be clearly marked.
- (f) *Blasting signs.* If blasting is conducted as part of the operation, the person who conducts the coal refuse disposal activities shall post and maintain signs and markers as required by §§ 87.124—87.127 and 87.129.
- (g) Groundwater and surface water monitoring locations and sampling points used to obtain background information shall be clearly marked and identified. The identification of monitoring locations and sampling points shall correspond with the identification used in the permit application. Markers used to identify monitoring locations shall be made of durable material. The Department may waive marking requirements in cases where the monitoring location or sampling point is obvious or where marking would be objectionable for aesthetic reasons.

#### Authority

The provisions of this § 90.92 amended under the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P.S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.92 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial page (149023).

### § 90.93. Casing and sealing of drilled holes and underground workings.

- (a) An exploration hole, other drill or borehole, well or other exposed underground opening—except for holes solely drilled and used for blasting—shall be cased, sealed or otherwise managed, as approved by the Department to:
  - (1) Prevent acid or other toxic drainage from entering groundwaters or surface waters.
  - (2) Minimize disturbance to the prevailing hydrologic balance.



- (3) Ensure the safety of people, livestock, fish and wildlife and machinery in the permit and adjacent areas.
- (4) Prevent groundwater or surface water from entering underground mine workings.
- (b) If these openings are uncovered or exposed by coal refuse disposal activities within the permit area, they shall be permanently closed unless approved for water monitoring, or otherwise managed in a manner approved by the Department.
- (c) Use of a drilled hole, borehole or monitoring well as a water well shall meet the provisions of § 90.115 (relating to hydrologic balance: groundwater monitoring).
- (d) Gas and oil wells shall be sealed in accordance with the Oil and Gas Act (58 P.S. §§ 601.101—601.605).
- (e) A solid barrier of undisturbed earth, 125 feet (38.1 meters) in radius shall be maintained around all oil and gas wells, unless one of the following happens:
  - (1) The well is sealed in accordance with subsection (d).
  - (2) The Department approves, in writing, a lesser distance, if:
    - (i) Access to the well is provided at all times.
    - (ii) The integrity of the well is maintained.
    - (iii) The measures included in the permit to minimize damage, destruction or disruption of services under § 90.147(b) (relating to support facilities and utility installations) are implemented.
- (f) All exploration holes, other drill or boreholes, wells—other than gas or oil wells—and other exposed underground openings which have been identified in the approved permit application for use to return waste to an underground mine as part of an operation approved under Chapter 89 (relating to underground mining of coal and coal preparation facilities), or to be used to monitor groundwater conditions, shall be protected by temporary seals, barricades, fences or other protective devices approved by the Department. These devices shall be periodically inspected and maintained in good operating condition during the coal refuse disposal activities.

**Source**

The provisions of this § 90.93 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (207952) to (207953).

**§ 90.94. [Reserved].**

**Source**

The provisions of this § 90.94 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.95. [Reserved].****Source**

The provisions of this § 90.95 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.96. Topsoil: general requirements.**

All topsoil and, if necessary, suitable subsoil shall be separately removed, segregated, conserved and redistributed on all areas affected by the coal refuse disposal activities.

**Source**

The provisions of this § 90.96 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.122 (relating to coal refuse disposal); and 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration).

**§ 90.97. Topsoil: removal.**

(a) All topsoil shall be removed from the areas to be disturbed in a separate layer prior to drilling, blasting, coal refuse disposal or other surface disturbance. Any vegetation cover which would interfere with the removal and use of the topsoil shall be removed prior to topsoil removal.

(b) In the event removal of vegetative matter, topsoil or other materials may result in erosion which may cause air or water pollution, the size of the area from which topsoil is removed at any one time shall be limited and other measures taken that the Department may approve or require to control erosion.

(c) If topsoil is less than 12 inches (30.48 centimeters), a 12-inch (30.48 centimeters) layer of topsoil, subsoil and unconsolidated materials shall be removed, segregated, conserved and replaced as the final surface soil layer. If the topsoil and all unconsolidated material measures less than 12 inches (30.48 centimeters), all the topsoil, subsoil and unconsolidated material shall be removed and the mixture segregated and redistributed as the final surface soil layer.

(d) On areas that have been previously affected by mining or coal refuse disposal activities and have no available topsoil or subsoil, sufficient material best suited to support vegetation shall be segregated, conserved and redistributed as the final surface layer.

(e) The B horizon and portions of the C horizon, or other underlying layers demonstrated to have qualities for comparable root development, shall be segregated and replaced as subsoil if the Department determines that either of these is necessary or desirable to ensure soil productivity consistent with the approved postdisposal land use.

(f) When approved by the Department, in writing, other material may be substituted or used as a supplement to topsoil if the operator demonstrates that the resulting soil medium is equal or more suitable than topsoil for sustaining vegetation and soil productivity. In making this demonstration, the Department may require chemical and physical analyses of the substituted material and topsoil. These analyses may include determinations of pH, net acidity or alkalinity, phosphorus, potassium, texture class, field site trials or greenhouse tests or other analyses as required by the Department.

#### Source

The provisions of this § 90.97 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (207954) to (207955).

#### Cross References

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.98 (relating to topsoil: storage); 25 Pa. Code § 90.122 (relating to coal refuse disposal); 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration); and 25 Pa. Code § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas).

### § 90.98. Topsoil: storage.

(a) Topsoil and other materials removed under § 90.97 (relating to topsoil: removal) shall be stockpiled only when it is impractical to promptly redistribute the material on regraded areas.

(b) Stockpiled materials shall be selectively placed on a stable area within the permit area and located where the material, unless approved by the Department, will not be moved until required for redistribution on the regraded area or otherwise disturbed by the coal refuse disposal activities.

(c) Stockpiled material shall be protected from wind and water erosion, unnecessary compaction and contaminants which lessen the capability of the materials to support vegetation when redistributed. Protective measures shall be accomplished by one of the following:

- (1) An effective cover of nonnoxious, quick-growing annual and perennial plants, seeded or planted as soon as weather and planting conditions permit.
- (2) Other methods demonstrated to and approved by the Department in writing to provide equal protection.

#### Source

The provisions of this § 90.98 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.92 (relating to signs and markers); 25 Pa. Code § 90.122 (relating to coal refuse disposal); 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration); and 25 Pa. Code § 90.163 (relating to prime farmland: soil stockpiling).

**§ 90.99. Topsoil: redistribution.**

(a) Prior to redistribution of topsoil or other material, the regraded land shall be scarified or otherwise treated as required by the Department to eliminate slip-page surfaces and to promote root penetration.

(b) Topsoil and other materials shall be redistributed in a manner that:

(1) Achieves an approximate uniform, stable thickness consistent with the approved postdisposal land uses, contours and surface water drainage system.

(2) Prevents excess compaction of the topsoil and other materials.

(3) Protects the topsoil and other materials from wind and water erosion before and after it is seeded and planted.

**Source**

The provisions of this § 90.99 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.122 (relating to coal refuse disposal); and 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration).

**§ 90.100. Nutrients and soil amendments.**

(a) Nutrients and soil amendments, in the amounts determined by soil tests, shall be applied to the surface soil layer so that it supports the approved postdisposal land use and meets the revegetation requirements of §§ 90.151—90.157, 90.159 and 90.160.

(b) All soil tests shall be performed using standard methods approved by the Department.

(c) Agricultural or granular limestone used for neutralizing soil acidity shall be of sufficient fineness so that a minimum of 95% will pass through a 20 mesh sieve or an equivalent material, and shall contain sufficient calcium and magnesium to be equivalent to not less than 89% calcium carbonate. An alternate material of equivalent neutralizing effect may be employed.

(d) The use of fly ash and sewage sludge as soil amendments may be approved by the Department if demonstrated to be a suitable soil amendment and the requirements of Articles VII—IX (relating to hazardous waste management; municipal waste management; and residual waste management) are met.

**Source**

The provisions of this § 90.100 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.122 (relating to coal refuse disposal); and 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration).

**§ 90.101. Hydrologic balance: general requirements.**

(a) Coal refuse disposal activities shall be planned and conducted to minimize disturbances to the prevailing hydrologic balance in the permit and adjacent areas and to prevent material damage to the hydrologic balance outside the permit area. The Department may require additional preventive, remedial or monitoring measures to assure that material damage to the hydrologic balance outside the permit area is prevented.

(b) Coal refuse disposal activities shall be planned and conducted to prevent pollution of groundwater and surface water and prevent, to the maximum extent possible, changes to the water quantity, depth to groundwater and location of surface water drainage channels so that the approved postdisposal land use of the permit is not adversely affected.

(c) The treatment requirements and effluent limitations established under § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices) may not be violated.

(d) Operations shall be conducted to prevent water pollution and, when necessary, treatment methods shall be used.

(e) A person who conducts coal refuse disposal activities shall conduct the disposal and reclamation operation to prevent water pollution and, when necessary, operate and maintain the necessary water treatment facilities until applicable treatment requirements and effluent limitations established under § 90.102 are achieved and maintained.

**Source**

The provisions of this § 90.101 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial page (244291).

**§ 90.102. Hydrologic balance: water quality standards, effluent limitations and best management practices.**

(a) A person may not allow a discharge of water from an area disturbed by coal refuse disposal activities, including areas disturbed by mineral preparation, processing or handling facilities which exceeds the following groups of effluent criteria. The effluent imitations are to be applied under subsection (b).

<i>Group A</i>			
<i>Parameter</i>	<i>30-day Average</i>	<i>Daily Maximum</i>	<i>Instantaneous Maximum</i>
iron (total)	3.0 mg/l	6.0 mg/l	7.0 mg/l
manganese (total)	2.0 mg/l	4.0 mg/l	5.0 mg/l
suspended solids	35 mg/l	70 mg/l	90 mg/l
pH <sup>1</sup>		greater than 6.0; less than 9.0	
alkalinity greater than acidity <sup>1</sup>			

<sup>1</sup> The parameter is applicable at all times.

<i>Group B</i>	
<i>Parameter</i>	<i>Instantaneous Maximum</i>
iron (total)	7.0 mg/l
settleable solids	0.5 ml/l
pH	greater than 6.0; less than 9.0
alkalinity greater than acidity	

<i>Group C</i>	
<i>Parameter</i>	<i>Instantaneous Maximum</i>
pH	greater than 6.0; less than 9.0
alkalinity greater than acidity	

(b) Effluent limitations and precipitation exemptions are as follows:

(1) The discharges specified in this subsection shall comply with the effluent limitations set forth as follows:

<i>Type Discharge</i>	<i>Precipitation Event</i>	<i>Effluent Limitations</i>
Drainage from coal refuse disposal piles	dry weather and less than or equal to 1yr-24hr	Group A
	greater than 1yr-24hr, to less than or equal to 10yr-24hr	Group B
	greater than 10yr-24hr	Group C
Surface runoff from active areas disturbed by coal refuse disposal activities	dry weather	Group A
	less than or equal to 10yr-24hr	Group B
	greater than 10yr-24hr	Group C

<i>Type Discharge</i>	<i>Precipitation Event</i>	<i>Effluent Limitations</i>
Surface runoff from area where Stage 2 standards achieved	dry weather	Group A
	less than or equal to 10yr-24hr	Group B
	greater than 10yr-24hr	Group C
All other discharges	dry weather	Group A
	less than or equal to 10yr-24hr	Group B
	greater than 10yr-24hr	Group C

(2) To be entitled to the effluent limitations in Group B or Group C, the permittee shall comply with the procedures in § 90.103 (relating to precipitation event exemption).

(c) Exceptions to effluent limitations are as follows:

(1) The pH of discharges of water shall be maintained between 6.0 and 9.0, except in the following circumstances:

(i) The discharger can show the water is discharged to an acid stream, in which case the pH may be greater than 9.0.

(ii) The discharger affirmatively demonstrates, in writing, to the Department that biological respiration in the wastewater treatment system will cause the discharge to exceed the limits set forth in this section and that exceeding these limits will not result in violation of applicable water quality standards in Chapter 93 (relating to water quality standards) or of the applicable treatment requirements and effluent limitations to which a discharge is subject under the Clean Water Act of 1977, the act of December 27, 1977 (Pub. L. No. 95-217, 91 Stat. 1566-1609), in which case the Department may grant a variance, in writing, from the limitations in this section.

(iii) When the discharger affirmatively demonstrates to the Department that the wastewater treatment process being used by the discharger requires the pH to be raised above 9.0, that the elevated pH will not cause a safety hazard at the outfall, and that the elevated pH will not result in a violation of applicable water quality standards in Chapter 93 or of the applicable treatment requirements and effluent limitations to which a discharge is subject under the Clean Water Act, the Department may grant a variance from this limitation.

(2) When a discharge without chemical or biological treatment has a pH greater than 6.0 and a total iron concentration of less than 10 mg/l, the manganese limitation does not apply.

(d) If a single facility is used for sediment and erosion control facilities and treatment facilities covered by this section, the concentration of each pollutant in the combined discharge may not exceed the most stringent limitations for that pollutant applicable to any component waste stream of the discharge.

(e) *Postmining pollutional discharges.*

(1) If a postmining pollutional discharge occurs, the discharger shall immediately provide interim treatment to comply with the Group A effluent requirements in subsection (a), including modifications authorized or required under subsection (c), (d) or (f). The discharger shall also take whatever measures are necessary and available to abate the discharge, including modifying the operation and reclamation plan for the mining activity.

(2) If the discharge continues to exist, after implementation of the abatement measures required under paragraph (1), the discharger shall make provisions for sound future treatment of the discharge to achieve the Group A effluent requirements in subsection (a), including modifications authorized or required under subsection (c) or (f). If the untreated discharge can be adequately treated using a passive treatment system, paragraph (3) applies in lieu of the Group A effluent requirements of subsection (a). Discharges which can be adequately treated using a passive treatment system include, but are not limited to:

(i) Discharges with a pH which is always greater than 6.0 and an alkalinity which always exceeds the acidity.

(ii) Discharges with an acidity which is always less than 100 milligrams per liter, an iron content which is always less than 10 milligrams per liter, a manganese content which is always less than 18 milligrams per liter and a flow rate which is always less than 3 gallons per minute.

(iii) Discharges with a net acidity always less than 300 milligrams per liter which is calculated by subtracting the alkalinity of the discharge from its acidity.

(3) A passive treatment system authorized under paragraph (2) shall comply with the following effluent requirements:

(i) The system shall reduce the iron concentration by at least 90% or by that percentage necessary to achieve the Group A effluent requirements in subsection (a), whichever percentage is less.

(ii) The system shall produce an effluent alkalinity which exceeds effluent acidity.

(4) In addition to achieving the effluent requirements of paragraphs (2) and (3), the passive treatment system shall be designed and constructed to accomplish the following:

(i) Prevent discharge of mine drainage into the groundwater.

(ii) Prevent extraneous sources of groundwater and surface water runoff from entering the treatment system.

(iii) Hydraulically handle the highest average monthly flow rate which occurs during a 12-month period.

(iv) Have inlet and outlet structures which will allow for flow measurement and water sampling.



(v) Prevent to the maximum extent practicable physical damage, and associated loss of effectiveness, due to wildlife and vandalism.

(vi) Be of a capacity so that it will operate effectively and achieve the required effluent quality for 15 to 25 years before needing to be replaced.

(5) The passive treatment system shall be designed by, and constructed under the supervision of, a qualified professional knowledgeable in the subject of passive treatment of mine drainage.

(f) *Additional requirements.* In addition to the requirements of subsections (a)—(e), the discharge of water from coal refuse disposal activities shall comply with this title, including Chapters 91—93, 95, 97 (reserved) and 102.

(g) *Abatement plan.* If water from a coal refuse disposal area is discharged into a mine for treatment with the drainage from the mine, that mine may not be closed or sealed until an approval for the abatement of the discharges from the coal refuse disposal area is granted by the Department. The abatement plan, including necessary permit applications, shall be submitted to the Department at least 18 months prior to the anticipated closure date of the mine to assure that necessary facilities and measures will be implemented prior to the mine closure or sealing.

#### Authority

The provisions of this § 90.102 amended under the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P.S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.102 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; corrected August 16, 1991, effective July 27, 1991, 21 Pa.B. 3697; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821; amended November 14, 1997, effective November 15, 1997, 27 Pa.B. 6041; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (237209) to (237213).

#### Cross References

This section cited in 25 Pa. Code § 86.1 (relating to definitions); 25 Pa. Code § 86.283 (relating to procedures); 25 Pa. Code § 86.294 (relating to uses and limitations); 25 Pa. Code § 90.35 (relating to protection of the hydrologic balance); 25 Pa. Code § 90.101 (relating to hydrologic balance: general requirements); 25 Pa. Code § 90.103 (relating to precipitation event exemption); 25 Pa. Code § 90.106 (relating to hydrologic balance: erosion and sedimentation control); 25 Pa. Code § 90.107 (relating to hydrologic balance: treatment facilities); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.111 (relating to hydrologic balance: impoundments); 25 Pa. Code § 90.122 (relating to coal refuse disposal); 25 Pa. Code § 90.134 (relating to haul roads and access roads: general); 25 Pa. Code § 90.307 (relating to treatment of discharges); 25 Pa. Code § 90.310 (relating to effluent limitations); and 25 Pa. Code § 90.311 (relating to baseline determination and compliance monitoring for pre-existing discharges at remining operations).

