

CALENDAR YEAR 1988
SIXTY-SIXTH ANNUAL REPORT
of the
MARYLAND BUREAU OF MINES



TO
HON. WILLIAM DONALD SCHAEFER
Governor of Maryland

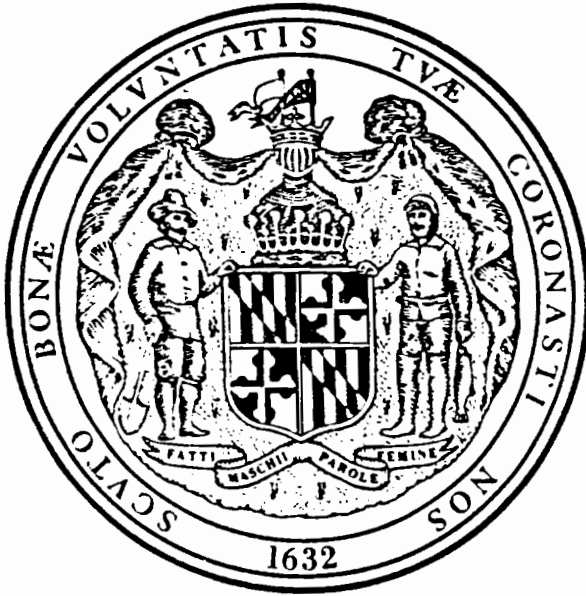
DEPARTMENT OF NATURAL RESOURCES
TORREY C. BROWN, MD., The Secretary

WATER RESOURCES ADMINISTRATION

From

MARYLAND BUREAU OF MINES

ANTHONY F. ABAR, Director



STATE OF MARYLAND
WILLIAM DONALD SCHAEFER
GOVERNOR

LOUIS L. GOLDSTEIN
COMPTROLLER OF THE TREASURY

LUCILLE MAURER
TEASURER

DEPARTMENT OF NATURAL RESOURCES
TORREY C. BROWN, M.D.
SECRETARY

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Governor of Maryland
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WATER RESOURCES ADMINISTRATION

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STATE OF MARYLAND
DEPARTMENT OF NATURAL RESOURCES
WATER RESOURCES ADMINISTRATION

TELEPHONE NO.
301/689-4136



69 HILL STREET
FROSTBURG, MARYLAND 21532

BUREAU OF MINES

INTRODUCTION

Maryland is rich in natural resources. The Department of Natural Resources, with the help of the people of Maryland, manages the protection, enhancement, and balanced use of our natural resources for present and future generations. As Secretary of the Maryland Department of Natural Resources, I am convinced that public support of DNR's mission is essential. The information in this publication is designed to increase your understanding of our program and of Maryland's natural resources.

Torrey C. Brown, M.D.

FOR THE CALENDAR YEAR 1988

REPORT OF THE MARYLAND BUREAU OF MINES

Coal production in Maryland during 1988 totalled 3,219,917.27 tons. Production for 1988 represents a decrease of 713,706.67 from the 1987 production of 3,933,623.94 tons.

SUMMARY OF 1988 STATISTICS¹

COAL PRODUCTION

Mining Method	Allegany County	Garrett County	Total	%
Strip	561,999.94	642,948.91	1,204,948.85	37.0
Deep	0	2,014,828.42	2,014,828.42	62.9
Auger	140.00	.00	140.00	.1
TOTALS	562,139.94	2,657,777.33	3,219,917.27	100%

EMPLOYEES²

Type of Mine	Allegany County	Garrett County	Total	Fatalities
Deep	0	328	328	0
Strip	189	123	312	0
TOTALS . . .	189	451	640	0

Allegany County shows a production of 2,974.28 net tons per man employed during 1988.

Garrett County shows a production of 5,893.07 net tons per man employed during 1988.

¹Reports submitted by Maryland mining operators.

²These figures do not include office, supervisory personnel or independent truck haulers.

FOR THE CALENDAR YEAR 1988

TONNAGE BY COAL SEAMS

Allegheny County

Waynesburg.	40,950.62
Sewickley (Tyson)	129,993.00
Redstone.	147,311.25
Pittsburgh.	165,141.32
Morantown	22,500.51
L. Pittsburgh	0
Franklin.	44,735.70
Harlem.	0
Bakerstown.	10,556.54
Freeport.	0
Kittanning.	0
Federal Hill.	892.18
Barton.	58.82
TOTAL.	562,139.94

Garrett County

Sewickley	0
Pittsburgh.	25,959.63
Morantown	0
L. Pittsburgh	69,357.00
Franklin.	48,116.91
Barton.	47,729.05
Elk Lick.	0
Harlem.	106,683.02
Bakerstown.	248,418.61
Brush Creek	0
Freeport.	2,069,016.68
Kittanning.	27,231.43
Redstone.	15,265.00
TOTAL.	2,657,777.33

TONNAGE BY BASIN

Lower Youghiogheny.	20,623.54
Upper Youghiogheny.	0
Casselman	32,477.55
Casselman (Cherry Creek).	0
Potomac	2,372,803.03
George's Creek.	794,013.15
TOTAL.	3,219,917.27

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR ALLEGANY COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
Alpha Mining, Inc.	362*	Pittsburgh		.00		0.0	0.0	0.0	4.0
Andalex Resources, Inc.	389	Pittsburgh Morantown Redstone		18,978.98 5,881.15 25,854.59		2.0 - -	2.0 - -	5.0 - -	0.0 - -
Ayers Coal Co.	323	Franklin		.00		0.0	0.0	0.0	0.0
Barton Mining Co.	338	Franklin Pittsburgh Redstone Morantown		18,165.34 18,482.02 16,995.02 5,198.35		22.0 - - -	10.0 - - -	10.0 - - -	- - - -
Bessemer Iron & Coal*	296	Bakerstown		.00		0.0	0.0	0.0	0.0
Black Diamond Energies	SC-83-118	Tipple							
Brashear Coal Mines	264 398	Pittsburgh Franklin Bakerstown		5,503.50 26,430.36 .00		6.0 - 0.0	6.0 - 0.0	6.0 - 0.0	0.0 - 0.0
Buffalo Coal Co.	276 279* 326 328 359 SC-83-101 SC-83-104	Pittsburgh Pittsburgh Pittsburgh Sewickley Pittsburgh Tipple Tipple		.00 .00 39,633.00 13,303.00 .00		0.0 0.0 11.0 10.0 0.0	0.0 0.0 10.0 8.0 0.0	0.0 0.0 10.0 8.0 0.0	0.0 4.0 0.0 0.0 0.0

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR ALLEGANY COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
Clark Coal Co.	SC-87-117	Tipple							
Clise Coal Co.	213	Sewickley		19,947.14		1.0	4.0	4.0	3.0
		Waynesburg		12,886.38		-	-	-	-
	234*	Sewickley		.00		0.0	0.0	0.0	0.0
	270	Sewickley		.00		0.0	0.0	0.0	0.0
Commonwealth Coals	315	Sewickley		5,581.85		5.0	0.0	0.0	0.0
	404	Sewickley		.00		0.0	0.0	0.0	0.0
	337	Morantown		.00		7.0	5.0	5.0	31.5
Delta Coal Sales	373	Morantown		.00		2.0	1.0	0.0	0.0
	SC-83-107	Tipple							
Delta Mining, Inc.	378	Federal Hill		892.18		6.0	28.0	28.0	0.0
		Bakerstown		10,556.54		-	-	-	-
	403	Barton		58.82		-	-	-	-
		Sewickley		3,421.00		0.0	15.0	15.0	0.0
		Redstone		13,515.91		-	-	-	-
		Pittsburgh		33,386.40		-	-	-	-
J. Duckworth Coal Co.	324	Morantown		7,434.47		-	-	-	-
	372	Waynesburg		617.25		-	-	-	-
J. Duckworth Coal Co.	SC-87-116	Pittsburgh		.00		0.0	0.0	0.0	0.0
		Pittsburgh		219.25		0.0	0.0	0.0	0.0
		Pittsburgh		390.00		0.0	0.0	0.0	0.0

