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U.S. DEPARTMENT OF THE INTERIOR

OFFICE OF SURFACE MINING RECLAMATION AND ENFORCEMENT

DIRECTIVES SYSTEM

Subject Number:	
AML-1	
Transmittal Number:	
877	
Date: OCT 15 1998	

Subject: Abandoned Mine Land Inventory

Approval: **Title: Director** Kathy Karpan

1. Purpose. This directive sets forth the Office of Surface Mining's (OSM) policy and procedures for maintenance of the Abandoned Mine Land (AML) Inventory.

2. Summary of Changes. This directive has been revised to consolidate and clarify policy and procedures for preparation of Problem Area Descriptions (PADs) and their entry into the Abandoned Mine Land Inventory (Inventory). Since the early 1980's, OSM and the States and Tribes have implemented a variety of programs, policies and procedures to inventory the abandoned coal mine lands in the United States. Over the years, computer tracking systems were developed, data collection forms were revised, and policies/procedures were modified to refine the inventory process. OSM, through this Directive, implements the attached "Abandoned Mine Land Inventory Manual" (Manual) that consolidates all of the current policies and procedures for managing the Inventory. The Manual supersedes all previous directives and guidance. **None of these changes are retroactive.** The major changes included in this revision are:

a. **Problem Area Updates/Revisions**. When information about keywords is updated/revised, AMLIS offers two options: 1) Enter the changes and AMLIS calculates new totals; or, 2) as in the past, calculate the new totals and enter them into AMLIS.

b. **Hard Copy Files.** States, Tribes, and OSM had been required to complete PAD forms, including Priority Documentation Forms and maps, and keep these pieces of paper in their files. All this information, including maps, can now be stored in AMLIS. If an item(s) including maps is stored in AMLIS, there is no longer a requirement to maintain a hard copy of that item(s).

c. **Federal Emergencies**. The Federal Reclamation Program Management System (FRPMS) is the repository for all information about Federal emergency projects. Selected information in FRPMS will be transferred to AMLIS so as to have one comprehensive inventory of completed AML reclamation.

d. **Supplementary Forms**. Supplementary Forms have been renamed Priority Documentation Forms and are part of the electronic record maintained in AMLIS. There is no longer a requirement to keep a hard copy after the information has been entered into AMLIS.

e. **Special Trust Fund.** Reclamation funded out of the 10 percent set aside established under section 402(g)(6)(A) is to be reported under State Set Aside (SSA).

3. Definitions.

See ABANDONED MINE LAND INVENTORY GLOSSARY, Abandoned Mine Land Inventory Manual

4. Background.

See INTRODUCTION, Abandoned Mine Land Inventory Manual

5. Policy.

See INTRODUCTION, Abandoned Mine Land Inventory Manual

6. Responsibilities.

See INTRODUCTION, Abandoned Mine Land Inventory Manual

7. Procedures.

See Abandoned Mine Land Inventory Manual

8. Reporting Requirements. None.

9. Effect on Other Documents. Supersedes OSM Directive AML-1, "Abandoned Mine Land Inventory System," dated January 20, 1995.

10. References.

A. Surface Mining Control and Reclamation Act of 1977, Title IV, as amended.
B. 30 CFR Parts 870, 872, 873, 874, 875, 876, and 886.
C. OSM Directive GMT 10, "Federal Assistance Manual."

11. Effective Date. Upon issuance.

12. Contact. Chief, Division of Reclamation Support
Phone 202-208-2937 FAX 202 219-0239

13. Keywords. Abandoned Mine Land Inventory, Health and Safety.

14. List of Related Documents .

Abandoned Mine Land Inventory Manual

AMLIS User's Guide (on-line) Available from the AMLIS Log-In page which may be accessed from the OSM Home Page, www.osmre.gov.

U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement

ABANDONED MINE LAND INVENTORY MANUAL

July 1998

The cover sketch is by Phil Schroeder, Chief of Missouri's Permitting Section. Mr. Schroeder drew this sketch in 1980 shortly after Missouri completed its AML Inventory. This site depicts both the historic intrigue and environmental ruins of pre-law coal mining.

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CHAPTER 1

INTRODUCTION

This manual defines when and how the Abandoned Mine Land (AML) Inventory (Inventory) is to be used and maintained. It also contains background information and Office of Surface Mining Reclamation and Enforcement (OSM) policy and responsibilities related to the Inventory. A separate, but related document, AMLIS User's Manual, explains how to use the Abandoned Mine Land Inventory System (AMLIS), a computer system used to store and process the information in the AML Inventory.

Both this manual and the AMLIS User's Manual can be viewed or downloaded when in AMLIS or from OSM's WEB site (www.osmre.gov).

1. Abandoned Mine Land Inventory System (AMLIS)

a. The AML Inventory is stored in a computer system--AMLIS. AMLIS was significantly enhanced in 1997 and 1998. Several major changes were made in the way AML Inventory information is stored and entered into the computer.

b. Hard Copy Files. States, Tribes, and OSM had been required to complete Problem Area Description (PAD) Forms including Priority Documentation Forms (previously called Supplemental Forms), and maps and keep these pieces of paper in their files. All this information including maps, can now be stored in AMLIS. Therefore, States, Tribes, and OSM are no longer required to maintain hard copies of any Inventory information, including maps, that have been put into AMLIS.

c. PAD Updates/Revisions.

i. The Inventory contains cumulative unfunded, funded, and completed units of AML hazards and problems (linear feet of dangerous highwalls, acres of dangerous slides, etc.) and associated costs. In the past, when this information was updated or revised, new cumulative data was recorded on the PAD and entered into AMLIS. For example, a PAD had 2,000 feet of dangerous highwalls (DH). A contract was signed to reclaim 750 feet. The PAD was revised to show 1,250 feet of unfunded DH and 750 feet of funded DH.

ii. **When information about keywords is updated/revised, AMLIS offers two options: 1) enter the changes and AMLIS calculates new totals, or, 2) as in the past, calculate the new totals and enter them into AMLIS.** Using option 1, if a contract is signed to reclaim 750 feet of the DH the PAD can show: -750 feet unfunded DH and +750 feet of funded DH. When this data is entered into AMLIS, the

computer automatically recomputes the cumulative totals. AMLIS stores the revisions including all supporting information in a separate file and updates the cumulative units and costs. Using option 2, new totals are entered into AMLIS, and it calculates the changes and stores them along with all supporting information in a separate file. It is possible to recreate the cumulative totals resulting from each revision to a PAD.

d. Metric Units. Information can be entered into AMLIS in either English or Metric units. AMLIS contains both English and Metric databases. When information is changed in one, it is automatically changed in the other. AMLIS can report unit information in both English and Metric measures.

2. When to Update the AML Inventory

A PAD (also known as an OSM-76) is to be completed/updated and entered into AMLIS at various times. This includes the PAD Form, Priority Documentation Forms, and a map. **Instead of completing an actual paper copy PAD Form including Priority Documentation Forms, this information, including maps, can be directly entered into AMLIS.**

To determine when to prepare or update a PAD, first determine which program area applies. The chart below describes when to prepare or update a PAD for each reclamation program.

PAD SUBMISSION GUIDE

Planned Program	Unfunded	Funded	Completed
Pre-SMCRA Coal (P1& P2) State/ Tribe AML Program, RAMP & FRP (non-Emergency)	X	X	X
Pre-SMCRA Coal (P3, P4, P5) State/ Tribe AML Program, RAMP & FRP(non-emergency)		X	X
Pre-SMCRA Coal (Research)			X
Emergencies State/ Tribe AML Program & FRP			X
Non-coal (P1, P2, P3, P4)		X	X
Acid Mine Drainage Plan, Coal Interim Site */, & Coal Insolvent Surety Site */		X	X
Remining, Other (formerly "Private") & 10% Set aside			X

*/ It is not required that these problems be entered as unfunded but minimum program States may wish to do so to help assure they are eligible for the maximum amount available to them as a minimum program State.

Generally, the Inventory should be updated or reviewed:

Unfunded

- when new problem areas are identified;

- when new problems occur or are identified on existing problem areas;

- when estimated costs are revised substantially;

- when priority rankings change; and

- when the Request for Authorization to Proceed is submitted to OSM for a pre-SMCRA coal P1 & P2 keyword(s)[1] [Keywords are defined in Chapter 3.]. The features included in the proposed project must be included in the "unfunded" columns of the appropriate priority.