### § 90.103. Precipitation event exemption.

(a) To establish the alternative effluent limitations of Group B or C in § 90.102(a) (relating to hydrologic balance: water quality standards, effluent

limitations and best management practices), a permittee shall demonstrate to the Department's satisfaction that a precipitation event has occurred, under the procedures in this section.

(1) The occurrence of a precipitation event greater than a 10-year, 24-hour precipitation event may be demonstrated by meeting the requirements of subsections (b)—(d) for each discharge that exceeds the effluent limits specified in § 90.102, unless the permit specifies a more stringent water quality based effluent limitation, in which case no exemption is available under this section. If the permittee demonstrates to the Department's satisfaction that a greater than 10-year, 24-hour precipitation event has occurred, the permittee shall meet the effluent limitation of Group C in § 90.102(a).

(2) The occurrence of a precipitation event equal to or less than a 10-year, 24-hour precipitation event may be demonstrated by meeting the requirements of subsections (c) and (d) for each discharge that exceeds the effluent limits specified in § 90.102, unless the permit specifies a more stringent water quality based effluent limitation, in which case no exemption is available under this section. If the permittee demonstrates to the Department's satisfaction that a precipitation event equal to or less than a 10-year, 24-hour precipitation event has occurred, the permittee shall meet the effluent limitations of Group B in § 90.102(a).

(b) The 1-year and 10-year 24-hour rainfall events for specific areas in this Commonwealth are listed as follows:

<i>County</i>	<i>Rainfall (inches)</i>	
	<i>1-Year</i>	<i>10 Year</i>
Allegheny	2.3	3.9
Armstrong	2.3	3.9
Beaver	2.3	3.8
Bedford	2.4	4.5
Blair	2.4	4.7
Bradford	2.3	4.2
Butler	2.3	3.8
Cambria	2.4	4.2
Cameron	2.3	4.0
Centre	2.3	4.3
Clarion	2.2	3.7
Clearfield	2.3	4.0
Clinton	2.3	4.2
Crawford	2.2	3.6
Elk	2.3	3.9
Fayette	2.4	4.1
Forest	2.2	3.8

<i>County</i>	<i>Rainfall (inches)</i>	
	<i>1-Year</i>	<i>10 Year</i>
Franklin	2.4	4.8
Fulton	2.4	4.6
Greene	2.3	3.9
Huntingdon	2.4	4.6
Indiana	2.3	4.0
Jefferson	2.3	3.9
Lawrence	2.2	3.7
Lycoming	2.4	4.3
McKean	2.2	3.9
Mercer	2.2	3.7
Potter	2.3	4.0
Somerset	2.4	4.3
Sullivan	2.4	4.2
Tioga	2.3	4.2
Venango	2.2	3.7
Warren	2.2	3.8
Washington	2.3	3.9
Westmoreland	2.3	4.0

(c) For the coal refuse disposal permittee to demonstrate that the event listed in subsection (b) has for his mine area been exceeded, or that dry weather flow conditions did not exist, the permittee shall comply with paragraph (1), (2) or (3).

(1) The permittee shall:

(i) Collect 24-hour rainfall information from official United States Weather Bureau Stations within a 25-mile distance—radius—of the site.

(ii) Calculate the estimated rainfall event for the site by appropriate interpolation of the data collected under this paragraph. Appropriate interpolation shall be accomplished by:

(A) Construction of an isohyetal map in accordance with the guidelines established by the Department.

(B) Linear interpolation between the isohyets.

(2) Complying with the following:

(i) Prepare a verified copy of the chart or readout from a Department-approved flow measuring device which continuously records the influent to the permitted treatment facility. The device shall be approved by the Department in writing prior to the event for which the exemption is sought and shall be secure to prevent tampering and acts of third parties.

(ii) Prepare an analysis identifying the runoff area tributary to the treatment facility, and compare the actual runoff as measured and depicted by the

flow measuring device with the runoff expected from the 1-year or 10-year, 24-hour precipitation event specified for the mine area in subsection (b).

(3) Develop alternative documentation or data concerning the precipitation event. The method or system for developing the documentation or data shall be approved, in writing, prior to the occurrence of the precipitation event for which the exemption is being sought, and shall guarantee the integrity of the information collected.

(d) When the discharge from the site exceeds an effluent limit in the permit, the permittee shall notify the Department within 5 days of the occurrence of the event that he is applying for an exemption from that limit and shall within 30 days thereafter provide to the Department:

(1) The data required by subsection (c).

(2) A showing that the facility from which the discharge occurred was designed, maintained and operated during and prior to the event to accommodate or treat a 10-year, 24-hour precipitation event.

(e) The permittee is not entitled to claim a greater than 1-year or 10-year, 24-hour precipitation event storm exemption unless the permittee has fully complied with subsections (c) and (d).

(f) Nothing in this section authorizes the Department to grant an exemption for a discharge which the Department finds may have caused or contributed to a violation of general or specific water quality criteria in Chapter 93 (relating to water quality standards).

#### Source

The provisions of this § 90.103 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149032) to (149034).

#### Cross References

This section cited in 25 Pa. Code § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

### § 90.104. Hydrologic balance: diversions.

(a) Surface water and shallow groundwater flow from undisturbed areas which will drain into the affected area shall be intercepted and diverted away from the disturbed area by means of diversion ditches.

(b) Diversions shall be designed, constructed and maintained using current engineering practices to pass safely the peak runoff from a precipitation event within a 2-year occurrence interval for temporary diversions or a 10-year recurrence interval for permanent diversions. If necessary to protect public health and safety or prevent pollution, a larger event shall be used.

(c) All topsoil shall be removed, stored on a stable site and protected against erosion and compaction until restoration of the diversion.

(d) Diversions shall be vegetated or otherwise stabilized to prevent erosion and contributions of sediment to stream or runoff outside the affected area. Asphalt, concrete or other similar lining shall only be used when approved by the Department. Riprap shall be nondegradable, nonacid-forming, nontoxic-forming rock that will not slake in water and will be free of coal, clay or shale.

(e) A diversion may not be located so as to increase the potential for landslides or other offsite damage.

(f) Excess material shall be placed in the coal refuse disposal area.

(g) When no longer needed, the diversion shall be regraded to blend with the natural contours and drainage pattern, and revegetated in accordance with § 90.151 (relating to revegetation: general requirements).

(h) Diversions may not be constructed or operated to divert water into underground mines without the approval of the Department. The discharges must meet the requirements of Chapter 89 (relating to underground mining of coal and coal preparation facilities).

#### Source

The provisions of this § 90.104 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.38 (relating to diversions); 25 Pa. Code § 90.113 (relating to hydrologic balance: coal processing waste dams and embankments); 25 Pa. Code § 90.122 (relating to coal refuse disposal); 25 Pa. Code § 90.302 (relating to definitions); and 25 Pa. Code § 90.307 (relating to treatment of discharges).

### § 90.105. Stream channel diversions.

(a) Flow from perennial and intermittent streams within the permit area may be diverted if the diversions:

(1) Will not adversely affect, during and after coal refuse disposal activities, the water quantity and quality of the stream.

(2) Comply with other requirements of this chapter and Chapter 105 (relating to dam safety and waterway management).

(b) When stream flow diversion is approved, the stream channel diversion shall be designed, constructed and removed in accordance with the following:

(1) The longitudinal profile of the stream, the channel and the flood plain shall be designed and constructed to remain stable and to prevent, to the extent possible using the best technology currently available, additional contributions of suspended solids to stream flow or to runoff outside the permit area. These contributions may not be in excess of requirements of State or Federal law. Erosion control structures, such as channel lining structures, retention basins and artificial channel roughness structures shall be approved for permanent diversion only when they are stable and will require infrequent maintenance.

(2) The combination of channel, bank and flood plain configurations shall be adequate to prevent a flooding potential greater than that created by the

natural condition of the existing channel. However, the capacity of the channel itself shall be at least equal to the capacity of the unmodified stream channel immediately upstream and downstream from the diversion.

(3) The design and construction of stream channel diversions of perennial and intermittent streams shall be certified by a qualified registered professional engineer as meeting the performance standards of this part.

(c) When no longer needed to achieve the purpose for which they are authorized, temporary stream channel diversions shall be removed and the affected land regraded and revegetated, in accordance with §§ 90.150—90.157, 90.159 and 90.160. At the time diversions are removed, treatment facilities previously protected by the diversion shall be modified or moved to prevent damage or failure of the facilities. This requirement does not release the person who conducts the coal refuse disposal activities from maintenance of a water treatment facility otherwise required under this chapter, and the erosion and sedimentation control requirements of § 90.106 (relating to hydrologic balance: erosion and sedimentation control).

(d) When permanent diversions are constructed or stream channels are restored after temporary diversions, the operator shall:

(1) Restore or maintain and enhance, where practicable, natural riparian vegetation of the banks of the stream.

(2) Restore the horizontal alignment of the stream to a condition compatible with the identified protected water use of Chapter 93 (relating to water quality standards).

- (3) Restore the stream to a longitudinal profile and cross section, including aquatic habitats, that approximate predisposal stream channel characteristics.

**Source**

The provisions of this § 90.105 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149035) to (149037).

**Cross References**

This section cited in 25 Pa. Code § 90.36 (relating to stream diversions, water obstructions and encroachments); 25 Pa. Code § 90.113 (relating to hydrologic balance: coal processing waste dams and embankments); and 25 Pa. Code § 90.122 (relating to coal refuse disposal).

**§ 90.106. Hydrologic balance: erosion and sedimentation control.**

- (a) Appropriate erosion and sediment control measures shall be designed, constructed and maintained using the best technology currently available to:
  - (1) Prevent, to the extent possible, contributions of sediment to stream flow or to runoff outside the affected area.
  - (2) Meet the treatment requirements and effluent limitations of § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).
  - (3) Minimize erosion to the extent possible.
  - (4) Meet the requirements of Chapter 102 (relating to erosion and sediment control).
- (b) All areas disturbed by coal refuse disposal activities shall be permanently stabilized as soon as practicable.

**Source**

The provisions of this § 90.106 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial page (207965).

**Cross References**

This section cited in 25 Pa. Code § 90.37 (relating to erosion and sedimentation control); 25 Pa. Code § 90.105 (relating to stream channel diversions); and 25 Pa. Code § 90.134 (relating to haul roads and access roads: general).

**§ 90.107. Hydrologic balance: treatment facilities.**

- (a) Facilities and measures for treating discharges from disturbed areas shall be designed, constructed and maintained for the runoff, at a minimum, from a 10-year, 24-hour precipitation event and any groundwater contribution.
- (b) Facilities and measures for treating any discharges shall be based on good engineering design and shall include failure warning devices and backup systems as necessary to insure compliance with § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

(c) The design, construction and maintenance of a treatment facility shall not relieve an operator of his responsibility for complying with the applicable treatment requirements and effluent limitations established under § 90.102.

**Source**

The provisions of this § 90.107 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.108. Hydrologic balance: sedimentation ponds.**

(a) Surface drainage from the disturbed area, including disturbed areas that have been graded, seeded, or planted, shall be passed through a sedimentation pond or a series of sedimentation ponds before leaving the permit area. The Department may waive the required use of sedimentation ponds when the person who conducts coal refuse disposal activities demonstrates to the satisfaction of the Department that sediment ponds are not necessary to meet the effluent limitations under § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

(b) Sedimentation ponds shall be constructed in accordance with this section and §§ 90.111 and 90.112 (relating to hydrologic balance: impoundments; and hydrologic balance: dams, ponds, embankments, and impoundments—design, construction and maintenance), in appropriate locations before any disturbance of the area to be drained into the pond. The ponds shall be located as near as possible to the area to be disturbed and out of perennial and intermittent streams. Ponds may be located in intermittent streams provided the requirements of Chapter 105 (relating to dam safety and waterway management) are met.

(c) Sedimentation ponds may not be removed until the disturbed area has been stabilized and revegetated and the Department approves the removal of the ponds. The ponds may not be removed sooner than 2 years after the last augmented seeding, unless the Department finds that the disturbed area has been sufficiently revegetated and stabilized.

(d) At a minimum, sedimentation ponds shall meet the requirements of Chapter 102 (relating to erosion and sediment control).

(e) The water storage resulting from inflow shall be removed by a nonclogging dewatering device approved by the Department. The dewatering device may not be located at a lower elevation than the maximum elevation of the sediment storage volume. The device shall have a discharge rate to achieve and maintain the required detention time.

(f) The ponds shall be designed, constructed and maintained to prevent short circuiting.

(g) The design, construction and maintenance of a sediment pond in accordance with this section does not relieve the person who conducts coal refuse disposal activities of the responsibility for complying with the applicable treatment requirements and effluent limitations established under § 90.102.



(h) There may be no discharge through the emergency spillway during the passage of the runoff resulting from the 10-year, 24-hour precipitation events or lesser events through the sedimentation pond.

(i) The elevation of the crest of the emergency spillway shall be a minimum of 1.0 foot above the crest of the principal spillway.

(j) When the sedimentation pond is to be removed, the affected land shall be regraded and revegetated in accordance with § 90.151—90.157, 90.159 and 90.160.

#### Authority

The provisions of this § 90.108 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.108 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (176082) and (180937).

#### Cross References

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); and 25 Pa. Code § 90.113 (relating to hydrologic balance: coal processing waste dams and embankments).

### § 90.109. Hydrologic balance: discharge structures.

Discharge from dams, ponds, embankments, impoundments and diversions shall be controlled by emergency dissipators, riprap, channels or other devices to reduce erosion, to prevent deepening or enlargement of stream channels, and to minimize disturbance of the hydrologic balance. Discharge structures shall be designed according to standard engineering design procedures.

#### Source

The provisions of this § 90.109 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.113 (relating to hydrologic balance: coal processing waste dams and embankments).

### § 90.110. [Reserved].

#### Source

The provisions of this § 90.110 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.111. Hydrologic balance: impoundments.**

Permanent impoundments are prohibited unless authorized by the Department, upon the basis of the following demonstration:

- (1) The quality of the impounded water shall be suitable on a permanent basis for its intended use, and discharge of water from the impoundment may not degrade the quality of the receiving waters to less than the water quality standards established under § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).
- (2) The level of water shall be sufficiently stable to support the intended use.
- (3) Adequate safety and access to the impounded water shall be provided for proposed water users.
- (4) Water impoundments may not result in the diminution of the quality or quantity of water used by adjacent or surrounding landowners for agricultural, industrial, recreational, or domestic uses.
- (5) The size of the impoundment shall be adequate for its intended purposes.
- (6) The impoundment shall be suitable for the approved postmining land use.
- (7) Impoundments which are constructed of or used to impound coal refuse shall be developed into fills meeting the construction requirements of § 90.122 (relating to coal refuse disposal).

**Authority**

The provisions of this § 90.111 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.111 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial page (180938).

**Cross References**

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); and 25 Pa. Code § 90.130 (relating to coal refuse dams).

**§ 90.112. Hydrologic balance: dams, ponds, embankments and impoundments—design, construction and maintenance.**

(a) Dams, ponds, embankments and impoundments that meet the following criteria shall be designed, constructed and maintained under Chapter 105 (relating to dam safety and waterway management):

(1) Dams located on a natural or artificial water course where one of the following applies:

- (i) The contributory drainage area exceeds 100 acres.
- (ii) The greatest depth of water at maximum storage elevation exceeds 15 feet.
- (iii) The impounding capacity at maximum storage elevation exceeds 50 acre-feet.

(2) Structures used for the storage of water not located on a watercourse and which have no contributory drainage where the greatest depth of water, at maximum storage elevation, exceeds 15 feet and the impounding capacity, at maximum storage elevation, exceeds 50 acre-feet.

(b) The design, construction and maintenance of dams, ponds, embankments and impoundments shall achieve the minimum design criteria contained in the United States Soil Conservation Service's *Pennsylvania Field Office Technical Guide, Section IV, Standards 350 "Sediment Basin" and 378, "Pond,"* or United States Soil Conservation Service's Technical Release No. 60, Earth Dams and Reservoirs, whichever is applicable. The standards are incorporated by reference. In addition to the requirements in "Sediment Basin," a minimum static safety factor of 1.3 is required. These structures shall meet the following requirements:

(1) The detailed design plan for a structure shall be prepared by and certified by a qualified registered professional engineer. Each impoundment shall be certified that the impoundment has been constructed and is being maintained as designed in accordance with the applicable performance standards.

(2) Each pond shall be inspected once every 3 months for structural weakness, erosion and other hazardous conditions. The person who conducts the coal refuse disposal activities shall make and retain records of the inspection, including records of actions taken to correct deficiencies found in the inspection. Copies of the records shall be provided to the Department on request.

(3) The entire embankment, including the surrounding areas disturbed by construction, shall be stabilized with respect to erosion by a vegetative cover or other means immediately after the embankment is completed. The active upstream face of the embankment where water will be impounded shall be rippedraped or otherwise stabilized. Areas in which the vegetation is not successful or where rills and gullies develop shall be repaired and revegetated.

(4) Plans for enlargement, reduction in size, reconstruction or other modification of dams or impoundments shall be submitted to the Department and shall comply with this section. Except when a modification is required to

eliminate an emergency condition, constituting a hazard to public health, safety or the environment, the plans shall be approved by the Department before modification begins.

(c) If the embankment is more than 20 feet in height as measured from the upstream toe of embankment to the crest of the emergency spillway, or has a storage volume of 20 acre feet or more, is located where failure could cause loss of life or serious property damage or otherwise poses a hazard to miners or the public, it must:

(1) Be stable under probable conditions of operation and be designed and constructed to achieve a static safety factor of 1.5 or a higher static safety factor required by the Department.

