

**FEDERAL REGISTER: 45 FR 14810 (March 6, 1980)**

DEPARTMENT OF THE INTERIOR

AGENCY: Office of Surface Mining Reclamation and Enforcement (OSM)

Abandoned Mine Land Reclamation Program

ACTION: Final guidelines for reclamation programs and projects.

**SUMMARY:** OSM is publishing final guidelines to assist States, Indian tribes, U.S. Department of Agriculture, and OSM in interpreting and applying the general reclamation requirements for individual programs and projects contained in SMCRA and the abandoned mine lands program regulations. These guidelines are designed to promote uniformity in programs and projects that are carried out by the different entities assigned the responsibility for administering the abandoned mine land programs and will provide a common basis for the conduct of future program and project evaluation activities.

EFFECTIVE DATE: March 6, 1980.

ADDRESS: Office of Surface Mining. Administrative Records Office, Room 135 South Building, 1951 Constitution Avenue, N.W., Washington, D.C. 20240, telephone (201) 343-4728.

FOR FURTHER INFORMATION CONTACT: M. Richard Nalbandian, Chief, Division of Reclamation Planning and Standards, Abandoned Mine Land Reclamation, Office of Surface Mining Reclamation and Enforcement, (202) 343-4057.

**SUPPLEMENTAL INFORMATION:**

Public Law 95-87, the Surface Mining Control and Reclamation Act of 1977 (SMCRA) (30 U.S.C. 1201 et seq. ), establishes an Abandoned Mine Reclamation Fund and provides the authority to use monies from this fund to reclaim and restore land and water resources adversely affected by past mining. Lands and water eligible for reclamation under this authority are those which were mined or affected by mining and abandoned or left in an adequate reclamation status prior to August 3, 1977 and for which there is no continuing reclamation responsibility under State, or other Federal Laws. OSM published final rules on October 25, 1978 (43 FR 49932) which established the abandoned mine land reclamation program and procedures for administering Title IV of SMCRA.

OSM is today publishing final guidelines to be considered when developing plans for abandoned mine land programs and projects. The text of these guidelines is published immediately following this notice. A notice of decision to develop guidelines was published on August 1, 1979 (44 FR 45316) with a request for public comment on this decision. The proposed guidelines were published on November 6, 1979 (44 FR 64254) with a request for public comments to be submitted by January 7, 1980. During this public comment period six public information meetings were conducted at Washington, D.C.; Charleston, West Virginia; Knoxville, Tennessee; Oklahoma City, Oklahoma; Denver, Colorado; and Indianapolis, Indiana. All comments received were reviewed and considered in developing these final guidelines.

The guidelines are considered to be statements of policy and are issued to advise the public on how OSM intends to administer the reclamation requirements for abandoned mine land programs and projects. These guidelines do not establish new legal requirements or obligations on the public and are subject to change at the discretion of OSM. They are issued to provide general guidance to States, Indian tribes, USDA, and OSM on the administration of reclamation activities carried out under programs authorized by Title IV of SMCRA.

The guidelines were prepared by the regional offices of OSM and have been reviewed by States, Indian tribes and Federal agencies prior to final publication. All formal comments received on the proposed guidelines were considered in the process of developing the final guidelines. Sixteen comments were received during the comment period which included the five transcripts for the public information meetings. Four State agencies commented and supported the concept of developing goal oriented guidelines as opposed to formal regulations on reclamation standards for abandoned mine lands. Two Federal agencies provided formal comments and the other commenters were either private citizens or surface mining organizations. All the comments received were considered and resulted in changes in the final guidelines. All formal comments are available for inspection at the address listed above.

## **ENVIRONMENTAL IMPACT STATEMENT**

In connection with the development of these guidelines, OSM has prepared an environmental impact statement (EIS) assessing the impacts of various alternatives considered for carrying out the Abandoned Mine Lands Reclamation program. The guidelines are assessed in that EIS and the content of the final EIS was considered for purposes of reaching decisions on the content of these guidelines. The availability of that EIS is being announced through a separate Federal Register notice.

### **AVAILABILITY OF COPIES**

Additional copies of the final guidelines and a listing of the technical references used to develop the guidelines are available for inspection and may be obtained at the following offices:

OSM Headquarters, Department of the Interior, Room 135 South Building, 1951 Constitution Avenue, N.W., Washington, D.C. 20240, (202) 343-4728.

OSM Region I, First Floor, Thomas Hill Building, 950 Kanawha Boulevard, Charleston, WV 25301, (303) 342-8125.

OSM Region II, 530 Gay Street, SW., Suite 500. Knoxville, TN 37902, (615) 637-8060.

OSM Region III, Federal Building and U.S. Courthouse, Room 510, 46 East Ohio Street, Indianapolis, IN 46204 (317) 269-2603.

OSM Region IV, 818 Grand Avenue, Room 501, Kansas City, MO 64116, (816) 374-5126.

OSM Region V, Post Office Building, 1832 Stout Street, Room 270, Denver, CO 80205, (303) 837-5511.

### **DRAFTING INFORMATION**

The final guidelines were drafted by the Abandoned Mine Land staffs of the five Regional offices of OSM under the direction of Theodore H. Ifft, OSM - Division of Federal Reclamation Programs. He can be contacted by phone at (202) 343-6786 or by mail addressed to Office of Surface Mining, Abandoned Mine Lands, Interior South Building, Room 221, 1951 Constitution Avenue, N.W., Washington, D.C. 20240.

Technical assistance was provided by a planning group composed of representatives from the States, Indian tribes, and USDA.

Note. - The Department of the Interior has determined that the proposed guidelines are not a significant rule under Executive Order 12044.

Dated: February 25, 1980.

Joan M. Davenport, Assistant Secretary, Energy and Minerals.

## **ABANDONED MINE LAND (AML) RECLAMATION PROGRAM PROPOSED GUIDELINES FOR RECLAMATION PROGRAMS AND PROJECTS**

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## **A. DEFINITIONS**

1. **ABANDONED PROPERTY** - Real and personal property, associated with past mining activities, that has been forsaken or deserted by an owner. This includes real estate, structures, and equipment.

a. **ABANDONED STRUCTURES** -

Abandoned permanent improvements or fixtures firmly attached to the land and considered as part of real property. Abandoned structures include but are not limited to coal tipples, coal washers, storage and grading facilities, loading docks, rail spurs, concrete foundations, dams, reservoirs, and bridges. Other items such as crushers, elevators, bins, loaders, conveyors and similar equipment are within this definition if firmly affixed to the land.

b. **ABANDONED EQUIPMENT** -

Abandoned movable items not affixed to the land. Such items are considered as personal property and include equipment and dismantled machinery not affixed to the land and which could be moved. These items include but are not limited to shovels, scrapers, tires, machinery parts, trailers, trucks, electrical substations on skids, feeders, and loaders.

c. **DISPOSAL** - The act of sale, federal utilization, demolition, removal, and the burning and burial of scrap or other debris resulting from abandoned structures and equipment.