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR ALLEGANY COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
R. Duckworth Coal Co.	357*	Bakerstown		.00		0.0	0.0	0.0	0.0
	381	Bakerstown		.00		0.0	3.0	3.0	0.0
Eagle Mining, Inc.	371*	Freeport		.00		0.0	0.0	0.0	25.0
Eckhart Coal Co.	184	Franklin			140.00	0.0	1.0	0.0	0.0
Ever, Inc.	SC-83-114	Gob. Pile							
Fairview Coal Co.	399	Pittsburgh Morantown Redstone		2,376.85		0.0	0.0	0.0	0.0
				3,810.19		-	-	-	-
				5,914.28		-	-	-	-
Hi-Note, Inc.	231	Pittsburgh		.00		0.0	6.0	2.0	0.0
	355*	Barton		.00		0.0	0.0	0.0	14.0
Jenkins Development Co.	411	Waynesburg Sewickley		18,166.99		29.0	0.0	0.0	0.0
				17,173.68		-	-	-	-
Jones Coal, Inc.	385	Sewickley		1,554.33		3.0	2.0	2.0	0.0
	407	Pittsburgh		.00		10.0	0.0	0.0	0.0
K & J Development, Inc.	182	Pittsburgh		.00		0.2	0.0	0.0	0.0
	393	Morantown		.00		0.0	0.0	0.0	0.0
Clyde Marsh Coal Co.	268	Redstone		.00		0.0	2.0	2.0	0.0
Michael McGowan	397*	Pittsburgh		.00		0.0	0.0	0.0	2.0
Merlo, C. J.	390*	Pittsburgh		.00		0.0	0.0	0.0	0.0

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR ALLEGANY COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
Potomac Coal Co.	SC-83-110	Tipple							
Westvaco Res., Inc.	333	Pittsburgh		4,648.00		(See Garrett County)			
Win-More Mining & Const.	273	Pittsburgh		2,172.40		0.0	0.0	0.0	0.0
	375	Redstone		8,080.94		-	-	-	-
		Redstone		1,640.92		1.0	0.0	0.0	0.0
		Morantown		3,890.51		-	-	-	-
				176.35		-	-	-	-
Winner Bros. Coal Co.	40	Redstone		42,700.00		1.0	0.0	0.0	0.0
	207	Sewickley		25,332.00		0.0	6.0	6.0	0.0
		Pittsburgh		21,330.00		-	-	-	-
		Redstone		30,360.00		-	-	-	-
	247	Pittsburgh		14,960.00		2.0	5.0	5.0	0.0
	286	Sewickley		34,860.00		0.0	0.0	0.0	0.0
		Sewickley		5,920.00		4.0	25.0	25.0	0.0
	329	Redstone		.00		1.0	12.0	12.0	0.0
	353	Waynesburg		9,280.00		4.0	0.0	0.0	0.0
	368	Pittsburgh		1,420.00		2.0	2.0	2.0	0.0
	374	Sewickley		2,900.00		0.0	0.0	0.0	0.0
TOTAL ALLEGANY COUNTY	SC-83-112	Tipple		561,999.94	140.00	129.2	153.0	150.0	83.5

* Mining Complete, awaiting Final Bond Release.

** Annual Report information was not submitted by this company.

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR GARRETT COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
Action Mining, Inc.	272*	Kittanning		.00		0.0	0.0	0.0	0.0
	295*	Freeport		.00		0.0	0.0	0.0	0.0
	394	Harlem		20,531.00		8.0	19.0	19.9	22.0
Allegheny Mining Corp.	277	Freeport		.00		0.0	9.0	9.0	91.9
	297*	Freeport		.00		0.0	0.0	0.0	0.0
	377*	Freeport		.00		0.0	0.0	0.0	12.3
	383	Freeport		3,690.86		6.0	2.0	2.0	0.0
	396	Harlem		27,562.60		1.0	17.0	17.0	0.0
Beener Coal Co.	143	Pittsburgh		25,959.63		21.0	16.0	16.0	0.0
		Franklin		46,862.11		-	-	-	-
		Barton		7,947.12		-	-	-	-
Bittering Coal Co.	265	Brush Creek		.00		0.0	0.0	0.0	0.0
	298*	Kittanning		.00		0.0	0.0	0.0	0.0
	369*	Brush Creek		.00		0.0	0.0	0.0	22.3
Buffalo Coal Co.	215	Bakerstown		1,979.00		15.0	28.0	28.0	0.0
	240*	Bakerstown		.00					
	360*	Freeport		.00		20.0	49.0	20.0	0.0
	366*	Barton		.00		0.0	0.0	0.0	59.0
	367	(in WV)							
			Area of mineral extraction is entirely in the State of West Virginia						
Delta Mining, Inc.	409	Bakerstown		58,647.00		45.0	15.0	19.0	0.0
	413			Not Started					
	SC-83-102*	Tipple		.00					
	SC-83-103	Tipple							
	SC-83-105	Tipple							
Delta Mining, Inc.	345*	Bakerstown		.00		0.0	0.0	0.0	26.0
	400*	Bakerstown		.00		28.0	27.0	27.0	0.0

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR GARRETT COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
J. Duckworth Coal Co.	364* 412	Bakerstown		Not Started .00		0.0	0.0	0.0	13.5
G&S Coal Co.	325 365	Barton Freeport		7,548.40 57,105.29		0.0 12.0	2.0 13.0	2.0 25.0	0.0 0.0
Hilltop Const.**	387	Freeport		.00					
Inter-State Lumber Co.	335*	Bakerstown		.00		0.0	0.0	0.0	0.0
Jones Coal, Inc.	376 405	Kittanning Freeport		.00 20,623.54		0.0 3.0	0.0 0.0	0.0 0.0	0.0 0.0
Jones Mining, Inc.	386	Kittanning		.00		0.0	0.0	0.0	0.0
L.C. Coal Co.	343	Bakerstown		.00		0.0	0.0	0.0	0.0
Masteller Coal Co.	379* DM107	Bakerstown Elk Lick	.00	.00		0.0 0.0	0.0 10.1	0.0 10.1	0.0 0.0
Mettiki Coal Corp.	DM101 DM104 DM105	Freeport Freeport Freeport	1,987,596.99 .00 .00			35.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0	0.0 0.0 0.0
Mt. Top Coal Co.	DM103	Kittanning	27,231.43			0.0	0.0	0.0	0.0

STATISTICS OF COAL PRODUCTION AND RECLAMATION ACTIVITIES, CALENDAR YEAR 1988
FOR GARRETT COUNTY

Name of Operator	Permit Number	Coal Seam Worked	Deep	Strip	Auger	Acres Mined	Acres Back-filled	Acres Planted	Acres Approved for Release
Patriot Mining Co., Inc.	406	Harlem Bakerstown		58,589.42 142,852.04		112.0	100.0	100.0	0.0
Pine Mt. Coal Co.	382	Bakerstown Franklin Bakerstown		5,795.33 758.80 .00		5.0	0.0	0.0	0.0
Schwinabart & Green	402*	Bakerstown				0.0	0.0	0.0	0.0
	348	Bakerstown		11,946.55		2.0	3.0	7.0	8.0
Tri Star Mining, Inc.	408	Barton		32,233.53		37.0	36.0	36.0	0.0
Wassell, Walter	410	Bakerstown		27,198.69		22.0	0.0	0.0	0.0
Westvaco Res., Inc.	333	L. Pittsborough Redstone Franklin Pittsborough Tiptple		69,357.00 15,265.00 496.00 .00		50.0	26.0	26.0	38.0
Wilhelm Coal, Inc.	392* SC-83-111	Freeport		.00		0.0	0.0	0.0	0.0
	314*	Freeport		.00		0.0	0.0	0.0	0.0
TOTAL GARRETT COUNTY			2,014,828.42	642,948.91	.00	422.0	372.1	363.1	293.0
TOTAL ALLEGANY COUNTY			.00	561,999.94	140.00	129.2	153.0	150.0	83.5
TOTAL BOTH COUNTIES			2,014,828.42	1,204,948.85	140.00	551.2	525.1	513.1	376.5

* Mining Complete, awaiting Final Bond Release.

