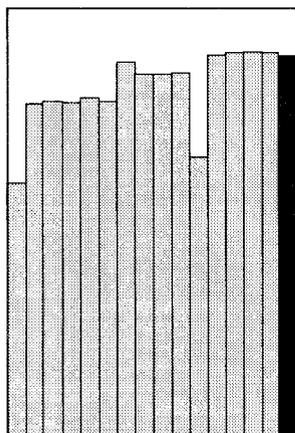


6. ABANDONED MINE LAND PROGRAM

Title IV of SMCRA -- the Abandoned Mine Land Program -- provides for the restoration of lands mined and abandoned or left inadequately restored before August 3, 1977, with priority given to projects that alleviate danger to public health and safety.

AML FUND



AML Fund Collections 1978-93

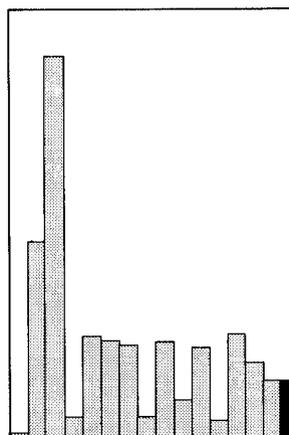
Production fees of 35 cents per ton of surface mined coal, 15 cents per ton of coal mined underground, and 10 cents per ton of lignite are collected from coal producers at all active coal mining operations. The fees are deposited in the Abandoned Mine Reclamation Fund, which is used to pay reclamation costs of AML projects. Collections into the fund consist of reclamation fees, late-payment interest, penalties, and administrative charges. From January 30, 1978, when the first fees were paid, through September 30, 1993, the fund has collected \$3,481,551,816.

Expenditures from the fund are made through the regular budgetary and appropriation process. SMCRA specifies that 50 percent of the reclamation fees collected in each state with an approved reclamation program, or within Indian lands where the tribe has an approved reclamation program, are to be allocated to that state or tribe. That 50 percent is designated as the state or tribal share of the Fund. The remaining 50 percent (the federal share) is used by OSM to complete high-priority and emergency projects under its Federal Reclamation Program; to fund the Rural Abandoned Mine Program (RAMP) administered by the U.S. Department of Agriculture; to fund the Small Operator Assistance Program (SOAP); and to fund reclamation directly through state reclamation programs. In 1991, at the direction of Congress, a formula to distribute federal share money to the state reclamation programs was established based on historic coal production. Table 12 shows fee collections and funding by states for 1993.

The Abandoned Mine Reclamation Act of 1990 (Public Law 101-508) became effective October 1, 1991, and extended fee collection authority through September 30, 1995. The Energy Policy Act of 1992 (Public Law 102-486) further extended the fee collection authority until September 30, 2004. In addition, the Energy Policy Act contained provisions which mandated the following:

- Transfer of interest earned by the AML Fund to the United Mine Workers of America Combined Benefit Fund;
- Deletion of the reclamation priority regarding AML-funded coal research;
- Extension of reclamation eligibility for certain AML water problems created after August 3, 1977;
- Retention of AML eligibility for sites affected by remaining operations; and
- Enhancement of basic SOAP technical services to provide a more complete permitting package.

FEDERAL RECLAMATION PROGRAM



Interior Department Projects 1978-93

Under Sections 402 and 407 of SMCRA, the Secretary of the Interior is authorized to expend Abandoned Mine Reclamation Fund monies for non-emergency reclamation of high-priority AML sites that present an extreme danger to the public. A non-emergency situation is defined in 30 CFR 870.5 as "a condition that could reasonably be expected to cause substantial harm to persons, property, or the environment and to which persons or improvements on real property are currently exposed."

Until states or Indian tribes received approval of their AML programs, all reclamation was carried out as Department of the Interior projects administered by OSM. However, as state programs were approved, beginning in 1980, and as the states assumed responsibility for correcting AML problems, OSM has greatly reduced its direct participation in this portion of the program. During 1993, work was accomplished on 12 projects: two in Georgia, three in Michigan, and seven in Tennessee.