2. ACT - The Surface Mining Control and Reclamation Act of 1977 enacted as Public Law 95-87 (30 U.S.C. 1201 et seq.).
3. ADMINISTERING AGENCY - The agency that has the responsibility for carrying out a reclamation program or project. This includes OSM for federal reclamation projects; U.S.D.A., Soil Conservation Service for the Rural Abandoned Mine Program; designated State reclamation agencies for projects carried out under an approved State Reclamation Plan; and Indian tribes for projects carried out under an approved Indian Reclamation Plan.
4. DAYLIGHTING - The surface mining procedures and excavation processes utilized to expose underground mine works for partial or complete removal of the remaining mineral underlying the surface.
5. EMERGENCY - A sudden danger condition or impairment that constitutes a situation with a high probability of substantial physical harm to the health, safety, or general welfare of people before the danger can be abated under normal program procedures.
6. RESTORATION OF THE HYDROLOGIC BALANCE - The stabilization and maintenance of the relationship between the quality and quantity of water inflow to water outflow from an abandoned mine land site. The relationship includes water storage and transfer within hydrologic units as they now exist or may have existed and measures needed to reduce or eliminate pollution to receiving surface and subsurface waters.
7. TOXIC-FORMING MATERIALS - Earth materials or wastes resulting from mining operations which, if acted upon by air, water, weathering, or micro-biological processes are likely to produce chemical or physical conditions in soils or water that are substantially detrimental to the biota or water use.

## **B. PROGRAM CONSIDERATIONS**

### **1. LAND, WATER, OR MINERAL RIGHTS REQUIRED FOR RECLAMATION**

a. Consent Requirements and Responsibility. In addition to the rights of entry required by 30 CFR 877, other consents required by the specific type of reclamation program should be obtained. In water limited areas reclamation programs that propose to restore or alter water quality or quantity should not be undertaken until the appropriate water right consents are obtained. If the mineral estate is severed from the surface estate, consents should be obtained from both parties. All necessary consents should be obtained for a time period sufficient to complete the reclamation activities. The administering agency has the responsibility to assure that no reclamation work is carried out without such consents.

b. Written Consent Versus Police Power. Written consent from the owner of record and lessee or his authorized agent should be the preferred means for obtaining agreements to enter lands in order to carry out reclamation work. Entry by use of police power is restricted to those reclamation projects that will protect public health and safety as authorized under Sections 403(1), 403(2), 409(c), and 410 of the Act and should be undertaken only after due care and deliberation has exhausted all possibilities of obtaining written consents. {14812}

c. Property Acquisition. Acquisition of property may be undertaken only under the specific conditions enumerated in Sections 407 and 409 of the Act and 30 CFR 879.

### **2. JURISDICTIONAL RESPONSIBILITIES**

a. Reclamation Program Legislative Requirements. The administering agency should consider how existing legislative requirements will impact its program, such as treaties, Federal laws, Executive orders, State laws, tribal laws, local laws, ordinances, and regional commission requirements. Timely coordination with the various agencies charged with implementing these requirements is necessary.

Among the Federal laws and Executive orders to consider are -

Bald Eagle Protection Act, as amended (16 U.S.C. 661 et seq.);

Clean Air Act, as amended (42 U.S.C. 7401 et seq.);

Clean Water Act of 1977, as amended (33 U.S.C. 1151 et seq.);

Endangered Species Act of 1973, as amended (16 U.S.C. 1531 et seq.);

Federal Coal Mine Health and Safety Act of 1969, as amended (30 U.S.C. 721 et seq.);

The Federal Metal and Nonmetallic Mine Safety Act (30 U.S.C. 721 et seq.);  
Fish and Wildlife Coordination Act, as amended (16 U.S.C. 661 et seq.);  
Floodplain Management, Executive Order 11988 (May 1977); 1977);  
Migratory Bird Treaty Act, as amended (16 U.S.C. 703 et seq.);  
Mineral Leasing Act of 1970, as amended (30 U.S.C. 181 et seq.);  
Mining and Minerals Policy Act of 1970 (16 U.S.C. 21a);  
National Environmental Policy Act of 1969, as amended (42 U.S.C. 4321 et seq.);  
National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 et seq.);  
Protection of Wetlands, Executive Order 11990 (May 24, 1977);  
Refuse Act of 1899 (33 U.S.C. 407);  
Safe Drinking Water Act, as amended (42 U.S.C. 7401 et seq.);  
Solid Waste Disposal Act (42 U.S.C. 3251-3259);  
Surface Mining Control and Reclamation Act of 1977 (30 U.S.C. 1201 et seq.); and  
Wild and Scenic Rivers Act, as amended (16 U.S.C. 1274 et seq.);

b. Environmental Evaluation Requirements. In compliance with the National Policy Act of 1969 (NEPA), the environmental concerns associated with reclaiming abandoned mine lands will be identified and resolved when a thorough effort is given to the environmental assessment or evaluation. Appropriate steps to achieve NEPA compliance should be undertaken for every proposed AML federal reclamation project except for emergencies under Section 410 and for every grant application submitted under an approved State or Indian Reclamation Plan. The objective of each administering agency should be to do a thorough environmental analysis for each reclamation site.

c. Interstate Coordination Requirements. Where reclamation that may affect adjoining States or other jurisdictional authorities (such as those of river basin commission) is undertaken, the administering agency should coordinate planning and implementation of these projects with other agencies with responsibilities for reclamation of abandoned mine lands in the affected area.

### 3. SELECTION CRITERIA

a. Reclamation Site Ranking. Procedures for selecting sites to carry out reclamation activities should incorporate relative weighting factors to rank the proposed sites. These procedures should give higher weights to the priorities of the Act (as outlined in Section 403 of the Act and 30 CFR 874.13) in descending order of their listing. In addition to weights assigned according to priorities, other factors including but not limited to those listed in 30 CFR 874.14 should be considered. Negative weights should be considered for adverse impacts resulting from the proposed project.

