Comparison: 30 CFR § 77.214, 215, 216, & 217 to Title 25, Chapters 86, 89, and 90
September 27, 2013

30 CFR § 77.214 / Refuse piles; general	Title 25, Chapter's 86, 89, and 90
Refuse piles constructed on or after July 1, 1971, shall be located in areas which are a safe distance from all underground mine airshafts, preparation plants, tipples, or other surface installations and such piles shall not be located over abandoned openings or steamlines.	**§ 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.
Where new refuse piles are constructed over exposed coal beds the exposed coal shall be covered with clay or other inert material as the piles are constructed.	**No references were found in Title 25, Chapter's 86, 89, and 90**
A fireproof barrier of clay or inert material shall be constructed between old and new refuse piles.	**§ 89.58. Pollution-Forming Materials.** "Disposing of the pollution-forming underground development wastes in accordance with Chapter 90 (relating to coal refuse disposal). Temporary storage of the materials may be approved by the Department upon a finding that storage will not result in any material risk of water pollution or other environmental damage. Storage shall be limited to the period until burial or treatment first becomes feasible. Pollution-forming underground development waste and spoil to be stored shall be placed on impermeable material and protected from erosion and contact with surface water. Any discharge shall conform with § 89.52 (relating to water quality standards, effluent limitations and best management practices)."
(d) Roadways to refuse piles shall be fenced or otherwise guarded to restrict the entrance of unauthorized persons.	No references were found in Title 25, Chapter's 86, 89, and 90

30 CFR § 77.215 / Refuse piles; construction requirements.	Title 25, Chapter's 86, 89, and 90
Refuse deposited on a pile shall be spread in layers and compacted in such a manner so as to minimize the flow of air through the pile.	**§ 90.125. Coal Refuse Disposal: Construction Requirements.** "Spread in horizontal layers no more than 24 inches in thickness."
Refuse shall not be deposited on a burning pile except for the purpose of controlling or extinguishing a fire.	**§ 90.126. Coal Refuse Disposal: Burning.** "Coal refuse may not be deposited on or near any portion of a coal refuse disposal area known to be burning."
Clay or other sealants shall be used to seal the surface of any refuse pile in which a spontaneous ignition has occurred.	**No references were found in Title 25, Chapter's 86, 89, and 90**

Surface seals shall be kept intact and protected from erosion by drainage facilities.	**§ 90.122. Coal Refuse Disposal.** "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)." "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)."
Refuse piles shall not be constructed so as to impede drainage or impound water.	**§ 90.122. Coal Refuse Disposal.** "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)." "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)."
Refuse piles shall be constructed in such a manner as to prevent accidental sliding and shifting of materials.	**§ 90.125. Coal Refuse Disposal: Construction Requirements.** "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."
No extraneous combustible material shall be deposited on refuse piles.	**No references were found in Title 25, Chapter's 86, 89, and 90**
After October 31, 1975 new refuse piles and additions to existing refuse piles, shall be constructed in compacted layers not exceeding 2 feet in thickness and shall not have any slope exceeding 2 horizontal to 1 vertical (approximately 27°) except that the District Manager may approve construction of a refuse pile in compacted layers exceeding 2 feet in thickness and with slopes exceeding 27° where engineering data substantiates that a minimum safety factor of 1.5 for the refuse pile will be attained.	**§ 90.122. Coal Refuse Disposal.** **§ 90.124. Coal Refuse Disposal: Site Inspection.** **§ 90.125. Coal Refuse Disposal: Construction Requirements.**
Foundations for new refuse piles and additions to existing refuse piles shall be cleared of all vegetation and undesirable material that according to current, prudent engineering practices would adversely affect the stability of the refuse pile.	**§ 90.122. Coal Refuse Disposal.** **§ 90.124. Coal Refuse Disposal: Site Inspection.** **§ 90.125. Coal Refuse Disposal: Construction Requirements.**

All fires in refuse piles shall be extinguished, and the method used shall be in accordance with a plan approved by the District Manager. 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 operation.	**§ 90.126. Coal Refuse Disposal: Burning.** "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."