Funded

-no earlier than when OSM approves an Authorization to Proceed to reclaim keyword(s). The features and costs included in the Authorization to Proceed should be moved from "unfunded" to "funded" and costs updated to reflect the Authorization to Proceed;

- no later than when a construction contract is signed to reclaim keyword(s). The features and costs included in the contract should be moved from "unfunded" to "funded" and costs updated to reflect the construction contract. If the keyword(s) and costs were moved from unfunded to funded after OSM approved an Authorization to Proceed, the costs do not have to be revised when a contract is signed, although, it is desirable to do so if there is a significant difference between the costs entered after the Authorization to Proceed is approved and the cost of the contract; and,

- when the request for Authorization to Proceed is approved by OSM for Pre-SMCRA coal P3, 4 & 5 sites; non-coal; acid mine drainage; coal interim permit; and coal insolvent sureties or a contract is signed to perform the work covered by the Authorization to Proceed.

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1 The terms "keyword" and "problem" are both used in this document. In the past the term "problem" has been used in most cases. The team preparing this manual thought that there were actually many more types of problems that those used in the AML Inventory and that people in the field have fit these many types of problems into one of the keywords used in the AML Inventory.

Completed

- upon project completion as required by 30 CFR 886.23. Reclaimed features and associated costs should be moved from "funded" to "completed" columns, and costs updated to reflect the construction costs;

- when construction is completed on keyword(s) such as emergencies not entered into the AML Inventory until completed; and

- when the preparer becomes aware that the keywords have been abated through methods other than through SMCRA programs (private reclamation, remining, natural causes). Features should be deleted from the "unfunded" column and then, a new PAD created with a Program Area of "Other" (formerly "Private") with these features recorded in the completed column.

AML Program accomplishments for OSM's Annual Report to Congress are taken directly from the AMLIS system on or about September 30. Completed reclamation information will be included in the annual reports only if entered into AMLIS prior to that date.

3. Background

a. Title IV of SMCRA, as amended, establishes the Abandoned Mine Land Reclamation Fund. The fund is to be used primarily for reclamation and restoration of land and water resources adversely affected by past coal mining.

b. In 1990, SMCRA section 403(c) was established. It mandates the Secretary to maintain an inventory of eligible lands and waters which meet the priorities under section 403(a)(1) and (2) ("high priority" coal sites).

c. Under section 403(c), the AML Inventory is to assist in planning and evaluating reclamation projects, and in making the certification under section 411(a) by a State or Tribe that all known coal reclamation has been completed (including post-Act coal sites under 402(g)(4)(f)). The AML Inventory is also used to determine which States and Tribes are eligible for the minimum threshold of historical coal distribution [402(g)(5)] and minimum program funding [402(g)(8)] under the annual distribution of AML grant funds.

d. Section 403(c) requires information about all projects completed under Title IV of SMCRA to be added to the AML Inventory on a regular basis, **but not less than annually**. In addition, the Secretary also is to provide standardized procedures for States and Tribes to use in updating the Inventory for eligible land and waters under their jurisdiction.

e. Under section 405(d) of SMCRA, the States and Tribes have responsibility and authority for administering their individual abandoned mine land programs, and providing a priority evaluation of each proposed project. The 1990 amendments to SMCRA emphasize the responsibility of the States and Tribes for setting their own priorities. SMCRA section 402(g)(4) and 30 CFR 874.12(e) provide for funding of certain post-SMCRA sites (coal interim and coal insolvent surety sites) if the State determines that the reclamation priority of the site is the same or more urgent than the pre-SMCRA high priority sites defined in section 403(a)(1) and (2).

f. During the immediate years after enactment of SMCRA, OSM, together with States and Tribes, conducted surveys of eligible lands and waters for inclusion in the Inventory. Subsequently, the primary objective has shifted to maintaining and updating the Inventory to reflect: (i) newly-discovered Problem Areas's (PA's) and problems in existing PAs meeting eligibility and priority criteria for funding; (ii) changes in priority status due to, for example, on-the-ground events; and (iii) program accomplishments in terms of cost of reclamation, problem type, and site reclamation measures.

4. Policy

a. The AML Inventory is a compilation of the individual State, Tribe, Federal Reclamation Program, and Rural Abandoned Mine Program (RAMP) inventories of AML problems. The information is Federally maintained under standardized procedures developed by OSM which the program States and Tribes use to prepare their Inventory updates (see SMCRA section 403(c)).

b. The AML Inventory documents unfunded high priority coal reclamation, records the funding of problem areas, reports accomplishments of completed Title IV projects, and assists in making the determination that a State or Tribe has addressed all known coal problems.

c. Priority 1 and 2 coal related problems are usually entered into the Inventory as **unfunded** when found and must be entered prior to requesting Authorization to Proceed. They are to be shown as **funded** some time between OSM's approval of an Authorization to Proceed and the signing of a construction contract to reclaim the keyword(s). As required by 30 CFR 886.23, they are to be shown as **completed** upon project completion. At what times information related to other priorities and programs is to be entered is set out in section 2 of this chapter.

d. There is no requirement to Inventory unfunded post-SMCRA coal interim, coal insolvent surety, coal Priority 3, or non-coal problems. All funded and/or completed reclamation on such sites is required to be shown in the Inventory. Because information concerning unfunded high priority sites to be reclaimed under the post-

SMCRA coal interim and coal insolvent surety site programs is used for planning purposes, States and Tribes may voluntarily submit such unfunded problems at any time. OSM encourages States and Tribes to include such information in AMLIS.

e. The Inventory is a dynamic system with an expectation that new PAs and new high priority problems on existing PAs will be added by the States, Tribes, Natural Resources Conservation Service (NRCS), and OSM (for non-program States and Tribes).

f. All problems listed in the Inventory are expected to be funded consistent with available grant fund levels, the State or Tribe's approved reclamation plan, and the guidance outlined in this directive. If, upon re-evaluation, a State, or Tribe or OSM (Federal Reclamation Program) finds that a problem/keyword does not meet the criteria for inclusion in the Inventory, the problem should be removed from the AML Inventory. If such re-evaluation changes the priority of a problem, then the priority shown in the AML Inventory must be raised or lowered as appropriate.

g. The use of paper forms should be minimized to the extent possible. To achieve this, the placement of all required information, including maps, in the AMLIS computer database is considered as meeting the requirement for completing the form OSM-76.

h. The existence of a problem in the Inventory does not constitute OSM concurrence with either a State or Tribe's priority or eligibility determination. In reviewing State and Tribe priority determination processes, OSM should give deference to State and Tribe determinations. In cases where there appears to be a lack of factual support and/or where a State or Tribe appears to be not following the guidance outlined in this directive as implemented through its approved reclamation plan, OSM should address the matter through program evaluation.

I. OSM fulfills its Inventory maintenance responsibilities (i.e., data validity, integrity and consistency) through a system of policies, procedures, and internal controls. Monitoring activities are generally accomplished through enhancement and performance evaluations. While certain reviews can gather program information at the point of Authorization to Proceed, a performance evaluation can occur at any point in the process. Evaluations should help State and Tribe programs by enhancing performance and addressing specific needs. Details of enhancement and performance evaluation activities can be specified in individual programmatic agreements with the States and Tribes. Site visits by OSM are not required before an AML problem is added to the Inventory.

j. The Inventory is available as a planning tool. The Inventory is a source of information on the amount of work completed under a State/Tribal program, and the extent and cost of AML problems remaining to be abated. The Inventory is also used

by OSM to determine which States and Tribes have sufficient Priority 1 and 2 coal problems to justify a grant distribution from the Federal historic coal share (see SMCRA 402(g)(5)). At the time a State or Tribe certifies completion of all known coal problems, the Inventory is used to establish that all coal problems listed in the State's and Tribe's Inventory are being addressed (i.e., that the problems have been funded).