** Annual Report information was not submitted by this company.

FOR CALENDAR YEAR 1988
SUMMARY OF LAND MINED, BACKFILLED, AND PLANTED IN 1988
(By Geological Basin)

Table No. 1

	ACRES THIS YEAR*					Planted	Rever Bond Release	Final Reports
	Approved By LKC Acres	Permitted	Mined	Backfilled				
Allegheny County:								
Georges Creek Basin	0	48.00	129.20	153.00	150.00	83.50	0	
Garrett County:								
Georges Creek Basin	76.00	272.00	135.00	78.00	78.00	51.50	1	
Potomac River Basin	0	219.00	246.00	236.10	223.10	71.30	4	
Casselman River Basin**	0	13.00	38.00	49.00	53.00	56.00	1	
Cherry Creek Basin**	0	0	0	9.00	9.00	114.20	0	
Upper Yough Basin	0	0	0	0	0	0	0	
Lower Yough Basin	0	0	3.00	0	0	0	0	
TOTAL GARRETT COUNTY	76.00	504.00	422.00	372.10	363.10	293.00	6	
TOTAL BOTH COUNTIES	76.00	552.00	551.20	525.10	513.10	376.50	6	

Table 2

ACRES CUMULATIVE FROM JANUARY 1, 1975 - DECEMBER 31, 1988

Allegheny County:							
Georges Creek Basin	6,574.38	5,811.50	4,387.00	3,748.97	3,726.80	2,888.10	46
Garrett County:							
Georges Creek Basin	1,867.00	1,799.00	1,743.45	1,530.85	1,798.05	1,153.80	12
Potomac River Basin	3,322.20	3,260.00	2,458.30	2,703.80	2,827.70	2,253.70	29
Casselman River Basin**	1,602.30	1,374.60	1,082.00	1,177.50	1,058.20	919.50	23
Cherry Creek Basin**	589.00	667.00	671.50	554.90	521.80	553.95	9
Upper Yough Basin	253.00	216.00	157.35	187.35	161.30	192.90	5
Lower Yough Basin	1,302.50	1,291.00	879.00	1,085.06	1,021.16	798.40	27
TOTAL GARRETT COUNTY	8,936.00	8,607.60	6,991.60	7,239.46	7,388.21	5,872.25	105
TOTAL BOTH COUNTIES	15,510.38	14,419.10	11,378.60	10,988.43	11,115.01	8,760.35	151

*Where difference occurs between Approved and Permitted, either Permit was approved in 1987 and not issued until 1988, or Permit was not issued.

**Both Casselman Geological Basin.

FOR CALENDAR YEAR 1988
SUMMARY OF MINING AND RECLAMATION STATISTICS

Table No. 3

Year	New Surface Mine Licenses Issued	New Surface Mine Permits Issued	New Deep Mine Permits Issued	Amended Permits Processed	Forfeitures	Permits Completed & Planted
1988	2	1	0	1	2	6
1987	1	7	0	3	0	7
1986	4	6	0	1	1	11
1985	8	6	0	7	1	5
1984	5	7	0	4	3	9
1983	13	12	0	11	0	11
1982	8	11	1	15	0	16
1981	10	0	0	11	1	16
1980	6	19	0	19	5	15
1979	8	7	0	8	4	19
1978	9	20	5	24	1	17
1977	13	25	1	36	0	19
1976	12	19	0	38	0	3
1975	20	37	0	62	0	16
Cumulative Total	119	177	7	240	18	170

FOR CALENDAR YEAR 1988
BUREAU OF MINES EMPLOYEES

Anthony F. AbarDirector
Stephen M. Layton Energy Resources Admin. I
Fred L. Bagley. Energy Resources Officer III
Alan V. Hooker Energy Resources Officer III
Mark Carney. Energy Resources Officer II
Jeffrey S. McCombs Energy Resources Officer I
Richard A. Gardner Energy Resources Officer I
(1/88-9/88)
Constance A. Lyons Energy Resources Officer I
P. Douglas Curtis. District Mine Inspector
John C. Eilers District Mine Inspector
Raymond Karlstrand District Mine Inspector
Joseph E. Mills. District Mine Inspector
Ruth D. Booth. Administrative Officer
Cathy A. Hooker. Stenographer Clerk III
Sallie A. Ricker Office Secretary III
Mary Lynn PeggLaboratory Scientist IV
Julie LaPorta. Laboratory Scientist I

FOR THE CALENDAR YEAR 1988

LAND RECLAMATION COMMITTEE

Members:

The following members served on the Land Reclamation Committee during 1988:

DEPARTMENT OF NATURAL RESOURCES REPRESENTATIVES;
Kenneth N. Weaver (Chairman), Maryland Geological Survey
Stephen M. Layton, Bureau of Mines
George Gilmore, Forest, Park, and Wildlife Service (1/88-
6/88)
Ed Golden, Forest, Park, and Wildlife Service
Robert Webster, Forest, Park, and Wildlife Service (6/88-
12/88)

DEPARTMENT OF THE ENVIRONMENT REPRESENTATIVE:
Robert V. Creter, Hazardous and Solid Waste Management
Administration

CITIZENS' REPRESENTATIVES:
June Neder, Allegany County
Jessie McCullough, Garrett County

COUNTY PLANNING & ZONING REPRESENTATIVES:
Tim Carney, Allegany County
Margaret Jamison, Garrett County

SOIL CONSERVATION DISTRICT REPRESENTATIVES:
Craig Hartsock, Allegany Soil Conservation District
Shaun Sanders, Garrett Soil Conservation District

COAL INDUSTRY REPRESENTATIVES:
John Carey
Steve Shaffer

Functions and Duties of the Committee:

The Land Reclamation Committee oversees land reclamation activities related to the surface mining of coal in Maryland. The Committee may enter on any surface mining operation to determine land reclamation conditions and progress.

The Land Reclamation Committee visits sites for which mining permit applications have been submitted/approved to:

- (1) determine the suitability of the proposed reclamation plan;
- (2) review annual mining and reclamation progress; and
- (3) evaluate revegetation.

The specific duties addressed by the Committee during its monthly meetings include:

1. Review and approval of reclamation plans;
2. Review and approval of Annual Mining and Reclamation Progress Reports;
4. Review and approval of revegetation prior to bond release.

During 1988, the Land Reclamation Committee met on 9 days, conducted site evaluations on 19 days, and processed 65 Annual Mining and Reclamation Progress Reports.

