

CALENDAR YEAR 2006
EIGHTY-FIFTH ANNUAL REPORT
Of The
MARYLAND BUREAU OF MINES



HON. Martin O'Malley
Governor of Maryland

DEPARTMENT OF THE ENVIRONMENT
Shari T. Wilson, Secretary

WATER MANAGEMENT ADMINISTRATION
Virginia F. Kearney, Acting Director

MINING PROGRAM
C. EDMON LARRIMORE, Program Manager

BUREAU OF MINES
JOHN E. CAREY, Director

FOR THE CALENDAR YEAR 2006

STATE OF MARYLAND
DEPARTMENT OF THE ENVIRONMENT
WATER MANAGEMENT ADMINISTRATION
MINING PROGRAM
BUREAU OF MINES

FROSTBURG, MARYLAND 21532

LETTER OF TRANSMITTAL

To The Honorable:

Martin O'Malley
Governor of Maryland

Sir:

It is my honor to submit herewith the Eighty-Fifth Annual Report of the Maryland Bureau Of Mines for the period of January 1, 2006 through December 31, 2006, in compliance with the mining laws of the State of Maryland. This report provides information pertaining to the conditions of the coal mining industry within the State.

Respectfully submitted,

John E. Carey, *Director*

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EXECUTIVE SUMMARY

During calendar year 2006, Maryland operators produced 5,196,446 tons of coal. Surface coal mining production was 1,170,289 tons in Allegany County and 1,186,569 in Garrett County. Deep coal mining production was 2,839,591 tons, all in Garrett County.

One hundred thirty-four permitting actions were received and one hundred twelve permitting actions were issued, including issuance of four original permits, four permit increments, and fifteen permit amendments, totaling 752 acres. Included in the permitting actions were 34 operator's license renewals. Other permit actions include: modifications, transfers and prospecting permits.

Four hundred thirty-five acres were affected, 184 acres backfilled, and 169 acres planted. Bond was totally released on 251 acres. There were four permits completed during 2006.

Nine hundred thirty-four inspections were performed on coal mining operations. Seventy Notices of Violations were issued. Twenty-seven Citizen Complaints were received and investigated and there were thirty-two cessation orders issued. There was one Bond Forfeiture during this calendar year.

The Land Reclamation Committee met eleven times and approved 13 reclamation plans. The Committee also evaluated the revegetation on 215 acres eligible for Phase II bond release and approved 118 acres as meeting the standards for release. There was one reclamation plan change during the year.

The Maryland Bureau of Mines, Abandoned Mine Land Section 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, and (2) Maryland Mine Reclamation Program. Three federally funded projects were completed in 2006, under the Maryland-Federal Abandoned Mine Reclamation Program with construction costs totaling \$105,683.99. These projects stabilized mine subsidence under one residence and Porter Road; extended the Lonaconing public water distribution system to two residences whose private water supplies had been polluted by abandoned mine drainage; and performed reclamation on three acres of abandoned mine spoil. Three State funded projects were also completed in 2006 under the Maryland Mine Reclamation Program, with construction costs totally \$443,435.00. These projects reclaimed 35 acres of surface mine in which the permit was revoked and the bond forfeited; removed mine drainage from the basement of one residence; and sealed one mine portal and one ventilation shaft.

The Acid Mine Drainage Section (AMDS), during the period of January 01, 2006 and December 31, 2006, completed two new treatment systems and upgraded the McDonald Mine Doser on the Georges Creek in Allegany County, to improve operations and maintenance of the system. The Railroad Street (Coney Silk Mill) SAPS Project was designed and constructed by the Abandoned Mine Land Section in consultation with AMDS. During the year, AMDS also continued design for two additional AMD remediation projects in the Aaron Run Watershed, with construction scheduled for the summer of 2007. Since AMD remediation efforts were initiated in 1992, a total of 30 mine drainage controls have been constructed and are continuously operated and maintained by Bureau of Mines personnel. These controls require ongoing maintenance and are improving 83 miles of AMD impaired stream in the Maryland coal region. Construction and upgrade costs for the work completed by AMDS in 2006 totaled \$338,174.

