

**DEPARTMENT OF ENVIRONMENTAL PROTECTION
BUREAU OF MINING AND RECLAMATION**

DOCUMENT NUMBER: 563-2113-660

TITLE: Coal Refuse Disposal - Site Selection

EFFECTIVE DATE: February 8, 1999

AUTHORITY: The Coal Refuse Disposal Control Act (52 P.S. §§30.51 et seq.)

POLICY:

It is the policy of the Department to ensure that all persons proposing to develop new coal refuse disposal sites or expand existing coal refuse disposal sites follow the site selection procedures prescribed in the 1994 amendments to the Coal Refuse Disposal Control Act (CRDCA).

PURPOSE:

This guidance explains in detail the site selection process which applies to new or expanded coal refuse disposal sites. The site selection process is a new requirement imposed by the 1994 amendments to CRDCA. The explanations provided in this document are intended to outline the site selection procedures for the benefit of district mining office staff and prospective permit applicants.

APPLICABILITY:

This guidance applies to all persons who propose to develop or laterally expand anthracite and bituminous coal refuse disposal sites after January 6, 1995. It does not apply where the proposal involves modifying the profile of an existing coal refuse disposal area without disturbing new acreage beyond the margins of the present disposal area.

DISCLAIMER:

The policies and procedures outlined in this guidance document are intended to supplement existing requirements. Nothing in the policies or procedures shall affect regulatory requirements.

The policies and procedures herein are not an adjudication or a regulation. There is no intent on the part of the Department to give these rules that weight or deference. This document establishes the framework, within which the Department will exercise its administrative discretion in the future. The Department reserves the discretion to deviate from this policy statement if circumstances warrant.

PAGE LENGTH: 11

LOCATION: Volume 12, Tab 84a (BMR/PGM Section II, Part 6, Subpart 60)

TECHNICAL GUIDANCE:

BACKGROUND

The selection of a site for coal refuse disposal is as important to protecting the environment as the actual disposal techniques. The 1994 amendments to CRDCA give special attention to the site selection process requiring the applicant for a coal refuse disposal permit to identify and evaluate alternative sites and to select a site that is the most suitable based on environmental, economic, transportation, technical, and social factors. Notwithstanding these considerations, the site will not be approved where the adverse environmental impacts clearly outweigh the public benefits.

CRDCA recognizes the importance of coal mining to the Commonwealth of Pennsylvania. In passing the 1994 amendments, the General Assembly found that incentives are needed to encourage disposal of coal refuse on areas previously affected by coal mining activities. It also found that it is better to have a few large coal refuse disposal areas than numerous small coal refuse disposal sites.

The 1994 amendments enhance the protection of surface water and groundwater by requiring a system to prevent adverse impacts to surface water and groundwater. Requirements include the use of systems (underdrains, etc.) which will prevent groundwater from infiltrating the coal refuse, and systems which will prevent precipitation from contacting the coal refuse.

The amendments to CRDCA prohibit coal refuse disposal in certain environmentally sensitive areas including areas within 100 feet (30.48 meters) of the bank of a stream. The Department may grant a variance to the 100-foot (30.48-meter) stream barrier. To qualify for the variance, the operator must demonstrate to the satisfaction of the Department that there will be no adverse hydrologic or water quality impacts as a result of the activities near the stream. Where the variance is granted, it must be issued as a written order and include language specifying the methods and techniques proposed to prevent or mitigate adverse impacts. It is important that applicants are aware, early in the site selection process, that for sites which will require a stream variance, failure to make the "no adverse hydrologic or water quality impact" demonstration will result in the site being denied.

Finally, where an operator proposes to dispose of coal refuse in an area with a pre-existing pollutional discharge, the amendments to CRDCA provide a special authorization and modified effluent limits for such discharges. This authorization is similar to those provided in Chapter 87, Subchapter F and Chapter 88, Subchapter G.