5. Responsibilities

a. Assistant Director for Program Support (AD/PS) is responsible for developing and implementing Inventory policies and procedures, and maintaining AMLIS.

b. Regional Directors are responsible for coordinating activities and providing policy guidance under this directive. Regional Directors are responsible for placing PAD information in AMLIS for all non-program States and Tribes and for projects they administer in their Regional Coordinating Centers, **both emergency and non-emergency**, in accordance with this directive.

c. Field Office Directors (FODs) responsibilities may include conducting reviews of State/Tribe conformance with the policies and procedures set out in this directive as part of enhancement and performance evaluations, advising States and Tribes of needed changes to Inventory practices, assisting States and Tribes in interpretation of Inventory guidance, and performing field visits when needed for technical assistance or for performance evaluation. The OSM Directive AML-22, "Evaluation of State and Tribal Abandoned Mine Land Programs," contains the procedures for setting program measurement techniques, collecting and reporting core program data, and establishing Programmatic Agreements between OSM and the States/Tribes.

d. States and Tribes are responsible for implementing procedures consistent with this directive to maintain the AML Inventory for their State/Tribe. They are responsible for setting priorities in accordance with their approved AML reclamation program, and for advising OSM of any problems or issues they encounter when implementing the procedures under this directive.

e. U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) is responsible for the Rural Abandoned Mine Program (RAMP). Responsibilities are set out in the chapter pertaining to RAMP in this Manual.

CHAPTER 2

INSTRUCTIONS FOR COMPLETING THE PAD FORM (OSM 76)

Answer each question on the PAD (OSM-76 Form, available in Chapter 4 of this document) by completing the blanks, checking the appropriate answer, or giving a narrative response. If no response is needed, indicate by writing "NA" (not applicable). The information may be written down on a paper PAD Form or it may be directly entered into AMLIS. The following is an explanation of what each question is requesting and what the response should include for the paper form. Instructions for entering the information directly into AMLIS is found in the AMLIS User's Manual.

Problem Areas versus Program Areas: A Problem Area is a distinct geographic area that does not overlap other Problem Area boundaries. There may be more than one Program Area (Pre-SMCRA Coal, RAMP, etc.) in a Problem Area that have identified impacts within a distinct geographic area. They all use the same PA name and number, but have differing program area identifiers.

A. Reason for Entering Information in the AML Inventory

NEW PROBLEM AREA/REVISED PROBLEM AREA BOUNDARIES

1. **New Problem Area (PA)**. Check this space (X) if this is the first time that the PA has been identified with any reclamation keyword type(s). **(NOTE: a PA is a problem area with geographic boundaries and should not be confused with the Problem Area Description--PAD Form--otherwise known as the OSM-76.)**

2. **State/Tribe.** Identify the State or Tribe. Use Postal Service style of two-letter State Code. Use Tribal abbreviations as indicated below.

TRIBAL CODES

Tribe	Tribal Code	Tribe	Tribal Code
Blackfeet	BF	Northern Cheyenne	CY
Cheyenne River	CH	Rocky Boys	RB
Crow	CR	San Carlos Apache	SA
Fort Berthold	FB	Southern Ute	SU
Fort Peck	FP	Uintah and Ouray	UB
Jicarilla Apache	JA	Ute Mountain Ute	UM
Hopi	HO	Wind River	WR
Laguna Pueblo	LP	White Mountain Apache	WM
Navajo	NA		

3. **Problem Area Number.** Enter the PA number. The first two characters identify the State or Tribe. The next five characters are numerical and sequential. This number is assigned to the PA by the State/Tribe and may only be used once. The PA boundary should not cross Planning Unit (PU) boundaries. See Chapter 8 for description of problem areas and planning units.

4. **Problem Area Name.** Enter a name assigned to a PA which describes it in a unique manner (e.g., geographically); no name should be repeated within the same State/Tribe.

NEW OR REVISED PROGRAM INFORMATION

5. **Program Information for Problem Area.**

Check the program area that applies to this PAD.

When providing revision or completion information for specific keyword features, please be careful to always use the proper program and code.

If a keyword feature is reclaimed under a program that is different from the one that originally contained the problem, be sure to revise all affected program area codes. For example, pre-existing AML problems that are reclaimed and entered as completed under the emergency program should also be removed from the PAD under the Pre-SMCRA coal state program.

B. General Information

6. **Planning Unit (PU) Number**. This number is assigned by the State/ Tribe. Most State/Tribe offices will have map overlays which identify the existing PU boundaries on a U.S. Geological Survey State Hydrological Unit Map. These overlays may also be found in OSM Field Offices. Within the existing planning unit, identify the significant AML keywords and assign them to a PA number (see Number 3), using State/Tribe identifier and six sequential numbers. See Chapter 8 for additional instructions.

7. **PU Name**. Enter the existing name identified on each State/Tribe's PU overlays. If it is a new PU, give it a unique name.

8. **Date Prepared**. Enter the date the PAD Form (OSM-76) is completed.

9. **Prepared by.** Enter the name of the individual who completed this form and who can be contacted if questions arise.

10. **Telephone Number**. Enter the telephone number (including area code) of the individual who completed this form and may be contacted for further explanation/clarification.

11. **County**. Enter the county in which the PA is located. Do not use abbreviations.

12. **FIPS (Federal Information Processing System) Code**. This is a five-digit number. The first-two digits are the State code; the last three digits are the county code. For example, if the State code is 03 and the county code is 006, it should be entered on the form as 03006. Use the Department of Commerce, National Institute of Standards and Technology FIPS guide (found in most libraries).

13. **Congressional District Number**. Enter the Congressional District number in which the PA is located. Use the most recent census directory.

14. **Primary Quad**. Enter the name of the U.S. Geological Survey 1:24,000 quadrangle that contains the PA. If the PA appears on more than one map, use the quadrangle that contains the largest portion of the PA.

15. **Coordinates**. Locate the latitude and longitude point at the geographic center of the PA. Enter the coordinate in degrees, minutes, and seconds in the appropriate blank. The seconds may be rounded to the nearest ten seconds. (Refer to the AMLIS User's Manual for a description of mapping enhancements that may be

available for your optional use. Refer to the AMLIS help message for this item for the current information on coordinate options.)

16. **Type of Mining**. From the list of mining types, choose the one that most represents the type of mining activity found in the PA and place the appropriate letter in the blank: (S) Surface, (U) Underground, (B) Surface and Underground, and (P) Processing.

C. Surface Owner

17. Indicate the type of surface ownership of lands in the affected area by placing an "X" next to it. For applicable owner(s) indicate percentage (%) of ownership based on acreage of affected area. Total percentage indicated must equal 100%. Figures must be rounded to the nearest whole number.

D. Non-Coal: Type of Mineral /Ore

18. This section is only applicable if the PA is P1, P2, P3, and/or P4 non-coal reclamation. Mark the type(s) of previous mineral/ore mining or processing. If this question is not applicable, leave it blank.

E. Unit/Cost Information (by priority)

Unit and cost information for each keyword feature should be entered into questions 19 through 22 depending on the priority assigned to each feature. SMCRA provides a general description of the 5 priorities for reclamation in sections 403(a) for coal keywords and in section 411(c) for non-coal keywords.

The preparer will use the "OSM-76 Priority Documentation Form" when determining the priority of keyword features in priorities 1, 2 and 3. (See Chapter 5 for more information). Priorities 4 and 5 are determined by the State or Tribe based upon Sections 403(a) and 411(c) of SMCRA. Following is a summary of the priority definitions. As these are rather general, the Priority Documentation Forms (Chapter 5) will be used when determining a problem's priority:

Priority 1. An AML problem meeting the conditions under Section 403(a)(1) [coal], or 411(c)(1) [non-coal] of SMCRA concerning the protection of public health, safety, general welfare, and property from extreme danger of adverse effects of mining practices.

Priority 2. An AML problem meeting the conditions under Section 403(a)(2) [coal] or 411(c)(2) [non-coal] of SMCRA concerning the protection of public health, safety and general welfare from adverse effects of mining practices.

Priority 3. An AML problem category meeting the conditions under Section 403(a)(3) [coal] or 411(c)(3) [non-coal] of SMCRA concerning the restoration of land and water resources and the environment previously degraded by adverse effects of mining practices.

Priority 4. Funding under section 403(a)(4) and 411(e) and (f) for protection, repair, replacement, construction or enhancement of water supply utilities, roads and other such facilities serving the public adversely affected by mineral mining and processing practices, and the construction of public facilities in communities impacted by coal or other mineral mining or processing practices as they relate to the priorities stated in SMCRA 411(c).

Priority 5. Funding under section 403(a)(5) for the development of publicly owned land adversely affected by coal mining practices including land acquired for recreation and historic purposes, conservation, reclamation purposes, and open space benefits.