Other functions of the Land Reclamation Committee include:

1. Study and recommend any amendments to the strip mining law and regulations;
2. Recommend to the Department the expenditure of funds for as much as 50% of the cost of lime, fertilizer and seed for an approved mining and reclamation plan;
3. Approve the expenditure of funds that are received by the Department for the reclamation and revegetation of any strip mined area within the State.

FOR CALENDAR YEAR 1988

REVEGETATION OF STRIP MINED LANDS

The State Land Reclamation Committee (LRC) voted to release 377 acres of reclaimed surface coal mined lands from a total of 421 acres eligible for revegetation bond release during 1988. The LRC also voted to reduce revegetation bond on 442 acres from a total of 785 eligible acres. This action was taken after consideration of 89 planting reports that were filed by 30 coal companies.

All reclaimed acres were planted with a grass and legume mixture to insure adequate erosion control. In addition, trees and/or shrubs were planted on 279 acres that were released or reduced.

The mining law requires that a Backfilling and Planting report be submitted to the Bureau within two weeks after the actual planting is completed. When this report is signed by the mine inspector, the minimum bond holding period (five years for all permits issued after July 1, 1979) begins.

All reclaimed permit acres may have revegetation bonds reduced (by an amount not to exceed 50% of the bond) after two years and total bond released after five years from the approved planting date.

The revegetation bond can be reduced when:

1. The revegetated area is not contributing suspended solids to stream flow or runoff outside of the permit area in excess of the requirements of the regulatory program;
2. All temporary drainage control structures not authorized to remain on the permit area are removed and the affected area is regraded, seeded and mulched; or all permanent structures are inspected and their deficiencies are repaired.
3. With respect to prime farmlands, soil productivity has been returned to the level of yield required; and

4. Revegetation has been established in accordance with the approved reclamation plan and the following standards for success of revegetation are met:
 - a. Area must be 90% covered.
 - b. Area must be covered by at least 10% permanent legume, well distributed.
 - c. Bare areas must not exceed 900 square feet at any particular location. However, the overall coverage of 90% must be obtained.
 - d. There must not be any depressions or rills and gullies over nine inches in depth in the revegetated area.
 - e. There must not be any seeps discharging toxic water that cause degradation of the vegetation growing on the area.
 - f. There must not be any permit suspension/revocation, bond forfeiture, or other enforcement action pending on the permit area.
 - g. A minimum of 450 living stems per acre, well distributed, is required when trees and shrubs are planted.
 - h. Any special reclamation requirements approved in the mining permit must be met.

When all of the above requirements have been achieved, it is possible that a longer evaluation time may be required if the health conditions of the vegetation are questionable. The Bureau of Mines has the final authority to release bond after LRC approval of revegetation.

The bond remaining on an area may be released when the permittee has successfully completed reclamation operations in accordance with the approved reclamation plan and achieved compliance with the requirements of the regulatory program, and the applicable liability period has expired.

Bond monies cannot be returned to permittees until they comply with three procedural requirements of the mining law:

(1) advertise once a week for four consecutive weeks in a newspaper of general circulation in the jurisdiction affected, (2) notify adjoining property owners, local government bodies, sewage authorities and water companies by certified mail of the pending bond release, and (3) make application for bond release to the Bureau (The Bureau of Mines must receive copies of the advertisements and landowner notifications.)

In January of each year, a listing of acres eligible for revegetation bond release and reduction during that year is compiled and available from the Bureau of Mines.

FOR CALENDAR YEAR 1988

ABANDONED MINE LAND RECLAMATION

The Maryland Bureau of Mines administers two programs to reclaim and/or restore land and water resources adversely affected by past coal mining practices. These two programs are: (1) Maryland Federal Abandoned Mine Reclamation Program, implemented utilizing Federal funds available under the Federal Surface Mining Control and Reclamation Act of 1977 (U.S. Public Law 95-87) under the authority of Natural Resources Article (NRA), Title 7, Subtitle 9 of the Annotated Code of Maryland, and (2) Maryland Mine Reclamation Program, implemented utilizing funds from the Bituminous Coal Open-Pit Mining Reclamation Fund (BCOPMRF) under the authority of NRA, Title 7, Subtitle 5; the Deep Mining Fund under the authority of NRA, Title 7, Subtitle 5A; and the Mine Reclamation and Water Quality Restoration Loan under the authority of NRA, Title 7, Subtitle 6.

Maryland Federal Abandoned Mine Reclamation Program

The Maryland Abandoned Mine Land Reclamation Plan received Federal approval on July 16, 1982, thus enabling Maryland to receive Federal funds for the reclamation of abandoned mine lands. During 1988, grants awarded to Maryland by the U.S. Department of Interior, Office of Surface Mining, provide \$1,568,912 for the reclamation of approximately 161 acres of abandoned mine lands in Allegany and Garrett Counties, Maryland.

Projects Under Construction During 1988

1. Table Rock/Backbone Mt. Reclamation Project
Location: Approximately 4.2 miles S of Oakland, Garrett Co., adjacent Route 50.
Size: 8 acres
Scope of Work: Backfill and regrade an abandoned surface mine to eliminate the health and safety hazards posed by trash and tires in the pit area.
Cost: \$19,000
Fund Source: Maryland-Federal AML Fund

2. Pickell Hill Reclamation Project
Location: Approximately 1.5 miles WNW of Barton,
Allegany Co.
Size: 5 acres.
Scope of Work: Backfill, regrade and revegetate an
abandoned surface mine in conjunction with
an active surface mining operation to
control erosion and sediment runoff.
Cost: \$45,610
Fund Source: Maryland-Federal AML Fund
3. Yoder/Delta Reclamation Project
Location: Approximately 1 mile ESE of Bittinger,
Garrett Co.
Size: 8.5 acres
Scope of Work: Backfill, regrade and revegetate an
abandoned surface mine to eliminate a water
impoundment and reduce acid pollution
loading into the Casselman River.
Cost: \$27,700
Fund Source: Maryland-Federal AML Fund
4. Aaron's Run Road Refuse Reclamation Project
Location: Approximately 2.5 miles NNW of Westernport,
Allegany County, adjacent Aaron's Run Road.
Size: 8 acres
Scope of Work: Regrade and revegetate coal mine refuse.
Cost: \$72,650
Fund Source: Maryland-Federal AML Fund
5. Potomac Hill Reclamation Project
Location: Approximately 1½ miles south of Barton,
Allegany County.
Size: 2 acres
Scope of Work: Seal two abandoned deep mine entries,
demolish and dispose of abandoned tipple
structure, and regrade coal refuse pile.
Cost: \$37,935
Fund Source: Maryland-Federal AML Fund
6. Gray Reclamation Project
Location: Approximately 8 miles S of Oakland, Garrett
Co., and approximately 1.5 miles S of the
Intersection of U.S. Rt. 50 and Table Rock
Rd.
Size: 6 acres
Scope of Work: Backfill, regrade, and revegetate an
abandoned surface mine to eliminate a safety
hazard associated with motorbike use of the
area.
Cost: \$16,000
Fund Source: Maryland-Federal AML Fund

7. Mill Run Gob Pile Reclamation Project
 - Location: Approximately 1/2 mile S of Barton, Allegany County, adjacent Mill Run Road.
 - Size: 20 acres
 - Scope of Work: Redirect deep mine drainage to eliminate flooding and landslide potential. Regrade and revegetate gob piles to ensure slope stability.
 - Cost: \$182,598.57
 - Fund Source: Maryland - Federal AML Fund

8. Woodland Reclamation Project
 - Location: Immediately N of Woodland, Allegany Co.
 - Size: 20 acres
 - Scope of Work: Backfill, regrade and revegetate an abandoned surface mine to eliminate safety hazards associated with the highwall and impounded water.
 - Cost: Approximately \$108,700
 - Fund Source: Maryland-Federal AML Fund