FOR CALENDAR YEAR 2006

MINING PROGRAM

C. Edmon Larrimore.	Program Manager, Mining Program
Ruth D. Booth.	Administrator II
Sallie Shuman.	Administrative Officer I

BUREAU OF MINES

John E. Carey	Director, Bureau of Mines
Barbara E. Murphy.	Office Secretary III

Abandoned Mine Lands Section

Michael P. Garner – Section Chief.	Water Resources Engineer V
John C. Eilers.	Energy Resources Administrator I
Bradley Nee.	Water Resources Engineer IV
Mark Carney.	Water Resources Engineer IV
Randall Matthews	Conservation Associate V
Scot Nicol	Conservation Associate III

Permitting and Regulatory Section

Alan V. Hooker– Section Chief	Geologist V
Jeffery Snyder	Engineer III

Acid Mine Drainage Section

Constance A. Lyons – Section Chief	Natural Resources Planner V
Michelle Arrington	Envir. Compliance Specialist III
Joseph E. Mills	Natural Resources Planner IV
Tamara Davis	Natural Resources Planner IV

Laboratory & Support Services

Mary Lynn Pegg – Section Chief	Geologist V
Julie O'Connor	Chemist IV

Mining Inspection and Compliance

William Murphy.	Envir. Compliance Specialist III
Thomas P. Murray.	Envir. Compliance Specialist IV

**FOR THE CALENDAR YEAR 2006
REPORT OF THE MARYLAND BUREAU OF MINES**

Coal production in Maryland during 2006 totaled 5,196,446.20 tons. Production in 2006 represents a decrease of 634,118.94 tons from the 2005 production of 5,830,565.14 tons.

**SUMMARY OF 2006
STATISTICS¹**

COAL PRODUCTION

Mining Method	Allegany County	Garrett County	Total
Strip	1,170,286.15	1,186,569.23	2,356,855.38
Deep	.00	2,839,590.82	2,839,590.82
Auger	.00	.00	.00
TOTALS	1,170,286.15	4,026,160.05	5,196,446.20

EMPLOYEES²

Type of Mine	Allegany County	Garrett County	Total
Deep	0	138	138
Strip	208	122	330
TOTALS	208	260	468

¹Reports submitted by Maryland mining operators.

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

**FOR THE CALENDAR YEAR 2006
TONNAGE BY COAL SEAMS**

Allegheny County

Waynesburg	102,184.44
Sewickley (Tyson)	4,592.09
Redstone	101,530.89
Pittsburgh	828,289.61
Morantown	40,465.20
L. Pittsburgh	56,666.65
Franklin	36,557.27
Harlem	0
Bakerstown	0
Freeport	0
Kittanning	0
Federal Hill	0
Barton	0
TOTAL	1,170,286.15

Garrett County

Sewickley	23,959.90
Pittsburgh	159,855.96
Morantown	11,470.24
L. Pittsburgh	56,607.59
Franklin	55,006.77
Barton	166,179.71
Elk Lick	11,134.35
Harlem	21,382.05
Bakerstown	370,377.48
Freeport	2,686,107.70
Kittanning	389,458.54
Redstone	16,308.93
Franklin Rider	58,310.83
TOTAL	4,026,160.05

TONNAGE BY BASIN

Lower Youghiogheny	0
Upper Youghiogheny	0
Casselman	0
Casselman (Cherry Creek)	0
Potomac	3,691,084.31
George's Creek	1,505,361.89
TOTAL	5,196,446.20

**CALENDAR YEAR 2006
COAL PRODUCTION, MINING AND RECLAMATION STATISTICS FOR ALLEGANY & GARRETT COUNTIES***

*This table includes all permits on which there was production, mining, backfilling or planting activity. This table does not include permits on which all bonds have been released or forfeited; or permits on which bonds are still held but no production or mining or reclamation activity occurred.