This program guidance implements the 1994 amendments to CRDCA. Existing guidance documents remain applicable except where they may be inconsistent with this guidance in which case this guidance governs.

Implementation of the 1994 amendments will require effective communication between the District Mining Office and concerned resource agencies. The District Mining Office will encourage meetings involving the applicant, the Pa. Fish and Boat Commission, the Pa. Game

Commission and the U.S. Fish and Wildlife Service at key points in the review process including: prior to the site selection process to discuss the procedures to be used; before defining the search area; before selecting the final site; and before developing a mitigation plan. The District Mining Office will also solicit input from the Pa. office of the U.S. Fish and Wildlife Service, U.S. EPA and the U.S. Army Corps of Engineers during the site selection process and the permit application review process. These communications will help define expectations, identify data needs and minimize future disagreements.

As amended, CRDCA establishes a two-part process for approval of new and expanded coal refuse disposal sites. The first part involves site selection and approval. Areas that have been previously affected by mining activities within a specific area (search area) of the source mine are preferred for coal refuse disposal unless the applicant demonstrates that another site is more suitable based on site-specific conditions. Coal refuse disposal is prohibited in certain environmentally sensitive areas. The operator is to perform an alternatives analysis which weighs several factors including social, environmental, technical, transportation, and economic considerations.

The second part involves approval of a site development plan. The site development plan must meet the informational requirements, permitting requirements, and performance standards in Chapter 90, and also meet the requirements of Chapter 86. Note that the alternatives analysis completed as part of the site selection process meets the requirement for an alternatives analysis under the "Dam Safety and Encroachments Act" and Chapter 105.

PROCEDURE:

The flow chart in Appendix B will help guide the reader through the decision-making process.

I. Site Selection.

An application for site approval must include a statement (as defined in Subsections 4.1 (c) and (d) of CRDCA) specifying whether or not disposal of coal refuse in abandoned, inactive or active underground mines or in abandoned or unreclaimed surface mines is proposed and, if not, outlining the technical and economic considerations prohibiting such disposal.

A. Defining the Search Area.

An applicant for Department approval of a site for coal refuse disposal must identify the "search area" on a 7 1/2' topographic map. For new coal refuse disposal sites, associated with an existing coal mining activity, the search area is defined by a one-mile radius from the coal mining activity. For new disposal sites, associated with a new coal mining activity, the search area is 25 square miles around the site where the coal refuse will be generated. In defining the search area, consideration shall be given to environmental, physical, geographic, transportation, economic and social factors. The delineation of a specified search area does not provide any guarantee, explicit

or implicit, as to the "acceptability" of a refuse disposal site within that search area.

B. Identifying Preferred Sites.

The applicant must identify the preferred sites within the search area. The features of preferred sites are described below. These descriptions should not be considered absolutes and other factors may be considered in determining a preferred site. For the purpose of site selection, a watershed is an area that has the potential for coal refuse disposal and would generally be a headwater area of a few square miles. The features of preferred sites include:

- A watershed where the in-stream water quality standards for pH, acidity, iron or manganese, as set forth in Chapter 93, are not met.
- A watershed in which there are substantial acres of unreclaimed surface mines but which has no mine discharges. A substantial amount of unreclaimed land would encompass about 25% of the first-order watershed where the coal refuse site is proposed. (Unreclaimed mine sites which the Department determines do not need reclamation do not count toward the preferred site classification.)
- A watershed in which there are substantial acres of unreclaimed surface mines with discharges that could be improved by the proposed coal refuse disposal operation. (A substantial amount of unreclaimed land would encompass about 25% of the first-order watershed where the coal refuse site is proposed.)
- Unreclaimed coal refuse disposal sites that could be improved by the proposed coal refuse disposal operation.
- Other unreclaimed areas previously affected by mining activities.