(2) Have an appropriate combination of principal and emergency spillways to safely pass, adequate storage capacity to safely contain, or a combination of storage capacity and spillway capacity to safely control, the probable maximum runoff from precipitation of a 6-hour precipitation event.

(3) Have a foundation investigation, as well as necessary laboratory testing of foundation material to determine the design requirements for foundation stability.

(d) An impoundment shall be inspected during construction and certified after construction, and annually thereafter, by a qualified registered professional engineer until removal of the structure. Certification reports shall include monitoring and instrumentation results and a statement regarding the condition of impoundment.

(e) An impoundment shall be examined by a qualified person designated by the operator at intervals not exceeding 7 days for structural weakness, erosion and other hazardous conditions. Impoundments with an embankment less than 20 feet in height as measured from the upstream toe of the embankment to the crest of the emergency spillway or which have a storage volume of less than 20 acre-feet shall be inspected once every 3 months unless otherwise required by the Department. If an examination or inspection discloses that a potential hazard exists, the person who examined the impoundment shall promptly inform the Department of the finding and provide a remedial action plan to protect the public. If adequate procedures cannot be formulated or implemented, the Department shall be notified immediately. The Department will then notify the appropriate agencies that other emergency procedures are required to protect the public. The permittee shall make and retain records of the inspection, including records of actions taken to correct deficiencies found in the inspection. Copies of the records shall be provided to the Department on request.

(f) Impoundments subject to 30 CFR 77.216-1 and 77.216-2 (relating to water, sediment or slurry impoundments and impounding structures; identification; and water, sediment or slurry impoundments and impounding structures; minimum plan requirements; changes or modifications; certification) shall have duplicate plans submitted to the District Manager of MSHA and to the Depart-

ment. The Department may consider MSHA's review for impoundments. However, the Department will review impoundments under the requirements of subsection (a).

#### Authority

The provisions of this § 90.112 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.112 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended February 17, 1984, 14 Pa.B. 524, effective August 4, 1984, 14 Pa.B. 2860; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821; amended June 17, 2011, effective June 18, 2011, 41 Pa.B. 3084. Immediately preceding text appears at serial pages (207969) to (207971).

#### Cross References

This section cited in 25 Pa. Code § 87.113 (relating to hydrologic balance: coal processing waste dams and embankments); 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.113 (relating to hydrologic balance: coal processing waste dams and embankments); and 25 Pa. Code § 90.130 (relating to coal refuse dams).

### **§ 90.113. Hydrologic balance: coal processing waste dams and embankments.**

(a) In addition to the requirements of § 90.112 (relating to hydrologic balance: dams, ponds, embankments and impoundments—design, construction and maintenance), each dam and embankment constructed of coal processing waste or intended to impound coal processing waste shall meet the requirement of this section.

(b) Waste may be used in the construction of dams and embankments if it has been demonstrated to, and approved by, the Department that the stability of such a structure conforms with the requirements of this section and the use of the waste material may not have a detrimental effect on downstream water quality or the environment.

(c) The design freeboard between the lowest point on the embankment crest and the maximum water elevation shall be at least 3 feet. The maximum water elevation shall be that determined by the freeboard hydrograph criteria contained in the United States Soil Conservation Service's Technical Release No. 60, "Earth Dams and Reservoirs." The standards contained therein are hereby incorporated by reference.

(d) The dam and embankment shall have a minimum safety factor of 1.5 for the partial pool with steady seepage saturation conditions, and the seismic safety factor shall be at least 1.2.

(e) The dam or embankment foundation and abutment shall be designed to be stable under all conditions of construction and operation of the impoundment. Sufficient foundation investigations and laboratory testing shall be performed to determine the safety factors of the dam and embankment for all loading conditions appearing in subsection (d) and for all increments of construction.

(f) Spillways and outlet works shall be designed to provide adequate protection against erosion and corrosion. Inlets shall be protected against blockage.

(g) Dams and embankments constructed of or impounding waste materials shall be designed so that at least 90% of the water stored during the design precipitation event shall be removed within a 10-day period.

(h) Before coal processing waste is placed at a dam or embankment site:

(1) Trees, shrubs, grasses and other organic material shall be cleared and grubbed for a distance of 50 feet from the coal refuse disposal pile, bank or dam within the site, and combustibles shall be removed and stockpiled in accordance with this subchapter.

(2) Surface drainage that may cause erosion to the embankment area or the embankment features, whether during construction or after completion, shall be diverted away from the embankment by diversion ditches that comply with the requirements of § 90.104 and 90.105 (relating to hydrologic balance: diversions; and stream channel diversions). Diversions that are designed to divert drainage from the upstream area away from the impoundment areas shall be designed to carry the peak runoff from a 100-year, 24-hour precipitation event. The diversion shall be maintained to prevent blockage, and the discharge shall be in accordance with § 90.109 (relating to hydrologic balance: discharge structures). Sediment control measures shall be provided at the discharge of each diversion ditch before entry into natural watercourses in accordance with §§ 90.105 and 90.108 (relating to stream channel diversions; and hydrologic balance: sedimentation ponds).

(i) Impoundments constructed of coal processing wastes or used to impound coal processing wastes may not be retained permanently as part of the approved postmining land use, unless these structures are developed into fills meeting the construction requirements of § 90.122 (relating to coal refuse disposal).

#### Authority

The provisions of this § 90.113 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.113 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 11, 1992, effective December 12, 1992, 22 Pa.B. 5945; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (180941) to (180942).

**Cross References**

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); and 25 Pa. Code § 90.130 (relating to coal refuse dams).

**§ 90.114. [Reserved].****Source**

The provisions of this § 90.114 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.115. Hydrologic balance: groundwater monitoring.**

(a) Groundwater levels, infiltration rates, subsurface flow and storage characteristics, and the quality of groundwater shall be monitored in a manner approved by the Department to determine the effects of coal refuse disposal activities on the recharge capacity of reclaimed lands and on the quantity and quality of groundwater in the permit and adjacent areas.

(b) When coal refuse disposal activities may affect the groundwater systems which serve as aquifers which ensure the hydrologic balance of water use on or off the permit area, groundwater levels and groundwater quality shall be monitored. Monitoring shall include measurements from a sufficient number of wells and chemical analyses of water from aquifers that are adequate to reflect changes in groundwater quality and quantity resulting from those activities. Monitoring shall be adequate to plan for modification of coal refuse disposal activities, if necessary, to prevent, to the maximum extent possible, disturbance of the prevailing hydrologic balance. At a minimum, total dissolved solids or specific conductance corrected to 25°C, pH, acidity, alkalinity, total iron, total manganese and water levels shall be monitored and reported to the Department at least every 3 months for each monitoring location.

(c) The person who conducts coal refuse disposal activities shall conduct additional hydrologic tests, as specified and approved by the Department, including but not limited to drilling, infiltration tests, chemical and mineralogical analysis of overburden and spoil, and aquifer tests, and shall submit the results to the Department to demonstrate protection of the groundwater.

(d) The Department may require the operator to conduct monitoring and reporting more frequently than every 3 months, and to monitor additional parameters beyond the minimum specified in this section.

**Authority**

The provisions of this § 90.115 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.115 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial page (180943).

**Cross References**

This section cited in 25 Pa. Code § 90.35 (relating to protection of the hydrologic balance); and 25 Pa. Code § 90.93 (relating to casing and sealing of drilled holes and underground workings).

**§ 90.116. Hydrologic balance: surface water monitoring.**

(a) In addition to the monitoring and reporting requirements established by the Department under Chapter 92 (relating to National Pollutant Discharge Elimination System permitting, monitoring and compliance), surface water shall be monitored to accurately measure and record the water quantity and quality of the discharges from the permit area and the effect of the discharge on the receiving waters. Surface water shall be monitored for parameters that relate to the suitability of the surface water for current and approved postmining land uses and to the objectives for protection of the hydrologic balance as set forth in § 90.35 (relating to protection of hydrologic balance). At a minimum, total dissolved solids or specific conductance corrected to 25°C, total suspended solids, pH, acidity, alkalinity, total iron, total manganese, sulfates and flow shall be monitored and reported to the Department at least every 3 months for each monitoring location.

(b) The Department may require the operator to conduct monitoring and reporting more frequently than every 3 months, and to monitor additional parameters beyond the minimum specified in this section.

**Authority**

The provisions of this § 90.116 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.116 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (180943) to (180944) and (159101).



**Cross References**

This section cited in 25 Pa. Code § 90.35 (relating to protection of the hydrologic balance).

**§ 90.116a. Hydrologic balance: water rights and replacement.**

An operator who conducts coal refuse disposal and adversely affects a water supply by contamination, pollution, diminution or interruption shall comply with § 87.119 (relating to water rights and replacement).

**Source**

The provisions of this § 90.116a adopted July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735.

**§ 90.117. [Reserved].****Source**

The provisions of this § 90.117 adopted July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; reserved June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial page (149045).

**§ 90.118. [Reserved].****Source**

The provisions of this § 90.118 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.119. Hydrologic balance: discharge of water into an underground mine.**

Discharges from coal refuse disposal areas into underground mine workings must comply with the requirements of Chapter 89 (relating to underground mining of coal and coal preparation facilities), including applicable permit requirement.

**Source**

The provisions of this § 90.119 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.120. Hydrologic balance: permanent postdisposal renovation of sedimentation ponds, diversions, impoundments and treatment facilities.**

At the completion of coal refuse disposal activities, the person who conducts the coal refuse disposal activities shall renovate the permanent sedimentation ponds, diversions, impoundments and treatment facilities to meet criteria specified in the detailed design plan for the permanent structures and impoundments, unless the permittee demonstrates that the facility or structure meets the requirements of this subchapter. Impoundments constructed of coal refuse or used to

impound coal refuse shall be developed into fills meeting the construction requirements of § 90.122 (relating to coal refuse disposal), or removed.

**Authority**

The provisions of this § 90.120 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.120 adopted July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (159101) to (159102).

**Cross References**

This section cited in 25 Pa. Code § 90.130 (relating to coal refuse dams).

**§ 90.121. [Reserved].**

**Source**

The provisions of this § 90.121 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.122. Coal refuse disposal.**

(a) Coal refuse shall be transported and placed in designated disposal areas approved by the Department for this purpose. These areas shall be within the permit area. The coal refuse disposal area shall be designed, constructed and maintained to ensure:

- (1) The leachate and surface runoff from the permit area will not degrade surface water or groundwater or exceed the effluent limitations of § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).
- (2) Prevention of combustion.
- (3) Prevention of public health hazards.
- (4) Stability of the fill.
- (5) The land mass designated as the coal refuse disposal area is suitable for reclamation and revegetation compatible with the natural surroundings.

(b) The fill shall be designed using recognized professional standards, certified by a qualified registered professional engineer, and approved by the Department.

(c) The foundation and abutment of the fill shall be stable under all conditions of construction and operation. Sufficient foundation investigations and laboratory testing of foundation materials and coal refuse shall be performed to determine the design requirements for stability of the facility. Analyses of foundation conditions shall include the effect of underground mine workings, if any, upon the stability of the structure.

(d) The coal refuse disposal fill shall be designed to attain a minimum long-term static factor of safety of 1.5 and a minimum seismic factor of safety of 1.2, based upon data obtained from subsurface exploration, geotechnical testing, foundation design, fill design and accepted engineering analyses.

(e) When the average slope of coal refuse disposal area exceeds 1v:2.8h-36%, or lesser slopes as may be designated by the Department based on local conditions, key way cuts, or excavation into stable bedrock or bedrock toe buttresses shall be constructed to stabilize the fill. When the toe of the fill rests on a downslope, stability analysis shall be performed in accordance with § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills) to determine the size of rock toe buttresses and key way cuts.

(f) If the disposal area contains springs, natural or manmade watercourses, or wet-weather seeps, the Department may approve an underdrain/subdrainage system, consisting of durable rock or other materials, designed and placed in a manner that prevents infiltration of the water into the fill material and ensures continued free drainage from the wet areas.

(g) The disposal area shall be provided with a system to prevent adverse impacts to the surface water and groundwater. The system shall be constructed in accordance with design schematics, test results, descriptions, plans, maps, profiles or cross-sections approved in the permit and shall function to prevent adverse impacts to surface water and groundwater.

(h) When a phase of the coal refuse disposal area reaches capacity, the operator shall install a system to prevent precipitation from coming in contact with the coal refuse in the completed phase.

(1) The system shall be constructed in accordance with design schematics, test results, descriptions, plans, maps, profiles or cross-sections approved in the permit.

(2) During normal coal refuse disposal, the system is not required to prevent precipitation from coming in contact with the coal refuse being placed in phases of the operation that have not reached capacity.

(3) The system shall be designed to allow for revegetation of the site in accordance with the standard of success under § 90.159 (relating to revegetation: standards for successful revegetation) and for the prevention of erosion.

(4) If the operator temporarily ceases operation of the coal refuse disposal area for a period in excess of 90 days (unless the Department, for reasons of labor strike or business necessity, approves a longer period not to exceed 1 year) or when the operation permanently ceases, the operator shall install the system for preventing precipitation from contacting the coal refuse.

(i) An underdrain/subdrainage system for the fill shall be designed in accordance with the following:

(1) It shall include an underdrain system which will ensure continued free drainage of anticipated seepage from precipitation and from spring or wet-weather seeps, and meet the following:

- (i) Anticipated discharges from springs and seeps due to precipitation shall be based on records or field investigation or both, to determine seasonal variation. The design of the underdrain system shall be based on maximum anticipated discharges.
- (ii) Granular material used for the drainage system shall be nondegradable, nonacid-forming or nontoxic-forming rock free of clay, and consist of durable particles such as natural sands and gravels, sandstone, limestone or other durable rock which will not flake in water.
- (2) The underdrain system shall be designed to be installed along the natural drainage system; extend from toe to head of fill; and contain lateral drains to each area of potential drainage or seepage.
- (3) A filter system to ensure the proper functioning of the rock underdrain system shall be designed and constructed using standard geotechnical engineering methods.
- (j) The final configuration of the fill shall be suitable for the post disposal land use approved under § 90.165 (relating to prime farmland: revegetation), except that no depression or impoundment may be allowed on the completed fill. New coal refuse disposal piles and area of piles active since May 17, 1973, shall blend into the local surroundings. Unless otherwise approved by the Department, the fill may not be designed to exceed the approximate elevation of the surrounding ridgeline.
- (k) The maximum overall completed slope of the coal refuse disposal pile measured from toe of the fill to crest of upper terrace may not exceed 33% or 18 degrees.
- (l) The top surface of the completed fill shall be graded so that the final slope after settlement will be no steeper than 1v:20h—5.0% toward properly designed drainage channels in natural ground along the periphery of the fill. Surface runoff from the top surface of the fill may not be allowed to flow over the outslope of the fill.
- (m) Terraces may be utilized to control erosion, enhance stability, or for roads included in postmining land use.
- (1) The slope of the outslope between terraces may not exceed 1v:2h—50%. The vertical distance between terraces may not exceed 50 feet.
- (2) To control surface runoff, each terrace bench will be a minimum of 20 feet wide, shall be graded to a slope of 1v:20h—5.0% toward the embankment. Runoff shall be collected by a ditch along the intersection of each terrace bank and the toe of the next higher outslope.
- (3) Terrace ditches shall have a maximum 5.0% slope toward the channels specified in subsection (n) unless steeper slopes are necessary in conjunction with approved roads.
- (n) Surface water runoff from the areas adjacent to and above the fill may not be allowed to flow onto the fill and shall be diverted into stabilized channels

which are designated to pass safely the peak runoff from a 100-year precipitation event. Diversion design shall comply with § 90.104 (relating to hydrologic balance: diversions).

(o) Surface water runoff from the fill shall be diverted off the fill to properly designated channels which will pass safely the peak runoff from a 100-year precipitation event. Diversion design shall comply with § 90.104 and § 90.105 (relating to stream channel diversions).

(p) Slope protection shall be provided to minimize surface erosion at the site. Disturbed areas, including diversion ditches that are not riprapped, shall be vegetated upon completion of construction.

(q) Coal refuse shall be hauled or conveyed and placed in a controlled manner and concurrently compacted as approved by the Department in lifts no greater than 2 feet, or less, as required or approved by the Department, as the design to:

- (1) Achieve the densities designed to ensure mass stability.
- (2) Prevent mass movement.
- (3) Avoid contamination of the rock underdrain.
- (4) Prevent formation of voids.

(r) Vegetative and organic materials shall be removed from the area where coal refuse is disposed of, and for a distance of 50 feet from the perimeter of the area where coal refuse is disposed, the topsoil shall be removed, segregated and stored or replaced as provided in §§ 90.96—90.100. If approved by the Department, organic material may be used a mulch or may be included in the topsoil to control erosion, promote growth of vegetation or increase the moisture retention of the soil.

#### Authority

The provisions of this § 90.122 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.122 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial pages (207976) to (207979).

#### Cross References

This section cited in 25 Pa. Code § 87.73 (relating to dams, ponds, embankments and impoundments); 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); 25 Pa. Code § 90.111 (relating to hydrologic balance: impoundments); 25 Pa. Code § 90.113 (relating to hydrologic balance: coal processing waste dams and embankments); 25 Pa. Code § 90.120 (relating to hydrologic balance: permanent postdisposal renovation of sedimentation ponds, diversions, impoundments and treatment facilities); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.130 (relating to coal refuse dams); and 25 Pa. Code § 90.164 (relating to prime farmland: soil replacement).