In 1993 OSM completed its sixth year of oversight of emergency and high-priority projects that were completed at least three years ago. The objective is to identify abatement or control methods that are effective over time, as well as those with demonstrated deficiencies that need to be corrected. The evaluation report

TABLE 12
AML FEE COLLECTIONS AND FUNDING
1993

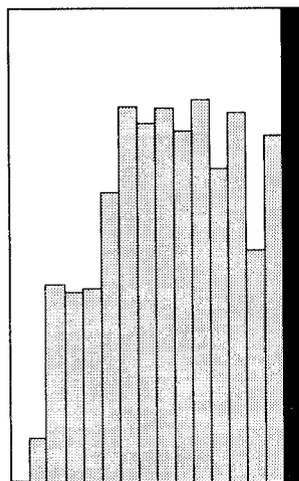
State/ Tribe	Fees Collected	Federal Projects	RAMP Projects	State Share Distribution*	Federal Share Distribution*	Emergency Distribution*
Alabama	\$5,513,618	\$0	\$414,893	\$1,767,182	\$1,211,306	\$300,000
Alaska	541,881	0	0	153,335	1,846,665	25,000
Arkansas	24,101	0	424,985	0	2,000,000	25,000
California	3,245	0	0	0	0	0
Colorado	4,709,061	6,768	0	1,204,472	795,528	0
Georgia	0	135,673	0	0	0	0
Illinois	10,417,805	0	211,780	3,686,844	4,487,462	460,000
Indiana	9,517,465	299,610	145,340	3,052,241	1,460,977	0
Iowa	79,493	5,088	0	15,241	1,984,759	0
Kansas	119,294	0	279,400	78,282	1,921,718	475,000
Kentucky	36,176,437	5,477,754	1,369,627	10,195,176	4,397,997	0
Louisiana	320,065	0	0	84,454	0	0
Maryland	632,976	520,659	171,700	238,803	1,761,197	0
Michigan	0	129,984	0	0	0	0
Missouri	582,568	59,278	0	279,587	1,720,413	0
Montana	12,034,554	0	0	3,376,236	0	125,000
New Mexico	4,755,006	0	0	1,018,994	981,006	0
North Dakota	3,210,645	8,320	150,000	842,381	1,157,619	0
Ohio	7,594,194	345,432	1,046,765	2,406,836	2,750,872	1,915,850
Oklahoma	580,866	9,315	400,000	175,410	1,824,590	0
Pennsylvania	14,022,653	3,002,847	1,338,822	4,361,050	14,505,707	0
South Dakota	0	47,000	0	0	0	0
Tennessee	759,990	803,127	397,592	0	0	0
Texas	5,579,823	0	0	1,435,317	0	0
Utah	3,188,809	0	0	843,596	1,156,404	0
Virginia	8,173,724	0	347,834	2,427,863	1,349,883	300,000
Washington	1,623,218	642,008	0	0	0	0
West Virginia	31,830,679	0	1,599,309	8,960,175	8,336,730	5,255,500
Wyoming	66,617,486	1,617	157,875	17,503,592	0	0
Cheyenne River Tribe	0	100,000	0	0	0	0
Crow Tribe	1,066,973	0	0	540,433	1,459,567	0
Hopi Tribe	825,979	0	0	523,834	0	0
Navajo Tribe	7,671,379	0	0	4,630,266	0	0
Uintah/Ouray Tribe	0	1,100	0	0	0	0
Wind River Tribe	0	1,500	0	0	0	0
Federal Share**	(20,550)					
Total	\$238,153,437	\$11,597,080	\$8,455,922	\$69,801,600	\$57,110,400	\$8,881,350

* The term "Distribution" is now used instead of "Allocation". Allocation refers to the "pooling" of monies collected for the AML Fund. State and federal share distribution amounts are based on formulae set forth in Directive AML-18 dated November 26, 1992. Emergency distribution amounts are based on figures provided annually by the Assistant Director, Reclamation and Regulatory Policy, and as approved during the year by the Deputy Director.

** This amount represents unidentified collections which were credited to the federal collections holding account at the end of fiscal year 1992. During 1993, these collections were identified and transferred to the appropriate state account.

issued in 1993 describes 18 of the 182 projects completed in 1990. The evaluation team found the overall quality of federal reclamation work and the abatement of emergencies to be excellent. No major deficiencies in design or control work were found and no recommendations for improvement were given in the report. Minor deficiencies were referred to the respective states for appropriate action.