For those preferred sites to be considered by the applicant for coal refuse disposal, the applicant, using reasonably available data, shall describe the extent to which the features qualify the sites as preferred. For example, when describing a watershed polluted by acid mine drainage, the applicant would indicate the miles of stream that are polluted, provide water quality samples up and down stream of mine discharges, provide flow measurements of inventoried discharges where possible, and indicate the existing classification (Chapter 93) of the stream. When describing a watershed with abandoned mine lands, the acres of unreclaimed land in relation to the size of the watershed would be important. Similar information should be provided for the other factors.

C. Evaluating a Preferred Site.

If a preferred site is considered for coal refuse disposal, the applicant shall identify any adverse environmental impacts and any public benefits that might occur as a result of the coal refuse disposal including any environmental impacts that result from a stream barrier variance as described in Section III below. Where the Department determines that the adverse environmental impacts of disposing of coal refuse in a preferred site would clearly outweigh the public benefits (e.g., instances in which the proposed activities are likely to affect species listed as threatened or endangered under federal law), site approval will be denied. A written findings report shall be prepared to document the reasons for the Department's decision.

D. Evaluating a Non-Preferred Site.

If a preferred site is available but the applicant does not select it, the applicant must evaluate the preferred site in addition to all non-preferred alternative sites proposed for consideration.

If there are no preferred sites in the search area, the applicant must identify the alternative sites considered within the search area and the basis for their selection.

Where the Department determines that the adverse environmental impacts clearly outweigh the public benefits, site approval will be denied.

In either situation, the alternative sites are to be compared to each other (and to referred sites, where present) based on environmental, technical, economic, transportation, and social factors. The purpose of the comparison is to evaluate the potential sites based on germane issues and to determine the most "suitable" site for coal refuse disposal. The "alternatives analysis" will use reasonably available data (see Appendix A for discussion of reasonably available data) and include a discussion of:

1. The environmental condition of each of the sites including, but not limited to, the fish and wildlife values, surface water and groundwater quality, stream uses, the presence of wetlands, and the presence of federally listed threatened or endangered plants or animals, and state threatened or endangered animals.
2. The engineering aspects of coal refuse disposal for each site including but not limited to:
 - The size of the site relative to the area needed for coal refuse disposal keeping in mind that the goal of the act is to minimize the number of new coal refuse disposal sites by building a few large ones instead of many small ones.

- The steepness of the slopes as it might impact the stability of the pile.
 - The availability of liner and cap material.
 - The potential for subsidence and the possible impacts on the liner.
 - Operational considerations.
3. The geology of each site.
 4. A comparison of the costs of disposal at each of the sites including but not limited to the cost of transportation, site preparation, operation and reclamation.
 5. A comparison of the transportation systems that would be needed including, but not limited to, the type of transportation (e.g., belt line, truck, etc.), and the transportation route for each site.
 6. A comparison of the positive and negative social factors including but not limited to noise and dust, employment, traffic impacts, infrastructure impacts, recreational impacts, and proximity to tourist and recreation areas.

E. Non-Preferred Sites Where Coal Refuse Disposal is Prohibited.

Subsection 4.1 (b) of CRDCA prohibits coal refuse disposal in the areas listed below unless the site is a preferred site meeting the criteria in Section B above and the Department determines that the adverse environmental impacts of using the preferred site do not clearly outweigh the public benefits.

- On prime farm lands, as defined in §90.1.
- In areas containing federal threatened or endangered plants or animals or state threatened or endangered animals.¹
- In an exceptional value watershed (as designated in Chapter 93 of the regulations).

¹Section 4.1 (b) of CRDCA prohibits coal refuse disposal on non-preferred sites that contain federally listed threatened or endangered species. With respect to preferred sites, the Department will not approve (via the site selection process) or permit (via the permitting process) a site that is known or likely to contain federally listed threatened or endangered species, unless the Department concludes and the U.S. 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.