**§ 90.123. [Reserved].****Source**

The provisions of this § 90.123 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.124. Coal refuse disposal: site inspection.**

(a) The coal refuse disposal area shall be inspected for stability by a qualified registered engineer or other qualified specialist under the direction of the qualified registered professional engineer at least quarterly throughout construction and during the following critical construction periods: removal of organic material and topsoil; placement of under-drain and protective filter systems; installation of surface drainage systems; placement and compaction of fill materials; and revegetation. The professional engineer or other qualified professional specialist shall be experienced in the construction of earth and rock fill embankments. The registered engineer or other qualified professional specialist shall provide to the Department a certified report within 2 weeks after each inspection that the fill has been constructed as specified in the design approved by the Department. A copy of the report shall be retained at the coal refuse disposal site.

(b) If an inspection discloses that potential hazard exists, the Department shall be informed promptly of the findings and the actions to abate the potential hazard.

(c) If an inspection discloses that an imminent danger exists, the Department shall be informed promptly of the findings and of the emergency procedures formulated for public protection and remedial action. The permittee shall immediately notify the appropriate emergency agencies and residents immediately downstream of the affected area.

(d) The certified report on underdrains and protective filter systems required under subsection (a) shall include color photographs taken during and after construction, but before underdrains are covered with coal refuse. If the underdrain system is constructed in phases, each phase shall be certified separately. Photographs shall be taken in adequate size and number with enough terrain or other physical features of the site shown to provide a relative scale to the photographs and to specifically and clearly identify the site.

**Source**

The provisions of this § 90.124 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149049) to (149050).

**Cross References**

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.130 (relating to coal refuse dams).

**§ 90.125. Coal refuse disposal: construction requirements.**

(a) The coal refuse disposal area shall be constructed in compliance with this section and §§ 90.122 and 90.124 (relating to coal refuse disposal; and coal refuse disposal: site inspection), except to the extent the requirements of those sections are specifically varied in this section.

(b) The coal refuse shall be:

(1) Spread in horizontal layers no more than 24 inches in thickness.

(2) Compacted to attain a minimum of 90% of the maximum dry density as determined by the Modified Proctor Test or 95% of the maximum dry density as determined by the Standard Proctor Test.

(c) Concurrently with construction of the site as each portion of the site is developed and reaches final configuration and elevation, that portion of the site shall be covered with a final layer of nontoxic, noncombustible material and soil suitable for revegetation within 60 days and revegetated under §§ 90.151—90.157, 90.159 and 90.160. The minimum combined thickness of the nontoxic, noncombustible material and soil shall be 4 feet except that this requirement may be waived for coal refuse disposal areas permitted prior to July 27, 1991 if the





requirements of §§ 90.150—90.157, 90.159—90.165 can be attained; or when the permittee has demonstrated that a lesser combined thickness is as effective as 4 feet of combined thickness in meeting the performance standards of this chapter.

(d) The Department may approve other compaction requirements if the requirements of § 90.122 are met.

#### Source

The provisions of this § 90.125 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended February 17, 1984, 14 Pa.B. 524, effective August 4, 1984, 14 Pa.B. 2860; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149050) to (149051).

#### Cross References

This section cited in 25 Pa. Code § 90.3 (relating to general requirements: permit); 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); 25 Pa. Code § 90.91 (relating to requirements); 25 Pa. Code § 90.128 (relating to coal refuse disposal: active surface mines); 25 Pa. Code § 90.129 (relating to coal refuse disposal: abandoned unreclaimed surface mines); and 25 Pa. Code § 90.130 (relating to coal refuse dams).

### § 90.126. Coal refuse disposal: burning.

(a) The person conducting the coal refuse disposal activities shall take immediate action to extinguish any fires or hot spots in accordance with a plan approved by the Department and the Mine Safety and Health Administration. The plan shall contain, as a minimum, provisions to ensure that only those persons authorized by the operator, and who have an understanding of the procedure to be used, shall be involved in the extinguishing operations.

(b) Coal refuse may not be deposited on or near any portion of a coal refuse disposal area known to be burning.

#### Source

The provisions of this § 90.126 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills).

### § 90.127. Coal refuse disposal: disposal in underground coal mines.

The person conducting the disposal of coal refuse in underground mines shall meet the requirements of Chapter 89 (relating to underground mining of coal and coal preparation facilities).

**Source**

The provisions of this § 90.127 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.3 (relating to general requirements: permit); and 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills).

**§ 90.128. Coal refuse disposal: active surface mines.**

(a) The person disposing of coal refuse in active surface mines shall meet the requirements of Chapter 87 (relating to surface mining of coal) and § 90.125 (relating to coal refuse disposal: construction requirements).

(b) The Department will limit the volume or amount of coal refuse disposal in an active surface mine based on achieving the approximate original contour and insuring pollution will not occur.

(c) The coal refuse shall be disposed at a minimum of 10 feet above the base of the pit floor or the seasonal high water table whichever is higher.

(d) The coal refuse shall be spread and compacted in 2 foot layers and may not exceed the volume as set forth in subsection (b).

(e) The coal refuse may not be deposited against an exposed coal seam. An exposed coal seam shall be covered by nontoxic, nonacid and noncombustible spoil at a minimum of 2.5 times the thickness of the coal.

(f) The Department may require treatment of the coal refuse.

**Source**

The provisions of this § 90.128 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial pages (149052) to (149053).

**Cross References**

This section cited in 25 Pa. Code § 90.3 (relating to general requirements: permit); 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills); and 25 Pa. Code § 90.91 (relating to requirements).

**§ 90.129. Coal refuse disposal: abandoned unreclaimed surface mines.**

(a) The volume of coal refuse to be disposed in the pit may not exceed in thickness 60% of the height of the highwall, if the applicant can demonstrate the overburden and coal refuse can be graded to approximate original contours and the disposal of the coal refuse will not create a water pollution problem.

(b) The coal refuse shall be disposed at a minimum of 10 feet above the base of the pit floor or the seasonal high water table whichever is higher.

(c) The coal refuse shall be spread and compacted in 2-foot layers, meet the requirements of § 90.125 (relating to coal refuse disposal: construction requirements) and may not exceed the volume set forth in subsection (a).

(d) The coal refuse may not be deposited against an exposed coal seam. An exposed coal seam shall be covered by nonacid, nontoxic and noncombustible spoil at a minimum of 2.5 times the thickness of the coal.

(e) The Department may require treatment of the coal refuse.

#### Source

The provisions of this § 90.129 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316. Immediately preceding text appears at serial page (149053).

#### Cross References

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills).

### § 90.130. Coal refuse dams.

Dams and embankments constructed of coal refuse or intended to impound coal refuse, whether they were completed before adoption of the regulatory program or are intended to be completed thereafter, shall meet the requirements of §§ 90.111—90.113, 90.120, 90.122, 90.124 and 90.125.

#### Authority

The provisions of this § 90.130 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.130 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821. Immediately preceding text appears at serial pages (180945) to (180946).

#### Cross References

This section cited in 25 Pa. Code § 90.39 (relating to ponds, impoundments, banks, dams, embankments, piles and fills).

### § 90.131. [Reserved].

#### Source

The provisions of this § 90.131 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.132. [Reserved].****Source**

The provisions of this § 90.132 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.133. Disposal of noncoal wastes.**

Noncoal wastes, including, but not limited to, grease, lubricants, paints, flammable liquids, garbage and other hazardous wastes, shall be disposed of or stored temporarily in accordance with the Solid Waste Management Act (35 P. S. §§ 6018.101—6018.1003) and the regulations promulgated thereunder. Storage must be of a type that fires are prevented and that the area remains stable and suitable for reclamation and revegetation. Noncoal waste materials including, but not limited to, wood, cloth, waste paper, oil, grease and garbage may not be deposited in a coal refuse disposal pile or impounding structure.

**Authority**

The provisions of this § 90.133 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

**Source**

The provisions of this § 90.133 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821; amended June 17, 2011, effective June 18, 2011, 41 Pa.B. 3084. Immediately preceding text appears at serial page (288902).

**§ 90.134. Haul roads and access roads: general.**

(a) Haul roads and access roads shall be designed, constructed and maintained to control or prevent: erosion and contributions of sediment to streams or runoff outside the affected area; flooding; air and water pollution; damage to fish and wildlife or their habitat; and damage to public or private property. To ensure environmental protection appropriate for their planned duration and use, including consideration of the type and size of equipment used, the design and construction or reconstruction of roads shall incorporate appropriate limits for grade, width, surface materials, surface drainage control, culvert placement and culvert size, in accordance with current, prudent engineering practices, and necessary design criteria established by the Department. Upon completion of the associated surface mining activities, the area disturbed by the road shall be restored in accordance with § 90.140 (relating to haul roads and access roads: restoration), unless retention of the road is approved as part of the postmining land use.

(b) The haul road or access roads may not be located in or within 100 feet (30.48 meters) of a perennial or intermittent stream except in accordance with § 86.102 (relating to areas where mining is prohibited or limited). Crossing of a

perennial or intermittent stream shall be made using bridges, culverts or similar structures. Bridges, culverts or other encroachment or water obstruction shall meet the requirements of Chapter 105 (relating to dam safety and waterway management).

(c) Each road shall have a drainage system that is compatible with the natural drainage system, structurally stable and will pass safely the peak flow from a 10-year, 24-hour precipitation event, or larger event if required by the Department. The drainage system shall include sloped or crowned road surface, cross drains or culverts, stabilized ditches, erosion-resistant surfacing, sediment traps and other appropriate sediment control measures as required by § 90.106 (relating to hydrologic balance: erosion and sedimentation control).

(d) Roads shall be constructed on stable areas that avoid wet or unstable soils.

(e) Prior to the construction of the road, all topsoil shall be removed, stored on a stable site and protected against erosion and compaction until restoration of the haul road.

(f) Disturbed areas adjacent to the road shall be vegetated or otherwise stabilized to prevent erosion.

(g) Haul roads shall be surfaced with material sufficiently durable for the anticipated volume of traffic and the weight and speed of vehicles using the road. Acid or toxic-forming material may not be used for surfacing or construction of a road except when the road is within the confines of a coal refuse disposal or reprocessing area, and the effluent meets the requirements of § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

(h) A road damaged by a catastrophic event, such as a flood or earthquake, shall be repaired or reclaimed as soon as practicable after the damage has occurred.

(i) Haul roads and roads approved as part of the postmining land use shall be certified by a qualified registered professional engineer or qualified registered land surveyor that the roads have been constructed or reconstructed as designed in accordance with the approved plan.

#### Authority

The provisions of this § 90.134 amended under section 4.2(a) of the Surface Mining Conservation and Reclamation Act (52 P. S. § 1396.4b(a)); section 3.2 of the Coal Refuse Disposal Control Act (52 P. S. § 30.53b); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.134 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227; amended May 31, 2002, effective June 1, 2002, 32 Pa.B. 2686. Immediately preceding text appears at serial pages (244302) to (244303).

**Cross References**

This section cited in 25 Pa. Code § 90.47 (relating to haul roads, access roads and other transportation facilities).

**§ 90.135. [Reserved].****Source**

The provisions of this § 90.135 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.136. [Reserved].****Source**

The provisions of this § 90.136 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.137. [Reserved].****Source**

The provisions of this § 90.137 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.138. [Reserved].****Source**

The provisions of this § 90.138 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.139. [Reserved].****Source**

The provisions of this § 90.139 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.140. Haul roads and access roads: restoration.**

Unless the Department approves retention of a road as suitable for the approved postdisposal land use in accordance with § 90.166 (relating to postdisposal land use), as soon as practicable after the road is no longer needed for operations, reclamation or monitoring:

- (1) The road shall be physically closed to vehicular traffic.
- (2) The road and adjacent slopes shall be regraded to blend with the natural contours and drainage pattern.
- (3) Bridges and culverts shall be removed.
- (4) Roadbeds shall be ripped or scarified.
- (5) Fill slopes shall be rounded or reduced and shaped to conform the site to adjacent terrain and to meet natural drainage restoration standards.
- (6) Cut slopes shall be shaped to blend with the natural contour.
- (7) Cross drains, dikes and water bars shall be constructed to minimize erosion.

(8) Terraces shall be constructed as necessary to prevent excessive erosion and to provide long-term stability in cut and fill slopes.

(9) Road surfacing materials shall be removed if the materials are incompatible with the postmining land use and establishment of vegetation.

(10) Disturbed areas shall be covered with topsoil in accordance with §§ 90.96—90.100 and revegetated in accordance with § 90.151 (relating to revegetation: general requirements).

(11) Excess material and debris shall be disposed in a manner approved by the Department.

**Source**

The provisions of this § 90.140 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (207986) to (207987).

**Cross References**

This section cited in 25 Pa. Code § 90.47 (relating to haul roads, access roads and other transportation facilities); and 25 Pa. Code § 90.134 (relating to haul roads and access roads: general).

**§ 90.141. [Reserved].**

**Source**

The provisions of this § 90.141 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.142. [Reserved].**

**Source**

The provisions of this § 90.142 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.143. [Reserved].**

**Source**

The provisions of this § 90.143 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.144. [Reserved].**

**Source**

The provisions of this § 90.144 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.145. [Reserved].****Source**

The provisions of this § 90.145 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.146. Other transportation facilities.**

Railroad loops, spurs, sidings, surface conveyor systems, chutes, aerial tramways or other transportation facilities within the proposed permit area shall be designed, constructed or reconstructed, and maintained and the area restored, to:

- (1) Prevent, using the best technology currently available:
  - (i) Damage to fish, wildlife and related environmental values.
  - (ii) Additional contributions of suspended solids to streamflow or runoff outside the permit area. Contributions may not be in excess of limitations of State or Federal law.
- (2) Control and prevent, to the maximum extent possible, diminution of water quantity and prevent pollution.
- (3) Control and prevent, to the maximum extent possible, erosion and siltation.
- (4) Control and prevent air pollution.
- (5) Prevent damage to public or private property.

**Source**

The provisions of this § 90.146 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; corrected March 1, 1985, effective November 13, 1982, 15 Pa.B. 779. Immediately preceding text appears at serial page (92806).

**Cross References**

This section cited in 25 Pa. Code § 90.47 (relating to haul roads, access roads and other transportation facilities).

**§ 90.147. Support facilities and utility installations.**

(a) Support facilities required for, or used incidentally to, the operation of the coal refuse disposal area, including, but not limited to, buildings, coal loading facilities at or near the coal refuse disposal site, coal storage facilities, equipment storage facilities, fan buildings, hoist buildings, preparation plants, sheds, shops and other buildings, shall be located, maintained and used in a manner that does the following:

- (1) Prevents or controls erosion and siltation, water pollution and damage to public or private property.
- (2) To the extent possible using the best technology currently available minimizes:
  - (i) Damage to fish, wildlife and related environmental values.



(ii) Additional contributions of suspended solids to streamflow or runoff outside the permit area. These contributions may not be in excess of limitations of State or Federal law.

(b) All coal refuse disposal activities shall be conducted in a manner which minimizes damage, destruction or disruption of services provided by oil, gas and water wells; oil, gas and coal-slurry pipelines; railroads; electric and telephone lines; and water and sewage lines which pass over, under or through the permit area, unless otherwise approved by the owner of those facilities and the Department.

**Source**

The provisions of this § 90.147 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (207988) to (207989).

**§ 90.148. Blasting.**

Blasting, if required, shall be conducted in accordance with §§ 87.124—87.127 and 87.129.

**Source**

The provisions of this § 90.148 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.149. Air resources protection.**

Air pollution control measures shall be planned and employed as an integral part of the coal refuse disposal activities and shall meet the following requirements:

(1) If processing facilities are to be used at the coal refuse disposal site, the facilities shall meet the requirements of Chapters 123 and 127 (relating to standards for contaminants; and construction, modification, reactivation and operation of sources).

(2) Fugitive dust control measures shall demonstrate compliance with Chapters 121, 123, 127 and 129.

**Source**

The provisions of this § 90.149 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.44 (relating to air pollution control plan).

**§ 90.150. Protection of fish, wildlife and related environmental values.**

(a) A person conducting coal refuse disposal activities shall, to the extent possible using the best technology currently available:

- (1) Minimize disturbances and adverse impacts of the activities on fish, wildlife and related environmental values, and achieve enhancement of the resources when practical.
- (2) Locate and operate haul and access roads to avoid or minimize impacts to fish and wildlife species or other species protected by State or Federal law.
- (3) Avoid disturbance to, enhance where practicable, or restore habitats of unusually high value for fish and wildlife.
- (4) Restore, enhance when practicable, or maintain natural riparian vegetation on the banks of streams, lakes and other wetland areas.
- (5) Not use restricted pesticides on the areas during coal refuse disposal activities, unless approved by the Department of Agriculture.
- (6) Do the following, if fish and wildlife habitat is to be postdisposal land use, in addition to the requirements of §§ 90.151—90.157, 90.159 and 90.160:
  - (i) Select plant species to be used on reclaimed areas, based on the following criteria:
    - (A) Their proven nutritional value for fish and wildlife.
    - (B) Their uses as cover for fish and wildlife.
    - (C) Their ability to support and enhance fish and wildlife habitat after release of bonds.
  - (ii) Distribute plant groupings to maximize benefit to fish and wildlife. Plants shall be grouped and distributed in a manner which optimizes edge effect, cover and other benefits for fish and wildlife.
- (7) Intersperse the fields with trees, hedges or fence rows throughout the harvested area to break up large blocks of monoculture and to diversify habitat types for birds and other animals when cropland is to be the alternative postdisposal land use and when appropriate for wildlife and crop management practices. Wetlands shall be preserved or created rather than drained or otherwise permanently abolished.
- (8) Intersperse reclaimed lands with greenbelts utilizing species of grass, shrubs and trees useful as food and cover for birds and small animals, unless the green belts are inconsistent with the approved postdisposal land use, when the primary land use is to be residential, public service or industrial land use.
- (9) Design fences, overland conveyors and other potential barriers to permit passage for large mammals, except if the Department determines that the requirements are unnecessary.
- (10) Fence, cover or use other appropriate methods to exclude wildlife from ponds which contain hazardous concentrations of toxic-forming materials.
  - (b) A person who conducts coal refuse disposal activities shall promptly report to the Department the presence in the permit area of threatened or endangered species under State or Federal laws of which that person becomes aware and which was not previously reported to the Department by that person. Upon notification, the Department will consult with the Game Commission or the Fish

and Boat Commission and appropriate Federal fish and wildlife agencies and, after consultation, will identify whether, and under what conditions, the operator may proceed.