30 CFR § 77.215-1 / Refuse piles; identification	**Title 25, Chapter's 86, 89, and 90**
A permanent identification marker, at least six feet high and showing the refuse pile identification number as assigned by the District Manager, the name associated with the refuse pile and the name of the person owning, operating or controlling the refuse pile, shall be located on or immediately adjacent to each refuse pile within the time specified in paragraphs (a) or (b) of this section as applicable.	**§ 90.92. Signs And Markers** This section contains all of the requirements for Coal refuse disposal facility and permit identification signs and markers
For existing refuse piles, markers shall be placed before May 1, 1976.	**§ 90.92. Signs And Markers.** This section contains all of the requirements for Coal refuse disposal facility and permit identification signs and markers
For new or proposed refuse piles, markers shalt be placed within 30 days from acknowledgment of the proposed location of a new refuse pile.	§ **90.92. Signs And Markers.** This section contains all of the requirements for Coal refuse disposal facility and permit identification signs and markers

30 CFR § 77.215.2 / Refuse piles; reporting requirements	**Title 25, Chapter's 86, 89, and 90**
The proposed location of a new refuse pile shall be reported to and acknowledged in writing by the District Manager prior to the beginning of any work associated with the construction of the refuse pile.	**§ 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.
Before May 1, 1976, for existing refuse piles, or within 180 days from the date of acknowledgment of the proposed location of a new refuse pile, the person owning, operating or controlling a refuse pile shall submit to the District Manager a report in triplicate which contains the following:	
The name and address of the person owning, operating or controlling the refuse pile; the name associated with the refuse pile; the identification number of the refuse pile as assigned by the District Manager; and the identification number of the mine or preparation plant as	**§ 90.3. General Requirements: Permit**

assigned by MSHA.	
The location of the refuse pile indicated on the most recent USGS 7 1/2 minute or 15 minute topographic quadrangle map, or a topographic map of equivalent scale if a USGS map is not available.	**§ 89.154. Maps** (a) General mine map - Coal refuse disposal areas, solid and hazardous waste disposal areas, and other air and water pollution control facilities, all identified by numerical reference.
A statement of the construction history of the refuse pile, and a statement indicating whether the refuse pile has been abandoned in accordance with a plan approved by the District Manager.	**No references were found in Title 25, Chapter's 86, 89, and 90**
A topographic map showing at a scale not to exceed 1 inch=400 feet, the present and proposed maximum extent of the refuse pile and the area 500 feet around the proposed maximum perimeter.	**§ 89.154. Maps** (a) General mine map - Coal refuse disposal areas, solid and hazardous waste disposal areas, and other air and water pollution control facilities, all identified by numerical reference.
A statement of whether or not the refuse pile is burning.	**§ 90.126. Coal Refuse Disposal: Burning** Coal refuse may not be deposited on or near any portion of a coal refuse disposal area known to be burning."
A description of measures taken to prevent water from being impounded by the refuse pile or contained within the refuse pile.	**No references were found in Title 25, Chapter's 86, 89, and 90**
At a scale not to exceed 1 inch= 100 feet, cross sections of the length and width of the refuse pile at sufficient intervals to show the approximate original ground surface, the present configuration and the proposed maximum extent of the refuse pile, and mean sea level elevations at significant points.	**§ 90.21. Maps and Cross Sections** **§ 90.46. Maps and Plans** 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.
(8) Any other information pertaining to the stability of the pile which may be required by the District Manager.	**§ 90.5. Site Selection And Permitting** 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.
(c) The information required by paragraphs (b)(4) through (b)(B) of this section shall be reported every twelfth month from the date of original submission for those refuse piles which the District Manager has determined can present a hazard until the District Manager notifies the operator that the hazard has been eliminated.	**§ 86.42. Conditions Of Permits: Environment, Public Health And Safety** An accelerated or additional monitoring necessary to determine the nature and extent of noncompliance and the results of the noncompliance.