- In areas hydrologically connected to, and which contribute at least 5% the drainage to wetlands designated as exceptional value. (A higher percentage may be approved by the Department in consultation with the Fish and Boat Commission based on the potential impact to the wetland.)
- In a watershed less than four square miles in area upstream of the intake of public water supplies or public recreational impoundments.
- In certain other areas as described in Subsection 6.1 (h) of CRDCA and as described in Section III below.

F. Criteria for Site Selection and Rejection.

Where a preferred site is available in the search area and it will not be used, the applicant must demonstrate, using the comparisons in Section D of this guidance, that a non-preferred site is more suitable and is not adverse to the public interest. The demonstration shall include the basis for excluding the other identified sites (this should include all preferred sites within the search area). If the applicant makes the demonstration, site selection will be approved provided the Department determines that the adverse environmental impacts do not clearly outweigh the public benefits and the site is not a prohibited site as discussed in Section E.

Where there are no preferred sites in the search area, the applicant must demonstrate to the Department's satisfaction the basis for excluding the other identified sites and that the proposed site is the most suitable based on comparisons in Section D. If the applicant makes the demonstration, site approval will be granted provided the Department determines that the adverse environmental impacts do not clearly outweigh the public benefits and the site is not a prohibited site as described in Section E.

If the applicant fails to make the required demonstrations outlined in the preceding paragraphs, site approval shall be denied. The rejection of all sites within the designated search area will result in the need to look at sites outside that area.

The Department shall prepare written findings to document the reasons for its decision.

II. Site Development Application

After site selection has been approved by the Department, the operator may submit an application to obtain a permit to dispose of coal refuse on the selected site. For this application, the "COAL REFUSE DISPOSAL APPLICATION" including the appropriate modules will be used.

In addition to the requirements in the "COAL REFUSE DISPOSAL APPLICATION" and Chapters 86 and 90, all new coal refuse disposal areas must include:

1. A system approved by the Department to prevent adverse impacts to the surfacewater and groundwater. The system should incorporate design features which facilitate the segregation of water infiltrating through the coal refuse from adjacent surface water and groundwater unless the applicant demonstrates that such design features are not necessary to prevent adverse surface water and groundwater impacts.

If a liner is proposed, it shall meet, at a minimum, the criteria and procedures set forth in Technical Guidance Document 563-2112-656 relating to liners for impoundments and storage areas.

2. A system for preventing precipitation from contacting coal refuse. The system shall be installed as phases of the disposal area reach capacity, as specified in the permit, when the operation temporarily ceases for a period in excess of ninety days (unless the Department approves a longer period), or when the operation permanently ceases. The system, when final reclamation of the disposal area is achieved, shall minimize infiltration to the extent practicable and be graded to promote surface run-off in a controlled manner which does not promote erosion. Additionally, the system shall allow for revegetation of the site in accordance with the standards in Chapter 90.

III. Stream Barrier Variance

CRDCA prohibits coal refuse disposal within 100 feet (30.48 meters) of the bank of a stream. The Department may grant a variance to this prohibition and may allow a stream relocation, enclosure or diversion if the applicant demonstrates that there will be no adverse hydrologic or water quality impacts as a result of the variance.

To apply for a variance, an applicant must submit with the permit application a request for a stream variance which must include the following information:

1. An identification of all adverse hydrologic and water quality impacts which have a moderate to high likelihood of occurring as a result of the coal refuse disposal activities within 100 feet (30.48 meters) of the stream. Each adverse hydrologic and water quality impact shall be classified as having a moderate or high likelihood of occurring. Each classification of a potential adverse hydrologic or water quality impact shall be supported by a detailed analysis which explains the basis for the classification and shall be based on facts, science, engineering and commonly accepted principles of hydrogeology.
2. A plan that will be implemented by the applicant to prevent or reduce the adverse impacts expected to be caused by the proposed activities which will take place within the 100-foot (30.48-meter) zone.