(1) Preference should be given to reclamation projects that -

(a) Invoice (landowners) consent to participate in post-reclamation maintenance activities of the area.

(b) Provide multiple benefits to the [landowners) where those benefits have a greater cumulative value than projects with fewer benefits, and

(c) Provide offsite public benefits.

b. Reclamation Considerations. The administering agency should consider the following items in determining whether a site should be reclaimed:

(1) The lands proposed for reclamation must be eligible as defined by Sections 404 and 409 of the Act.

(2) The proposed project should utilize available funds in an effective manner. Projects which require continuous maintenance and/or operating costs should be undertaken only if a commitment exists to bear these indefinite costs.

(3) Problems associated with the site can be abated by utilizing current available technology or horizon technology with a high probability of success to prevent or minimize present or future adverse effects.

(4) The proposed reclamation plan can solve the problems identified and has considered existing site conditions.

Site conditions to be considered include -

(a) Percent and length of slope,

(b) Amount of coarse fragments,

(c) Soil pH,

(d) Toxic substance occurrence,

(e) Depth to water table, and

(f) Potential for soil slippage.

(5) Reclamation can be carried out in a manner that minimizes maintenance to achieve a self-sustaining reclamation solution. Self-sustaining implies reclamation which is permanent and stable under the prevailing environmental and land-use conditions utilizing current state-of-the-art technology.

(6) If the project area is to be remined or developed in the foreseeable future and these activities will eliminate the adverse effects of past mining, reclamation should only be considered where the offsite adverse impacts from the affected area are so severe as to cause significant danger to public health and safety or to the environment if not abated before the proposed remining or development takes place.

(7) Control of abandoned mine subsidence problems should be limited to emergency or extreme danger situations except that a State agency with an approved reclamation program may include proposals for lesser priority subsidence control work in their annual submissions of projects. Reclamation activities should include all the necessary steps to abate or eliminate the emergency or extreme danger condition. Structures should only be moved as a last resort with the approval of the head of the administering agency.

(8) Abatement or control of abandoned mine fires should only be considered where the problems associated with the fire have created or have the potential to create an emergency or extreme danger situation except that a State agency with an approved reclamation program may include proposals for lesser priority mine fire control projects in their annual submissions of projects. Reclamation activities should include all necessary steps to abate or eliminate the emergency or extreme danger condition created by the fire.

(9) Land use conditions should be evaluated as part of the planning process. This evaluation should consider if the -

(a) Reclamation activities can be planned in a manner that is compatible with the proposed land use of the reclaimed land as intended by the (landowners);

(b) Post-reclamation land use proposed is compatible with surrounding land uses, complies with local, State, tribal, and Federal requirements, and is acceptable to the community involved; and {14813}

(c) Post-reclamation land use results in protecting and possibly improving the natural resource base of the area, enhancing the quality of the environment, and improving the quality of life.

(10) Esthetic values should be evaluated as part of the project planning process. The requirements for this evaluation are detailed in Site Consideration Guideline No. 8 (Esthetic and Visual Values).

(11) Fish and wildlife values should be evaluated as part of the project planning process. The requirements for this evaluation are detailed in Site Consideration Guideline No. 9 (Fish and Wildlife Values).

c. Reclamation Extent. The amount of reclamation performed on a site depends upon the priority, funding available, and technology available for reclaiming the site.

(1) Consideration should be given to eliminating all the problems associated with an abandoned mine site. All lower priority problems should be included in the reclamation plan when contracting for the elimination of the high priority problem. Factors that should be considered in determining the amount of reclamation to be done at a site include -

- (a) The affected land and water area,
- (b) Uniformity of the (problems) over the entire site,
- (c) Proposed post-reclamation land use,
- (d) Fund availability,
- (e) Offsite benefits,
- (f) Onsite benefits,
- (g) Landowner participation,
- (h) Later additional reclamation work required,
- (i) Multiple land use benefits,
- (j) Cost effectiveness of the proposed work, and
- (k) The possibility of remining.

(2) The administering agency should determine the minimum reclamation needed to make the site environmentally suitable. The administering agency should confer with the (landowners) and, if possible without incurring additional costs above that required for the minimum reclamation needed, accommodate the (landowners) land use and treatment desires.

d. Cooperative Efforts. -

(1) Agreements should be initiated for all reclamation projects between the administering agency and the (landowners). If an agreement is unattainable or the (landowners) does not want to participate in the reclamation project, then "Entry and consent to reclaim" procedures established in 30 CFR 877.13 may be followed or no reclamation undertaken.

(2) A maintenance agreement between the administering agency and the (landowners) may be incorporated as part of the reclamation plan to insure the continued success of the reclamation project. Estimated costs as well as financial and administrative responsibilities should be recognized in any agreement.

e. Joint Projects. Joint undertakings between the administering agency and the (landowners) or other local, State, tribal, or Federal agencies may be desirable.

#### 4. EMERGENCY PROJECTS

a. Authority for Emergency Reclamation. - (1) Authorities and requirements for rights of entry to carry out emergency reclamation projects are contained in Section 410 of the Act and 30 CFR 877.14. The Secretary of the Interior working through the Office of Surface Mining has the responsibility for projects administered under these authorities.

b. Emergency Project Considerations. - (1) Emergencies are differentiated from extreme danger (Priority 1) projects by interpretation of the phrases "sudden danger" and "high probability of substantial physical harm" in the definition of "emergency" contained in 30 CFR 872.5.

(2) Once it has been determined that an emergency exists on lands eligible for reclamation under the Act, all agencies should act expeditiously to restore, abate, control, prevent, or otherwise eliminate the emergency situation by removing the threat to the health, safety, or general welfare of the persons involved.

(3) Justification for emergency action must be based on whether immediate action is crucial to eliminate the danger of harm to persons and that no other person or agency will expeditiously act to eliminate the emergency situation. The time element referenced by the phrase "before the danger can be abated under normal program operation procedures" means that the danger is so imminent that time is not available for normal project contractual and budget procedures.

c. Emergency Project Examples. The following list illustrates examples of sudden situations with a high probability of causing substantial physical harm to the health, safety, and general welfare of people:

(1) Subsidence suddenly occurring in or near populated areas.

(2) Deep mine or highly used public areas.

(3) Slides caused by movement of spoil material or mass movement due to drainage or seepage from abandoned coal mines threatening to destroy homes and business or block roads and stream channels.