EMERGENCY PROJECTS



OSM Emergency Projects 1978-93

practices if an emergency exists.

Emergency projects are those involving abandoned mine lands that present a danger to public health, safety, or general welfare and which require immediate action.

Under Section 410(a) of SMCRA, the Secretary of the Interior is authorized to expend monies from the Abandoned Mine Reclamation Fund for the emergency restoration, reclamation, abatement, control, or prevention of the effects of coal mining

practices if an emergency exists. Since the beginning of the program, OSM has encouraged states to take over emergency project responsibility. Beginning in 1983, Arkansas and Montana assumed emergency project responsibility, followed by Illinois in 1984. During 1988 and 1989, Kansas, Virginia, and West Virginia took over responsibility for their emergency projects. Alabama assumed responsibility in 1990, followed by Ohio in 1992, and Alaska and North Dakota in 1993. In 1989, OSM established an emergency policy that provided federal-share funds, in addition to the formula-based allocation, to states with emergency programs.

In 1993 the average number of days required to respond to complaints (notification of a possible emergency problem) averaged 1.2 in the East and 1.5 in the West. The total days from complaint referral to construction averaged 66.5 days in the East and 14.2 in the West. This represents a 27 percent improvement in response (an 11 percent reduction in days from complaint referral to construction) compared with 1992. Of the 346 emergency complaint investigations referred by OSM field offices, 240 resulted in declaration of emergencies, 44 were determined to be not of an emergency nature, 6 were considered not related to coal mining or were reclaimed by the landowner, and 56 were still under investigation on September 30, 1993. The mining-related complaints not of an emergency nature were referred to

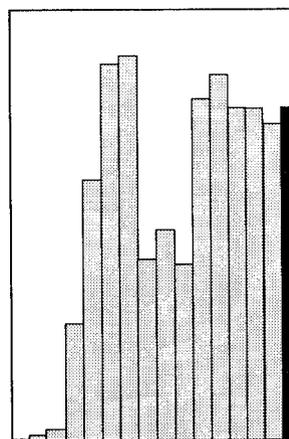
the states for their consideration as high-priority AML grant projects.

Due to funding limitations in 1993, not all new emergency projects were funded; however, obligations were made on 311 projects, including 252 for current year projects and 59 for pre-1993 projects. The ten states with emergency programs initiated 277 emergency projects in 1993. Table 13 summarizes high-priority and emergency project obligations by state for 1993.

POST-SMCRA RECLAMATION PROGRAM

As authorized in the 1993 appropriation (Public Law 102-381), federal civil penalties collected under Section 518 of SMCRA were used to reclaim lands mined and abandoned after August 3, 1977. In 1993, OSM funded two reclamation projects costing a total of \$333,725. An additional \$273,002 in unobligated funds will be carried over for use in reclaiming 1994 projects. Table 14 summarizes 1993 post-SMCRA reclamation projects.

GRANTS TO STATES AND TRIBES



Grants & Cooperative Agreements 1978-93

Beginning with Texas in 1980, OSM has approved state reclamation programs so that currently all primacy states except Mississippi have approved AML programs. During 1988, the Navajo and Hopi Tribe programs were approved, and in 1989 the Crow Tribe received approval for its program. The states and the tribes received grants totaling \$192,570,939 in 1993. Since 1981, when the states began receiving AML administrative grants to operate

their programs and construction grants to complete reclamation projects, states have received \$1,934,227,531 from the Abandoned Mine Reclamation Fund. Of that amount, approximately \$600 million was applied to administration grants, set-aside and subsidence insurance programs, emergency programs, and initial program development and cooperative agreement costs. Total net grant awards for AML construction projects from grants were \$1.4 billion, and construction obligations at the state/tribe level were \$1.3 billion. Grant amounts for 1993 are shown in Table 15. On-the-ground coal mine reclamation accomplishments resulting from grant funding through 1993 are summarized in Tables A-5 and A-7.