30 CFR § 77.215·3 / Refuse piles: certification	**Title 25, Chapter's 86, 89, and 90**
Within 180 days following written notification by the District Manager that a refuse pile can present a hazard, the person owning, operating, or controlling the refuse pile shall submit to the District Manager a certification by a registered engineer that the refuse pile is being constructed or has been modified in accordance with current, prudent engineering practices to minimize the probability of impounding water and failure of such magnitude as to endanger the lives of miners.	**§ 90.124. Coal Refuse Disposal: Site Inspection** 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., or 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.
After the initial certification required by this section and until the District Manager notifies the operator that the hazard has been eliminated, certification shall be submitted every twelfth month from the date of the initial certification.	No references were found in Title 25, Chapter's 86, 89, and 90
Certifications required by paragraphs (a) and (b) of this section shall include all information considered in making the certification.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.** **§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance.**

30 CFR § 77.215-4 / Refuse Piles; Abandonment	**Title 25, Chapter's 86, 89, And 90**
When a refuse pile is to be abandoned, the District Manager shall be notified in writing, and if he determines it can present a hazard, the refuse pile shall be abandoned in accordance with a plan submitted by the operator and approved by the District Manager. The plan shall include a schedule for its implementation and describe provisions to prevent burning and future impoundment of water, and provide for major slope stability.	**No references were found in Title 25, Chapter's 86, 89, and 90**

30 CFR § 77.216 Water, Sediment, or Slurry Impoundments And Impounding Structures; General	**Title 25, Chapter's 86, 89, And 90**
Plans for the design, construction, and maintenance of structures which impound water, sediment, or slurry shall be required if such an existing or proposed impounding structure can:	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.** 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.
Impound water, sediment, or slurry to an elevation of five feet or more above the upstream toe of the structure and can have a storage volume of 20 acre-feet or more	**90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** The impounding capacity at maximum storage elevation exceeds 50 acre-feet.
Impound water, sediment, or slurry to an elevation of 20 feet or more above the upstream toe of the structure; or	**90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** The greatest depth of water at maximum storage elevation cannot exceed 15 feet.
As determined by the District Manager, present a hazard to coal miners.	**§ 90.124. Coal Refuse Disposal: Site Inspection** 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., or 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.

Plans for the design and construction of all new water, sediment, or slurry impoundments and impounding structures which meet the requirements of paragraph (a) of this section shall be submitted in triplicate to and be approved by the District Manager prior to the beginning of any work associated with construction of the impounding structure.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills** **§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** **§ 90.113. Hydrologic Balance: Coal Processing Waste Dams and Embankments** Note: the application requires a minimum of five copies.
Before May 1, 1976, a plan for the continued use of an existing water, sediment, or slurry impoundment and impounding structure which meets the requirements of paragraph (a) of this section shall be submitted in triplicate to the District Manager for approval.	**§ 90.111. Hydrologic Balance: Impoundments**
The design, construction, and maintenance of all water, sediment, or slurry impoundments and impounding structures which meet the requirements of paragraph (a) of this section shall be implemented in accordance with the plan approved by the District Manager.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills** **§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** **§ 90.113. Hydrologic Balance: Coal Processing Waste Dams and Embankments**
All fires in impounding structures shall be extinguished, and the method used shall be in accordance with a plan approved by the District Manager. 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 procedures to be used, shall be involved in the extinguishing operation.	**No references were found in Title 25, Chapter's 86, 89, and 90**