(4) Actual or potential failure of unstable coal refuse impoundments, processing waste banks, or abandoned sediment control structures caused by unusual precipitation events significantly imperiling downstream populated areas.

(5) Mine or coal refuse fires that impair the health or safety of residents in populated areas.

d. Abatement Procedures. -

(1) Reclamation procedures are site specific and often cannot be determined or implemented until after onsite inspection and evaluation of the nature of the emergency, number of people affected, resources available, and existing time constraints.

(2) Emergency reclamation procedures need not resemble final reclamation products. The objective of emergency reclamation is not to fully reclaim the area but to stabilize the problem and eliminate the danger to public health, safety, and welfare. Additional reclamation may be carried out under regular reclamation programs at a later date.

e. Coordination Requirements. -

(1) OSM and the State or tribal reclamation agency should coordinate all efforts on emergency projects so that the assessment of the emergency situation and the determination of eligibility can be accomplished in an expeditious manner.

(2) Agencies that provide emergency services such as the fire department, police, utilities, ambulance, and Red Cross should be contacted to determine the services available to abate the emergency situation.

(3) If construction is necessary, local, State, and tribal agencies should be contacted to identify qualified contractors and/or technical experts that can provide immediate assistance.

#### 5. INCIDENTAL RECOVERY OF COAL IN CONJUNCTION WITH RECLAMATION ACTIVITIES

a. Active Mining Permit Requirements. - The administering agency should make a determination as to whether any coal recovery activity associated with an abandoned mine reclamation project is exempt from Title V regulations under provisions of Section 528 of the Act. If the determination is made that any recovery of coal is not incidental to the reclamation project, the administering agency should see that all permits required under this title are obtained before reclamation activities commence. {14814}

b. Resource Recovery Potential. - Prior to conducting reclamation activities on land containing coal refuse piles, coal waste impoundments, or abandoned mine workings, a written determination should be made as to whether coal within a refuse pile, impoundment, or abandoned working is economical to recover during the reclamation project. In making its determination, the administering agency should -



- (1) Perform a chemical analysis of the coal, coal refuse, or coal waste to enable determination of the economic feasibility of recovery,
- (2) Identify any coal preparation, washing, and loading operations located within reasonable proximity of the site,
- (3) Consider the financial and technical feasibility of recovery,
- (4) Identify persons with the capability of performing any reclaiming or other coal recovery operation believed to be feasible, and
- (5) Make a written statement as to its findings on the potential for resource recovery and outline plans for incorporating resource recovery into the reclamation project.

c. Reclamation Techniques and Methods. -

(1) Many techniques for the reclamation of land containing coal refuse piles, coal waste impoundments, or abandoned mine workings are available. If the mineral estate under the area to be reclaimed contains other coal seams that are currently uneconomical to mine, reclamation activities should be carried out so that they do not preclude future coal recovery. Methods of reclaiming land containing coal refuse, coal wastes, or abandoned workings containing coal refuse, coal wastes, or abandoned workings or coal waste to an environmentally acceptable site;

(2) Burying the refuse or waste, layering the refuse material and sealing it with clay or other impervious material, when necessary, to prevent water infiltration and contamination, revegetating the disposal area, and diverting water away from or around the reclaimed area;

(3) Treating the refuse pile in place by -

(a) Diverting water around the coal refuse and/or waste,

(b) Collecting and conveying drainage from the refuse pile for safe disposition (an approved water pollution control facility should be used if needed to meet with quality standards),

(c) Grading and contouring waste structures to drain water off the disposal site,

(d) Covering the refuse with a suitable thickness of nontoxic or nonacid-forming material or treating the refuse with lime or other material to prevent acid or other toxic drainage, or

(e) Any combination of the above treatments;

(4) Opening old underground mine workings to reclaim the area;

(5) Sealing underground mine entries to preclude polluted water discharges; or

(6) Other appropriate methods.

d. Recovered Coal Disposition. - Where the refuse pile, impoundment, or abandoned mine working contains recoverable coal, the administering agency may recover or authorize the recovery of any coal determined incidental to the reclamation activities. Any revenues received from the sale of this coal should be deposited to the Fund pursuant to Section 401(b) (4) of the Act.

## 6. ABANDONED STRUCTURES

a. Abandoned Structures and Equipment Investigation. -

(1) The administering agency should perform an onsite investigation of abandoned structures or equipment. The landowner and/or the owner of the structures or equipment should be offered the opportunity to participate in the investigation.

(2) Every effort should be made to encourage the recovery of any salvage value from abandoned structures and equipment by disposal prior to the initiation of any reclamation project.

(3) The investigation should -

(a) Record the type, quantity, and apparent condition of all abandoned structures or equipment.

(b) Consider the age, structural soundness, visual quality, historical significance, effect on existing and/or proposed reclamation activities, and land uses in the area. The structural soundness of the structure should be evaluated in relation to public health, safety, general welfare, and the post-reclamation use. Evaluation of complex structures should be performed by a qualified person with written recommendations and cost estimates for any modifications needed to eliminate safety hazards associated with these structures.

b. Abandoned Structures and Equipment Report. Upon completion of the onsite investigation, a report should be prepared by the administering agency and should include -

(1) A description of the type, quantity, and condition of all abandoned structures or equipment;

(2) A discussion of the considerations relating to the disposal or retention of abandoned structures or equipment in accordance with local, State, tribal and Federal laws;

(3) Recommended methods to eliminate the safety hazards associated with structures or equipment that are retained on the reclaimed site.

(4) If a determination can be made of the ownership, an analysis should be developed of the impact of the proposed reclamation activities on these owners.

c. Ownership Rights. Based on the investigation and report, the administering agency is responsible for determining the disposition of the abandoned structures or equipment, and for obtaining all rights or releases from the owner before such structures or equipment are removed or modified.

## 7. BORROW AND DISPOSAL AREAS

a. Site Selection. The borrow and disposal areas created by reclamation activities should be subject to and conducted in accordance with applicable local, State, tribal, or Federal reclamation requirements. Borrow and disposal areas should be located on the site of the reclamation project if possible. Offsite borrow and disposal areas should be utilized only when no onsite area is available and it is necessary to protect the health and safety of the public, provide an area more suitable for reclamation and less prone to constitute a hazard in itself, produce an improved land use, or protect the environment.

b. Adverse Impacts. Adverse impacts of the selected areas should be minimized by disturbing the smallest possible area; providing adequate drainage, dust, and erosion control measures; protecting historic and cultural values; protecting visual esthetics; protecting fish and wildlife values; protecting the health and the safety of the community and the public; and reclaiming the borrow and disposal area after termination of the project.