9. Sugar Point Reclamation Project
 - Location: Approximately 1/2 mile WNW of Grantsville, Garrett Co., adjacent U.S. Route 40.
 - Size: Approximately 50 acres
 - Scope of Work: Backfill, regrade and revegetate two abandoned surface mines to eliminate safety hazards associated with the sites.
 - Cost: Approximately \$107,900
 - Fund Source: Maryland-Federal AML Fund

10. Staub Run Stream Channel Lining Project
 - Location: Approximately 2½ miles S of Frostburg, Allegany Co.
 - Size: 5400 lineal feet, 6.2 acres
 - Scope of Work: Reduce stream flow into underground deep mine workings by injecting polyurethane grout below streambed to seal existing stream channel.
 - Cost: \$147,201
 - Fund Source: OSM administered ARC Funds

11. Squirrel Neck Run Stream Channel Lining Project
 - Location: Immediately west of Midland, Allegany Co.
 - Size: 4200 lineal feet, 7.5 acres
 - Scope of Work: Reconstruct the stream channels to reduce stream flow into underground deep mine workings by placing clay lining in the reconstructed stream channel.
 - Cost: Approximately \$496,890
 - Fund Source: OSM administered ARC Funds

12. Austin/Kelly Reclamation Project
Location: Approximately 2.6 miles ESE of Grantsville, Garrett Co., adjacent New Germany Road.
Size: Phase I and II - 22 acres; Phase III - 3 acres.
Scope of Work: Backfill, regrade and revegetate two abandoned surface mines adjacent active mining permit.
Cost: Phase I & II - \$59,997; Phase III - \$37,600.
Fund Source: Maryland-Federal AML Fund

Maryland Mine Reclamation Program

Utilizing monies from the Bituminous Coal Open-Pit Mining Reclamation Fund and the Deep Mine Fund (derived from a 9¢ per ton of coal mined surcharge), 17.5 acres of abandoned mine lands were reclaimed during 1988. Funding for these reclamation projects totalled \$77,000.

Projects Under Construction During 1988

1. Harvey Reclamation Project
Location: Approximately 2 miles W of Gorman, Garrett County.
Size: 11 acres.
Scope of Work: Backfill, regrade and revegetate an abandoned surface mine to eliminate safety hazards.
Cost: \$42,457.00
Fund Source: BCOPMRF-Garrett County
2. Win-More Reclamation Project
Location: Approximately 1/2 mile west of Midlothian, Allegany County.
Size: 6.5 acres
Scope of Work: Regrade and revegetate abandoned surface mine spoil materials.
Cost: \$34,680.00
Fund Source: BCOPMRF-Allegany County

FOR CALENDAR YEAR 1988

MINE FOREMAN AND FIRE BOSS
EXAMINATION AND CERTIFICATIONS

The number of Mine Foremen and Fire Boss applicants examined and certified from 1976 through 1988 are identified below.

YEAR	APPLICANTS EXAMINED		APPLICANTS CERTIFIED	
	Mine Foreman	Fire Boss	Mine Foreman	Fire Boss
1988	15	0	11	0
1987	0	0	10*	0
1986	0	0	25*	0
1985	0	0	11*	0
1984	0	0	0	0
1983	1	26	1	21
1982	11	60	7	20
1981	0	0	0	0
1980	8	36	3	21
1979	14	28	12	26
1978	30	16	22	16
1977	0	0	0	0
1976	11	0	11	0

*These applicants were upgraded from Fire Boss to Foreman, based on years of experience, without taking an examination.

INSPECTION AND ENFORCEMENT ACTIVITIES
1984-1988

TYPE OF ACTION	1984	1985	1986	1987	1988
Inspections	1777	1910	1873	1728	1667
Notices of Violations	127	94	84	35	39
Cessation Orders	43	43	25	21	20
Citizen Complaints	20	17	19	37	9
Bond Forfeitures	3	1	1	0	1

COMPARATIVE ACCIDENT REPORT

Year	Man-Hour Exposure	Tons Produced	Fatalities	Lost Time Accidents	Fatalities Per Million Man-Hours	Fatalities Per Million Short Tons	Non-Fatal Man-Hours Per Million	Non-Fatal Per Million Short Tons
1988	1,163,028.64	3,219,917.27	0	83	0	0	71.36	25.77
1987	1,250,717.00	3,933,623.94	0	49	0	0	39.30	12.45
1986	1,199,234.00	4,055,312.47	0	15	0	0	12.51	3.70
1985	1,351,526.00	3,062,831.07	0	30	0	0	22.20	9.79
1984	1,749,464.25	3,993,299.82	1	35	.57	.25	20.00	8.76
1983	1,367,297.75	3,086,835.57	0	5	0	0	3.65	1.61
1982	2,085,157.75	3,459,891.66	0	5	0	0	2.39	1.44
1981	2,218,325.69	4,451,559.31	0	82	0	0	36.96	18.42
1980	2,089,982.50	3,760,092.25	0	61	0	0	29.18	16.22
1979	1,855,326.73	2,716,617.07	3	29	1.61	1.10	14.01	9.51
1978	1,429,612.00	2,851,321.89	1	24	.69	.35	16.08	8.06
1977	1,373,626.25	3,028,629.66	0	15	0	0	10.92	4.95
1976	1,287,997.50	2,695,178.96	0	4	0	0	3.10	1.48
1975	981,372.00	2,520,765.27	1	5	1.01	.39	4.07	1.58
1974	697,707.50	2,221,412.94	1	0	1.43	.45	0	0
1973	541,210.00	1,754,130.93	0	3	0	0	5.54	1.71
1972	520,285.00	1,638,418.46	0	5	0	0	9.61	3.05
1971	806,056.00	1,591,677.20	0	6	0	0	7.44	3.77

FOR THE CALENDAR YEAR 1988

ACCIDENT REPORT

COMPANY	PERMIT NUMBER	NON-FATAL ACCIDENTS	NUMBER OF ACCIDENTS	WORKING DAYS LOST	FATAL ACCIDENTS
Mettiki Coal	DM101,104,105	81		1,566	0
Andalex Resources	389	1		4	0
Winner Bros. Coal	353	1		4	0