ALLEGANY COUNTY

Operator	Permit Number	Coal Seam Worked	PRODUCTION (TONS)			Acres Affected	Acres Backfilled	Acres Planted
			Deep	Strip	Auger			
Brashear Coal Mines	264	Franklin		32,582.82		0.0	4.0	4.0
	436	Franklin		3,974.45		0.0	0.0	0.0
Clise Coal Company	213	Waynesburg		0.00		0.0	0.5	0.5
	404	Waynesburg		45,576.42		1.5	0.0	0.0
	449	Pittsburgh		13,511.15		12.0	0.0	0.0
		Morantown		2,291.68				
Cobra Mining, Inc.	184	Pittsburgh		0.00		0.0	0.0	0.0
	437	Pittsburgh		11,602.49		6.0	3.0	3.0
		Morantown		8,619.52		--	--	--
		Redstone		858.33		--	--	--
Fairview Coal Co., Inc.	399	Pittsburgh		1,802.70		0.0	0.0	0.0
		Redstone		2,204.71		--	--	--
G & S Coal Company, Inc.	440	Pittsburgh		1,950.45		8.0	0.0	0.0
		L.Pittsburgh		46,564.15		--	--	--
		Morantown		9,852.15		--	--	--
Jenkins Development Co., Inc.	411	Waynesburg		52,145.66		0.5	9.5	9.5
	447	Pittsburgh		20,393.77		9.0	0.0	0.0
Mountaineer Mining Corp.	451	Pittsburgh		4,652.57		0.0	0.0	0.0
		Morantown		4,652.53				
Patriot Mining Co., Inc.	393	Pittsburgh		168,349.58		79.0	12.0	6.0
Ritchie Trucking & Excavating, Inc.	407	Pittsburgh		10,013.50		2.0	2.0	2.0
		Redstone		24,297.53		--	--	--
		Sewickley		2,632.61				
Tri-Star Mining, Inc.	419	Pittsburgh		289,308.61		14.0	7.0	19.0
		L.Pittsburgh		4,460.42		--	--	--
		Morantown		9,863.00		--	--	--
		Redstone		42,729.16		--	--	--
		Sewickley		1,782.72		--	--	--
		Waynesburg		4,462.36		--	--	--
United Energy Coal, Inc.	403	Redstone		1,224.10		0.0	0.0	0.0
	439	Redstone		25,075.89		0.0	0.0	0.0
Vindex Energy Corp.	338					0.0	0.0	11.0
	427	Pittsburgh		306,704.79		56.0	10.0	3.0
		L.Pittsburgh		5,642.08		--	--	--
		Morantown		5,186.32		--	--	--
		Redstone		5,141.17		--	--	--
Sewickley		176.76		--	--	--		
TOTAL ALLEGANY COUNTY				1,170,286.15		188.0	48.0	58.0

GARRETT COUNTY

Operator	Permit Number	Coal Seam Worked	PRODUCTION (TONS)			Acres Affected	Acres Backfilled	Acres Planted
			Deep	Strip	Auger			
ARJ Construction	DM-00-111	Barton	153,483.12			0.00	0.00	0.00
Backbone Mountain, LLC	DM112	Freeport	358,020.97			0.0	0.0	0.0
G & S Coal Company, Inc.	421	Franklin		11,496.55		5.0	22.0	22.0
	435	Bakerstown		21,443.55		14.0	13.0	13.0
		Elk Lick		11,134.35		--	--	--
		Harlem		21,382.05		--	--	--
	441	Bakerstown		8,078.50		0.0	0.0	0.0
Mettiki Coal Corporation	428	Bakerstown		128,617.13		31.3	0.0	0.0
	DM101	Freeport	2,328,086.73			0.0	0.0	0.0
Moran Coal Company	445	L.Pittsburgh		24,545.26		9.0	5.0	5.0
	446	Sewickley		23,099.26		15.0	0.0	0.0
Patriot Mining Co., Inc.	431	Bakerstown		212,238.30		0.0	19.2	0.0
Pine Mountain Coal Company	424	Pittsburgh		2,701.69		0.0	0.0	0.0
		Morantown		4,518.52		--	--	--
		Redstone		2,151.02		--	--	--
Savage Mountain Minerals, Inc.	448	Pittsburgh		12,758.06		11.0	0.0	0.0
		Barton		12,696.59		--	--	--
Tri-Star Mining, Inc.	419	Pittsburgh		144,396.21		(See	Allegany	County)
		L.Pittsburgh		32,062.33		--	--	--
		Redstone		14,157.91		--	--	--
		Morantown		6,951.72		--	--	--
		Swickley		860.64		--	--	--
	434	Franklin		43,510.22		10.0	11.0	11.0
		Franklin Rider		58,310.83		--	--	--
	444	Barton		0.00		0.0	0.0	0.0
Vindex Energy Corporation	443	Kittanning		389,458.54		152.0	66.0	60.0
TOTAL GARRETT COUNTY			2,839,590.82	1,186,569.23		247.3	136.2	111.0
TOTAL BOTH COUNTIES			2,839,590.82	2,356,855.38		435.3	184.2	169.0