## 8. EXPERIMENTAL OR DEMONSTRATION PRACTICES

a. Unique Aspects. Experimental or demonstration practices authorized by Sections 403(4) and 405(f) (5) of the Act should be considered when the proposed practices include new technologies not demonstrated on existing reclamation projects or not adequately covered by previous research efforts. State-of-the-art information and past research efforts should be reviewed to ascertain that the proposed practices have some unique aspects.

b. Coordination Requirements. Coordination of experimental and demonstration practices with other Federal, State, or tribal agencies interested in the practices is the responsibility of the administering agency. Care should be taken to limit the size and number of experimental or demonstration practices to those necessary to determine the effectiveness and economic feasibility of the practice.

c. Practice Considerations. The selection of an experimental or demonstration practice should be based on the following factors:

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(1) The practice is believed to be more cost effective, or more effective in the overall abatement of the specific AML (problems), than present practices.

(2) The result will meet environmental, mine health and safety standards, and other applicable State, tribal, and Federal laws.

(3) The practice has not been successfully applied to the particular problem under similar conditions.

(4) The practice has a good probability of succeeding with minimum or no adverse effects to public health and safety or the environment.

(5) Anticipated construction time and monitoring period are of such reasonable length that interim and/or final results will be useful during the life of the AML program.

(6) Proposed experimental or demonstration practices should have broad application so as to benefit reclamation techniques and be of interest to other areas, States, Indian tribes, or regions. Funding priority should be based on the benefits which could be derived, extent of applicability, and consistency with State and Indian Reclamation Programs, were applicable.

(7) The results of the practice will be consistent with existing and/or planned surrounding land uses.

(8) Practices which address high priority problems as specified in Sections 403(1) and 403(2) of the Act should be given priority over other practices proposed to address lower priority projects.

d. Report Requirements. Thorough records of all experimental or demonstration projects should be kept, and reports outlining the results or consensus of findings published and made available to interested parties.

## 9. PROGRAM AND PROJECT EVALUATION

a. General Evaluation Considerations. Title IV reclamation activities are to be evaluated on a continuing basis to determine the effectiveness of the program/project in reclaiming abandoned lands. Project evaluation measures the success or failure of the applied reclamation while program evaluation determines the effectiveness of the program, purposes, regulations, and procedures in achieving the objectives of the Act. Evaluation efforts include, but are not limited to, recording progress (accomplishments), making onsite reviews before, during, and after reclamation, and analyzing fund management.

b. Recording Requirements. The administering agency should be responsible for measuring, recording, and reporting the physical benefits of reclamation projects. Benefits recorded should include -

- (1) Number of acres restored;
- (2) Number of health or safety hazards eliminated;
- (3) Population protected from subsidence, air pollution, mine or waste fires, water pollution, or other hazards;
- (4) Miles of stream improved or protected;
- (5) Acres of fish or wildlife habitat restored; and
- (6) Esthetic value improved (acres).

c. Completed Reclamation Review.

(1) At least 5 percent of the completed reclamation sites under each program (Office of Surface Mining, State, Indian, and Rural Abandoned Mine Program) should be reviewed annually by the administering agency. This review should be carried out by persons who were not directly involved in the planning or installation of the site, but may be employed by the administering agency. The purpose of the review is to evaluate the effectiveness of the completed reclamation. Items to be addressed include the extent to which the existing program policies, procedures, and these guidelines were followed; the reclamation objectives were accomplished; and the planned benefits were actually obtained. Additionally the extent to which completed reclamation meets program requirements, the degree to which the reclamation practices serve the intended purpose, the cost effectiveness of reclamation procedures, and the degree to which the completed reclamation activities are maintained should be reviewed.

(2) Results from the review carried out under (1) above should be used to modify program operations on future reclamation activities so that deficiencies noted on the review will not reoccur. Major deficiencies noted on the review should be corrected onsite if they fail to meet basic reclamation requirements.

d. Monitoring Requirements. Representative samples of reclamation activities should be monitored over time to document benefits or results, and insure that the success of the reclamation measures can be evaluated. The monitored activities should represented a mix of different priority projects, geographical areas, and problem areas.

## 10. MAINTENANCE OF RECLAMATION WORK

a. Minimizing Maintenance. Reclamation should be done in a manner to minimize or eliminate continued maintenance.

b. Maintenance Plan Content. Maintenance requirements for a site should be identified and established during the planning and design stages. These requirements must be technically and economically feasible and should be developed in cooperation with the (landowners) and/or appropriate agencies through formal agreement. Maintenance plans should include maintenance requirements, inspection schedules, technical assistance needed, and funding requirements.

## 11. NONCOAL PROJECTS

a. Guideline Applicability. Noncoal reclamation projects should only be treated under the authorities specified in Section 409 of the Act.

b. Planning Considerations. Planning for reclamation of noncoal projects may commence prior to completion of all coal projects.

c. Selection Priorities. Priorities given to noncoal projects should be determined in the same manner as coal projects; reclamation may not proceed until all coal problems have been resolved, except for those reclamation projects relating to the protection of the public health or safety as outlined in Section 409(c) of the Act.

## 12. IMPACT ASSISTANCE

a. **Planning Considerations.** Impact assistance should be for the purpose of alleviating the adverse effects on communities impacted by coal development. Planning impact assistance can begin prior to physical completion of all coal and noncoal projects, but funding for Impact Assistance projects cannot be approved until the requirements of Section 402(g) (2) of the Act and 30 CFR 884.12(d) have been met.

b. **Priorities for Selection.** Funding assistance priorities for communities impacted by coal development should be determined according to the following sequence:

(1) **Priority A** - Areas suffering or expected to suffer housing shortages and inadequate public facilities and services as a result of coal mine development where such conditions are expected to pose a threat to the public health, safety, and general welfare.

(2) **Priority B** - Repair or replacement of public facilities that have been adversely affected or are inadequate as a result of coal mine development.

c. **Coordination Requirements.** Planning for impact assistance and coordination with other agencies should be implemented in accordance with local, State, tribal, and Federal requirements. {14816}

## C. SITE CONSIDERATIONS

### 1. MINE DRAINAGE

a. **General Considerations.** The administering agency should consider the following factors in minimizing or controlling mine drainage:

(1) Impounded waters containing mine drainage or toxic materials should be treated prior to release.