Research. Research and demonstration projects were once eligible for AML funding under SMCRA section 403(a)(4) and considered priority 4 projects. The 1990 amendments to SMCRA deleted Research and Demonstration projects from the list of priorities and renumbered the 5 remaining priorities under section 403(a). Project accomplishments previously recorded as priority 4 (Research and Demonstration) are now found under the category "Research".

Emergency Projects.

For purposes of the AML Inventory, emergency projects are recorded when work is completed. See Chapter 10 of the this Manual for instructions for entering emergency reclamation into the Inventory.

Reclamation Costs.

Costs for unfunded keywords and units should be determined using historical costs experienced by the State, Tribal or Federal reclamation program. If no other information is available, the preparer may use the cost guidelines contained in Chapter 7 of these instructions. However, these guidelines were developed in 1984 and OSM believes that estimates based on recent local or regional information for similar projects, are more reliable. Costs for funded units should reflect estimated costs at the time OSM approves an Authorization to Proceed (ATP) or contract costs at time of award. Completed costs should reflect

final contract costs for construction only. Maintenance costs are not to be included. If major remedial work requiring an ATP is conducted, the associated construction costs should be included.

Be aware of the selected option when completing this information.

a. **Unfunded Portion**. Identify the keyword units and estimate the monies needed for reclamation.

b. **Funded Portion**. Report the units and costs of funded reclamation work when OSM approves an Authorization to Proceed or when a construction contract is signed that will result in reclamation of the keywords. Divide the reclamation contract cost between the features to be reclaimed. As the funded portion of the PAD increases, the unfunded portion should decrease.

c. **Completed Portion**. As required by 30 CFR 886.23, reclaimed features and associated costs should be moved from "funded" to "completed" columns and costs updated to reflect the construction costs upon project completion.

19. **PRIORITY 1 KEYWORDS and**

20. **PRIORITY 2 KEYWORDS.** These sections are used to record: 1) Priority 1 and 2 keyword unit and cost information for unfunded, funded and completed reclamation, and 2) for completed Emergency Program reclamation. Figures should be rounded to one decimal place for units and to the nearest whole dollar. All priority 1 and 2 costs/units should be distributed among the 17 standard keywords (chapter 3) and the three status categories (unfunded, funded, and completed). Indicate if the entry us initial data or reflects a change in existing data.

The AMLIS computer system allows one to enter either new totals, or just the change to the unit and cost information.

Annual Report of Accomplishments. Remember that AML Program accomplishments for OSM's Annual Report to Congress are taken directly from AMLIS on or about September 30, of each year. The annual reports will include only completed reclamation entered in AMLIS prior to that date.

Reporting Keyword Cost and Units: Distribute the cost among the identified work keywords by units and cost. Round units to one decimal place. Round dollar values to nearest whole dollar. **When entering the initial information for a new problem area**

or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or English--used for each keyword unit. If English measure is used, AMLIS will convert it to metric.

Dividing Costs Among Several Keyword Types. When keywords are reclaimed at the same time, the preparer should use available information to divide the costs between the reclaimed features. For example, keyword types which are closely related, such as Hazardous Water Body(HWB)/Dangerous Highwall(DH) keyword types, identify the costs for draining with the keyword type "HWB" and assign a cost amount. Then identify the backfilling cost to the keyword type "DH."

When AML keywords have been abated in some way other than through SMCRA programs, including RAMP, such as private reclamation, remining, natural causes, etc., the cost figure to be entered into the "Completed" column should be zero since there were no AML funds used.

21. **PRIORITY 3 KEYWORDS.** This section is used to record Priority 3 keyword unit and cost information for unfunded, funded, and completed reclamation. Figures should be rounded to one decimal place for units and to the nearest whole dollar. All priority 3 costs/units should be distributed among the twelve standard keywords and the three status categories (unfunded, funded and completed) in accordance with the following:

a. **Unfunded Portion**. Identify the keyword units and estimate the monies needed for reclamation.

b. **Funded Portion**. Report the keyword units and costs when OSM approves an Authorization to Proceed or when a construction contract is signed that will result in reclamation of the keyword features. Divide the reclamation contract cost between the features to be reclaimed. As the funded portion of the PAD increases, the unfunded portion should decrease.

c. **Completed Portion**. As required by 30 CFR 886.23, reclaimed features and associated costs should be moved from "funded" to "completed" columns, and costs updated to reflect the construction costs upon project completion.

Annual Report of Accomplishments. Remember that AML Program accomplishments for OSM's Annual Report to Congress are taken directly from AMLIS on or about September 30, of each year. The annual reports will include only completed reclamation entered in AMLIS prior to that date.

Reporting Keyword Cost and Units. Distribute the cost among the identified work keywords by units and cost. Round units to one decimal place. Round dollar values to nearest whole dollar. **When entering the initial information for a new problem area or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or English--used for each keyword unit. If English measure is used, AMLIS will convert it to metric.**

Dividing Costs Among Several Keywords. For keywords reclaimed at the same time, the preparer should use available information to divide the costs between the reclaimed features.

When AML keywords have been abated in some way other than through SMCRA programs, including RAMP, such as private reclamation, remining, natural causes, etc., the cost figure to be entered into the "Completed" column should be zero since there were no AML funds used.

22. **Priority 4 and 5 Problems.** Each PA should distribute all Priority 4 or 5 costs/units among the problem/objective types. Figures should be rounded to one decimal place for units and to the nearest whole dollar.

a. **Completed Portion**. As required by 30 CFR 886.23, report the keyword units and costs when reclamation work is completed.

Annual Report of Accomplishments. Remember that AML Program accomplishments for OSM's Annual Report to Congress are taken directly from AMLIS on or about September 30, of each year. The annual reports will include only completed reclamation entered in AMLIS prior to that date.

Reporting Keyword Cost and Units. Distribute the cost among the identified keywords by units and cost. Round units to one decimal place Round dollar values to nearest whole dollar. **When entering the initial information for a new problem area or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or English--used for each keyword unit. If English measure is used, AMLIS will convert it to metric.**

CHAPTER 3
KEYWORD[2] DEFINITIONS
COAL AND NON-COAL

Priority 1 and 2 (P1 and P2): Health, Safety and General Welfare Problems

An AML "keyword" is a defined category of AML problem type (i.e., DH = dangerous highwall).

A "keyword feature" is a specific on-the-ground feature that meets the definition of one of the AML keywords.

Within a problem area there may be many occurrences of a keyword. For example, a problem area may contain seven different portals or three different segments of dangerous highwall, each of different length and/or priority. For purposes of this Manual, each of these on-the-ground features is considered a separate keyword feature.

NOTE: As used throughout the following definitions, interpret "populated area" to be one where anyone lives within one mile of the problem. A keyword feature qualifies as an "intense visitation area" if evidence is given of high visitation in or adjacent to the area. Definitions are shown in alphabetical order.

CS Clogged Stream

Any filling of a stream bed, usually in a narrow valley, with AML-originated silt and debris carried downstream by surface runoff. This causes reduced carrying capacity of the stream resulting in a danger to improved property and human health, safety and welfare. Clogged streams are measured in miles of stream that will be dredged to abate the problem.

Those problems related to saturated ground caused by mine drainage water adversely impacting domestic water supply, human health condition or the structural integrity of an occupied dwelling shall not be assigned to the CS or

---

[2] The terms "keyword" and "problem" are both used in this document. In the past the term "problem" has been used in most cases. The team preparing this manual thought that there were actually many more types of problems that those used in the AML Inventory and that people in the field have fit these many types of problems into one of the keywords used in the AML Inventory.

CSL keyword. Rather, problems associated with domestic water supply or human health condition can be considered as a Polluted Water Human Consumption (PWHC); problems associated with structural integrity can be considered as a Dangerous Slide (DS).

CSL Clogged Stream Lands

Any AML-related surface mining spoil pile and bank, mine waste or earth material disturbed by mining activity which could be eroded and carried downstream by surface runoff, and deposited in a stream bed (thus causing a clogged stream), resulting in property damage and a human health, safety and general welfare threat. Clogged stream lands are measured in acres of land affected by spoil, mine waste and earth material that are directly contributing to the clogged stream. Those piles and banks which are identified and included in DH (dangerous highwall), DS (dangerous slide) and DI (dangerous impoundment) shall not be repeated for CSL problems.