FOR CALENDAR YEAR 1987

Permit No. 1 The George's Creek Lumber Company*
 Permit No. 2 Allegany Engineering Company*
 Permit No. 3 B.M.W. Coal Company*
 Permit No. 4 Old Hampshire Coal Company, Inc.*
 Permit No. 5 Car and Gotfelty Construction Co.*
 Permit No. 6 M.H. Bigan Coal Company*
 Permit No. 7 Moran Coal Company*
 Permit No. 8 Allegany Engineering Company*
 Permit No. 9 Schell Mining Company, Inc.*
 Permit No. 10 B & U Coal Company*
 Permit No. 11 Morgan Contracting Company**
 Permit No. 12 Romadale Coal Corporation*
 Permit No. 13 Cross Fuel Company*
 Permit No. 14 Highland Construction Company*
 Permit No. 15 Phoenix Big Vein Coal Company (Repermitted 338)*
 Permit No. 16 Moran Coal Company*
 Permit No. 17 T.J. Cramblett**
 Permit No. 18 Moscow-Georges Creek Coal Company*
 Permit No. 19 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 20 Moran Coal Company (Repermitted 333)*
 Permit No. 21 Schell Mining Company, Inc.**
 Permit No. 22 Savage Coal Company*
 Permit No. 23 Moran Coal Company*
 Permit No. 24 The Georges Creek Coal & Land Co.*
 Permit No. 25 Charles T. Clise*
 Permit No. 26 Allegany Engineering Company*
 Permit No. 27 Goodwill Fuel Company*
 Permit No. 28 D.B.&B. Coal Company*
 Permit No. 29 Queen George's Creek Coal Company**
 Permit No. 30 Mack Coal Company**
 Permit No. 31 White Crest Coal Company, Inc.**
 Permit No. 32 D.B.&B. Coal Company*
 Permit No. 33 Moran Coal Company*
 Permit No. 34 Chelsie A. Liller*
 Permit No. 35 J.E. George Trucking Company**
 Permit No. 36 D.B.&B. Coal Company*
 Permit No. 37 J.&M. Coal Company**
 Permit No. 38 Casey Construction Company**
 Permit No. 39 Moran Coal Company*
 Permit No. 40 Winner Bros. Coal Company, Inc.
 Permit No. 41 Buffalo Coal Company, Inc.*
 Permit No. 42 Casey Construction Company**
 Permit No. 43 Sara-Ki Coal Company, Inc.*
 Permit No. 44 Yantus & Zubek Coal Company*
 Permit No. 45 Moran Coal Company*
 Permit No. 46 Casey Construction Company**
 Permit No. 47 Moran Coal Company*
 Permit No. 48 Moran Coal Company*
 Permit No. 49 Sara-Ki Coal Company, Inc.*
 Permit No. 50 Laurel Creek Company, Inc.**
 Permit No. 51 D.B.&B. Coal Company**
 Permit No. 52 Moon and Sons*

Permit No. 53 George L. Smith Contracting Company*
 Permit No. 54 The Georges Creek Lumber Company*
 Permit No. 55 Moran Coal Company*
 Permit No. 56 North Branch Coal Corporation*
 Permit No. 57 George Coal Company**
 Permit No. 58 Samuel Compton & Company**
 Permit No. 59 Hoover & White*
 Permit No. 60 Laurel Creek Company, Inc.**
 Permit No. 61 The Eddy Fuel Company**
 Permit No. 62 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 63 Pittsburgh Coal Company*
 Permit No. 64 Mineral Coal Company, Inc., of West Virginia*
 Permit No. 65 Laurel Creek Company, Inc.*
 Permit No. 66 The Georges Creek Lumber Company*
 Permit No. 67 Chelsie A. Liller*
 Permit No. 68 Casey Contracting Company**
 Permit No. 69 Pine Mountain Coal Company*
 Permit No. 70 Opel and Brenneman*
 Permit No. 71 The Georges Creek Lumber Company*
 Permit No. 72 P.&J. Coal Company*
 Permit No. 73 Casey Contracting Company**
 Permit No. 74 Goodwill Fuel Company*
 Permit No. 75 D.B.&B. Coal Company*
 Permit No. 76 Baughman Contracting Company, Inc.*
 Permit No. 77 P&K Coal Company*
 Permit No. 78 Morgan Contracting Company*
 Permit No. 79 Buffalo Coal Company, Inc.*
 Permit No. 80 Buffalo Coal Company, Inc.*
 Permit No. 81 Randall Robertson*
 Permit No. 82 Hoover & White**
 Permit No. 83 James E. George*
 Permit No. 84 B.M.W. Coal Company, Inc.*
 Permit No. 85 Casey Contracting Company**
 Permit No. 86 Beener Coal Company*
 Permit No. 87 Moran Coal Company, Inc.*
 Permit No. 88 D&K Coal Company*
 Permit No. 89 Brenneman Brothers*
 Permit No. 90 Mack Coal Company*
 Permit No. 91 Clarence Rodamar*
 Permit No. 92 James E. George*
 Permit No. 93 Casey Contracting Company**
 Permit No. 94 Winner Brothers*
 Permit No. 95 Moran Coal Company, Inc.*
 Permit No. 96 Big Vein Coal Company*
 Permit No. 97 Maryland Fuel Company, Inc.*
 Permit No. 98 Yantus-Zubek Coal Company*
 Permit No. 99 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 100 Trefall Bros., Inc.*
 Permit No. 101 Mack Coal Comany*
 Permit No. 102 C.A. Liller Company*
 Permit No. 103 Cross & Brumage Coal Company*
 Permit No. 104 Beener Coal Company*
 Permit No. 105 D&K Coal Company*
 Permit No. 106 Mack Coal Company*

Permit No. 107 Yantus and Zubek*
 Permit No. 108 Potomac Mining Company*
 Permit No. 109 Casey Contracting Company*
 Permit No. 110 Wilhelm Coal Company*
 Permit No. 111 The Georges Creek Lumber Company*
 Permit No. 112 Clark Coal Company*
 Permit No. 113 Casey Contracting Company*
 Permit No. 114 Casey Contracting Company*
 Permit No. 115 Douglas Coal Company*
 Permit No. 116 Red Lion Mining Corporation**
 Permit No. 117 Ebensburg Coal and Clay Company*
 Permit No. 118 James E. George*
 Permit No. 119 Ebensburg Coal and Clay Company*
 Permit No. 120 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 121 Moran Coal Company, Inc.*
 Permit No. 122 Buffalo Coal Company, Inc.*
 Permit No. 123 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 124 Win-More Mining & Construction Co., Inc.*
 Permit No. 125 Beener Coal Company*
 Permit No. 126 W.R. Nethken and Company, Inc.*
 Permit No. 127 Mack Coal Company*
 Permit No. 128 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 129 J. Russell Cravener*
 Permit No. 130 Chelsie A. Liller*
 Permit No. 131 The Georges Creek Lumber Company*
 Permit No. 132 Brenneman Brothers*
 Permit No. 133 W.R. Nethken and Company, Inc.*
 Permit No. 134 Richards and Parnell Coal Company*
 Permit No. 135 William Brashear*
 Permit No. 136 W.R. Nethken and Company, Inc.*
 Permit No. 137 G&S Coal Company, Inc.*
 Permit No. 138 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 139 J.R. Thrasher Contracting & Stripping Co.*
 Permit No. 140 Shallmar Coal Company, Inc.*
 Permit No. 141 Randall Robertson***
 Permit No. 142 Ace Drilling Coal Company, Inc.*
 Permit No. 143 Beener Coal Company
 Permit No. 144 Clarence Rodamer*
 Permit No. 145 Ginniman Coal Company*
 Permit No. 146 Raymond A. Wolf Mining Company*
 Permit No. 147 Menallen Coke Company*
 Permit No. 148 Russel Shafer*
 Permit No. 149 Homage Coal Co. (Emmett Duppstadt)*
 Permit No. 150 Twin States Coal Company**
 Permit No. 151 M.F. Fetterolf Coal Company, Inc.*
 Permit No. 152 Ebensburg Coal and Clay Company**
 Permit No. 153 Raymond A. Wolf Mining Co. (UPRC)*
 Permit No. 154 Michael Rostosky*
 Permit No. 155 Ginniman & Ware Coal Company*
 Permit No. 156 Harold H. Upole Coal Company*
 Permit No. 157 T.G.&C. Coal Company, Inc.*
 Permit No. 158 Clarence Rodamer Coal Company*
 Permit No. 159 Michael Rostosky Coal Company*
 Permit No. 160 Russel Shafer Coal Company*