(c) Coal refuse disposal activities may not be conducted in a manner which would result in the unlawful taking of a bald or golden eagle, its nest or its eggs. The operator shall promptly report to the Department a golden or bald eagle nest within the permit area of which the operator becomes aware. Upon notification, the Department will consult with the United States Fish and Wildlife Service and the Game Commission and, after consultation, will identify whether, and under what conditions, the operator may proceed.

(d) Coal refuse disposal activities may not be conducted which are likely to jeopardize the continued existence of endangered or threatened species listed by the Secretary of the Interior, the Game Commission or the Fish and Boat Commission or which are likely to result in the destruction or adverse modification of designated critical habitats of the species in violation of the Endangered Species Act of 1973, 16 U.S.C.A. §§ 1531—1544.

#### Authority

The provisions of this § 90.150 amended under the Surface Mining Conservation and Reclamation Act (52 P. S. §§ 1396.1—1396.19a); The Clean Streams Law (35 P. S. §§ 691.1—691.1001); and section 1920-A of The Administrative Code of 1929 (71 P. S. § 510-20).

#### Source

The provisions of this § 90.150 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 15, 1990, 20 Pa.B. 3383, effective July 27, 1991, 21 Pa.B. 3316; amended December 15, 1995, effective December 16, 1995, 25 Pa.B. 5821; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (207989) to (207991).

#### Cross References

This section cited in 25 Pa. Code § 86.151 (relating to period of liability); 25 Pa. Code § 90.48 (relating to fish and wildlife protection and enhancement plan); 25 Pa. Code § 90.105 (relating to stream channel diversions); and 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements).

### § 90.151. Revegetation: general requirements.

(a) Vegetation shall be established on all land affected by coal refuse disposal activities.

(b) Revegetation shall provide for a diverse, effective and permanent vegetative cover of the same seasonal variety native to the area of land to be affected and capable of self-regeneration and plant succession at least equal in extent of cover to the natural vegetation of the area; except that introduced species may be used in the revegetation process when desirable and necessary to achieve the approved postdisposal land use plan. Vegetative cover shall be considered of the same seasonal variety when it consists of a mixture of species of equal or supe-

rior utility for the approved postdisposal land use when compared with the utility of naturally occurring vegetation during each season of the year. For areas designated as prime farmland, the requirements of §§ 90.161—90.165 shall apply.

(c) Revegetation shall provide a quick-germinating, fast growing vegetative cover capable of stabilizing the soil surface from erosion.

(d) All revegetation shall be completed in compliance with the plans submitted under § 90.34 (relating to reclamation: postdisposal land use) as approved by the Department in the permit, and carried out in a manner that encourages a prompt vegetative cover and recovery of productivity levels compatible with the approved postdisposal land use.

#### Source

The provisions of this § 90.151 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.104 (relating to hydrologic balance: diversions); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration); 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values); and 25 Pa. Code § 90.165 (relating to prime farmland: revegetation).

### § 90.152. Revegetation: timing.

(a) Disturbed areas shall be seeded and planted when weather and planting conditions permit, but the seeding and planting of disturbed areas shall be conducted no later than the first normal period for favorable planting after grading. The normal periods for favorable planting are:

(1) Early spring until May 30, and August 10 until September 15, for permanent herbaceous species.

(2) Early spring until May 20, for woody species.

(b) When necessary to effectively control erosion, the disturbed area shall be seeded and planted as contemporaneously as practicable with the completion of grading with a temporary cover of small grain grasses or legumes, until a permanent cover is established.

#### Source

The provisions of this § 90.152 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values).

**§ 90.153. Revegetation: introduced species.**

The use of introduced species in the revegetation process may be approved by the Department under the following conditions:

- (1) The species have been proven acceptable through field trials to be capable of providing permanent vegetation and are desirable and necessary to achieve the approved postdisposal land use.
- (2) The species are necessary to achieve a quick, temporary and stabilizing cover that aids in controlling erosion; and measures to establish permanent vegetation are included in the approved plan submitted in § 90.34 (relating to reclamation: postdisposal land use).
- (3) The species are compatible with the plant and animal species of the region.
- (4) The species meet the requirements of applicable State and Federal seed or introduced species statutes and are not poisonous or noxious.

**Source**

The provisions of this § 90.153 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values).

**§ 90.154. Revegetation: agriculture crops.**

When the approved postdisposal land use is cropland, the planting of agriculture crops normally grown in the general locality of the permit area shall satisfy the revegetation requirements of § 90.166 (relating to postdisposal land use). If planting of the crop will be delayed, a temporary cover of annual or perennial grasses or small grains shall be established.

**Source**

The provisions of this § 90.154 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values).

**§ 90.155. Revegetation: species.**

(a) Species, rates and techniques of seeding and planting shall be adequate to achieve the standards for successful revegetation of § 90.159 (relating to revegetation: standards for successful revegetation).

(b) Legume seed shall be inoculated or treated with the specific inoculant for that seed and the seed shall be seeded within 24 hours after inoculation or treatment.

(c) A single tree or shrub species may not comprise more than 50% of the total number of seedlings planted.

(d) When the approved postdisposal land use is wildlife habitat, unless alternative plans are approved by the Department, a minimum of 75% of the land affected shall be planted with a mixture of woody species which provides a diverse plant community. The remaining affected area shall be planted to an approved herbaceous cover. The configuration and species composition of the cover types shall be established in accordance with guidelines of the Fish and Boat Commission and Game Commission.

**Source**

The provisions of this § 90.155 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075. Immediately preceding text appears at serial pages (149064) to (149065).

**Cross References**

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values); and 25 Pa. Code § 90.159 (relating to revegetation: standards for successful revegetation).

**§ 90.156. Revegetation: seedbed preparation.**

(a) The soil surface shall be prepared by disking or harrowing. If soil conditions or steep slopes prohibit the practices, the soil surface shall be scarified by any mechanical method which will loosen the surface material. Scarification will not be required if seeding is done immediately following final grading when the soil is still loose.

(b) Disking or harrowing shall be accomplished following or along the contours of all slopes.

(c) Topsoil shall be disked or harrowed to a depth of at least 3 inches prior to seeding.

#### Source

The provisions of this § 90.156 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values).

### § 90.157. Revegetation: mulching.

(a) Mulch shall be applied to all regraded and topsoiled areas at rates adequate to control erosion, promote germination of seeds and increase the moisture retention of the soil. With the exception of outslopes of terrace contours, dams or embankments, fills between terrace benches or any other approved slopes which exceed 36%, the Department may waive the requirement for mulch under the following conditions:

(1) When seeding can be accomplished using a conventional agricultural farm drill.

(2) When the approved postdisposal land use is for agricultural crops.

(3) When annual grasses or small grains can be seeded immediately following final grading, resulting in a quick vegetative cover which will provide adequate soil erosion control.

(4) When the permittee can demonstrate that alternative procedures will achieve the standards for revegetation success of § 90.159 (relating to revegetation: standards for successful revegetation).

(b) When required by the Department, mulches shall be mechanically or chemically anchored to the soil surface.

(c) Chemical soil stabilizers may be used alone or in combination with appropriate mulches.

#### Source

The provisions of this § 90.157 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code

§ 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values); and 25 Pa. Code § 90.165 (relating to prime farmland: revegetation).

**§ 90.158. [Reserved].**

**Source**

The provisions of this § 90.158 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; reserved July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**§ 90.159. Revegetation: standards for successful revegetation.**

(a) When the approved postdisposal land use is cropland or as provided in subsection (c), the following apply:

(1) The standards for successful revegetation shall be based upon crop productivity or yield.

(2) The approved standard shall be the average yields per acre for the crop and soil type as specified in the soil surveys of the United States Department of Agriculture Soil Conservation Service.

(3) The productivity or yield of the disposal area shall be equal to or greater than the approved standard for the last two consecutive growing seasons of the 5-year responsibility period established in this section. Productivity or yield shall be considered equal if production or yield is at least 90% of the approved standard.

(b) When the approved postdisposal land use is other than cropland, the following apply:

(1) The standards for successful revegetation shall be determined by ground cover.

(2) The approved standard shall be the percent ground cover of the vegetation which exists on the proposed area to be affected by coal refuse disposal activities. The Department will not approve less than a minimum of 70% ground cover of permanent plant species with not more than 1.0% of the area having less than 30% ground cover with no single or contiguous area having less than 30% ground cover exceeding 3,000 square feet. When woody species are planted in mixture with herbaceous species, the standards in this subsection shall be met and a minimum of 400 woody plants per acre shall be established, except:

(i) On slopes greater than 20 degrees, the minimum number of woody plants shall be 600 per acre.

(ii) When the approved postdisposal land use is commercial forest land, the minimum number of woody plants shall be 450 trees per acre with at least 75% commercial tree species.

(iii) When the approved postdisposal land use is wildlife habitat, the requirements of § 90.155 (relating to revegetation: species) apply and the areas approved for the planting of woody species shall have a stocking equal



to or greater than 90% of the stocking of woody plants of the same life form on the proposed area to be affected by coal refuse disposal activities. The Department will not approve stocking of less than 400 woody plants per acre.

(3) The following shall apply for purposes of measuring the stocking standards for woody species:

(i) Root crown or root sprouts over 1 foot in height shall count as one toward meeting the stocking requirements. When multiple stems occur, only the tallest stem shall be counted.

(ii) A tree or shrub shall count as one toward meeting the stocking requirements if the tree or shrub has been in place at least two growing seasons and is alive and healthy with at least 1/3 of its length in live crown.

(4) The percent ground cover of the permit area shall meet the standards of paragraph (2) for a minimum of the last 2 consecutive years of the 5-year period of responsibility, and the 5-year period of responsibility shall commence after the last year of augmented seeding and fertilizing.

(5) For purposes of this section, herbaceous species means grasses, legumes, and nonleguminous forbs; woody plants means woody shrubs, trees, and vines; and ground cover means the area of ground covered by the combined aerial parts of the vegetation and the litter that is produced naturally onsite, expressed as a percentage of the total area of measurement.

(c) When the approved postdisposal land use is pastureland, the crop productivity standards of subsection (a) and the ground cover standards of subsection (b) shall be met.

#### Source

The provisions of this § 90.159 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended June 25, 1993, effective June 26, 1993, 23 Pa.B. 3075. Immediately preceding text appears at serial pages (149066) to (149068).

#### Cross References

This section cited in 25 Pa. Code § 86.172 (relating to criteria for release of bond); 25 Pa. Code § 90.17 (relating to vegetation information); 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.122 (relating to coal refuse disposal); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values); 25 Pa. Code § 90.155 (relating to revegetation: species); 25 Pa. Code § 90.157 (relating to revegetation: mulching); 25 Pa. Code § 90.160 (relating to revegetation: techniques and frequency of measurement); 25 Pa. Code § 90.165 (relating to prime farmland: revegetation); and 25 Pa. Code § 90.305 (relating to application approval or denial).

### § 90.160. Revegetation: techniques and frequency of measurement.

The coal refuse disposal permittee shall conduct periodic measurements of vegetation to identify conditions during the applicable periods of responsibilities

specified in § 90.159 (relating to revegetation: standards for successful revegetation). The permittee shall report the findings of these measurements to the Department.

#### Source

The provisions of this § 90.160 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 90.33 (relating to reclamation plan); 25 Pa. Code § 90.100 (relating to nutrients and soil amendments); 25 Pa. Code § 90.105 (relating to stream channel diversions); 25 Pa. Code § 90.108 (relating to hydrologic balance: sedimentation ponds); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.150 (relating to protection of fish, wildlife and related environmental values).

### § 90.161. Prime farmland: special requirements.

(a) When the coal refuse disposal activities are being conducted on prime farmland historically used for cropland, a permit for the mining and reclamation operation may be granted by the Department if it first finds, in writing and after consultation with the Soil Conservation Service, that the applicant has demonstrated that:

(1) The approved postdisposal land use of this prime farmland will result in the land restored to a condition of being used for cropland.

(2) The applicant has the technological capability to restore the prime farmland, within a reasonable time, to equivalent or higher levels of yield as nondisposal prime farmland in surrounding areas under equivalent levels of management.

(3) The proposed reclamation will be conducted in compliance with the requirements of this section and §§ 90.162—90.165.

(b) If a permit is granted under this section, the permit shall be specifically conditioned as containing the plan submitted under § 90.33 (relating to reclamation plan), including any revisions to that plan suggested by the United States Soil Conservation Service.

(c) Areas where coal refuse disposal activities were authorized by permits issued under The Clean Streams Law (35 P. S. §§ 691.1—691.1001) and the Clean Air Act (42 U.S.C.A. §§ 7401—7642) prior to August 3, 1977, are exempt from the prime farmland requirements.

#### Source

The provisions of this § 90.161 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 86.159 (relating to self-bonding); 25 Pa. Code § 90.45 (relating to prime farmland); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); and 25 Pa. Code § 90.151 (relating to revegetation: general requirements).

**§ 90.162. Prime farmland: soil removal.**

(a) Soil materials to be used in the reconstruction of the prime farmland soil shall be removed before drilling, blasting or mining, in accordance with this section and in a manner that prevents mixing or contaminating these materials with undesirable material. Soil materials shall be removed in a manner that does not result in air and water pollution.

(b) The entire A horizon shall be separately removed from other soil and overburden materials.

(c) The B horizon, a combination of the B horizon and underlying C horizon, or other suitable soil material which will create a reconstructed soil of equal or greater productive capacity than that which existed before mining shall be separately removed from other topsoil and overburden materials.

(d) The underlying C horizons, other strata or a combination of horizons or other strata to be used instead of the B horizon, shall be separately removed from the topsoil and overburden materials. When replaced, these combinations shall be equal to, or more favorable for plant growth than, the B horizon.

(e) The minimum depth of soil and soil material to be removed for use in reconstruction of prime farmland soils shall be sufficient to meet the soil replacement requirements of § 90.164(a) (relating to prime farmland: soil replacement).

**Source**

The provisions of this § 90.162 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 86.159 (relating to self-bonding); 25 Pa. Code § 90.45 (relating to prime farmland); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.151 (relating to revegetation: general requirements); 25 Pa. Code § 90.161 (relating to prime farmland: special requirements); 25 Pa. Code § 90.163 (relating to prime farmland: soil stockpiling); and 25 Pa. Code § 90.164 (relating to prime farmland: soil replacement).

**§ 90.163. Prime farmland: soil stockpiling.**

If not utilized immediately, the A horizon specified in § 90.162(b) (relating to prime farmland: soil removal) and the B horizon or other suitable soil materials specified in § 90.162(c) and (d) shall be stored separately from each other and from spoil. These stockpiles shall be placed within the permit area where they are not disturbed or exposed to excessive water or wind erosion before the stockpiled horizons can be redistributed. Stockpiles in place for more than 30 days shall meet the requirements of § 90.98 (relating to topsoil: storage).

**Source**

The provisions of this § 90.163 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 86.159 (relating to self-bonding); 25 Pa. Code § 90.45 (relating to prime farmland); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.151 (relating to revegetation: general requirements); and 25 Pa. Code § 90.161 (relating to prime farmland: special requirements).

**§ 90.164. Prime farmland: soil replacement.**

(a) The minimum depth of soil and soil material to be reconstructed for prime farmland shall be 48 inches, or a depth equal to the depth of a subsurface horizon in the natural soil that inhibits root penetration, whichever is shallower. The Department may specify a depth greater than 48 inches, whenever necessary to restore productive capacity due to uniquely favorable soil horizons at greater depths. Soil horizons shall be considered as inhibiting root penetration if their densities, chemical properties or water-supplying capacities restrict or prevent penetration by roots of plants common to the vicinity of the permit area and have little or no beneficial effect on soil productive capacity.

(b) Soil material shall be replaced only on land which has been first returned to final grade and scarified according to § 90.122 (relating to coal refuse disposal), unless site-specific evidence is provided to and approved by the Department showing that scarification will not enhance the capability of the reconstructed soil to achieve equivalent or higher levels of yield.

(c) The soil horizons or other suitable soil material shall be replaced in a manner that avoids excessive compaction and creates a reconstructed soil of equal or greater productive capacity than that which existed before mining.

(d) The B horizon or other suitable material specified in § 90.162(c) and (d) (relating to prime farmland: soil removal) shall be replaced to the thickness needed to meet the requirements of subsection (a).