DPE Dangerous Pile or Embankment

Any AML-related waste pile or bank located within close distance to a populated area, public road, or other area of intense visitation, and posing a danger to public health, safety and general welfare by adverse effect resulting from an unstable steep slope or wind-blown particulate matter. The DPE keyword is to be used for recording non-coal related radiation problems associated with piles or embankments that would not otherwise be dangerous.

DH Dangerous Highwall

Any AML-related unprotected unreclaimed highwall located in close proximity to a populated area, public road, or other area of intense visitation, which poses a threat to public health, safety and general welfare.

DI Dangerous Impoundment

Any AML-related large-volume water impoundment such as a mine waste embankment, sedimentation pond, or underground mine water pool which poses a threat of flooding and catastrophic destruction to downstream property and human health, safety, and general welfare in the event of rupture or breach of the water retention structure.

The description of a DI must give evidence of a weak, unstable, or otherwise inadequate impounding structure, such as lack of an emergency spillway or improper primary spillway.

DS Dangerous Slide

Any AML-related land mass slide of surface-subsurface soil, a mine waste pile or bank, or surface mine spoil that, due to instability of its own weight or lubricating effects of mine drainage water, endangers human health, safety and general welfare or threatens destruction of improved property located uphill or downhill from the land mass.

GHE Gases: Hazardous or Explosive

AML-related venting of hazardous or explosive gases. Those problems identified and included under other keywords shall not be repeated for a GHE problem. Use the GHE for gasses from an underground mine fire when the proposed reclamation technique would involve sealing gas vents or restricting access to the gas plume. Use UMF when reclamation would require mitigating the fire. The GHE keyword is to be used for recording non-coal related radiation problems where the radiation impact is not associated with any other keyword.

HEF Hazardous Equipment or Facilities

Any AML-related dilapidated hazardous equipment or facilities located within close proximity to populated areas, along public roads, or other areas of intense visitation.

HWB Hazardous Water Body

Any impounded water, regardless of depth or surface area, that is considered an attractive nuisance and is located within close proximity to a populated area, public road, or other areas of intense visitation. Impounded water problems related to water pollution instead of physical hazards should be included under PWAI.

The hazard must result from some AML-related feature(s) such as steep or unstable banks, hidden underwater ledges, or rocks or debris on the bottom. The fact that a pond is present is not sufficient evidence of a hazard.

IRW Industrial or Residential Waste

Unauthorized use of AML-impacted areas for residential or industrial waste disposal that poses a danger to public health, safety and general welfare from unsanitary conditions or from the toxic emissions from the burning refuse.

P Portal

Any AML-related surface entrance to a drift, tunnel, adit or entry which is not sealed or barricaded, and is posing a threat to public safety and general welfare.

PWAI Polluted Water: Agricultural/Industrial

Any surface or subsurface water used for agricultural or industrial purposes which does not meet standards (especially those for suspended solids, acid or alkaline conditions, heavy metals concentrations, or radioactivity) because of AML-related impact. Current test results should be supplied demonstrating the substandard conditions. The standards that are set for the water use should also be stated.

PWHC Polluted Water: Human Consumption

Any surface or subsurface water used for human consumption or recreational waters used for swimming that does not meet standards (especially those for suspended solids, acid or alkaline conditions, heavy metals concentrations, or radioactivity) appropriate to the historical use due to the AML impact. (Note: current test results demonstrating pollution are recommended to be submitted with the Form OSM-76.)

S Subsidence-Prone Area

Any surface expression of AML-related subsidence such as tension cracks, troughs, shearing faults, or caving caused by AML-related underground mine voids which damages property and poses danger to human safety, health and general welfare. For instances where subsidence results in an isolated pothole or vertical opening, see the VO keyword. There must be evidence of subsidence activity and/or continued damage within the last five years.

SB Surface Burning

Any AML-related continuous combustion of mine waste material resulting in smoke, haze, heat, or venting of hazardous gases located within close distance to a populated area, public road or other public use area and posing a danger to public health, safety and general welfare. Burning must be currently occurring or be demonstrated to occur on a regular basis. Burning in a mine dump, even if beneath the surface of the material, is surface burning.

UMF Underground Mine Fire

Any AML-related continuous smoke, haze, heat, or venting of hazardous gases from underground mine coal combustion posing a danger to public health, safety and general welfare.

VO Vertical Opening

Any AML-related vertical or steeply-inclined shaft or opening which is not sealed or barricaded, or a subsidence-caused opening that has become a hazard, posing a threat to the public health, safety and general welfare. Also included are instances where subsidence results in an isolated pothole or vertical opening.

Priority 3 (P3): Land and Waters Problems

BE Bench, Solid Bench, Fill Bench

A ledge that forms a single level operation along which mineral or waste materials are excavated. A solid bench is that portion of a bench formed on solid, unexcavated material. A fill bench is that portion of a bench usually consisting of unconsolidated spoil material extending outward from the solid bench.

DP Industrial or Residential Waste Dump

An area used to dispose of any kind of industrial or residential waste not related to mining or processing.

EF Equipment and Facilities

Any equipment or buildings used to mine, process or transport coal or mineral ores.

GO **Gob**

The refuse or waste removed from a mine. This includes mine waste, rock, pyrites, slate or other unmarketable materials which are separated during the cleaning process.

H **Highwall**

The face of exposed overburden or the face or bank on the uphill side of a contour strip mine excavation. The vertical wall consisting of the deposit being mined and the overlying rock and soil strata of the mining site.

HR **Haul Road**

A road built to carry loaded trucks from mine heads. A road from pit to loading dock, tipple ramp or preparation plant, used for transporting mined material by truck.

MO **Mine Opening**

Any surface entrance or opening related to an underground mine excavation.

PI **Pit, Open Pit, Strip Pit**

The last uncovered cut adjacent to the highwall. In surface mining the working area may be known as a strip pit. Mine workings or excavations open to the surface are also termed pits.

SA **Spoil, Spoil Bank**

The overburden material removed in gaining access to a coal seam or mineral deposit.

SL **Slurry**

Fine particle-size material from coal or mineral processing stored in a pond. Solid must be separated from the water in order to have clear effluent for reuse or discharge.

SP **Slump**

Surface expressions resulting from the caving in of underground mine voids.

Criterion: *Affected areas are either undeveloped or have only an occasional structure. The area has infrequent public, visitation, recreational use, farming, or livestock use, etc. In all likelihood subsidence will not cause loss of life or serious injury or economic loss.*

WA Water

Water leaving the AML Problem Area and causing environmental impacts because of its pH, sediments load, or other pollutants, or because of its effect on other lands due to poor drainage conditions (e.g., agricultural flooding).

O Other

An AML area causing an environmental impact that does not fit one of the above definitions.

CHAPTER 4

PROBLEM AREA DESCRIPTION FORMS (PAD) - OSM 76

U.S. Department of the Interior
Office of Surface Mining Reclamation and Enforcement

ABANDONED MINE LAND
PROBLEM AREA DESCRIPTION (PAD) OSM-76

OMB NO. 1029-0087 **Expires: 5/31/2001**

A. Reason for Entering Information into the AML Inventory

NEW PROBLEM AREA (PA)/REVISED BOUNDARY

1. _____New PA
2. State/Tribe _____
3. PA Number _____
4. PA Name _____

NEW OR REVISED PROGRAM INFORMATION

5. Check the program area for which data is provided

(SGA)	___	Pre-SMCRA Coal (P1,P2,P3) State Program	(RMA)	___	Remining
(SGB)	___	Pre-SMCRA Coal (P3 Only) State Program	(CIA)	___	Coal Interim Site Funding
(SGC)	___	Pre-SMCRA Coal (P4) State Program	(CSA)	___	Coal Insolvent Surety Site Funding
(SGD)	___	Pre-SMCRA Coal (P5) State Program	(AMA)	___	Acid Mine Drainage Plan
(SGE)	___	Pre-SMCRA Coal (Research--Old P4) State Program	(PVA)	___	Other (P1,P2,P3)
(SEA)	___	State Emergency Program	(NCA)	___	Non-Coal (P1,P2,P3) Complete Question 22
(RUA)	___	RAMP	(NCC)	___	Non-Coal (P4)
(FRA)	___	FRP Nonemergency	(NCD)	___	Non-Coal (P5)
(FEA)	___	FRP Emergency	(CLA)	___	Clean Streams Initiative

B. GENERAL INFORMATION

6. Planning Unit (PU) Number: _____
7. PU Name: _____
8. Date Prepared: _____
9. Prepared by: _____
10. Telephone Number: _____
11. County: _____
12. FIPS Code: _____
13. Congressional District: _____
14. Primary Quad: _____
15. Coordinates: Latitude: ___o ___ ' ___ "
    Longitude: ___o ___ ' ___ "
16. Type of Mining (S,U,B;P,) _____
    (S) Surface, (U) Underground, (B) Both,
    (P) Processing

C. SURFACE OWNER

17. For applicable owner(s), indicate percentage (%) of ownership , to the nearest whole number, based on acreage of affected area. Total percentage indicated must equal 100%.