30 CFR § 77.216-1 / Water, Sediment or Slurry Impoundments and Impounding Structures; Identification	**Title 25, Chapter's 86, 89, And 90**
A permanent identification marker, at least six feet high and showing the identification number of the impounding structure as assigned by the District Manager, the name associated with the impounding structure and name of the person owning, operating, or controlling the structure, shall be located on or immediately adjacent to each water, sediment or slurry impounding structure within the time specified in paragraph (a) or (b) of this section as applicable.	**§ 90.92. Signs and Markers** This section contains all of the requirements for Coal refuse disposal facility and permit identification signs and markers
For existing water, sediment or slurry impounding structures, markers shall be placed before May 1, 1976.	**§ 90.92. Signs and Markers** This section contains all of the requirements for Coal refuse disposal facility and permit identification signs and markers
For new or proposed water, sediment, or slurry impounding structures, markers shall be placed within 30 days from the start of construction.	**§ 90.92. Signs and Markers** This section contains all of the requirements for Coal refuse disposal facility and permit identification signs and markers

30 CFR § 77.216-2 / Water, Sediment, or Slurry Impoundments and Impounding Structures; Minimum Plan Requirements; Changes or Modifications; Certification	**Title 25, Chapter's 86, 89, And 90**
The plan specified in §77.216, shall contain as a minimum the following information:	
The name and address of the persons owning, operating or controlling the impoundment or impounding structure; the name associated with the impoundment or impounding structure; the identification number of the impounding structure as assigned by the District Manager; and the identification number of the mine or preparation plant as assigned by MSHA.	**§ 89.71. General Requirements** **§ 90.3. General Requirements: Permit**
The location of the structure indicated on the most recent USGS 7 1/2 minute or 15 minute topographic quadrangle map, or a topographic map of equivalent scale if a USGS map is not available.	**§ 89.154. Maps** (a) General mine map - Coal refuse disposal areas, solid and hazardous waste disposal areas, and other air and water pollution control facilities, all identified by numerical reference.
A statement of the purpose for which the structure is or will be used.	**§ 90.31. General Requirements** (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 post disposal land use as specified in § 90.166 (relating to post disposal land use):
The name and size in acres of the watershed affecting the impoundment.	**§ 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.
A description of the physical and engineering properties of the foundation materials on which the structure is or will be constructed.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills** **§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments - Design, Construction and Maintenance** **§ 90.113. Hydrologic Balance: Coal Processing Waste Dams and Embankments**
A statement of the type, size, range, and physical and engineering properties of the materials used, or to be used, in constructing each zone or stage of the impounding structure; the method of site preparation and construction of each zone; the approximate dates of construction of the structure and each successive stage; and for existing structures, such history of construction as may be available, and any record or knowledge of structural instability.	§§ **90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills** **§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments - Design, Construction and Maintenance** **§ 90.113. Hydrologic Balance: Coal Processing Waste Dams and Embankments**

At a scale not to exceed 1 inch= 100 feet, detailed dimensional drawings of the impounding structure including a plan view and cross sections of the length and width of the impounding structure, showing all zones, foundation improvements, drainage provisions, spillways, diversion ditches, outlets, instrument locations, and slope protection, in addition to the measurement of the minimum vertical distance between the crest of the impounding structure and the reservoir surface at present and under design storm conditions, sediment or slurry level, water level and other information pertinent to the impoundment itself, including any identifiable natural or manmade features which could affect operation of the impoundment.	**§ 89.154. Maps.** (a) General mine map - Coal refuse disposal areas, solid and hazardous waste disposal areas, and other air and water pollution control facilities, all identified by numerical reference.
A description of the type and purpose of existing or proposed instrumentation.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance.** 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.
Graphs showing area-capacity curves.	**No references were found in Title 25, Chapter's 86, 89, and 90**
A statement of the runoff attributable to the probable maximum precipitation of 6-hour duration and the calculations used in determining such runoff.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.**
A statement of the runoff attributable to the storm for which the structure is designed and the calculations used in determining such runoff.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.**
A description of the spillway and diversion design features and capacities and calculations used in their determination.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.**
The computed minimum factor of safety range for the slope stability of the impounding structure including methods and calculations used to determine each factor of safety.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.**
The locations of surface and underground coal mine workings including the depth and extent of such workings within the area 500 feet around the perimeter, shown at a scale not to exceed one inch=500 feet.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.** **§ 89.154. Maps.** (a) General mine map - Coal refuse disposal areas, solid and hazardous waste disposal areas, and other air and water pollution control facilities, all identified by numerical reference.
Provisions for construction surveillance, maintenance, and repair of the impounding structure.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.**
General provisions for abandonment.	**§ 90.33. Reclamation Plan.** This Chapter contains the requirements for the reclamation of the site.
A certification by a registered engineer that the design of the impounding structure is in accordance with current, prudent engineering practices for the maximum volume of water, sediment, or slurry which can be impounded therein and for the passage of runoff from the designed storm which exceeds the capacity of the impoundment; or, in lieu of the certification, a report indicating what additional investigations, analyses, or improvement	§ **90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills**