**TABLE 13
FEDERAL RECLAMATION PROGRAM PROJECTS
1993 OBLIGATIONS**

State or Tribe	Emergency	High Priority	Total 1978-93
Alabama	\$0	\$0	\$13,934,015
Alaska	0	0	194,638
Arkansas	0	0	84,904
California	0	0	1,048,643
Colorado	6,768	0	1,833,313
Georgia	0	135,673	1,903,371
Illinois	0	0	5,376,749
Indiana	299,610	0	3,862,909
Iowa	5,088	0	1,080,038
Kansas	0	0	5,094,172
Kentucky	5,477,754	0	71,678,308
Maryland	520,659	0	2,537,645
Michigan	25,556	104,428	1,834,815
Missouri	59,278	0	7,779,966
Montana	0	0	729,058
New Mexico	0	0	2,364,696
North Carolina	0	0	205,407
North Dakota	8,320	0	1,723,933
Ohio	345,432	0	18,444,593
Oklahoma	9,315	0	1,191,814
Oregon	0	0	42,275
Pennsylvania	3,002,847	0	82,667,404
Rhode Island	0	0	556,229
South Dakota	0	47,000	47,000
Tennessee	283,127	520,000	15,591,772
Texas	0	0	283,849
Utah	0	0	123,791
Virginia	0	0	10,139,719
Washington	139,514	502,494	4,344,568
West Virginia	0	0	29,023,226
Wyoming	1,617	0	1,066,738
Cheyenne River Tribe	0	100,000	2,412,372
Crow Tribe	0	0	1,097,895
Fort Berthold Tribe	0	0	69,972
Fort Peck Tribe	0	0	147,991
Hopi Tribe	0	0	1,263,409
Jicarilla Apache Tribe	0	0	50,998
Navajo Tribe	0	0	2,222,792
Northern Cheyenne Tribe	0	0	580,005
Southern Ute Tribe	0	0	94,206
Rocky Boy Tribe	0	0	60,188
Uintah/Ouray Tribe	0	1,100	138,738
Ute Mountain Ute Tribe	0	0	14,300
White Mountain Apache Tribe	0	0	1,838
Wind River Tribe	0	1,500	73,267
Zuni Tribe	0	0	125,009
Total	\$10,184,885	\$1,412,195	\$295,142,538

Based on initiatives proposed by OSM in 1991, the Office of Management and Budget asked OSM to assess the feasibility of revising the grant process used for the AML program. In response, OSM implemented a pilot program in 1993 by providing simplified AML grants to the states for carrying out reclamation activities. Simplified grants provided the states with more authority, flexibility, and responsibility in operating their AML programs.

Simplified grant funding of state AML programs streamlined the grant application process by eliminating the requirement for advance approval of each AML project before OSM awarded a state grant for AML reclamation. Instead, within the limits of existing authority, 16 states received amounts based on appropriated spending levels and are held accountable for using those funds in accordance with their approved AML plan. OSM's role moved away from cumbersome and detailed pre-award scrutiny of state grant applications.

Empowering the states in this manner recognizes the states' acknowledged record of accomplishment in AML work and reflects OSM's confidence in the states' ability to operate effective AML programs.

Progress in revising the AML grants process during 1993 included the following:

- A final change to current National Environmental Policy Act procedures was published in the Federal Register on March 10, 1993.
- A Federal Assistance Manual revision to implement AML simplified grants was issued January 6, 1993.
- Part 886 AML grant regulations are being modified to reflect the simplified process. A proposed rule is scheduled to be published in the *Federal Register* in early 1994.

MINIMUM PROGRAM GRANT FUNDING

The minimum-level program was established by Congress in 1988 to assure funding of existing high-priority projects in states where the annual allocation is too small for the state to administer a program and initiate reclamation.

Alaska, Arkansas, Iowa, Kansas, Maryland, Missouri, New Mexico, North Dakota, Oklahoma, Utah, and the Crow Tribe were eligible for minimum-level program funding during 1993 and received such grants during the year. Authorized funding of the minimum-level program remained at \$2,000,000 in 1993. Eligible states received \$14,669,719 federal-share money in 1993. This funding brought the 11* states and the Crow Tribe to the minimum-program level. Once the minimum program states/tribe complete their high-priority projects listed in the National Inventory of AML Problems, annual funding is limited to state-share money.