Permit No. 161 Buffalo Coal Company, Inc.*
 Permit No. 162 J.R. Thrasher Contracting & Stripping Co.***
 Permit No. 163 Buffalo Coal Company, Inc.*
 Permit No. 164 Union Coal Company*
 Permit No. 165 Win-More Mining & Construction Co., Inc.*
 Permit No. 166 Ginniman Coal Company*
 Permit No. 167 Upperman Coal Company*
 Permit No. 168 Frank Pulford*
 Permit No. 169 Winner Bros. Coal Company, Inc.*
 Permit No. 170 Russel Shafer*
 Permit No. 171 The Chief Coal Company*
 Permit No. 172 Mary Ruth Corporation*
 Permit No. 173 Oakland Coal Company*
 Permit No. 174 Bernard C. Drees*
 Permit No. 175 Delta Mining, Inc.*
 Permit No. 176 D&K Coal Company, Inc.*
 Permit No. 177 T.G.&C. Coal Company, Inc.*
 Permit No. 178 Emmett Duppstadt*
 Permit No. 179 Somerset Excavating, Inc.*
 Permit No. 180 Ayers Coal Company*
 Permit No. 181 Delta Mining, Inc.*
 Permit No. 182 K&J Development, Inc.
 Permit No. 183 Chief Coal Company*
 Permit No. 184 Eckhart Coal Company
 Permit No. 185 Bessemer Iron & Coal Company*
 Permit No. 186 Coal Lick Coal Company*
 Permit No. 187 Phillips Big Vein Coal Company*
 Permit No. 188 Ace Drilling Coal Company, Inc.*
 Permit No. 189 Buffalo Coal Company, Inc.*
 Permit No. 190 Buffalo Coal Company, Inc.*
 Permit No. 191 Keystone Coal and Development Company
 (Liability Assumed by Garrett County
 Roads Department)
 Permit No. 192 Ace Drilling Company, Inc.*
 Permit No. 193 Wilhelm Coal, Inc.*
 Permit No. 194 M.F. Fetterolf Coal Company, Inc.***
 Permit No. 195 Buffalo Coal Company, Inc.*
 Permit No. 196 Besemer Iron & Coal Company*
 Permit No. 197 Grafton Coal Company*
 Permit No. 198 Jet Fuel Coal Company*
 Permit No. 199 Bessemer Iron & Coal Company
 Permit No. 200 Chief Coal Company*
 Permit No. 201 Brashear Coal Company*
 Permit No. 202 Winner Bros. Coal Company, Inc.*
 Permit No. 203 Mary Ruth Corporation*
 Permit No. 204 Grafton Coal Company*
 Permit No. 205 Chief Coal Company*
 Permit No. 206 Upperman Coal Company*
 Permit No. 207 Winner Bros. Coal Company, Inc.
 Permit No. 208 Sanner Bros. Coal Company*
 Permit No. 209 Delta Mining, Inc.*
 Permit No. 210 Markat, Inc.*
 Permit No. 211 Oakland Coal Company*
 Permit No. 212 Bessemer Iron & Coal Company*

Permit No. 213 Clise Coal Company
 Permit No. 214 Inter-State Lumber Company*
 Permit No. 215 Buffalo Coal Company, Inc.
 Permit No. 216 Brashear Coal Company***
 Permit No. 217 Bernard Drees Coal Company*
 Permit No. 218 Buffalo Coal Company, Inc.*
 Permit No. 219 G&S Coal Company, Inc.*
 Permit No. 220 Evans Coal Company*
 Permit No. 221 Brideview Coal Company*
 Permit No. 222 John Duckworth Coal Company*
 Permit No. 223 Edward Mikel*
 Permit No. 224 Delta Mining, Inc.*
 Permit No. 225 Northwest Coal Company, Inc.*
 Permit No. 226 Thrasher Coal Company**
 Permit No. 227 Winner Bros. Coal Company, Inc.*
 Permit No. 228 Bittinger Coal Company*
 Permit No. 229 Charles M. Filsinger*
 Permit No. 230 G&H Coal Company, Inc.*
 Permit No. 231 Hi-Note, Inc.
 Permit No. 232 Buffalo Coal Company, Inc.*
 Permit No. 233 Oliver Mining Company**
 Permit No. 234 Clise Coal Company
 Permit No. 235 Markat, Inc.*
 Permit No. 236 Delta Mining, Inc.*
 Permit No. 237 Bridgeview Coal Company*
 Permit No. 238 Burnham Coal Company, Inc.*
 Permit No. 239 Highland Mining*
 Permit No. 240 Buffalo Coal Company, Inc.
 Permit No. 241 Buffalo Coal Company, Inc.*
 Permit No. 242 Hopwood Strip Mine, Inc.**
 Permit No. 243 Ponderosa Coal Company, Inc.*
 Permit No. 244 Markat, Inc.*
 Permit No. 245 Phillips Coal, Inc.*
 Permit No. 246 Lambert Coal Company*
 Permit No. 247 Winner Bros. Coal Company, Inc.
 Permit No. 248 Buffalo Coal Company, Inc.*
 Permit No. 249 Cobra Fuels*
 Permit No. 250 Laoc Coal Company*
 Permit No. 251 Tower Resources, Inc.*
 Permit No. 252 Phillips Coal, Inc.*
 Permit No. 253 Pine Mt. Coal Company*
 Permit No. 254 T.G.&C. Coal Company*
 Permit No. 255 Allegheny Mining Company*
 Permit No. 256 Bridgeview Coal Company*
 Permit No. 257 A&R Coal Company*
 Permit No. 258 Clinton Coal Company**
 Permit No. 259 Tower Resources, Inc.*
 Permit No. 260 Yough Tree Farm*
 Permit No. 261 Russel Shafer***
 Permit No. 262 Northwest Coal Company**
 Permit No. 263 Allegheny Mining Corporation*
 Permit No. 264 Brashear Coal Company
 Permit No. 265 Bittinger Coal Company
 Permit No. 266 Delta Mining, Inc.*

Permit No. 267 Bittering Coal Company*
 Permit No. 268 Clyde Marsh Coal Company
 Permit No. 269 Hungry Hollow Coal Company*
 Permit No. 270 Clise Coal Company
 Permit No. 271 A&R Coal Company*
 Permit No. 272 Action Mining, Inc.
 Permit No. 273 Win-More Mining & Construction
 Permit No. 274 Evans Coal Company*
 Permit No. 275 Buffalo Coal Company, Inc.*
 Permit No. 276 Buffalo Coal Company, Inc.
 Permit No. 277 Allegheny Mining Corporation
 Permit No. 278 Inter-State Lumber Company*
 Permit No. 279 Buffalo Coal Company, Inc.*
 Permit No. 280 Delta Mining, Inc.*
 Permit No. 281 Rondell Company*
 Permit No. 282 Phillips Coal, Inc.*
 Permit No. 283 G&H Coal Company, Inc.*
 Permit No. 284 Tower Resources, Inc.*
 Permit No. 285 Clinton Coal Company**
 Permit No. 286 Winner Bros. Coal Company, Inc.
 Permit No. 287 T.L. Moran, Inc.*
 Permit No. 288 Delta Mining, Inc.*
 Permit No. 289 Pine Mt. Coal Company*
 Permit No. 290 Delta Mining, Inc.*
 Permit No. 291 George Nolan**
 Permit No. 292 Alexander Coal Co.*
 Permit No. 293 Pine Mt. Coal Company*
 Permit No. 294 Arlen Miller***
 Permit No. 295 Action Mining, Inc.
 Permit No. 296 Bessemer Iron & Coal Company
 Permit No. 297 Oakland Coal Company
 Permit No. 298 Bittering Coal Company
 Permit No. 299 Inter-State Lumber, Inc.*
 Permit No. 300 Garbart Coal Company*
 Permit No. 301 Pine Mt. Coal Company*
 Permit No. 302 L.C. Coal Company, Inc.*
 Permit No. 303 Ginniman Brothers Coal Company**
 Permit No. 304 Buffalo Coal Company, Inc.*
 Permit No. 305 Wood Products, Inc.*
 Permit No. 306 Bridgeview Coal Company*
 Permit No. 307 T.L. Moran, Inc.*
 Permit No. 308 Best Coal Stripping, Inc.**
 Permit No. 309 Delta Mining, Inc.*
 Permit No. 310 Oakland Coal Company*
 Permit No. 311 Primrose Coal Company*
 Permit No. 312 R.A.K. Coal Company, Inc.**
 Permit No. 313 G&S Coal Company*
 Permit No. 314 Wilhelm Coal, Inc.
 Permit No. 315 Clise Coal Company
 Permit No. 316 Brawal Mining, Inc.*
 Permit No. 317 John R. Livingston**
 Permit No. 318 Winner Bros. Coal Company, Inc.
 Permit No. 319 John Duckworth Coal Company*
 Permit No. 320 Kelley Enterprises*