work are necessary before such a certification can be made, including what provisions have been made to carry out such work in addition to a schedule for completion of such work.	
Such other information pertaining to the stability of the impoundment and impounding structure which may be required by the District Manager.	§ **90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills**
Any changes or modifications to plans for water, sediment, or slurry impoundments or impounding structures shall be approved by the District Manager prior to the initiation of such changes or modifications.	§ **90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills**

30 CFR § 77.216-3 / Water, Sediment, or Slurry Impoundments and Impounding Structures; Inspection Requirements; Correction of Hazards; Program Requirements	**Title 25, Chapter's 86, 89, And 90**
All water, sediment, or slurry impoundments that meet the requirements of §77.216(a) shall be examined as follows:	
At intervals not exceeding 7 days, or as otherwise approved by the District Manager, for appearances of structural weakness and other hazardous conditions.	§ **90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills.** Sections (a) thru (f) **§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.

All instruments shall be monitored at intervals not exceeding 7 days, or as otherwise approved by the District Manager.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.
Longer inspection or monitoring intervals approved under this paragraph (a) shall be justified by the operator based on the hazard potential and performance of the impounding structure, and shall include a requirement for inspection immediately after a specified rain event approved by the District Manager.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.
All inspections required by this paragraph (a) shall be performed by a qualified person designated by the person owning, operating, or controlling the impounding structure.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.
When a potentially hazardous condition develops, the person owning, operating or controlling the impounding structure shall immediately:	
Take action to eliminate the potentially hazardous condition;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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
Notify the District Manager;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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
Notify and prepare to evacuate, if necessary, all coal miners from coal mine property which may be affected by the potentially hazardous conditions; and	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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
Direct a qualified person to monitor all instruments and examine the structure at least once every eight hours, or more often as required by an authorized representative of the Secretary.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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
After each examination and instrumentation monitoring referred to in paragraphs (a) and (b) of this section, each qualified person who conducted all or any part of the examination or instrumentation monitoring shall promptly record the results of such examination or instrumentation monitoring in a book which shall be available at the mine for inspection by an authorized representative of the Secretary, and such qualified person shall also promptly report the results of the examination or monitoring to one of the persons specified in paragraph (d) of this section.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.

All examination and instrumentation monitoring reports recorded in accordance with paragraph (c) of this section shall include a report of the action taken to abate hazardous conditions and shall be promptly signed or countersigned by at least one of the following persons:	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.
The mine foreman;	**No references were found in Title 25, Chapter's 86, 89, and 90**
The assistant superintendent of the mine;	**No references were found in Title 25, Chapter's 86, 89, and 90**
The superintendent of the mine;	**No references were found in Title 25, Chapter's 86, 89, and 90**
The person designated by the operator as responsible for health and safety at the mine.	**No references were found in Title 25, Chapter's 86, 89, and 90**
Before May 1, 1976, the person owning, operating, or controlling a water, sediment, or slurry impoundment which meets the requirements of §77.216(a) shall adopt a program for carrying out the requirements of paragraphs (a) and (b) of this section. The program shall be submitted for approval to the District Manager. The program shall include as a minimum:	
A schedule and procedures for examining the impoundment and impounding structure by a designated qualified person;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.