(e) The A horizon specified in § 90.162(b) shall be replaced as the final surface soil layer. This surface soil layer shall equal or exceed the thickness of the original soil, as determined in § 90.45 (relating to prime farmland), and be replaced in a manner that protects the surface layer from wind and water erosion before it is seeded or planted.

(f) Nutrients and soil amendments shall be applied as needed to quickly establish vegetative growth.

**Source**

The provisions of this § 90.164 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Cross References**

This section cited in 25 Pa. Code § 86.159 (relating to self-bonding); 25 Pa. Code § 90.45 (relating to prime farmland); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.151 (relating to revegetation: general requirements); 25 Pa. Code § 90.161 (relating to prime farmland: special requirements); and 25 Pa. Code § 90.162 (relating to prime farmland: soil removal).

**§ 90.165. Prime farmland: revegetation.**

(a) A vegetative cover capable of stabilizing the soil surface with respect to erosion shall be established following soil replacement. All vegetation shall be in compliance with the plan approved by the Department under § 90.45 (relating to prime farmland) and carried out in a manner that encourages prompt vegetative cover and recovery of productive capacity. The timing and mulching provisions of §§ 90.151 and 90.157 (relating to revegetation: general requirements; and revegetation: mulching) shall be met.

(b) Within a time period specified in the permit, but not to exceed 10 years after completion of coal refuse disposal activities, any portion of the permit area which is prime farmland must have the capabilities of being used for crops commonly grown on surrounding prime farmland. When used for cropland, crops may be grown in rotation with hay or pasture crops as defined for cropland. The Department may approve a crop use of perennial plants for hay, when this is a common long-term use of prime farmland soils in the surrounding area. The level of management shall be equivalent to that on which the target yields are based.

(c) Standards for determining success of restoration on prime farmland soils shall be based upon the soil surveys and soil interpretations and the latest yield data available from the United States Department of Agriculture Soil Conservation Service.

(1) If crops are grown, standards for determining the success of restoration shall be based on crop yields. The current estimated yields under equivalent levels of management for each soil map unit and for each crop shall be used by the Department as the predetermined target level for determining success of revegetation. The target yields may be adjusted by the Department in consultation with the Secretary of the Department of Agriculture before approval of the permit application. The crop productivity or yield of the mined area shall be compared to the predetermined target level. The following standards shall be met:

(i) Average annual crop production shall be determined based upon a minimum of three years data. Crop production shall be measured for the three years prior to release of bonding according to Chapter 86 Subchapter E (relating to coal exploration).

(ii) Adjustment for weather-induced variability in the annual crop production may be permitted by the Department.

(iii) Restoration of prime farmland shall be considered a success when the adjusted 3-year average annual crop production is equivalent to, or higher

than, the predetermined target level of crop production specified in the permit in accordance with § 90.45.

(2) If crops are not grown, standards for determining success of restoration shall be based on a soil survey in addition to meeting the standards of § 90.159(b) (relating to revegetation: standards for successful revegetation). The permittee shall demonstrate to the Department that the prime farmland soil has been restored to a capability of equivalent or higher levels of yield as nonmined prime farmland of the same soil type in the surrounding area. The demonstration shall consider erodability, moisture-holding capacity, permeability, depth, texture, pH and any other factors deemed relevant by the Department for determining quality of the restored soils as prime farmland.

(d) In all cases, soil productivity for prime farmlands shall be returned to equivalent levels of yield as nonmined land of the same soil type in the surrounding area under equivalent management practices as determined from the soil survey performed under § 90.22 (relating to prime farmland investigation).

#### Source

The provisions of this § 90.165 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

#### Cross References

This section cited in 25 Pa. Code § 86.151 (relating to period of liability); 25 Pa. Code § 86.159 (relating to self-bonding); 25 Pa. Code § 90.45 (relating to prime farmland); 25 Pa. Code § 90.122 (relating to coal refuse disposal); 25 Pa. Code § 90.125 (relating to coal refuse disposal: construction requirements); 25 Pa. Code § 90.151 (relating to revegetation: general requirements); and 25 Pa. Code § 90.161 (relating to prime farmland: special requirements).

### § 90.166. Postdisposal land use.

(a) Prior to the release of land from permit area in accordance with Chapter 86, Subchapter F (relating to bonding and insurance requirements), all affected areas shall be restored in a timely manner to conditions that are capable of supporting the uses which they were capable of supporting before any coal refuse disposal activities, or to higher or better uses achievable under criteria and procedures of this section.

(b) The predisposal use of land to which the postdisposal land use is compared shall be determined by the following:

(1) The postdisposal land use for land that has not been previously mined or had coal refuse disposal activities and has been properly managed shall be judged on the basis of those uses which the land previously supported.

(2) The postdisposal land use for land that has been previously mined and not reclaimed shall be judged on the basis of the condition prior to any mining, including disposal, or the highest and best use that can be achieved and is compatible with surrounding areas.

(c) Alternative land uses may be approved by the Department after consultation with the landowner or the land management agency having jurisdiction over the lands and after determining that the following criteria are met:

(1) The proposed postdisposal land use is compatible with adjacent land use and applicable land use policies, plans, and programs and Federal, State and local law. A written statement of the views of the authorities with statutory responsibilities for land use policies and plans is submitted to the Department before coal refuse disposal activities begin. Any required approval, including any necessary zoning or other changes required for land use by local, State or Federal land management agencies, is obtained and remains valid throughout the coal refuse disposal activities.

(2) The owner of the surface requests in a notarized written statement that the alternative land use be approved.

(3) The proposed postmining land use is reasonably likely to be achieved which may be demonstrated by one or more of the following or other similar criteria:

(i) Specific plans are prepared and submitted to the Department which show the feasibility of the postdisposal land use as related to projected land use trends and markets. The plan shall include a schedule showing how the proposed use will be developed and achieved within a reasonable time after coal refuse disposal activities are completed and how the development will be sustained. The Department may require appropriate demonstrations to show that the planned procedures are feasible, reasonable and integrated with coal refuse disposal activities, and that the plans will result in successful reclamation.

(ii) Provision for necessary public facilities is ensured as evidenced by letters of commitment from parties other than the person who conducts coal refuse disposal activities, as appropriate, to provide the public facilities in a manner compatible with the plans submitted under § 86.34 (relating to informal conferences). The letters shall be submitted to the Department before coal refuse disposal activities begin.

(iii) Specific and feasible plans are submitted to the Department which show that financing, attainment and maintenance of the postdisposal land use are feasible and, if appropriate, are supported by letters of commitment from parties other than the person who conducts the coal refuse disposal activities.

(4) The proposed use will not present an actual or potential threat to public health or safety or of water diminution, interruption, contamination or pollution.

(5) The use will not involve unreasonable delays in reclamation.

(6) Necessary approval of measures to prevent or mitigate adverse effects on fish, wildlife and related environmental values and threatened or endangered plants is obtained from the Department, and appropriate State and Federal fish

and wildlife management agencies have been provided a 30-day period to review the plan before coal refuse disposal activities begin.

**Source**

The provisions of this § 90.166 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended May 8, 1998, effective May 9, 1998, 28 Pa.B. 2227. Immediately preceding text appears at serial pages (208002) to (208004).

**Cross References**

This section cited in 25 Pa. Code § 86.37 (relating to criteria for permit approval or denial); 25 Pa. Code § 86.172 (relating to criteria for release of bond); 25 Pa. Code § 86.174 (relating to standards for release of bonds); 25 Pa. Code § 90.31 (relating to general requirements); 25 Pa. Code § 90.34 (relating to reclamation: postdisposal land use); 25 Pa. Code § 90.140 (relating to haul roads and access roads: restoration); 25 Pa. Code § 90.154 (relating to revegetation: agriculture crops); and 25 Pa. Code § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas).

**§ 90.167. Cessation of operations: temporary.**

(a) As soon as it is known that the operation will temporarily cease for more than 30 days, the operator shall submit a notice of intention, in writing, to temporarily cease the operation. The notice shall include a statement of the exact number of acres that will have been affected in the permit area, the extent and kind of reclamation of those areas, and identification of the disposal, regrading, revegetation, monitoring and water treatment activities which will continue during the temporary cessation.

(b) Temporary cessation of an operation may not exceed 90 days unless the Department approves a longer period for reasons of seasonal shutdown or labor strike.

(c) Temporary cessation does not relieve the operator of the obligation to comply with any provisions of the permit.

(d) The operator shall install the system for preventing precipitation from contacting the coal refuse when the temporary cessation exceeds 90 days. The Department may approve a longer period, not to exceed 1 year, for reasons of a labor strike or business necessity.

**Source**

The provisions of this § 90.167 adopted December 19, 1980, 10 Pa.B. 4789, effective July 31, 1982, 12 Pa.B. 2382; amended July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382; amended July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735. Immediately preceding text appears at serial page (244314).

**Cross References**

This section cited in 25 Pa. Code § 90.50 (relating to design criteria: groundwater and surface water protection system).



**§ 90.168. Cessation of operations: permanent.**

Operations that are permanently ceased shall be backfilled or closed or otherwise permanently reclaimed in accordance with this chapter and the permit. All underground openings, equipment, structures or other facilities not required for monitoring, unless approved by the Department as suitable for the postmining land use, shall be removed and the affected land reclaimed.

**Source**

The provisions of this § 90.168 adopted July 30, 1982, 12 Pa.B. 2473, effective July 31, 1982, 12 Pa.B. 2382.

**Subchapter E. SITE SELECTION**

Sec.

- 90.201. Definitions.
- 90.202. General requirements.
- 90.203. Proposing a preferred site.
- 90.204. Proposing an alternate site.
- 90.205. Alternatives analysis.
- 90.206. Disapproval of a proposed site.
- 90.207. Approval of a selected site.

**Source**

The provisions of this Subchapter E adopted July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735, unless otherwise noted.

**Cross References**

This subchapter cited in 25 Pa. Code § 88.281 (relating to requirements); 25 Pa. Code § 90.5 (relating to site selection and permitting); 25 Pa. Code § 90.45 (relating to prime farmland); and 25 Pa. Code § 90.49 (relating to stream buffer zone variance).

**§ 90.201. Definitions.**

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

*Preferred site*—A watershed polluted by acid mine drainage; a watershed containing an unreclaimed surface mine but which has no mining discharge; a watershed containing an unreclaimed surface mine with discharges that could be improved by the proposed coal refuse disposal operation; unreclaimed coal refuse disposal piles that could be improved by the proposed coal refuse disposal operation; or other unreclaimed areas previously affected by mining activities.

*Search area*—The geographic area within a 1-mile radius of an existing coal preparation facility or the 25-square mile geographic area encompassing a proposed coal preparation facility.

*Selected site*—A location selected by the applicant and approved by the Department under this subchapter for which the applicant can then apply for a permit to conduct coal refuse disposal activities.

**§ 90.202. General requirements.**

(a) A preferred site shall be used for coal refuse disposal unless the applicant demonstrates to the Department that an alternate site is more suitable based upon engineering, geology, economics, transportation systems, and social factors and is not adverse to the public interest.

(b) The applicant is required to determine whether the search area contains a preferred site.

(1) For a new coal refuse disposal area that will support an existing coal preparation facility, the applicant shall examine the geographic area within a 1-mile radius of the existing coal preparation facility.

(2) For a proposed coal refuse disposal area that will support a proposed coal preparation facility, the applicant shall examine a 25-square mile geographic area encompassing the proposed coal preparation facility. In defining the 25-square mile area, consideration shall be given to environmental, technical, transportation, economic and social factors where applicable.

(c) If there are no preferred sites located within the search area, the applicant shall conduct a comparative analysis of the potential coal refuse disposal sites in accordance with § 90.204(b) (relating to proposing an alternate site).

(d) The Department will not approve a site proposed by the applicant for coal refuse disposal activities when the Department finds that the adverse environmental impacts of using the site for coal refuse disposal activities would clearly outweigh the public benefits.

(e) Except on preferred sites, the Department will not approve coal refuse disposal on or within any of the following areas:

(1) Prime farmlands.

(2) An exceptional value watershed as defined under Chapter 93 (relating to water quality standards).

(3) Sites known to contain threatened or endangered animals listed exclusively under the Commonwealth's protection programs.

(4) An area that is hydrologically connected to and contributes at least 5% of the drainage to wetlands designated as exceptional value under Chapter 105 (relating to dam safety and waterway management) unless a larger percentage contribution is authorized by the Department after consultation with the Fish and Boat Commission.

(5) A watershed less than 4 square miles in area upstream of the intake of a public water supply.

(6) A watershed less than 4 square miles in area upstream of the upstream limit of a public recreational impoundment.

(7) Sites known to contain Federally listed threatened or endangered plants or animals. At preferred sites known to contain Federally listed threatened or endangered species, approval will be granted only when the Department concludes and the United States Fish and Wildlife Service concurs that the proposed activity is not likely to adversely affect Federally listed threatened or endangered species or result in the take of Federally listed threatened or endangered species in violation of section 9 of the Endangered Species Act of 1973 (16 U.S.C.A. § 1538).

(f) As part of the site selection process, an applicant may request approval for more than one site. The Department will evaluate each site proposed for coal refuse disposal and, if the Department finds that a proposed site meets the requirements of this subchapter, it will designate it as an approved site. The applicant will then have the option of choosing a selected site from among the approved sites and submitting an application for coal refuse disposal for that site.

#### Cross References

This section cited in 25 Pa. Code § 90.203 (relating to proposing a preferred site); 25 Pa. Code § 90.204 (relating to proposing an alternate site); and 25 Pa. Code § 90.205 (relating to alternatives analysis).

#### § 90.203. Proposing a preferred site.

If the applicant proposes to use a preferred site, the Department will approve the proposed site subject to § 90.202(c) (relating to general requirements) provided the applicant demonstrates that the attendant adverse environmental impacts will not clearly outweigh the public benefits.

#### § 90.204. Proposing an alternate site.

(a) Where a preferred site exists within the search area, but the applicant proposes an alternate site, the applicant shall:

(1) Demonstrate that the alternate site is more suitable, using criteria in § 90.202(a) (relating to general requirements), than all preferred sites within the search area.

(2) Identify other alternate sites considered and provide the basis for the rejection of these sites.

(3) Based on reasonably available data, demonstrate that it is the most suitable site based on environmental, economic, technical, transportation and social factors.

(b) If a preferred site does not exist within the search area, the applicant shall:

(1) Identify all the sites considered within the search area and provide the basis for their consideration.

(2) Provide the basis for the rejection of considered sites.

(3) Based on reasonably available data, demonstrate to the Department that the proposed site is the most suitable based on environmental, economic, technical, transportation and social factors.

**Cross References**

This section cited in 25 Pa. Code § 90.202 (relating to general requirements); and 25 Pa. Code § 90.205 (relating to alternative analysis).

**§ 90.205. Alternatives analysis.**

The alternatives analysis required by §§ 90.202(b) and 90.204 (relating to general requirements; and proposing an alternate site) satisfies the requirement for an alternatives analysis under the Dam Safety and Encroachments Act (32 P.S. §§ 693.1—693.27) and regulations promulgated thereunder. See Chapter 105 (relating to dam safety and waterway management).

**§ 90.206. Disapproval of a proposed site.**

If the Department disapproves the applicant's proposed site, the applicant may submit a new proposal supporting the selection of another site located either within or outside of the search area.

**§ 90.207. Approval of a selected site.**

Department approval of a selected site does not indicate the Department will approve an application for coal refuse disposal activities for the selected site.

**Subchapter F. COAL REFUSE DISPOSAL ACTIVITIES ON AREAS  
WITH PRE-EXISTING POLLUTIONAL DISCHARGES**

Sec.	
90.301.	Scope.
90.302.	Definitions.
90.303.	Applicability.
90.304.	Application for authorization.
90.305.	Application approval or denial.
90.306.	Operational requirements.
90.307.	Treatment of discharges.
90.308.	Request for bond release.
90.309.	Criteria and schedule for release of bonds on pollution abatement areas.
90.310.	Effluent limitations.
90.311.	Baseline determination and compliance monitoring for pre-existing discharges at remining operations.
90.312.	Procedure for calculating and applying a single-observation (monthly) trigger.
90.313.	Procedure for calculating and applying an annual trigger.

**Source**

The provisions of this Subchapter F adopted July 13, 2001, effective July 14, 2001, 31 Pa.B. 3735, unless otherwise noted.

**Cross References**

This subchapter cited in 25 Pa. Code § 86.162c (relating to Bioenergy Crop Bonding); 25 Pa. Code § 88.281 (relating to requirements); and 25 Pa. Code § 95.10 (relating to treatment requirements for new and expanding mass loadings of Total Dissolved Solids (TDS)).

**§ 90.301. Scope.**

(a) This subchapter specifies procedures and rules applicable to those who seek authorization to engage in coal refuse disposal activities on an area on which there are preexisting pollutional discharges resulting from previous mining and describes the terms and conditions under which the Department may release bonds to operators who have received authorization.

(b) Chapter 86 (relating to surface and underground coal mining: general) and Subchapters A—D apply to authorizations to mine areas with preexisting pollutional discharges except as specifically modified by this subchapter.

**§ 90.302. Definitions.**

The following words and terms, when used in this subchapter, have the following meanings, unless the context clearly indicates otherwise:

*Actual improvement*—The reduction of the baseline pollution load resulting from the implementation of the approved pollution abatement plan; except that any reduction of the baseline pollution load achieved by water treatment may not be considered as actual improvement provided that treatment approved by the Department of the coal refuse before, during or after placement in the coal refuse disposal area will not be considered to be water treatment.