(O PV)	___	% Private	(O-BLM)	___	% Bur. of Land Mgmt.
(O-ST)	___	% State/Local Government			
(O-IN)	___	% Tribal Lands	(O-OFS)	___	% U.S. Forest Service
(O-NA)	___	% National Park Service			
			(O-OF)	____	% Other Federal

D. NON-COAL: TYPE OF MINERAL/ORE

18. Select (x) type(s) of previous mineral/ore mining. Identify keyword(s) and complete cost/unit information (Question 23 (P1), Question 24 (P2), Question 25 (P3), or Question 24 (P4).)

Bentonite	___	Gold	___	Phosphate	____	Sulphur	____
Cinnabar	___	Graphite	___	Platinum	____	Tungsten	____
Clay	___	Iron	___	Sand & Gravel	____	Uranium	____
Copper	___	Lead	___	Shale	____	Vermiculite	____
Feldspar	___	Limestone	___	Silver	____	Zinc	____
Fluorite	___	Marble	___		____	Other	____

E. COST/UNIT INFORMATION

KEY TO KEYWORDS--PRIORITY 1 AND PRIORITY 2

KEYWORD		WORK UNITS	
Code	Description	Standard Measure	Metric Measure
CS	Clogged Streams	Miles	Kilometers
CSL	Clogged Stream Lands	Acres	Hectares
DH	Dangerous Highwalls	Feet	Meters
DI	Dangerous Impoundments	Count	Count
DPE	Dangerous Piles and Embankments	Acres	Hectares
DS	Dangerous Slides	Acres	Hectares
GHE	Gases: Hazardous/Explosive	Count	Count
UMF	Underground Mine Fires	Acres	Hectares
HEF	Hazardous Equip & Facilities	Count	Count
HWB	Hazardous Water Bodies	Count	Count
IRW	Industrial/Residential Waste	Acres	Hectares
P	Portals	Count	Count
PWAI	Polluted Water: Agricultural & Industrial	Count	Count
PWHC	Polluted Water: Human Consumption	Count	Count
S	Subsidence	Acres	Hectares
SB	Surface Burning	Acres	Hectares
VO	Vertical Openings	Count	Count

E. **COST/UNIT INFORMATION** (continued)

PRIORITY 1 PROBLEMS

19. Check box to indicate if this entry is initial total or an updated/revised **change** or an updated/revised **total.**

___INITIAL DATA **___UPDATED/REVISED CHANGE** **___UPDATED/REVISED TOTAL**

Distribute the cost among the identified work problems by units and cost. Round units to one decimal place. Round dollar values to nearest whole dollar **When entering the initial information for a new problem area or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or standard--used for each keyword unit. If standard measure is used, AMLIS will convert it to metric.**

	UNFUNDED PORTION			FUNDED PORTION			COMPLETED PORTION		
Problem	No. Of Units English	Metric	Estimated Cost	No. Of Units English	Metric	Funded Cost	No. Of Units English	Metric	Completed Cost
CS	Mi	Km		Mi	Km		Mi	Km	
CSL	Ac	Ha		Ac	Ha		Ac	Ha	
DH	Ft	m		Ft	m		Ft	m	
DI	Ct	Ct		Ct	Ct		Ct	Ct	
DPE	Ac	Ha		Ac	Ha		Ac	Ha	
DS	Ac	Ha		Ac	Ha		Ac	Ha	
GHE	Ct	Ct		Ct	Ct		Ct	Ct	
UMF	Ac	Ha		Ac	Ha		Ac	Ha	
HEF	Ct	Ct		Ct	Ct		Ct	Ct	
HWB	Ct	Ct		Ct	Ct		Ct	Ct	
IRW	Ac	Ha		Ac	Ha		Ac	Ha	
P	Ct	Ct		Ct	Ct		Ct	Ct	
PWAI	Ct	Ct		Ct	Ct		Ct	Ct	
PWHC	Ct	Ct		Ct	Ct		Ct	Ct	
S	Ac	Ha		Ac	Ha		Ac	Ha	
SB	Ac	Ha		Ac	Ha		Ac	Ha	
VO	Ct	Ct		Ct	Ct		Ct	Ct	
Total	XXXX	XXXX		XXXX	XXXX		XXXX	XXXX	

It is not necessary to calculate Total Costs as AMLIS will do so. Space is provided for totals if one wishes to enter them on a paper copy. Note: A **Priority Documentation Form** must be completed for each new priority 1 keyword or when an existing problem is upgraded to a Priority 1.

PRIORITY 2 PROBLEMS

20. Check box to indicate if this entry is initial total or an updated/revised **change** or an updated/revised **total.**

___INITIAL DATA **___UPDATED/REVISED CHANGE** **___UPDATED/REVISED TOTAL**

Distribute the cost among the identified work problems by units and cost. Round units to one decimal place. Round dollar values to nearest whole dollar **When entering the initial information for a new problem area or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or standard--used for each keyword unit. If standard measure is used, AMLIS will convert it to metric.**

	UNFUNDED PORTION			FUNDED PORTION			COMPLETED PORTION		
Problem	No. Of Units English	Metric	Estimated Cost	No. Of Units English	Metric	Funded Cost	No. Of Units English	Metric	Completed Cost
CS	Mi	Km		Mi	Km		Mi	Km	
CSL	Ac	Ha		Ac	Ha		Ac	Ha	
DH	Ft	m		Ft	m		Ft	m	
DI	Ct	Ct		Ct	Ct		Ct	Ct	
DPE	Ac	Ha		Ac	Ha		Ac	Ha	
DS	Ac	Ha		Ac	Ha		Ac	Ha	
GHE	Ct	Ct		Ct	Ct		Ct	Ct	
UMF	Ac	Ha		Ac	Ha		Ac	Ha	
HEF	Ct	Ct		Ct	Ct		Ct	Ct	
HWB	Ct	Ct		Ct	Ct		Ct	Ct	
IRW	Ac	Ha		Ac	Ha		Ac	Ha	
P	Ct	Ct		Ct	Ct		Ct	Ct	
PWAI	Ct	Ct		Ct	Ct		Ct	Ct	
PWHC	Ct	Ct		Ct	Ct		Ct	Ct	
S	Ac	Ha		Ac	Ha		Ac	Ha	
SB	Ac	Ha		Ac	Ha		Ac	Ha	
VO	Ct	Ct		Ct	Ct		Ct	Ct	
Total	XXXX	XXXX		XXXX	XXXX		XXXX	XXXX	

It is not necessary to calculate Total Costs as AMLIS will do so. Space is provided for totals if one wishes to enter them on a paper copy. **Note: A Priority Documentation Form** must be completed for each new priority 2 keyword or when an existing problem is changed to a Priority 2.