A schedule and procedures for monitoring any required or approved instrumentation by a designated qualified person;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.
Procedures for evaluating hazardous conditions;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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

Procedures for eliminating hazardous conditions;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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
Procedures for notifying the District Manager;	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.
Procedures for evacuating coal miners from coal m'1ne property which may be affected by the hazardous condition.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance**
Before making any changes or modifications in the program approved in accordance with paragraph (e) of this section, the person owning, operating, or controlling the impoundment shall obtain approval of such changes or modifications from the District Manager.	**§ 90.39. Ponds, Impoundments, Banks, Dams, Embankments, Piles and Fills** (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
The qualified person or persons referred to in paragraphs (a}, (b)(4), (c), (e)(l), and (e)(2) of this section shall be trained to recognize specific signs of structural instability and other hazardous conditions by visual observation and, if applicable, to monitor instrumentation.	**§ 90.112. Hydrologic Balance: Dams, Ponds, Embankments and Impoundments—Design, Construction and Maintenance** (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.

30 CFR § 77.216-4 / Water, sediment or slurry impoundments and impounding structures; reporting requirements; certification.	**Title 25, Chapter's 86, 89, And 90**
Except as provided in paragraph (b) of this section, every twelfth month following the date of the initial plan approval, the person owning, operating, or controlling a water, sediment, or slurry impoundment and impounding structure that has not been abandoned in accordance with an approved plan shall submit to the District Manager a report containing the following information:	**No references were found in Title 25, Chapter's 86, 89, and 90**
Changes in the geometry of the impounding structure for the reporting period.	**§ 89.89. Permanent Impoundments** The design, construction and maintenance of structures shall achieve the minimum design requirements of § 89.111 or § 89.112 (relating to performance standards) as appropriate.
Location and type of installed instruments and the maximum and minimum recorded readings of each instrument for the reporting period.	**§ 89.89. Permanent Impoundments** The quality of the impounded water shall be suitable, on a permanent basis, for its intended use, and discharge or water from the impoundment shall not degrade the quality of receiving waters of the Commonwealth to less than the water quality standards established under applicable State and Federal laws.
The minimum, maximum, and present depth and elevation of the impounded water, sediment, or slurry for the reporting period.	**§ 89.89. Permanent Impoundments** The level of water shall be sufficiently stable to support the intended use.
Storage capacity of the impounding structure.	**§ 89.89. Permanent Impoundments** The level of water shall be sufficiently stable to support the intended use.
The volume of the impounded water, sediment, or slurry at the end of the reporting period.	**§ 89.89. Permanent Impoundments** The level of water shall be sufficiently stable to support the intended use.
Any other change which may have affected the stability or operation of the impounding structure that has	**§ 89.89. Permanent Impoundments**

occurred during the reporting period.	
A certification by a registered professional engineer that all construction, operation, and maintenance was in accordance with the approved plan.	**§ 89.89. Permanent Impoundments** The design, construction and maintenance of structures shall achieve the minimum design requirements of § 89.111 or § 89.112 (relating to performance standards) as appropriate. **§ 90.31. General Requirements** 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)
A report is not required under this section when the operator provides the District Manager with a certification by a registered professional engineer that there have been no changes under paragraphs (1) through (6) of this section to the impoundment or impounding structure. However, a report containing the information set out in paragraph of this section shall be submitted to the District Manager at least every 5 years.	**No references were found in Title 25, Chapter's 86, 89, and 90**