3. A plan which will be implemented by the applicant to mitigate the adverse impacts that will result as a consequence of the proposed activities within the 100-foot (30.48-meter) zone.
4. Proof that the applicant published notice of the variance application, in two newspapers of general circulation in the area of the proposed variance, for two consecutive weeks.
5. A complete characterization of the stream to be impacted by the proposed coal refuse disposal activities, including Chapter 93 stream uses; temperature; flow rate; pH; identification of the area as a recharge or discharge area; and other water quality characteristics. The characterization should also include an inventory and identification of aquatic life in the stream and all threatened or endangered species that are found in the surrounding area. In addition, the applicant should include as part of the characterization an identification of all wetlands in the area to be impacted by the coal refuse disposal activities as well as an identification of all streams and wetlands hydrologically connected to the area to be impacted by the coal refuse disposal activities.

Any person has the right to file with the Department an exception to the proposed variance if the exception is filed within twenty (20) days of the last publication of the newspaper notice. If an exception is filed in a timely manner, the Department will conduct a public hearing with respect to the variance application within 30 days of Department receipt of the exception.

Upon receipt of a variance application, the District Mining Office will provide copies of the variance request information to the Pa. Fish and Boat Commission, the Pa. Game Commission, the U.S. EPA, the U.S. Fish and Wildlife Service, and the Army Corps of Engineers and provide these agencies with thirty (30) days to respond with information and comments. The District Mining Office will also review the variance request information and make a determination as to whether or not the proposed variance is expected to result in adverse hydrologic or water quality impacts. (Potential adverse impacts to be considered would include: physical alterations to the stream channel which result in or can contribute to accelerated channel erosion; channel instability or increased flooding potential; changes in stream chemistry resulting in or contributing to a violation of an applicable water quality standard; and adverse impacts to the area's biological resources.)

In making this determination, the district mining office should consider, at a minimum, the following factors:

1. Information provided by the applicant and information contained in the application.
2. The review conducted pursuant to Chapter 105.

3. Information and comments solicited from outside agencies.
4. Public hearing comments, if any.
5. Information available from other sources.

The variance request will be denied if the District Mining Office determines that the applicant has failed to demonstrate there will not be any adverse hydrologic or water quality impacts.

If the District Mining Office determines that the applicant has demonstrated there will be no adverse hydrologic or water quality impacts the variance will be granted subject to measures which the applicant must employ to prevent or mitigate adverse hydrologic or water quality impacts. The District Mining Office, after considering comments and mitigation suggestions from outside agencies, will decide the measures which must be taken by the operator to prevent or mitigate adverse hydrologic and/or water quality impacts. The District Mining Office will approve the variance through the issuance of an order to the operator. The order must specify the methods and techniques that the operator must employ to prevent or mitigate adverse impacts. The order granting the variance will be conditioned upon the operator implementing the approved prevention and mitigation measures and will be issued at the same time the permit is issued.

It should be noted that any proposal to place coal refuse in a stream channel is also subject to the requirements of Section 404 of the Clean Water Act. Additionally, even in cases where no stream variance is being sought, wetland mitigation may be required under other statutes.

APPENDICES:

Appendix A Examples of Reasonably Available Data

Appendix B Flow Chart

APPENDIX A

EXAMPLES OF REASONABLY AVAILABLE DATA

1. The data exists in any published form such as:
 - topographic maps
 - aerial photographs
 - soils maps
 - Pennsylvania Natural Diversity Index
 - resource books
 - National Wetland Inventory
 - Government agency files and records
2. The data can be collected without the need for property acquisition or legal right of entry.
 - Water samples and flow measurements at bridges, crossings or other public access areas as close to the site as possible.
 - A one time quantitative collection of aquatic information (fish, benthos, wetlands) at bridges, crossings or other public access areas as close to the potential site as possible.
 - Qualitative wildlife data collection at public access areas or where landowner allows access.
 - Data from adjacent areas that closely represent the project area.
3. Visual information that is obtained by walking through the proposed site or adjacent areas where access has been obtained.