STATE-SHARE SET-ASIDE GRANTS

Beginning in 1987, Public Law 100-34 authorized states to set aside up to 10 percent of the state-share portion of their annual AML reclamation grants. Set-aside money was deposited into special trust funds, and became available, along with interest earned, for use by the state for reclaiming AML problems after August 3, 1992, the original expiration date for the collection of AML reclamation fees. (Subsequent legislation extended this date to September 30, 2004.) Statutory amendments contained in Public Law 101-508 created a new set-aside program which does not supersede the transfer funds deposited under the original 1987 program. The funds set aside under the new program may be utilized only after September 30, 1995, and only to reclaim eligible Priority 1 and 2 coal AML problems. In 1993, ten states/tribes set aside a total of \$6,172,790.

*Colorado was not considered a minimum program state in 1993 because its original distribution was over \$2,000,000; therefore, Colorado was taken out of the calculation for minimum program contributions.

**TABLE 14
POST-ACT RECLAMATION PROJECTS
1993**

State	Project Name and Description
Kentucky	Sam Sloan Slide - A large volume of coal mine spoil, including trees and stumps, slid off a hillside and blocked Branhams Creek. An occupied residence was in the direct path of the landslide.
Kentucky	Rowenna Caldwell Landslide - A large landslide being charged by seepage from abandoned underground auger mines was threatening five occupied residences.

TABLE 15
AML GRANTS¹ TO PRIMACY STATES AND INDIAN TRIBES
1993

State/ Tribe	Subsidence Insurance	10% Program Set-Aside	Administration ⁵	Construction ⁶	Emergency ⁷	Total
Alabama	\$0	\$0	\$553,074	\$3,280,827	\$300,000	\$4,133,901
Alaska	0	0	152,134	2,355,742	25,000	2,532,876
Arkansas	0	0	403,091	1,514,181	25,000	1,942,272
Colorado	0	200,000	370,000	1,465,000	0	2,035,000
Illinois	0	0	937,342	7,372,818	709,235	9,019,395
Indiana	0	451,322	1,521,678	5,200,000	0	7,173,000
Iowa	0	0	370,401	1,674,824	0	2,045,225
Kansas	0	0	193,594	3,721,546	474,578	4,389,718
Kentucky	0	0	1,273,196	13,455,467	0	14,728,663
Louisiana	0	0	82,454	0	0	82,454
Maryland	0	263,223	310,986	1,906,116	0	2,480,325
Missouri	0	75,888	419,865	2,407,139	0	2,902,892
Montana ⁴	0	337,623	415,728	4,715,408	125,000	5,593,759
New Mexico	0	200,000	694,751	976,037	0	1,870,788
North Dakota	0	200,000	469,056	1,321,982	0	1,991,038
Ohio	0	0	3,423,250	5,354,876	1,915,850	10,693,976
Oklahoma ²	0	0	888,548	1,191,830	0	2,080,378
Pennsylvania	0	3,781,707	2,881,186	42,089,681	0	48,752,574
Texas	0	0	926,562	2,448,000	0	3,374,562
Utah	0	0	430,528	1,664,000	0	2,094,528
Virginia ³	0	0	1,321,920	4,792,291	300,000	6,414,211
West Virginia	1,084,555	0	5,618,617	17,312,466	5,642,684	29,658,322
Wyoming	0	0	386,126	17,788,869	0	18,174,995
Crow Tribe	0	200,000	230,867	1,575,133	0	2,006,000
Hopi Tribe	0	0	109,022	34,366	0	143,388
Navajo Tribe	0	463,027	1,312,276	4,481,396	0	6,256,699
Total	\$1,084,555	\$6,172,790	\$25,696,252	\$150,099,995	\$9,517,347	\$192,570,939

1. Funding for these grants is derived from the FY 1993 distribution and funds recovered or carried over from previous years. Downward adjustments of prior-year awards are not included in the totals.