*Baseline pollution load*—The characterization of the pollutional material being discharged from or on the pollution abatement area, described in terms of mass discharge for each parameter deemed relevant by the Department, including seasonal variations and variations in response to precipitation events. The Department will establish in each authorization the specific parameters it deems relevant for the baseline pollution load, including, at a minimum, iron and acid loadings.

*Best professional judgment*—The highest quality technical opinion forming the basis for the terms and conditions of the treatment level required after consideration of all reasonably available and pertinent data. The treatment levels shall be established by the Department under sections 301 and 402 of the Federal Clean Water Act (33 U.S.C.A. §§ 1311 and 1342).

*Best technology*—Measures and practices which will abate or ameliorate, to the maximum extent possible, discharges from or on the pollution abatement area. These measures include engineering, geochemical or other applicable practices.

*Coal refuse disposal activities*—

(i) The storage, dumping or disposal of any waste coal, rock, shale, slurry, culm, gob, boney, slate, clay, underground development wastes, coal processing wastes, excess soil and related materials, associated with or near a coal seam, that are either brought above ground or otherwise removed from a coal mine in the process of mining coal or are separated from coal during the cleaning or preparation operations.

(ii) The term does not include the removal or storage of overburden from surface mining activities.

*Coal remining operation*—A coal mining operation at a site on which coal mining was previously conducted and where the site has been abandoned or the performance bond has been forfeited.

*Encountered discharge*—

(i) A pre-existing discharge intercepted in the course of active surface mining activities, including, but not limited to, overburden removal, coal extraction and backfilling, or that occurs in the pit, any mining-related conveyance, sedimentation pond or treatment pond.

(ii) the term does not include diversions of surface water and shallow groundwater flow from areas undisturbed by the implementation of the pollution abatement plan which would otherwise drain into the affected area so long as they are designed, operated and maintained in accordance with § 90.104(b)—(g) (relating to hydrologic balance: diversions).

*Excess soil and related material*—

(i) Rock, clay or other material located immediately above or below a coal seam and which are extracted from a coal mine during the process of mining coal.

(ii) The term does not include topsoil or subsoil.

*Pollution abatement area*—

(i) The part of the permit area that is causing or contributing to the baseline pollution load.

(ii) The term includes adjacent and nearby areas that must be affected to bring about significant improvements of the baseline pollution load and may include the immediate locations of the discharges.

*Pollution abatement plan*—Best management practices (BMP), including, but not limited to, the addition of alkaline material, special handling plans for managing toxic and acid forming material, regrading, revegetation and daylighting, that when implemented will result in reduction of the baseline pollution load.

*Pre-existing discharge*—

(i) Any discharge resulting from mining activities that have been abandoned prior to the time of a remining permit application.

(ii) The term includes a pre-existing discharge that is relocated as a result of the implementation BMPs in the pollution abatement plan.

*Steep slope*—

(i) Any slope, including abandoned mine land features, above 20 degrees or a lesser slope as may be defined by the Department after consideration of soil, climate and other characteristics of a region.

(ii) The term does not apply to situations in which an operator is mining on flat or gently rolling terrain, on which an occasional steep slope is

encountered and through which the mining operation is to proceed, leaving a plain or predominantly flat area.

**Authority**

The provisions of this § 90.302 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

**Source**

The provisions of this § 90.302 amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial pages (281275) to (281276).

**§ 90.303. Applicability.**

(a) Authorization may be granted under this subchapter when the authorization is part of the following:

(1) A permit issued after February 6, 1995, but only if the authorization request is made during one of the following periods:

(i) At the time of the submittal of the permit application for the coal refuse disposal activities, including the proposed pollution abatement area.

(ii) Prior to a Department decision to issue or deny that permit.

(2) A permit revision under § 86.52 (relating to permit revisions), but only if the operator affirmatively demonstrates to the satisfaction of the Department that:

(i) The operator has discovered pollutional discharges within the permit area that came into existence after its permit application was approved.

(ii) The operator has not caused or contributed to the pollutional discharges.

(iii) The proposed pollution abatement area is not hydrologically connected to an area where coal refuse disposal activities have been conducted under the permit.

(iv) The operator has not affected the proposed pollution abatement area by coal refuse disposal activities.

(v) The Department has not granted a bonding authorization and mining approval for the area under § 86.37(b) (relating to criteria for permit approval or denial).

(b) Notwithstanding subsection (a), authorization will not be granted under this subchapter for repermitting under §§ 86.12 and 86.14 (relating to continued operation under interim permits; and permit application filing deadlines), permit renewals under § 86.55 (relating to permit renewals: general requirements) or permit transfers under § 86.56 (relating to transfer of permit).

(c) This subchapter applies to pre-existing discharges that are located within or are hydrologically connected to pollution abatement areas of a coal remining operation.

(d) When a coal remining operation seeks reissuance of an existing remining permit with best professional judgment limitations and the Department determines that it is not feasible for a remining operator to re-establish baseline pollutant levels in accordance with the statistical procedures in this subchapter, pre-existing discharge limitations at the existing remining operation remain subject to baseline pollutant levels established during the original permit application.

#### Authority

The provisions of this § 90.303 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.303 amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial page (281276).

### § 90.304. Application for authorization.

(a) An operator who requests authorization under this subchapter shall comply with the permit application requirements of Chapter 86 (relating to surface and underground coal mining: general) and Subchapters A—D, except as specifically modified by this subchapter. The operator shall also:

(1) Delineate on a map the proposed pollution abatement area, including the location of the pre-existing discharges.

(2) Provide a description of the hydrologic balance for the proposed pollution abatement area that includes:

(i) Results of a detailed water quality and quantity monitoring program, including seasonal variations, variations in response to precipitation events and modeled baseline pollution loads using this monitoring program.

(ii) Monitoring for flow, pH, alkalinity, acidity, total iron, total manganese, total aluminum, sulfates, total suspended solids and other water quality parameters the Department deems relevant.

(3) Provide a pollution abatement plan which must:

(i) Describe the pollution abatement area.

(ii) Be designed to reduce the pollution load from pre-existing discharges and must identify the selected best management practices (BMP) to be used.

(iii) Describe the design specifications, construction specifications, maintenance schedules, criteria for monitoring and inspection, and expected performance of the BMPs.

(iv) Represent best technology and include:

(A) Plans, cross-sections and schematic drawings describing the pollution abatement plan proposed to be implemented.



(B) A description and explanation of the range of abatement level that is anticipated to be achieved, costs and each step in the proposed pollution abatement plan.

(C) A description of the standard of success for revegetation necessary to insure success of the pollution abatement plan.

(v) Provide a description of and information on the pre-existing discharges hydrogeologically connected to the remaining area.

(4) Determine the baseline pollution load.

(5) Provide background data that are the bases for the baseline pollution load. The baseline pollution load shall be reported in pounds per day.

(b) The operator seeking this authorization may continue the water quality and quantity monitoring program required by subsection (a)(2) after making the authorization request. The operator may submit the results of this continuing monitoring program to the Department on a monthly basis until a decision on the authorization request is made.

#### Authority

The provisions of this § 90.304 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.304 amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial pages (281276) and (378241).

### § 90.305. Application approval or denial.

(a) Authorization may not be granted under this subchapter unless the operator seeking the authorization affirmatively demonstrates the following to the satisfaction of the Department on the basis of information in the application:

(1) Neither the operator, nor an officer, principal shareholder, agent, partner, associate, parent corporation, subsidiary or affiliate, sister corporation, contractor or subcontractor, or a related party as defined in § 86.1 (relating to definitions) has either of the following:

(i) Legal responsibility or liability as an operator for treating the water pollution discharges from or on the proposed pollution abatement area.

(ii) Statutory responsibility or liability for reclaiming the proposed pollution abatement area.

(2) The proposed pollution abatement plan will result in significant reduction of the baseline pollution load and represents best technology.

(3) The land within the proposed pollution abatement area can be reclaimed.

- (4) The coal refuse disposal activities on the proposed pollution abatement area will not cause additional surface water pollution or groundwater degradation.
- (5) The standard of success for revegetation will be achieved. The standard of success for revegetation for sites previously reclaimed to the standards of this chapter and Chapters 87 and 88 (relating to surface mining of coal; and anthracite coal) shall be the standards set forth in § 90.159 (relating to revegetation: standards for successful revegetation). The standard of success for revegetation for sites not previously reclaimed to the standards of this chapter and Chapters 87 and 88 shall be, at a minimum, the following, provided the site is not a bond forfeiture site where the forfeited money paid into the fund is sufficient to reclaim the forfeited site to the applicable standards:
- (i) A ground cover of living plants not less than can be supported by the best available topsoil or other suitable material in the reaffected area.
  - (ii) A ground cover no less than that existing before disturbance of the area by coal refuse disposal activities.
  - (iii) Adequate vegetation to control erosion. Vegetation may be no less than that necessary to insure the success of the pollution abatement plan.
- (6) The coal refuse disposal activities on permitted areas other than the proposed pollution abatement area will not cause surface water pollution or groundwater degradation.
- (7) Requirements of § 86.37(a) (relating to criteria for permit approval or denial) that are consistent with this section have been met.
- (b) An authorization may be denied under this subchapter if granting the authorization will, or is likely to, affect a legal responsibility or liability under The Clean Streams Law (35 P.S. §§ 691.1—691.1001), the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.1—1396.19b), Chapter 86 (relating to surface and underground coal mining: general) or Subchapters A—D, for the proposed pollution abatement area or other areas or discharges in the vicinity of the proposed pollution abatement area.
- (c) Authorization may not be granted under this subchapter unless there are one or more pre-existing discharges from or on the pollution abatement area.
- (d) The authorization allowed under this subchapter is only for the pollution abatement area and does not apply to other areas of the permit.

#### Authority

The provisions of this § 90.305 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

**Source**

The provisions of this § 90.305 amended August 21, 2015, effective August 22, 2015, 45 Pa.B. 4904; amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial pages (378241) to (378242).

**Cross References**

This section cited in 25 Pa. Code § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas).

**§ 90.306. Operational requirements.**

An operator who receives an authorization under this subchapter shall comply with Chapter 86 (relating to surface and underground coal mining: general) and Subchapters A—D except as specifically modified by this subchapter. The operator shall also:

- (1) Implement the approved water quality and quantity monitoring program for the pollution abatement area until the requirements of § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas) are met. The monitoring program must conform to the following:
  - (i) Sampling shall be conducted on a monthly basis for the pre-existing discharges and should adequately represent the seasonal range in loading rates as well as the median loading rate from each pre-existing discharge or combination of discharges.
  - (ii) Results shall be submitted on a quarterly basis.
  - (iii) Data must include the flow measurements and loading calculations.
- (2) Implement the approved pollution abatement plan.
- (3) Notify the Department when more frequent sampling is required.
  - (i) Weekly sampling of the pre-existing discharges shall begin if any two consecutive monthly samples of pollution load at any of the monitoring points or hydrologic units exceed one or more of the triggers established by the baseline data.
  - (ii) Weekly sampling requirements shall continue until two consecutive weekly sample analyses indicate that all parameters which triggered weekly sampling have dropped below the trigger established by the baseline data.

**Authority**

The provisions of this § 90.306 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

**Source**

The provisions of this § 90.306 amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial pages (378242) and (281279).

**Cross References**

This section cited in 25 Pa. Code § 90.307 (relating to treatment of discharges); and 25 Pa. Code § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas).

**§ 90.307. Treatment of discharges.**

(a) Except for pre-existing discharges that are not encountered during coal refuse disposal activities or the implementation of the pollution abatement plan, the operator shall comply with § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

(b) Except as provided in § 90.310(d) (relating to effluent limitations), the operator shall treat the pre-existing discharges that are not encountered during coal refuse disposal activities or implementation of the pollution abatement plan to comply with the effluent limitations established by best professional judgment. The effluent limitations established by best professional judgment may not be less than the baseline pollution load. If the baseline pollution load, when expressed as a concentration for a specific parameter, satisfies the effluent limitation in § 90.102 for that parameter, the operator shall treat the pre-existing discharge for that parameter to comply with either effluent limitations established by best professional judgment or the effluent limitations in § 90.102.

(c) For purposes of subsections (a) and (b), the term encountered may not be construed to mean diversions of surface water and shallow groundwater flow from areas undisturbed by the implementation of the pollution abatement plan that would otherwise drain into the affected area, as long as the diversions are designed, operated and maintained under § 90.104(b)—(h) (relating to hydrologic balance: diversions).

(d) An operator required to treat pre-existing discharges will be allowed to discontinue treating the discharges under subsection (b) when the operator affirmatively demonstrates the following to the Department's satisfaction:

(1) The pre-existing discharges are meeting the effluent limitations established by subsection (b) as shown by groundwater and surface water monitoring conducted by the operator or the Department.

(2) Coal refuse disposal activities under the permit—including the pollution abatement area—are being or were conducted under the requirements of the permit and the authorization, and Chapter 86 (relating to surface and underground mining: general) and this chapter except as specifically modified by this subchapter.

(3) The operator has implemented each step of the pollution abatement plan as approved in the authorization.

(4) The operator did not cause or allow additional surface water pollution or groundwater degradation by re-affecting the pollution abatement area.

(e) If after discontinuance of treatment of discharges under subsection (d) the discharges fail to meet the effluent limitations established by subsection (b), the operator shall reinstitute treatment of the discharges under subsection (b). An

operator who reinstates treatment under this subsection will be allowed to discontinue treatment if the requirements of subsection (d) are met.

(f) Discontinuance of treatment under subsection (d) may not be deemed or construed to be or to authorize a release of bond under § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas).

(g) If four consecutive weekly determinations of pollution load, as required under § 90.306(3)(i) (relating to operational requirements), exceed one or more triggers, the permittee shall notify the Department and begin treatment within 30 days of the fourth sample in accordance with the treatment limits established in the permit.

(h) If the Department determines, through analysis of any data submitted pursuant to the monitoring requirements or any data collected by the Department, that there has been pollution loading degradation at any of the monitoring points or hydrologic units, the Department will notify the permittee accordingly. The permittee shall begin treatment within 30 days in accordance with the treatment limits established in the permit.

(i) Any pre-existing pollutorial discharge which is an encountered discharge shall be treated to the effluent limitations in the permit until the discharge is no longer encountered.

(j) For the purposes of determining applicable effluent limitations, a discharge will continue to be deemed to be an encountered discharge until the surface mining area which has been disturbed and which contributes to the discharge has been backfilled and regraded, and revegetation work has started.

#### Authority

The provisions of this § 90.307 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.307 amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial pages (281279) to (281280).

#### Cross References

This section cited in 25 Pa. Code § 90.309 (relating to criteria and schedule for release of bonds on pollution abatement areas).

### § 90.308. Request for bond release.

Sections 86.172(c) and 90.309 (relating to criteria for release of bond; and criteria and schedule for release of bonds on pollution abatement areas) apply to the release of bonds for pollution abatement areas authorized by this subchapter. Section 86.172(a), (b) and (d) is not applicable to the release of bonds.

**§ 90.309. Criteria and schedule for release of bonds on pollution abatement areas.**

(a) The Department will release up to 50% of the amount of bond for the authorized pollution abatement area if the applicant demonstrates and the Department finds the following:

(1) The coal refuse disposal activities were conducted on the permit area, including the pollution abatement area, under the requirements of the permit and the authorization, Chapter 86 (relating to surface and underground coal mining: general) and this chapter except as specifically modified by this subchapter.

(2) The operator has satisfactorily completed backfilling, grading, installing the water impermeable cover and drainage control in accordance with the approved reclamation plan.

(3) The operator has properly implemented each step of the pollution abatement plan approved and authorized under this subchapter.

(4) The operator has not caused degradation of the baseline pollution load at any time during the 6 months prior to the submittal of the request for bond release under this subsection and until the bond release is approved as shown by all groundwater and surface water monitoring conducted by the permittee under § 90.306(a)(1) (relating to operational requirements) or conducted by the Department.

(5) The operator has not caused or contributed to surface water pollution or groundwater degradation by re-affecting the pollution abatement area.

(b) The Department will release up to an additional 35% of the amount of bond for the authorized pollution abatement area but retain an amount sufficient to cover the cost to the Department of re-establishing vegetation if completed by a third party if the operator demonstrates and the Department finds the following:

(1) The operator has replaced the topsoil or material conserved under § 90.97 (relating to topsoil: removal), completed final grading, planting and established revegetation under the approved reclamation plan and achieved the standards of success for revegetation in § 90.305(a)(5) (relating to application approval or denial).

(2) The operator has not caused or contributed to groundwater or surface water pollution by re-affecting the pollution abatement area.

(3) The operator has achieved the following standards:

(i) Achieved the actual improvement of the baseline pollution load described in the approved pollution abatement plan as shown by groundwater and surface water monitoring conducted by the permittee for the time provided in the pollution abatement plan after completion of backfilling, final grading, drainage control, topsoiling and establishment of revegetation to achieve the standard for success in § 90.305(a)(5).

(ii) Achieved the following:

(A) At a minimum has not caused degradation of the baseline pollution load as shown by groundwater and surface water monitoring conducted by the operator or the Department for one of the following:

(I) For 12 months from the date of initial bond release under subsection (a), if backfilling, final grading, drainage control, placement of impermeable cover, topsoiling and establishment of revegetation to achieve the standard of success for revegetation in § 90.305(a)(5) have been completed.