**FOR CALENDAR YEAR 2006
SUMMARY OF LAND MINED, BACKFILLED, AND PLANTED IN 2006
(By Geological Basin)**

	<u>ACRES THIS YEAR</u>				
	Permitted	Affected	Backfilled	Planted	Bond Released*
Allegany County:					
Georges Creek Basin	419.00	188.00	48.00	58.00	154.00
Garrett County:					
Georges Creek Basin	144.00	21.00	11.00	11.00	74.00
Potomac River Basin	202.00	226.30	125.20	100.00	23.00
Casselman River Basin**	0.00	0.00	0.00	0.00	0.00
Cherry Creek Basin	0.00	0.00	0.00	0.00	0.00
Upper Yough Basin	0.00	0.00	0.00	0.00	0.00
Lower Yough Basin	0.00	0.00	0.00	0.00	0.00
TOTAL GARRETT COUNTY	346.00	247.30	136.20	111.00	97.00
TOTAL BOTH COUNTIES	765.00	435.30	184.20	169.00	251.00

ACRES CUMULATIVE FROM JANUARY 1, 1975 - DECEMBER 31, 2006

Allegany County:					
Georges Creek Basin	7,761.30	6,343.50	5,448.47	5,548.30	4,653.00
Garrett County:					
Georges Creek Basin	2,916.00	2,690.95	2,427.80	2,747.81	2,717.60
Potomac River Basin	5,339.00	4,075.60	3,877.30	4,013.40	23.00
Casselman River Basin**	1,416.60	1,135.00	1,260.50	1,142.20	1,265.80
Cherry Creek Basin**	667.00	671.50	578.90	545.80	659.95
Upper Yough Basin	216.00	157.35	215.35	189.30	261.50
Lower Yough Basin	1,335.00	914.00	1,135.06	1078.16	855.40
TOTAL GARRETT COUNTY	11,889.60	9,644.40	9,494.91	9,716.67	5,783.25
TOTAL BOTH COUNTIES	19,650.90	15,987.90	14,943.38	15,264.97	10,436.25

*Total Bond Release by the Bureau.

**Total Casselman Geological Basin.

**PERMITTING ACTIVITY
CALENDAR YEAR 2006**

Type of Application	Surface Mines			Underground Mines			Other Facilities			Totals		
	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres	App. Rec.	Issued	Acres
Original Permits	7	3	94	0	0	0	1	1	0	8	4	99
Permit Increments	6	4	91	0	0	0	0	0	0	6	4	91
Modifications/Revisions With Acreage	17	13	559	4	1	2	1	1	1	22	15	562
Modifications/Revisions Without Acreage	35	26		1	1		2	2		38	29	
Transfers	9	7		1	0		0	0		10	7	
Renewals	2	6		1	2		1	0		4	8	
Prospecting Permits	3	2		0	0		0	0		3	2	
Prospecting Letter of Intent	6	6		3	3		0	0		9	9	
Operators License Original	0	0		0	0		0	0		0	0	
Operators License Renewals	28	28		6	6		0	0		34	34	
Totals	113	95	744	16	13	2	5	4	6	134	112	752