Permit No. 321 Delta Mining, Inc.*
 Permit No. 322 Bridgeview Coal Company*
 Permit No. 323 Ayers Coal Company
 Permit No. 324 John Duckworth Coal Company
 Permit No. 325 G&S Coal Company, Inc.
 Permit No. 326 Buffalo Coal Company, Inc.
 Permit No. 327 Buffalo Coal Company, Inc.*
 Permit No. 328 Buffalo Coal Company, Inc.
 Permit No. 329 Winner Bros. Coal Company, Inc.
 Permit No. 330 Inter-State Lumber Company*
 Permit No. 331 R.A.K. Coal Company***
 Permit No. 332 Seneca Mining Company*
 Permit No. 333 Westvaco Resources, Inc.
 Permit No. 334 Buffalo Coal Company, Inc.*
 Permit No. 335 Inter-State Lumber Company
 Permit No. 336 Inter-State Lumber Company*
 Permit No. 337 Commonwealth Coals, Inc.
 Permit No. 338 Barton Mining Company, Inc.
 Permit No. 339 Wilhelm Coal, Inc.*
 Permit No. 340 Fetterolf Mining, Inc.*
 Permit No. 341 Eastern Mining Systems, Inc.**
 Permit No. 342 Primrose Coal Company*
 Permit No. 343 L.C. Coal Company
 Permit No. 344 Bridgeview Coal Company*
 Permit No. 345 Delta Mining, Inc.
 Permit No. 346 Inter-State Lumber Company*
 Permit No. 347 Kelley Enterprises*
 Permit No. 348 Schwinabart & Green, Joint Venture
 Permit No. 349 Wilhelm Coal, Inc.**
 Permit No. 350 Bridgeview Coal Company*
 Permit No. 351 Winner Bros. Coal Company, Inc.*
 Permit No. 352 John Duckworth Coal Company
 Permit No. 353 Winner Bros. Coal Company, Inc.
 Permit No. 354 Brawal Mining, Inc.*
 Permit No. 355 Hi-Note, Inc.
 Permit No. 356 G&S Coal Company, Inc.***
 Permit No. 357 Richard Duckworth Coal Company
 Permit No. 358 Bridgeview Coal Company*
 Permit No. 359 Buffalo Coal Company, Inc.
 Permit No. 360 Buffalo Coal Company, Inc.
 Permit No. 361 Pamela Mines, Inc.**
 Permit No. 362 Alpha Mining, Inc.
 Permit No. 363 Pamela Mines, Inc.**
 Permit No. 364 John Duckworth Coal Company
 Permit No. 365 G&S Coal Company, Inc.
 Permit No. 366 Buffalo Coal Company, Inc.
 Permit No. 367 Buffalo Coal Company, Inc.
 Permit No. 368 Winner Bros. Coal Company, Inc.
 Permit No. 369 Bittinger Coal Company*
 Permit No. 370 Keystone Mt. Development Company*
 Permit No. 371 Eagle Mining, Inc.
 Permit No. 372 John Duckworth Coal Company
 Permit No. 373 Commonwealth Coals, Inc.

Permit No. 374 Winner Bros. Coal Company, Inc.
 Permit No. 375 Win-More Mining & Construction Company
 Permit No. 376 Jones Coal, Inc.
 Permit No. 377 Oakland Coal Company
 Permit No. 378 Delta Mining, Inc.
 Permit No. 379 Masteller Coal Company
 Permit No. 380 Fairview Coal Company (Repermitted 399)*
 Permit No. 381 Richard Duckworth Coal Company
 Permit No. 382 Pine Mt. Coal Company
 Permit No. 383 Oakland Coal Company
 Permit No. 384 Evans Coal Company*
 Permit No. 385 Jones Coal, Inc.
 Permit No. 386 Jones Mining, Inc.
 Permit No. 387 Hilltop Construction Company**
 Permit No. 388 Fetterolf Mining, Inc.*
 Permit No. 389 Tower Resources, Inc.
 Permit No. 390 C.J. Merlo, Inc.*
 Permit No. 391 Oak Springs Coal Company*
 Permit No. 392 Westvaco Resources, Inc.
 Permit No. 393 K&J Development, Inc.
 Permit No. 394 Action Mining, Inc.
 Permit No. 395 Stan-Jan Excavating, Inc.*
 Permit No. 396 Oakland Coal Co.
 Permit No. 397 Michael R. McGowan*
 Permit No. 398 Brashear Coal Company
 Permit No. 399 Fairview Coal Company
 Permit No. 400 Delta Mining, Inc.
 Permit No. 401 Buffalo Coal Company, Inc.***
 Permit No. 402 Pine Mt. Coal Company
 Permit No. 403 Delta Mining, Inc.
 Permit No. 404 Clise Coal Company
 Permit No. 405 Jones Coal, Inc.
 Permit No. 406 Patriot Mining Company, Inc.
 Permit No. 407 Jones Coal, Inc.
 Permit No. 408 Tri Star Mining, Inc.
 Permit No. 409 Buffalo Coal Company, Inc.
 Permit No. 410 J. Walter Wassell
 Permit No. 411 Jenkins Development Company
 Permit No. 412 John Duckworth Coal Company
 Permit No. 413 Buffalo Coal Company, Inc.

DEEP MINES

Permit DM 101 Mettiki Coal Corporation
 Permit DM 102 Masteller Coal Company*
 Permit DM 103 Mt. Top Coal Company
 Permit DM 104 Mettiki Coal Corporation
 Permit DM 105 Mettiki Coal Corporation
 Permit DM 106 A&J Coal Corporation**
 Permit DM 107 Masteller Coal Company

TIPPLES AND GOB FILES

Permit SC-83-101 Buffalo Coal Company
Permit SC-83-102 Buffalo Coal Company
Permit SC-83-103 Buffalo Coal Company
Permit SC-83-104 Buffalo Coal Company
Permit SC-83-105 Buffalo Coal Company***
Permit SC-83-106 Permit Not Issued
Permit SC-83-107 Delta Coal Sales, Inc.
Permit SC-83-108 Delta Coal Sales, Inc.
Permit SC-83-109 Permit Not Issued
Permit SC-83-110 Potomac Coal Company
Permit SC-83-111 Westvaco Resources, Inc.
Permit SC-83-112 Winner Bros. Coal Company
Permit SC-83-113 Permit Not Issued
Permit SC-83-114 Ever, Inc.
Permit SC-83-115 Permit Not Issued
Permit SC-87-116 John Duckworth Coal Company
Permit SC-87-117 Clark Coal Company
Permit SC-87-118 Black Diamond Energies, Inc.

* Operation Completed and Bond Released
** Forfeiture of Bond
*** Not Activated