30 CFR § 77.216-5 / Water, sediment or slurry impoundments and impounding structures; abandonment.	**Title 25, Chapter's 86, 89, And 90**
Prior to abandonment of any water, sediment, or slurry impoundment and impounding structure which meets the requirements of 30 CFR 77 .2..l.Q.@l, the person owning, operating, or controlling such an impoundment and impounding structure shall submit to and obtain approval from the District Manager, a plan for abandonment based on current, prudent engineering practices. This plan shall provide for major slope stability, include a schedule for the plan's implementation, and, except as provided in paragraph (b) of this section, contain provisions to preclude the probability of future impoundment of water, sediment, or slurry.	**§ 89.89. Permanent Impoundments** The quality of the impounded water shall be suitable, on a permanent basis, for its intended use, and discharge or water from the impoundment shall not degrade the quality of receiving waters of the Commonwealth to less than the water quality standards established under applicable State and Federal laws.
An abandonment plan does not have to contain a provision to preclude the future impoundment of water if the plan is approved by the District Manager and documentation is included in the abandonment plan to ensure that the following requirements are met:	**§ 89.89. Permanent Impoundments** The quality of the impounded water shall be suitable, on a permanent basis, for its intended use, and discharge or water from the impoundment shall not degrade the quality of receiving waters of the Commonwealth to less than the water quality standards established under applicable State and Federal laws. **§ 90.34. Reclamation: Post-Disposal Land Use** **§ 90.111. Hydrologic Balance: Impoundments**
A registered professional engineer, knowledgeable in the principles of dam design and in the design and construction of the structure, shall certify that it substantially conforms to the approved design plan and specifications and that there are no apparent defects.	**§ 89.89. Permanent Impoundments** The quality of the impounded water shall be suitable, on a permanent basis, for its intended use, and discharge or water from the impoundment shall not degrade the quality of receiving waters of the Commonwealth to less than the water quality standards established under applicable State and Federal laws. **§ 90.34. Reclamation: Post-disposal Land Use** **§ 90.111. Hydrologic Balance: Impoundments**

The current owner or prospective owner shall certify a willingness and ability to assume responsibility for operation and maintenance of the structure.	**§ 89.89. Permanent Impoundments** The quality of the impounded water shall be suitable, on a permanent basis, for its intended use, and discharge or water from the impoundment shall not degrade the quality of receiving waters of the Commonwealth to less than the water quality standards established under applicable State and Federal laws. **§ 90.34. Reclamation: Post-disposal Land Use** **§ 90.111. Hydrologic Balance: Impoundments** *(Note: There was no specific reference to the current owner assuming the responsibility for operation and maintenance of the structure.)*
A permit or approval for the continued existence of the impoundment or impounding structure shall be obtained from the Federal or State agency responsible for dam safety.	**§ 89.89. Permanent impoundments** The quality of the impounded water shall be suitable, on a permanent basis, for its intended use, and discharge or water from the impoundment shall not degrade the quality of receiving waters of the Commonwealth to less than the water quality standards established under applicable State and Federal laws. **§ 90.34. Reclamation: Post-disposal Land Use** **§ 90.111. Hydrologic Balance: Impoundments**

30 CFR § 77.217 / Definitions	**Title 25, Chapter's 86, 89, And 90**
Abandoned - as applied to any refuse pile or impoundment and impounding structure means that work on such pile or structure has been completed in accordance with a plan for abandonment approved by the District Manager.	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.
Area-capacity curves - means graphic curves which readily show the reservoir water surface area, in acres, at different elevations from the bottom of the reservoir to the maximum water surface, and the capacity or volume, in acre-feet, of the water contained in the reservoir at various elevations.	Not included in Title 25, Chapter 90 definitions
Impounding structure - means a structure which is used to impound water, sediment, or slurry, or any combination of such materials.	Impoundment—A closed basin, naturally formed or artificially built, which is dammed or excavated for the retention of water, sediment or waste.
Probable maximum precipitation - means the value for a particular area which represents an envelopment of depth – duration - area rainfall relations for all storm types affecting that area adjusted meteorologically to maximum conditions.	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.

Refuse pile - means a deposit of coal mine waste which may contain a mixture of coal, shale, claystone, siltstone, sandstone, limestone, and related materials that are excavated during mining operations or separated from mined coal and disposed of on the surface as waste byproducts of either coal mining or preparation operations. Refuse pile does not mean temporary spoil piles of removed overburden material associated with surface mining operations.	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.
Safety factor - means the ratio of the forces tending to resist the failure of a structure to the forces tending to cause such failure as determined by accepted engineering practice.	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.