KEY TO KEYWORDS-- PRIORITY 3

KEYWORD		WORK UNITS	
Code	Description	Standard Measure	Metric Measure
SA	Spoil Area	Acre	Hectare
BE	Bench	Acre	Hectare
PI	Pits	Acre	Hectare
GO	Gobs	Acre	Hectare
SL	Slurry	Acre	Hectare
HR	Haul Road	Acre	Hectare
MO	Mine Opening	Count	Hectare
SP	Slump	Acre	Count
H	Highwall	Feet	Hectare
EF	Equipment/Facility	Count	Meter
DP	Industrial/Residential Waste	Acre	Count
WA	Water Problems	Gallons	Hectare
O	Other		Liter

E. **COST/UNIT INFORMATION (continued)**

PRIORITY THREE PROBLEMS

21. Check box to indicate if this entry is initial total or an updated/revised **change** or an updated/revised **total.**

___**INITIAL DATA** ___**UPDATED/REVISED CHANGE** ___**UPDATED/REVISED TOTAL**

Distribute the cost among the identified work problems by units and cost. Round units to one decimal place. Round dollar values to nearest whole dollar **When entering the initial information for a new problem area or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or standard--used for each keyword unit. If standard measure is used, AMLIS will convert it to metric.**

	UNFUNDED PORTION		FUNDED PORTION		COMPLETED PORTION	
Prob. Type	No. of Units English, Metric	Estimated Cost	No. of Units English, Metric	Funded Cost	No. of Units English, Metric	Actual Cost
SA	Ac Ha		Ac Ha		Ac Ha	
BE	Ac Ha		Ac Ha		Ac Ha	
PI	Ac Ha		Ac Ha		Ac Ha	
GO	Ac Ha		Ac Ha		Ac Ha	
SL	Ac Ha		Ac Ha		Ac Ha	
HR	Ac Ha		Ac Ha		Ac Ha	
MO	Ct Ct		Ct Ct		Ct Ct	
SP	Ac Ha		Ac Ha		Ac Ha	
H	Ft m		Ft m		Ft m	
EF	Ct Ct		Ct Ct		Ct Ct	
DP	Ac Ha		Ac Ha		Ac Ha	
WA	Gal l		Gal l		Gal l	
O						
TOTAL	XXXXXX		XXXXXX		XXXXX	

It is not necessary to calculate Total Costs as AMLIS will do so. Space is provided for totals if one wishes to enter them on a paper copy.

E. **COST/UNIT INFORMATION** (continued)

***** KEY TO KEYWORDS-- PRIORITY 4, and 5**

PRIORITY FOUR AND FIVE PROBLEMS

PROBLEM TYPE Code	Description	WORK UNITS Standard Measure	Metric Measure
4 COAL	**RCF** Recreational Facilities	Count	Count
4 COAL	**CNF** Conservation Facilities	Count	Count
4 COAL	**ROD** Roads	Feet	Meters
5 COAL	**OSB** Open Space Benefit	Acres	Hectares
5 COAL	**RCT** Recreation Purpose	Acres	Hectares
5 COAL	**HST** Historic Purpose	Acres	Hectares
4 NON-COAL	**UTL** Public Utilities	Count	Count
4 NON-COAL	**STR** Public (Infra) Structure	Count	Count
4 NON-COAL	**ROD** Roads	Feet	Meters
4 NON-COAL	**RCF** Recreational Facilities	Count	Count
4 NON-COAL	**CNF** Conservation Facilities	Count	Count
	O Other		

22. Check box to indicate if this entry is initial total or an updated/revised **change** or an updated/revised **total.**

___INITIAL DATA **___UPDATED/REVISED CHANGE** **___UPDATED/REVISED TOTAL**

Distribute the cost among the identified work problems by units and cost. Rounds units to one decimal place. Round dollar values to nearest whole dollar. **When entering the initial information for a new problem area or keyword, enter totals. Thereafter, either enter the changes and AMLIS will compute the new totals, or enter the revised totals and AMLIS will compute the changes. Also, circle the appropriate type of measure--metric or standard--used for each keyword unit. If standard measure is used, AMLIS will convert it to metric.**

Priority	Prob. Type	No. of Units English, Metric		Cost	(*Number)
4 COAL	**UTL**	Ct	Ct		
4 COAL	**STR**	Ct	CT		
4 COAL	**ROD**	Ft	m		
4 COAL	**RCF**	Ct	Ct		
4 COAL	**CNF**	Ct	Ct		
5 COAL	**RCT**	Ac	Ha		
5 COAL	**HST**	Ac	Ha		
5 COAL	**CNP**	Ac	Ha		
5 COAL	**RCM**	Ac	Ha		
5 COAL	**OSB**	Ac	Ha		
4 NON-COAL	**UTL**	Ct	Ct		
4 NON-COAL	**STR**	Ct	Ct		
4 NON-COAL	**ROD**	Ft	m		
4 NON-COAL	**RCF**	Ct	Ct		
4 NON-COAL	**CNF**	Ct	Ct		
	O				
TOTAL	XXXXXXX	XXXXXXX			XXXXXXX

It is not necessary to calculate Total Costs as AMLIS will do so. Space is provided for totals if one wishes to enter them on a paper copy.

DESCRIPTION INCLUDING PROJECT NAME, PROBLEM/OBJECTIVE, AND ACCOMPLISHMENT:

_(*_____) .,_____
_(*_____) .,_____
_(*_____) .,_____

CHAPTER 5

PRIORITY DOCUMENTATION FORMS

These forms are used to help determine and document why a keyword is a Priority 1 or 2 problem. They are required PAD documentation and must be maintained by OSM/State/Tribe in either hard paper copy or electronic version. Electronic versions of these Priority Documentation Forms are in AMLIS. If the information is entered into AMLIS, it is not necessary to keep hard copy versions. AMLIS can be used to print blank copies of these forms.

A separate Priority Documentation Form must be completed for each keyword and priority. For example, if a PAD were being submitted for a Problem Area that had Priority 1 and Priority 2 dangerous highwalls (DH) and a Priority 2 Dangerous Impoundment (DI), three Priority Documentation Forms would have to be completed-- (1) DH, Priority 1; (2) DH, Priority 2; and (3) DI Priority 2.

The forms follow. These forms can be downloaded from AMLIS or from OSM's WEB site-- www.osmre.gov.

CS--CLOGGED STREAM, CSL--CLOGGED STREAM LAND, DI--DANGEROUS IMPOUNDMENT

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

I.	Health, Safety and General Welfare Information	Yes	No
1.	Is there any occupied structure, improved property, road, or public facility located within the flood water path limit that would be subjected to destruction or flood water damage in the event of local stream flooding, or water retention structure failure?		
2.	Was there any previous record of flooding in the problem area caused by a stream bed being filled with AML-related sediments (thus losing storm water carrying capacity) where the cause of the flooding problem has not been corrected? *Note: Both keyword CS and CSL can be considered as the cause of the flooding problem.*		
3.	Is there a ***high probability of occurrence*** of flooding caused by either an AML-related sediment-filled stream bed, or significant erosion carried downstream by surface water runoff from the unreclaimed AML area, or by a deteriorated AML-related water retention structure currently impounding a large quantity body of water located upstream?		
4.	Is there ***potential danger*** of flooding caused by an AML-related sediment-filled stream bed, or significant erosion carried downstream by surface water runoff from the unreclaimed AML area, or by a deteriorated AML-related water retention structure currently impounding a large quantity body of water located upstream?		
5.	Is there any water impounding structure that has been breached, vacating the main body of impounded water, and where the water retention capacity of the structure is now being restored gradually by natural clogging and damming action?		
6.	Does the problem meet the General Welfare criteria outlined in Chapter 6 of the AML Inventory Manual for: a. Immediate Vicinity of a Residential Area? b. Adverse Economic Impact on the Local Community?		

Positive answers to Question 1 and Question 2 or 3 indicate the problem can qualify to meet Priority 1 criteria with the adequate justification included in the narrative description.

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

Positive answers to Question 1 and Question 4 or 5 indicate the problem can qualify to meet Priority 2 criteria with the adequate justification included in the narrative description.

A positive answer to Question 6 indicates the problem can qualify to meet Priority 2 criteria with the adequate justification included in the narrative description.

II. RECLAMATION PROBLEM DESCRIPTION (Evidence of Extreme Danger and Health, Safety, and General Warfare Problems)

7. Narrative description of Priority 1 (Extreme Danger) problems:

8. Narrative description of Priority 2 (HS&GW) problems:

III. Basis for Your Cost Estimate(s)

DPE--DANGEROUS PILE OR EMBANKMENT, HEF--HAZARDOUS EQUIPMENT AND FACILITIES, HWB--HAZARDOUS WATER BODY, P--PORTAL, VO--VERTICAL OPENING

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

I.	HEALTH, SAFETY AND GENERAL WELFARE INFORMATION	Yes	No
1.	Are there any AML-related unstable steep refuse piles or banks (other than landslides), wind-blown refuse fines, radio nuclides, dilapidated equipment or facilities, hazardous water bodies, easily accessible unguarded open mine entries, or unfilled vertical or steeply inclined shafts or openings posing a danger to human life, safety, health, and general welfare?		
2.	Is there any occupied structure, public use facility, improved public road, or public use park or recreational area located within 300 feet of the problem area?		
3.	Is there any evidence of either frequent visitation or easy access road capable of carrying vehicles to the problem area?		
4.	Does the problem meet the General Welfare Criteria outlined in Chapter 6 of the AML Inventory Manual for: a. Immediate Vicinity of a Residential Area? b. Adverse Economic Impact on the Local Community?		