(2) At-source control measures are preferred over long-term treatment methods to eliminate or minimize maintenance.

b. **At-Source Control Measures.** Controlling or minimizing mine drainage at its source can be accomplished by- (1) Mine-sealing techniques, including grout curtains and slurry trenching. Factors to be considered when planning to seal mines are the potential to develop hydrostatic heads, the accessibility of the area, and the integrity of the surrounding geologic formations.

(2) Infiltration control and water diversion. Factors to be considered include topography, control of surface water, effects on ground water, the control of water passage through openings, and the storm event design.

(3) Daylighting. Factors to be considered include the depth of overburden, marketability of the mineral, and safety measures.

c. **Treatment Measures.**

(1) Secondary treatment of mine drainage can be carried out by the addition of neutralizing agents. Permanent treatment facilities should be designed to minimize operation and maintenance costs and should only be considered if no other means exists to abate the problem. Written assurance should be obtained that the treatment facilities will be maintained after appropriations for the abandoned mine land program cease.

(2) Since tertiary treatment to control toxic mine drainage problems is expensive, the only method that should be given serious consideration is neutralization.

### 2. ACTIVE SLIDES AND SLIDE-PRONE AREAS

a. **Site Selection Considerations.** The selection process for reclamation work on slides or slide prone areas should follow the criteria contained in the Program Consideration Guideline No. 3 (Selection Criteria).

b. **Site Evaluation Factors.** Factors that should be considered on a case-by-case basis in the evaluation of slides of slide-prone areas include -

(1) The topography of the ground surface as an indication of past landslide activity and potential instability. Mapping may be necessary before construction, at appropriate intervals during design implementation, and after remedial measures are undertaken. Topographic data collected should include contour maps at 2- to 5- foot intervals, surface drainage characteristics with emphasis on the locations of ponded surface water, and slope profiles.

(2) The geology or geometry of the subsurface. Rock formations and geologic structure including folds, faults, joints, and shear zones should be identified. This information may be useful in comparing the landslide potential of various

areas.

(3) The soil or spoil material. Description of the slide-prone material should include its texture, permeability, and engineering properties as well as the related soil-rock ratios.

(4) Ground water sources. Springs and seeps, dump areas, adits, auger holes, drill holes, and coal seams should be identified.

(5) Monitoring data available. Any data specific to the slide or slide-prone area can be helpful in assessing the constant changes taking place and in providing technical data for designing the best structural specifications for stabilizing the area.

(6) Other physical factors. These include timber coverage or lack of it on slopes, parent material and volume of spoil, and proximity to other slides.

(7) Vegetative cover. Vegetation may indicate the nature of landslide activity and affect the stability of the slide or slide-prone area. Deep masses of roots may provide sufficient reinforcement to distort the geometry of the sliding or creeping mass and trees with deep tap roots may curtail severe movement. Vegetative cover within a landslide area should be compared to that within the surrounding area and with that present at known landslide areas. (8) Material disturbances. These include undercutting of the toe and the dip slope and upslope disturbances.

(9) U.S. Geological Survey slide-prone maps, U.S. Department of Agriculture soil maps, and other related data.

c. Remedial Measures. Reclamation and stabilization of slide-prone areas may be obtained by reducing the driving forces contributing to failure. Such reduction may be achieved by

(1) Removing unstable or potentially unstable material.

(2) Changing or flattening the slope by terracing, slope reduction, or removal of all or part of the slide material.

(3) Dewatering and providing internal drainage by -

(a) Diversion of surface waters.

(b) Installing horizontal drains consisting of perforated pipes or adits.

(c) Installing french-type drainage systems.

(d) Diverting water from underground workings by daylighting.

(e) Drilling wells to pump water from the slide.

(f) Electrochemical stabilization.

(g) Revegetation (evapotranspiration).

(4) Installing support and reinforcement systems. These include -

(a) Buttresses and bulkheads to bear the weight of the slide material where failure of overhangs is imminent or where cracking or vertical displacement is occurring.

(b) Retaining walls to prevent large blocks from failing and to control failures by increasing resistance to slope movement.

(c) Vertical pilings to increase the resisting force.

(d) Gabions to increase resistance forces in small-scale slides.

### 3. EROSION AND SEDIMENTATION

a. Erosion and Sediment Control Considerations. The administering agency should consider the following to control erosion and reduce the sediment load derived from a site exposed for reclamation:

(1) Erosion and sediment control measures should be designed to -

(a) Reduce erosion rates;

(b) Reduce water pollution from sediment, acid drainage, and other toxic materials;

(c) Stabilize mined lands and spoil piles;

(d) Protect water resources; and

(e) Provide conditions suitable for the planned land use.

(2) Reclamation should include adequate treatment and management to maintain the soil resource within soil loss limits. Additional treatment may be necessary to minimize environmental degradation.

(3) Allowable sheet and rill erosion rates should be related to the properties of the reconstructed soil resulting from reclamation. Information relative to allowable soil loss limits may be obtained from local USDA Soil Conservation Service Offices.

(4) Land disturbing activities should be planned to -

(a) Expose the least amount of land at any one time, {14817}

(b) Expose the more hazardous areas for the shortest time and during the season when extreme rainfall is least likely to occur.

(c) Complete activities so revegetation can take place at the most advantageous time of year, and

(d) Control foot and vehicular traffic and grazing until vegetation is established.

b. Erosion Control Practices.

(1) Vegetation should be established as outlined in Site Consideration Guideline No. 4 (Vegetation).

(2) Mulches may be used for temporary erosion control and in some cases stabilizing agents such as gravel, stone, and concrete blocks may be used for permanent protection. Mulching materials may include straw, hay, wood chips, bark, shells, hulls, stone, jute mesh, synthetic fabrics, plastic netting, asphalt materials, and chemical stabilizers.

(3) Structural measures may be used to divert offsite runoff, reduce slope length, and provide for an effective runoff disposal system. Some of the more common practices used include diversions, terraces, grassed and lined waterways, underground outlets, subsurface drains, and grade stabilization structures. In many cases, a combination of vegetation and structural measures is needed for adequate erosion control.

(4) Temporary structural measures may be needed for erosion control during establishment of permanent practices. Temporary vegetation may also be needed. Provisions should be made to remove the temporary control measures and stabilize the area when they are no longer needed.

c. Sediment Trapping Practices.