2. Construction amount includes \$54,159 in construction costs from a reimbursable cooperative agreement (GR299401).

3. Administrative amount includes \$42,888 for coalbed mapping grant.

4. 10% set-aside amount also contains \$101,287 in Acid Mine Drainage set-aside funding.

5. Administrative amounts for some states/tribes contain non-emergency indirect costs which are applicable to their entire AML program. These costs cannot be broken down into separate cost categories.

6. Construction amounts contain both non-water supply and water supply construction monies.

7. Emergency amounts contain indirect costs which are not directly attributable to either emergency construction or emergency administrative costs.

SUBSIDENCE INSURANCE PROGRAM

Public Law 98-473 authorized states and tribes with approved reclamation programs to use abandoned mine land funds for establishing self-sustaining, individually administered programs to insure private property against damage caused by land subsidence resulting from abandoned underground coal mines. Implementing rules were promulgated in February 1986. Under those rules, states can receive a subsidence insurance grant of up to \$3,000,000, awarded from the state's share of the AML Fund. In 1993 one subsidence insurance grant was issued. Through 1993, OSM has granted a total of \$11,569,662 to Colorado, Indiana, Kentucky, Ohio, West Virginia, and Wyoming to develop and administer subsidence insurance programs.

ABANDONED MINE LAND INVENTORY

SMCRA, as amended by the Abandoned Mine Reclamation Act of 1990 (Public Law 101-508), requires OSM to maintain an inventory of eligible abandoned mine lands and waters which meet the public health, safety, and general welfare criteria of SMCRA Section 403(1) and (2). During 1993, that inventory was completed and is currently in use.

In the early 1980s, OSM and the states compiled an initial inventory of abandoned mine land problems. Since then, the inventory has been maintained to reflect both newly identified problems and those that have received reclamation funding. Responding to the revisions to SMCRA, OSM identified projects that had been completed. OSM accomplished this by working with the states and tribes to add new problem areas* and validate existing records. As a result, OSM processed over 5,300 updated problem area records submitted for 23 program and 11 non-program states, and three program and 14 non-program Indian tribes.

In May 1993, OSM completed enhancement to its computerized Abandoned Mine Land Inventory System (AMLIS). The AMLIS system is used to provide statistical reports that track problems eligible for funding, estimated reclamation costs, and accomplishments. As of September 30, 1993, AMLIS contained information for a total of 11,300 problems areas (mostly related to abandoned coal mines) and showed \$919 million spent for completed coal AML reclamation projects and \$262 million presently funding ongoing coal AML projects. Table A-5 reports Priority 1 and 2 coal accomplishments, and Table A-7 contains Priority 3 coal AML accomplishments through 1993. Tables A-6 and A-8 show similar information for the Rural Abandoned Mine Program.

*A "problem area" is a geographic area (such as a watershed) containing one or more abandoned mine problems that could logically be corrected together. Problem area boundaries are delineated by the impacts on the surrounding land and water, not just the AML sites.

When comparing the data shown in these tables with previously reported AML accomplishments, differences will be apparent. Prior reports included data for OSM emergencies and non-coal AML projects. OSM emergencies are tracked in a separate computer system. AMLIS reports \$128.2 million spent on completed non-coal AML projects. That figure includes cumulative information provided voluntarily by Wyoming and Utah, in addition to non-coal reports for the states and tribes submitted after non-coal AML reporting requirements took effect in March 1992.

As of September 30, 1993, AMLIS also reported \$462,000 spent for a completed coal research project in Kentucky (completed when SMCRA allowed such projects to be funded by AML funds), and \$2.5 million in completed coal-related public infrastructure and utility projects in Wyoming. No projects were reported as completed through funding under SMCRA's acid mine drainage, insolvent surety, or interim site funding programs.

NATIONAL ABANDONED MINE LAND RECLAMATION AWARDS

After more than 15 years of abandoned mine land reclamation funded under the Surface Mining Control and Reclamation Act, thousands of dangerous health and safety problems throughout the country have been eliminated. Most people recognize the highly visible scars of the unreclaimed landscape as the result of past coal mining. But after abandoned mine problems are eliminated and reclamation is completed, it is nearly impossible to tell that health and safety problems ever existed on the site. Ironically, the better the reclamation, the less apparent it is.