Positive answers to Question 1 and Question 2 indicate the problem can qualify to meet Priority 1 criteria with adequate justification included in the narrative description.

Positive answers to Question 1 and Question 3 OR a positive answer to Question 4 indicate the problem can qualify to meet Priority 2 criteria with adequate justification included in the narrative description.

II. RECLAMATION PROBLEM DESCRIPTION (Evidence of Extreme Danger and Health, Safety, and General Welfare Problems)

5. Narrative description of Priority 1 (Extreme Danger) problems:

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

6. Narrative description of Priority 2 (HS&GW) problems:

III. BASIS FOR YOUR COST ESTIMATES:

Priority Documentation Form **DS--DANGEROUS SLIDE**

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

I.	HEATH, SAFETY AND GENERAL WELFARE INFORMATION	Yes	No
1.	Is there any AML-related land mass in the problem area such as: a. Surface or sub-surface soil b. Coal mine waste pile or bank, or c. Surface mine bank affected by mine drainage water?		
2.	Is there any occupied structure, improved property, public road, or public use facility located at the toe or adjacent to an unstable AML-related land mass?		
3.	Has that land mass become unstable and is it presently moving, or is an imminent move obvious due to instability of its own weight or to the lubricating effects of mine drainage water that would endanger human health, safety and welfare or destruction of property located uphill or downhill from the land mass?		
4.	Is there any potential occurrence of a land mass move due to instability of its own weight or the lubricating effects of mine drainage water, that would endanger human health, safety and welfare or destruction of property located uphill or downhill from the land mass?		
5.	Does the problem meet the General Welfare Criteria outlined in Chapter 6 of the AML Inventory Manual for: a. Immediate Vicinity of a Residential Area? b. Adverse Economic Impact on the Local Community?		

Positive answers to Questions 1, 2 and 3 indicate the problem can qualify to meet Priority 1 criteria with adequate justification included in the narrative description.

Positive answers to Questions 1, 2 and 4 OR a positive answer to Question 5 indicate the problem can qualify to meet Priority 2 criteria with adequate justification included in the narrative description.

II. RECLAMATION PROBLEM DESCRIPTION (Evidence of Extreme Danger and Health, Safety, and General Welfare problems)

6. Narrative description of Priority 1 (Extreme Danger) problems:

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

7. Narrative description of Priority 2 (HS&GW) problems:

III. BASIS FOR YOUR COST ESTIMATE(S):

GHE--HAZARDOUS OR EXPLOSIVE GASES, IRW--INDUSTRIAL OR RESIDENTIAL WASTE, SB--SURFACE BURNING

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

I.	HEALTH, SAFETY AND WELFARE INFORMATION	Yes	No
1.	Are there any current AML-related problems with: a. The venting of hazardous or explosive gases, including radon, through mine openings, mine induced cracks or boreholes; or b. Unsanitary or toxic wastes, hazardous fumes or open fires of residential or industrial waste disposed in an AML-affected area; or c. Smoke, haze, heat, open fire or venting or hazardous gases from burning coal waste materials? *Note: Analysis of ambient air samples is required for the evidence of hazardous gases.*		
2.	Are there any occupied structures, public facilities intense visitation areas, or densely grown forest located within the subject impact area, including adjoining areas where gas and smoke carried by wind or fire propagates?		
3.	Has there been any ***occurrence*** of human death, injury or illness, or fire damage to improved property or a forest ignited by an AML-related fire where the problem has been corrected?		
4.	Is there any ***potential*** of human death, injury or illness, or of fire damage to improved property or a forest area ignited by the AML-related fire?		
5	Does the problem meet the General Welfare Criteria outlined in Chapter 6 of the AML Inventory Manual for: a. Immediate Vicinity of a Residential Area? b. Adverse Economic Impact on the Local Community?		

Positive answers to Question 1, 2 and 3 indicate the problem can qualify to meet Priority 1 criteria with adequate justification included in the narrative description.

Positive answers to Question 1, 2 and 4 OR a positive answer to Question 5 indicate the problem can qualify to meet Priority 2 criteria with adequate justification included in the narrative description.

II. RECLAMATION PROBLEM DESCRIPTION (Evidence of Extreme Danger and Health, Safety, and General Welfare problems)

6. Narrative description of Priority 1 (Extreme Danger) problems:

PAD NO:	DATE:	KEYWORD:	PRIORITY:

7. Narrative description of Priority 2 (HS&GW) problems:

III. BASIS FOR YOUR COST ESTIMATE(S):

PWAI--POLLUTED WATER: AGRICULTURAL/INDUSTRIAL
PWHC--POLLUTED WATER: HUMAN CONSUMPTION

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

I.	HEALTH, SAFETY AND GENERAL WELFARE INFORMATION	Yes	No
1.	Is there any AML-related mine drainage water being used for agricultural irrigation, livestock feed, industrial use, domestic supply, or recreational use?		
2.	Has the mine drainage water currently used for any of the above mentioned purposes proven to be polluted. Pollution may be demonstrated by the existence of suspended soils, acidity, alkalinity, heavy metals or radioactivity, by the water's impact on aquatic life? *Note: It is recommended that results of laboratory analysis be attached as supporting evidence that water is polluted.*		
3.	Is there ***potential for any occurrence*** of death or illness of people or livestock, or productivity loss in agriculture or industry, caused by use of the water?		
4.	Has there been any ***occurrence*** of death or illness of people or livestock or a productivity loss in agriculture or industry, caused by use of the water? *Note: It is recommended that evidence of direct relation of polluted water to an identified adverse impact be documented.*		
5.	Does the problem meet the General Welfare Criteria outlined in Chapter 6 of the AML Inventory Manual for: a. Immediate Vicinity of a Residential Area? b. Adverse Economic Impact on the Local Community?		

Positive answers to Question 1, 2, 3 and 4 indicate the problem can qualify to meet Priority 1 criteria with adequate justification included in the narrative description.

Positive answers to Questions 1, 2, and 3 OR a positive answer to Question 5 indicate the problem can qualify to meet Priority 2 criteria with adequate justification included in the narrative.

II. RECLAMATION PROBLEM DESCRIPTION (Evidence of Extreme Danger and Health, Safety, and General Welfare Problems)

6. Narrative description of Priority 1 (Extreme Danger) problems:

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

7. Narrative description of Priority 2 (HS&GW) problems:

III. BASIS FOR YOUR COST ESTIMATE(S):

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

I.	**HEALTH, SAFETY, AND GENERAL WELFARE INFORMATION**	**Yes**	**No**
1.	Is there a possible subsidence area directly beneath or immediately adjacent to inhabited structures, roadways, or public facilities?		
2.	Has it caused, or is it anticipated that it may shortly cause loss of life, serious injury, or excessive economic loss?		
3.	Is there possible subsidence adjacent to or near structures, roadways or public facilities?		
4.	Has actual subsidence in the area caused injury or appreciable economic loss?		
5.	Have the above problems occurred within the past 5 years?		
6.	Does the problem meet the General Welfare Criteria outlined in Chapter 6 of the AML Inventory Manual for: a. Immediate Vicinity of a Residential Area? b. Adverse Economic Impact on the Local Community?		

Positive answers to Questions 1 and 2 indicate the problem can qualify to meet Priority 1 criteria with adequate justification included in the narrative description.

Positive answers to Questions 3, 4 and 5 OR a positive answer to Question 6 indicate the problem can qualify to meet Priority 2 criteria with adequate justification included in the narrative description.

II. RECLAMATION PROBLEM DESCRIPTION (Evidence of Extreme Danger and Health, Safety, and General Welfare Problems for Subsidence)

7. Narrative evidence of Priority 1 (Extreme Danger) Subsidence problems:

PAD NO.:	DATE:	KEYWORD:	PRIORITY:

8. Narrative evidence of Priority 2 (HS&GW) Subsidence problems:

III. BASIS FOR YOUR COST ESTIMATE(S):