(1) If it is impractical to achieve the desired reduction in sediment yield by erosion control practices, either during the establishment period or permanently, sediment control practices should be used to achieve the desired results.

(2) Sediment control measures include filter strips, sediment traps, and sediment basins. These measures should be stabilized and maintained during their planned life.

(3) Permanent sediment basins should be maintained and the sediment removed promptly when it accumulates to the design level. Sediment removed should be disposed of in a manner that prevents environmental degradation. The use of permanent sediment basins should be minimized because of the continuing maintenance responsibility.

#### 4. VEGETATION

a. Existing Vegetation Inventory and Evaluation. The administering agency should complete an inventory and evaluation of existing vegetation and site conditions prior to developing the Reclamation Plan. Land use determinations should be made after consideration of various alternatives. Wherever possible, multiple land uses should be adopted and become a part of the plan. The permanent vegetation selected to cover the reclaimed mine land should be compatible with the site characteristics and the intended land use of the reclaimed and surrounding land and provide adequate soil cover and other supporting practices to control erosion.

b. Vegetative Requirements. The vegetation portion of the reclamation plan should be developed considering the requirements itemized for each of the following specific cases:

(1) In areas where the present plant species are inadequate or undesirable and only a change in vegetation is needed -

(a) Temporary vegetation should be used to provide protection during a delay in construction activities, to protect stockpiles of soil materials for a short time, or to provide temporary cover until the permanent vegetation is established. Temporary vegetation may be used alone or in combination with a mulch or other stabilizing agent or technique in accordance with the needs of the site.

(b) Necessary erosion and sediment control structures should be installed to protect the area from excessive erosion and sedimentation during the vegetation establishment period.

(c) Permanent vegetation should be selected so that it is adapted to the site and is compatible with the planned land use.

(d) Permanent vegetation should be established and maintained in accordance with plans itemized in the vegetative portion of the reclamation plan. The newly planted area should be protected from excessive use, especially livestock grazing, during the establishment period.

(2) In areas where changes in topography and vegetation are needed -

(a) Changes in topography should be made to improve esthetic aspects of the site, permit establishment of desirable vegetative cover, and insure compatibility with the planned land use;

(b) Existing vegetation should be selectively destroyed when necessary; and

(c) Permanent vegetation should be established in accordance with 4.b.(1) above.

(3) In areas where the present spoil material is unsuited for vegetation because of unfavorable soil conditions -

(a) Spoil material should be covered or replaced with material that will support the desired vegetation,

(b) Permanent vegetation should be established in accordance with 4.b.(1) above.

(4) In areas where alteration of the site to support vegetation is impractical -

(a) Confine runoff and sediment to the immediate area, or

(b) Intercept and treat the sediment and runoff to an acceptable level of quality before discharging offsite.

## 5. TOXIC MATERIALS

a. Sampling and Analysis Consideration. The administering agency should carry out the following investigations on sites containing toxic materials:

(1) Sampling - Where data are insufficient or nonexistent for spoil, characterization of toxic materials by the use of vertical core samples or other suitable deep-sampling procedures should be undertaken.

(2) Analysis The following chemical and physical (2) utilizing acceptable analytical procedures, should be conducted on toxic materials:

(a) pH (paste).

(b) SMP Buffer (tests pH of solution prior to weathering).

(c) Net acidity or alkalinity, or potential acidity.

(d) Total sulfur (sulfate and sulfide).

(e) Electrical conductivity (mmhos/cm).

(f) N,K,P and USDA texture class when material is to be used as post-reclamation plant growth medium.

(g) Organic matter (quantity and type).

(h) Other analyses- When pH values of 4.5 or less and 8.5 or greater are encountered, other analyses may be required (e.g., Na, Mg, Ca, heavy metals, various trace elements).

(i) Visual and/or microscopic identification of potential toxic or acid forming minerals.

(3) Critical toxic element limits. The administering agency should consult with agencies that have responsibility for establishing toxic limits and consider these limits in their reclamation planning efforts.

b. Planning Considerations. The administering agency should consider the following items in their planning efforts on projects containing toxic materials:

(1) Site preparation should provide for any required -

(a) Containment or segregation of toxic materials by placement of the toxic materials in sealed pits or embankments and/or covering the toxic materials with compacted clay or some other suitable material. {14818}

(b) Grading and backfilling.

(c) Scarification.

(d) Application of appropriate growing medium consisting of topsoil or suitable overburden material.

(e) Soil amendments including chemical fertilizers, lime gypsum, mulches, or sludge.

(2) Runoff water management should provide for any required -

(a) Sediment control.

(b) Soluble toxic element control.

(c) Water management control.

(3) Vegetation should be established as outlined in Site Consideration Guideline No. 4 (Vegetation).

(4) Necessary monitoring and maintenance should be developed.

## 6. HYDROLOGIC BALANCE

a. Planning Considerations. The administering agency should consider the following items in their planning of projects aimed at the restoration of the hydrologic balance:

(1) Identification of areas needing restoration.

(2) Relationship of anticipated restoration activities to offsite hydrologic systems.

(3) Evaluation of the hydrologic balance considering the proposed restoration along with technical and economic constraints.

(4) Post-reclamation land use of the site and surrounding area.

(b) Surface-Water Considerations. Factors to be considered include:

(1) Restoration and protection of surface drainage to:

(a) Insure erosional and ecological stability including stream gradient, fish and wildlife habitat, longitudinal profile, and type of reconstruction materials.

(b) Insure compatibility with geomorphic and ecologic characteristics of adjoining undisturbed surface drainage.

(c) Enable use, as appropriate, as a source of ground-water recharge.

(d) Insure minimization of downstream flood potential.

(2) Flood-plain reconstruction should consider all relevant factors including geomorphic and vegetative characteristics. Stream channelization is prohibited in certain cases contained in Sections 403(3) and 406 of the Act.

(3) Reclamation of overland flow drainage systems compatible with the longitudinal profile of the drainage area and the receiving stream characteristics.

(4) Consideration of long-term, self-maintaining erosion control measures to enhance stream and flood plain stability.

c. Ground-Water Considerations. Factors to be considered include:

(1) Evaluation of the relationship of the re-established water table to the reclaimed land surface.

(2) Evaluation of the ground-water recharge capacity, considering underlying aquifers, backfill materials, and the presence of toxic and acid forming materials.

(3) Identification and isolation of unsuitable material between impervious layers of earth to preclude contamination of the re-established water table.