(II) If treatment has been initiated at any time after initial bond release under subsection (a) and § 90.307(e) (relating to treatment of discharges), for 12 months from the date of discontinuance of treatment under § 90.307(d), if backfilling, final grading, drainage control, placement of impermeable cover, topsoiling and establishment of revegetation to achieve the standard of success for revegetation in § 90.305(a)(5) have been completed.

(B) Conducted all the measures provided in the approved pollution abatement plan and additional measures specified by the Department in writing at the time of initial bond release under subsection (a) for the area requested for bond release.

(C) Caused aesthetic or other environmental improvements and the elimination of public health and safety problems by engaging in coal refuse disposal activities and re-affecting the pollution abatement area.

(D) Stabilized the pollution abatement area.

(c) The Department will release the remaining portion of the amount of bond on the authorized pollution abatement area if the operator demonstrates and the Department finds the following:

(1) The operator has successfully completed the approved pollution abatement and reclamation plans, and the pollution abatement area is capable of supporting the postdisposal land use approved under § 90.166 (relating to postdisposal land use).

(2) The operator has complied with the permit and the authorization, Chapter 86 and this chapter, except as specifically modified by this subchapter.

(3) The operator has not caused degradation of the baseline pollution load from the time of bond release under subsection (b) or, if treatment has been initiated after bond release under subsection (b) in accordance with § 90.307(e) for 5 years from the discontinuance of treatment under § 90.307(d).

(4) The applicable liability period has expired under § 86.151 (relating to period of liability).

**Authority**

The provisions of this § 90.309 amended under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

**Source**

The provisions of this § 90.309 amended October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780. Immediately preceding text appears at serial pages (281280) to (281282).

**Cross References**

This section cited in 25 Pa. Code § 90.306 (relating to operational requirements); 25 Pa. Code § 90.307 (relating to treatment of discharges); and 25 Pa. Code § 90.308 (relating to request for bond release).

**§ 90.310. Effluent limitations.**

(a) *Approval and incorporation into permit.* The pollution abatement plan for the pollution abatement area must be approved by the Department and incorporated into the permit as an effluent limitation.

(b) *Implementation of best management practices.* The best management practices (BMP) in the pollution abatement plan shall be implemented as specified in the plan.

(c) *Pre-existing discharges.*

(1) Except as provided in subsection (d), the following effluent limits apply to pre-existing discharges:

<i>Parameter</i>	<i>Effluent Limit</i>
Total Iron	May not exceed baseline loadings (as determined by this subchapter).
Total Manganese	May not exceed baseline loadings (as determined by this subchapter).
Acidity, Net	May not exceed baseline loadings (as determined by this subchapter).
Suspended Solids	During remining and reclamation, may not exceed baseline loadings (as determined by this subchapter). Prior to bond release, the pre-existing discharge must meet the applicable standards for suspended solids or settleable solids in § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices).

(2) A pre-existing discharge is exempt from meeting standards in § 90.102 for suspended solids and settleable solids when the Department determines that the standards are infeasible or impractical based on the site-specific conditions



of soil, climate, topography, steep slopes or other baseline conditions provided that the operator demonstrates that significant reductions of suspended solids and settleable solids will be achieved through the incorporation of sediment control BMPs into the pollution abatement plan as required under subsection (a).

(d) *In-stream requirements.*

(1) If the Department determines that it is infeasible to collect samples for establishing the baseline pollutant levels under paragraph (4) and that remining will result in significant improvement that would not otherwise occur, the permit applicant shall establish an in-stream baseline concentration at a suitable point downstream from the remining operation, unless the Department waives the sampling requirement under paragraph (5) and the numeric effluent limitations in subsection (c)(1) do not apply.

(2) The in-stream baseline period must include, at a minimum, twice monthly monitoring for a minimum of a 1-year period and must adequately represent the seasonal range and median pollutant concentrations.

(3) Upon issuance of a surface mining permit, the operator shall continue, at a minimum, monthly monitoring of pollutant concentrations at the in-stream monitoring point referenced in paragraph (1), and make a determination as to whether or not there has been degradation of in-stream water quality.

(i) This determination shall be made on a quarterly basis and for each year defined as each consecutive 12-month period.

(ii) The operator is not required to treat individual pre-existing sources of pollution except as may be needed to maintain the in-stream baseline concentration.

(iii) Unless the operator can demonstrate to the satisfaction of the Department that the degradation was the result of factors that are not related to the remining, the operator shall treat one or more pre-existing pollutional discharges or undertake other pollution abatement measures to restore or improve the in-stream pollutant concentration to its baseline conditions.

(4) Pre-existing discharges for which it is infeasible to collect samples for determination of baseline pollutant levels include, but are not limited to:

(i) Discharges that exist as a diffuse groundwater flow that cannot be assessed by the collection of samples.

(ii) A base flow to a receiving stream that cannot be monitored separate from the receiving stream.

(iii) A discharge on a steep or hazardous slope that is inaccessible for sample collection.

(iv) A number of pre-existing discharges so extensive that monitoring of individual discharges is infeasible.

(5) When in-stream monitoring is not indicative of the impact of remining, the in-stream monitoring requirement may be waived by the Department.

In-stream monitoring is not indicative of the impact of remining in circumstances including, but not limited to, the following:

- (i) Remining sites in drainage areas exceeding 10 square miles.
  - (ii) Remining sites in watersheds where there are other influences on the in-stream water quality that make it impossible to establish the cause of water quality changes.
  - (iii) Remining sites where the  $Q_{7-10}$  stream flow is zero.
- (e) *Limits.* Pollutants for which there are not effluent limitations established in § 90.102 may be eligible for limits established under this subchapter.
- (f) *Applicability of standards.* Section 90.102 applies to a pre-existing discharge that is:
- (1) Intercepted by surface mining activities.
  - (2) Commingled with waste streams from operational areas for the purposes of water treatment.
- (g) *Cessation of applicability of standards.* Section 90.102 does not apply to a pre-existing discharge described in subsection (f) when the pre-existing discharge is no longer intercepted by surface mining activities or is no longer commingled with waste streams from operational areas for the purposes of water treatment.
- (h) *Bond release.* The effluent limitations in this subchapter apply to pre-existing discharges until bond release under the procedures in Chapter 86 (relating to surface and underground coal mining; general).

#### Authority

The provisions of this § 90.310 issued under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.310 adopted October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780.

#### Cross References

This section cited in 25 Pa. Code § 90.307 (relating to treatment of discharges).

### **§ 90.311. Baseline determination and compliance monitoring for pre-existing discharges at remining operations.**

- (a) The procedures in this section shall be used for determining site-specific baseline pollutant loadings, and for determining whether discharge loadings during coal remining operations have exceeded the baseline loading. A monthly (single-observation) procedure and an annual procedure shall be applied.
- (b) At least one sample result per month shall be obtained for 12 months to characterize pollutant loadings for:

- (1) Baseline determination.
- (2) Each annual monitoring period. It is required that at least one sample be obtained per month for 12 months.
- (c) Calculations described in this subchapter shall be applied to pollutant loadings.
- (d) Each loading value shall be calculated as the product of a flow measurement and pollutant concentration taken on the same date at the same discharge sampling point using standard units of flow and concentration.
- (e) If the baseline concentration in a baseline sample is below the daily maximum effluent limits established in § 90.102 (relating to hydrologic balance: water quality standards, effluent limitations and best management practices), the baseline sample concentration may be replaced with daily maximum effluent limit for the purposes of some of the statistical calculations in this subchapter.
- (f) The substituted values should be used for all methods in this subchapter except for:
  - (1) The calculation of the interquartile range (R) in Method 1 for the annual trigger (Step 3).
  - (2) Method 2 for the single observation trigger (Step 3).
- (g) The interquartile range (R) is calculated as the difference between the quartiles  $M_{-1}$  and  $M_1$ ; the values for quartiles  $M_{-1}$  and  $M_1$  should be calculated using actual loadings (based on measured concentrations) when they are used to calculate the interquartile range (R).

#### Authority

The provisions of this § 90.311 issued under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.311 adopted October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780.

### **§ 90.312. Procedure for calculating and applying a single-observation (monthly) trigger.**

- (a) This section contains two alternative methods for calculating a single-observation trigger. One method must be proposed by the applicant to be approved and applied by the Department for a remining permit.
- (b) Method 1 for calculating a single observation trigger (L) is accomplished by completing the following steps:
  - (1) Count the number of baseline observations taken for the pollutant of interest. Label this number n. To sufficiently characterize pollutant loadings during baseline determination and during each annual monitoring period, it is required that at least one sample result be obtained per month for 12 months.

- (2) Order all baseline loading observations from lowest to highest. Let the lowest number (minimum) be  $x_{(1)}$ , the next lowest be  $x_{(2)}$ , and so forth until the highest number (maximum) is  $x_{(n)}$ .
  - (3) If fewer than 17 baseline observations were obtained, the single observation trigger (L) will equal the maximum of the baseline observations ( $x_{(n)}$ ).
  - (4) If at least 17 baseline observations were obtained, calculate the median (M) of all baseline observations. If n is odd, then M equals  $x_{(n/2+1/2)}$ . If n is even, then M equals  $0.5 * (x_{(n/2)} + x_{(n/2+1)})$ .
  - (5) Next, calculate  $M_1$  as the median of the subset of observations that range from the calculated M to the maximum  $x_{(n)}$ ; that is, calculate the median of all x larger than or equal to M.
  - (6) Next, calculate  $M_2$  as the median of the subset of observations that range from the calculated  $M_1$  to  $x_{(n)}$ ; that is, calculate the median of all x larger than or equal to  $M_1$ .
  - (7) Next, calculate  $M_3$  as the median of the subset of observations that range from the calculated  $M_2$  to  $x_{(n)}$ ; that is, calculate the median of all x larger than or equal to  $M_2$ .
  - (8) Finally, calculate the single observation trigger (L) as the median of the subset of observations that range from the calculated  $M_3$  to  $x_{(n)}$ .
  - (9) When subsetting the data for each of the steps in paragraphs (5)—(8), the subset should include all observations greater than or equal to the median calculated in the previous step. If the median calculated in the previous step is not an actual observation, it is not included in the new subset of observations. The new median value will then be calculated using the median procedure, based on whether the number of points in the subset is odd or even.
- (c) The method for applying the single observation trigger (L) to determine when the baseline level has been exceeded is as follows:
- (1) If two successive monthly monitoring observations both exceed L, immediately begin weekly monitoring for 4 weeks (four weekly samples).
  - (2) If three or fewer of the weekly observations exceed L, resume monthly monitoring.
  - (3) If all four weekly observations exceed L, the baseline pollution loading has been exceeded.
- (d) Method 2 for calculating a single observation trigger (L) is accomplished by completing the following steps:
- (1) Follow Method 1 in subsection (b) to obtain  $M_1$  (the third quartile, that is, the 75th percentile).
  - (2) Calculate  $M_{-1}$  as the median of the baseline data which are less than or equal to the sample median M.
  - (3) Calculate the interquartile range,  $R = (M_1 - M_{-1})$ .
  - (4) Calculate the single observation trigger L as  $L = M_1 + 3 * R$ .

(5) If two successive monthly monitoring observations both exceed L, immediately begin weekly monitoring for 4 weeks (four weekly samples).

(6) If three or fewer of the weekly observations exceed L, resume monthly monitoring.

(7) If all four weekly observations exceed L, the baseline pollution loading has been exceeded.

#### Authority

The provisions of this § 90.312 issued under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.312 adopted October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780.

#### Cross References

This section cited in 25 Pa. Code § 90.313 (relating to procedure for calculating and applying an annual trigger).

### § 90.313. Procedure for calculating and applying an annual trigger.

(a) This section contains two alternative methods for calculating the annual trigger. One method shall be proposed by the applicant to be approved and applied by the Department for a remining permit.

(b) Method 1 for calculating and applying an annual trigger (T) is accomplished by completing the following steps:

(1) Calculate M and  $M_1$  of the baseline loading data as described under Method 1 for the single observation trigger in § 90.312(b) (relating to procedure for calculating and applying a single-observation (monthly) trigger).

(2) Calculate  $M_{.1}$  as the median of the baseline data which are less than or equal to the sample median M.

(3) Calculate the interquartile range,  $R = (M_1 - M_{.1})$ .

(4) The annual trigger for baseline (Tb) is calculated as  
 $Tb = M + (1.815 * R) / \text{SQRT}(n)$

where n is the number of baseline loading observations.

(5) To compare baseline loading data to observations from the annual monitoring period, repeat the steps in paragraphs (1)—(3) for the set of monitoring observations. Label the results of the calculations  $M'$  and  $R'$ . Let m be the number of monitoring observations.

(6) The subtle trigger (Tm) of the monitoring data is calculated as  
 $Tm = M' - (1.815 * R') / \text{SQRT}(m)$

(7) If  $Tm > Tb$ , the median loading of the monitoring observations has exceeded the baseline loading.

(c) Method 2 for calculating and applying an annual trigger (T) is accomplished by completing the following steps:

(1) Let n be the number of baseline loading observations taken, and let m be the number of monitoring loading observations taken. To sufficiently char-

acterize pollutant loadings during baseline determination and during each annual monitoring period, it is required that at least one sample result be obtained per month for a period of 12 months.

(2) Order the combined baseline and monitoring observations from smallest to largest.

(3) Assign a rank to each observation based on the assigned order: the smallest observation will have rank 1, the next smallest will have rank 2 and so forth, up to the highest observation, which will have rank  $n + m$ . If two or more observations are tied (have the same value), then the average rank for those observations should be used.

(4) Sum all the assigned ranks of the  $n$  baseline observations, and let this sum be  $S_n$ .

(5) Obtain the critical value ( $C$ ) from Table 1.

(6) Compare  $C$  to  $S_n$ . If  $S_n$  is less than  $C$ , then the monitoring loadings have exceeded the baseline loadings.

(7) Critical values for the Wilcoxon-Mann-Whitney test are as follows:

(i) When  $n$  and  $m$  are less than 21, use Table 1. To find the appropriate critical value, match column with correct  $n$  (number of baseline observations) to row with correct  $m$  (number of monitoring observations).

*Table 1—Critical Values (C) of the Wilcoxon-Mann-Whitney Test (for a one-sided test at the 0.001 significance level)*

n \ m	10	11	12	13	14	15	16	17	18	19	20
10	66	79	93	109	125	142	160	179	199	220	243
11	68	82	96	112	128	145	164	183	204	225	248
12	70	84	99	115	131	149	168	188	209	231	253
13	73	87	102	118	135	153	172	192	214	236	259
14	75	89	104	121	138	157	176	197	218	241	265
15	77	91	107	124	142	161	180	201	223	246	270
16	79	94	110	127	145	164	185	206	228	251	276
17	81	96	113	130	149	168	189	211	233	257	281
18	83	99	116	134	152	172	193	215	238	262	287
19	85	101	119	137	156	176	197	220	243	268	293
20	88	104	121	140	160	180	202	224	248	273	299

(ii) When  $n$  or  $m$  is greater than 20 and there are few ties, calculate an approximate critical value using the following formula and round the result to the next larger integer. Let  $N = n + m$ .

$$\text{Critical Value} = 0.5 * n * (N + 1) - 3.0902 * \text{SQRT}(n * m * (N + 1) / 12)$$

(iii) When  $n$  or  $m$  is greater than 20 and there are many ties, calculate an approximate critical value using the following formula and round the result to the next larger integer. Let  $S$  be the sum of the squares of the ranks or average ranks of all  $N$  observations. Let  $N = n + m$ .

$$\text{Critical Value} = 0.5 * n * (N + 1) - 3.0902 * \text{SQRT}(V)$$

In the preceding formula, calculate  $V$  using:

$$V = (n * m * S) / (N * (N - 1) - (n * m * (N + 1))^2 / (4 * (N - 1)))$$

#### Authority

The provisions of this § 90.313 issued under section 5 of The Clean Streams Law (35 P.S. § 691.5); sections 4(a) and 4.2 of the Surface Mining Conservation and Reclamation Act (52 P.S. §§ 1396.4(a) and 1396.4b); and section 1920-A of The Administrative Code of 1929 (71 P.S. § 510-20).

#### Source

The provisions of this § 90.313 adopted October 21, 2016, effective October 22, 2016, 46 Pa.B. 6780.

### Subchapter G. EXPERIMENTAL PRACTICES

Sec.  
90.401. General.

#### Cross References

This subchapter cited in 25 Pa. Code § 88.281 (relating to requirements).

#### § 90.401. General.

(a) To encourage advances in coal refuse disposal practices, coal refuse site reclamation and advances in technology or practices that will enhance environmental protection with respect to coal refuse disposal activities, the Department may grant permits approving experimental practices and demonstration projects. The Department may grant these permits under the following circumstances:

(1) The environmental protection provided will be potentially more protective or at least as protective as required by this chapter, the Coal Refuse Disposal Control Act (52 P. S. §§ 30.51—30.66) and Chapter 86 (relating to surface and underground coal mining; general).

(2) The coal refuse disposal activities approved under the permits are not larger or more numerous than necessary to determine the effectiveness and economic feasibility of the experimental practices or demonstration projects.

(3) The experimental practices or demonstration projects do not reduce the protection afforded public health and safety below that provided by this chapter, the Coal Refuse Disposal Control Act and Chapter 86.

(b) Experimental practice permits issued under this subchapter shall meet the provisions, standards and information requirements of the 30 CFR 785.13 (relating to experimental practices mining).

[Next page is 91-1.]