To give well-earned public recognition to those responsible for the nation's most outstanding achievements in abandoned mine land reclamation, OSM initiated an annual national Abandoned Mine Land Reclamation Awards program in 1992. The program received a highly positive response from state reclamation programs, the coal industry (which paid the fee used to fund the reclamation work), and citizens living in the coal fields throughout the country. This year, 50 individuals responsible for the 10 award-winning projects received recognition. Positive public recognition:

- Promotes exemplary reclamation performance;
- Acknowledges the extra effort made by those responsible for achieving outstanding reclamation;
- Encourages the exchange and transfer of methods used to achieve successful reclamation; and

- Provides the public with a better understanding of mined-land reclamation achieved through the SMCRA Abandoned Mine Reclamation Fund.

Awards for the following projects were presented at the annual meeting of the National Association of State Abandoned Mine Land Programs:

- **Warrick Hospital RAMP Project.** This project was a cooperative effort of the city, the Soil Conservation Service, adjacent landowners, and the contractor. It eliminated dangerous health and safety abandoned mine hazards in a residential area near a hospital and an elementary school in Boonville, Indiana.
- **Coppermine Abandoned Mine Project.** The Coppermine project, located on the Navajo Indian Reservation in Coconino County, Arizona, eliminated open shafts, water pollution, soil erosion, and other abandoned mine land hazards resulting from historic copper mining. Reclamation was completed by the inhouse construction crew of the Tuba City, Arizona, Navajo Abandoned Mine Land Office.
- **Gay Branch Gob Pile Project.** The Gay Branch project in Clinchco, Virginia, reclaimed what was once rated the highest extreme danger site in the state. The project's outstanding results eliminated a variety of problems, ranging from open mine portals and steep refuse piles to fires that caused noxious smoke and fumes.
- **Lead and Zinc Mine Sites Reclamation Project.** This project eliminated 25 abandoned underground mine entries and shafts in and around historic Galena, Illinois, with minimal disturbance to the surrounding area. The contractor pumped polyurethane foam from lightweight trucks and used extensive hand labor to achieve excellent reclamation results.
- **Ocean Refuse Removal Project.** Reclamation of the former Ocean Mine, in Midland, Maryland, resulted in outstanding restoration of land and water resources at a site mined primarily for steamship coal from the 1870s until the 1940s. The project included many unique challenges as it reclaimed the area, but finally, after more than a century, the newly landscaped site is an asset to the community.
- **Pine Creek Mine Shafts Project.** At the Pine Creek project, in Logan County, West Virginia, vertical air shafts abandoned about 30 years ago were adjacent to a public road. To eliminate the danger associated with the 250-foot-deep shafts, the project used foam concrete to fill the shafts and a concrete cap to seal them. Then the area was landscaped.
- **Pyramid Coal Company Reclamation Project.** At this site, a surface mine near Pinckneyville, Illinois, disturbed about 3,000 acres and left the area covered with acid-forming refuse. Reclamation eliminated the sources of acid water and acid mine drainage and revegetated 270 acres of barren land.
- **Shiloh Reclamation Project.** The Shiloh Reclamation Project, in Russellville, Arkansas, was a joint effort by the Corps of Engineers, the City of Russellville, the Russellville Rotary Club, and the AML Fund. The project eliminated abandoned mine hazards at site that was partially flooded by the Arkansas River and frequently used as a recreation site by local residents. Major regrading and landscaping of the area with more than 2,600 trees and shrubs resulted in a high-quality, hazard-free recreation center for local residents.
- **Veca Pit and Spoils Project.** The Veca Pit was an abandoned uranium mine near Gas Hills, Wyoming. Spoil on the surface contained high levels of radioactive wastes and heavy metals. During reclamation, the contractor segregated contaminated material and buried it. Grading the site recreated the gently rolling landscape that existed before mining.
- **White Oak IV Reclamation Project.** The White Oak project, in Gallia County, Ohio, included reclamation of a 70-acre site containing highly acidic and erodible spoil. During reclamation more than five million gallons of acid mine drainage was treated, in addition to treating, draining, and backfilling mine pits at the site. With those problems eliminated, local streams are returning to their pre-mining condition.