(4) Restoration of ground water in a manner that will not diminish or degrade water leaving the site.

d. Water Impoundments. Water impoundments should be designed and constructed in accordance with applicable local, State, tribal, or Federal requirements and should not adversely affect the restoration of the hydrologic balance.

## 7. PUBLIC HEALTH AND SAFETY

a. Insect/Vermin Vectors.

(1) Abandoned mine sites used as dumps may pose a hazard to public health if they are close to residences. The presence of a dump in an abandoned mine site should not be considered the primary reason for reclamation, but may be considered in raising the site priority over other sites in the same objective category.

(2) Prior to any reclamation work on dumps, the local, State and/or tribal agency should be contacted for proper disposal techniques and encouraged to abate the problem under other existing authorities.

b. Highwall Danger.

(1) Highwall characteristics that create a significant danger to public health or safety include -

(a) Sloughing or slipping that may damage structures and may block roads and stream channels, or

(b) Public use of the area above the highwall.

(2) Appropriate reclamation techniques to control public health and safety problems associated with highwalls include -

(a) Reducing the highwall height,

(b) Backfilling and grading the highwall to a safe and stable slope, or

(c) Providing a physical barrier to limit accessibility and material movement.

c. Mine Openings and Subsidence.

(1) The administering agency should consider the following items when planning for subsidence control projects:

(a) Exploratory drilling to determine the locations, size, and condition of abandoned underground mine openings with the potential to subside (except in emergencies).

(b) Proximity to populated areas with high public use.

(c) Identification of potential subsidence areas to all local, State, and tribal land use planning agencies.

(2) Restricting entry to mine openings should be accomplished by constructing physical barriers and/or fencing for emergency situations.

(3) Only currently available technology for subsidence and mine opening control should be employed.

d. Radiation Emission. Where radiation constitutes a potential public health or safety problem, the primary consideration should be to assure proper coordination with other pertinent agencies prior to reclamation activity. Such agencies include: U.S. Environmental Protection Agency, Nuclear Regulatory Commission, National Council on Radiation Protection, State Nuclear Regulatory Agencies, State Health Departments, and Tribal Environmental Offices.

e. Domestic Water Supplies.

(1) Control measures designed to protect or restore domestic water supplies should consider the number of people affected, the type and concentration of (pollutants), and the type and cost of control technology.

(2) Clean-up or restoration of domestic water supplies should be restricted to source control where possible.



f. Surface and Underground Mine Fires.

(1) Only fires associated with abandoned mines or in virgin seams associated with other abandoned mine reclamation problems are eligible for Title IV funding.

(2) Prior to initiating control or extinguishment efforts, geologic investigations should be carried out to determine the extent of the fire and the amount of remaining combustible material.

g. Hazardous Gases and Particulates.

(1) Toxic gases and particulates can adversely affect health, visibility, and inhibit plant growth.

(2) Specific control or treatment procedures should consider local physiographic and atmospheric conditions.

(3) The expertise and data that can be provided by local, State, and tribal air pollution control agencies should be considered.

## 8. ESTHETIC AND VISUAL VALUES

a. Esthetic Evaluation Requirements. The administering agency should conduct an esthetic evaluation to assess the -

(1) Visual impact within the context of the viewing distance, disparity of land forms and texture, color contrast, and seasonal variations. {14819}

(2) Viewing audience, including the number of potential observers, the nature of the viewing audience, and their expectations.

(3) Proximity to public facilities and other high use areas including transportation facilities, parks and recreation areas, public forests, urban areas, and tourist attractions.

b. Visual Degradations. Reclamation activities should include landscaping techniques to visually improve the areas being reclaimed. Highwalls, eroding soils or spoil, discolored water, haul roads, offsite sedimentation, deep mine openings, refuse piles, abandoned structures, slurry ponds and sediment basins, stockpile areas, abandoned mining equipment and debris, garbage and refuse dumps, open pits, and deforestation in certain cases may be determined to be visual degradations and should be considered for visual improvement.

c. Esthetic Problem Solutions. Most solutions for esthetic problems should involve material movement, strategic placement of screening materials, and the determination of appropriate plant species. Guidelines and standards to evaluate visual resources developed by the U.S. Forest Service, U.S. Soil Conservation Service, U.S. Bureau of Land Management, National Park Service, Heritage Conservation and Recreation Service, and other agencies should be adapted for use in evaluating and planning visual solutions. Some solutions for esthetic problems may include -

(1) Revegetation with screening trees and shrubs, herbaceous plants, and combinations thereof;

(2) Offsite screening;

(3) Stream and/or reshaping of outslopes;

(4) Stream restoration where permitted;

(5) Disposal of abandoned mining and processing equipment and debris; and

(6) Reshaping and revegetation of bare eroded areas.

## 9. FISH AND WILDLIFE VALUES

a. Project Identification Requirements. The administering agency should periodically provide a list of proposed and on-going abandoned mine land activities to the conservation or land management agencies with responsibilities for fish and wildlife or their habitats and should request pertinent information and suggestions from these agencies.

b. Determining Fish and Wildlife Values and Goals. The administering agency should review information provided by the conservation and land management agencies with responsibilities for fish and wildlife or their habitats to determine the pre-reclamation fish and wildlife values of abandoned mine land sites. The administering agency should then determine the fish and wildlife goals for each project, in relation to that project's determined fish and wildlife values and the program priority objectives.

c. Planning Considerations. The administering agency should encourage the consideration of fish and wildlife values in all reclamation activities, including those whose primary purposes for reclamation are related to public health, safety, or general welfare. If fish and wildlife values are determined to be among the goals of the reclamation efforts, the administering agency should incorporate them into the reclamation plan.

d. Coordination With (Landowners). The selected reclamation plan should be discussed with the landowners/or users before reclamation begins.

e. Installing and Maintaining Established Fish and Wildlife Habitat Values. The administering agency should insure that all fish and wildlife measures contained in the selected plan are implemented and should encourage the (landowners) to maintain them at or above the planned level.

#### 10. AIR QUALITY

a. Air Quality Standards. All reclamation activities should be conducted in accordance with applicable local, State, tribal, or Federal air quality standards.

b. Coordination Requirements. Local, State, tribal, or Federal air quality officials should be contacted prior to reclamation planning activities for requirements concerning air quality permit procedures, applicable standards, and possible control measures.

c. Air Quality Degradation and Improvement. Long-term air quality improvements which will result from reclamation should have priority over possible short-term air quality degradation caused by reclamation construction.

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