**FOR THE CALENDAR YEAR 2006
LAND RECLAMATION COMMITTEE**

Members:

The following members served on the Land Reclamation Committee during 2006:

DEPARTMENT OF THE ENVIRONMENT REPRESENTATIVES:

Ed Larrimore, Chairman, Water Management Administration
John E. Carey, Bureau of Mines

DEPARTMENT OF NATURAL RESOURCES REPRESENTATIVES:

Jim Mullan, Wildlife Division
Robert Webster, Forestry Division
Alan Klotz, Freshwater Fisheries

CITIZEN REPRESENTATIVES

Edgar Harman, Garrett County
Robert Davis, Allegany County

COUNTY REPRESENTATIVES:

Margaret Jamison, Garrett County
Tim Carney, Allegany County

SOIL CONSERVATION DISTRICT REPRESENTATIVES:

Craig Hartsock, Allegany Soil Conservation District
Shaun Sanders, Garrett Soil Conservation District

COAL INDUSTRY REPRESENTATIVES:

Vaughn Miller
Tim Schwinabart

FOR THE CALENDAR YEAR 2006
FUNCTIONS AND DUTIES OF THE LAND RECLAMATION COMMITTEE

The Land Reclamation Committee is responsible for the approval of all reclamation plans submitted, as part of an application for a permit, to the Bureau of Mines and for the oversight of land reclamation activities on surface coal mining operations in Maryland.

The Land Reclamation Committee visits proposed and active mining sites to:

- (1) Determine the suitability of proposed reclamation plans;
- (2) Review mining and reclamation progress; and
- (3) Evaluate the success of revegetation practices.

During 2006, the Land Reclamation Committee conducted site visits on 8 days. These visits included field reviews of 13 proposed mining sites and 24 revegetation sites to evaluate the success of the revegetation.

The Land Reclamation Committee conducts meetings to:

1. Review and approve reclamation plans;
2. Review reclamation progress on active mining permits;
3. Evaluate the revegetation on areas eligible for Phase II bond release;
4. Review the surface coal mining laws, regulations and policies and recommend changes to improve effectiveness of the Maryland Regulatory program; and
5. Recommend research and cost-sharing projects to promote optimum revegetation of mine lands.

During 2006, the Land Reclamation Committee met 11 times. During these meetings, the Land Reclamation Committee approved 13 reclamation plans, evaluated 215 acres of revegetation eligible for Phase II bond release and approved 118 acres as meeting the standards for release. There was one reclamation plan change during the year.

Reclamation Results Calendar Year 2006		
Bond Release Phase	Applicable Performance Standard	Acreage Released
Phase I	<ul style="list-style-type: none"> • Area restored to Approximate original contour • Topsoil replaced • Area seeded and mulched • Completion of all reclamation work on the permit or the open acre limit is reduced 	163
Phase II	<ul style="list-style-type: none"> • Revegetation established in accordance with approved reclamation plan and standards for success of revegetation met • The lands are not contributing suspended solids to stream flow or runoff outside the permit area • Temporary drainage control structures are removed or all permanent structures are inspected and approved • Land Reclamation Committee has inspected and approved the revegetation on the area 	168
Phase III	<ul style="list-style-type: none"> • Post-mining land use/productivity restored • Successful permanent vegetation established • Groundwater recharge, quality and quantity restored • Surface water quality and quantity restored • Applicable bond liability period has expired 	251

2006 RECLAMATION AWARD

Winner Brothers Coal Company ----- Permit SM-83-385

This seventy-one acre site located near Midlothian, Maryland was mined by Winner Brothers Coal Company. Prior to the mining operation, the landscape showed deep mine entries and subsidence as a result of abandoned deep mine workings on the Sewickley and Waynesburg coal seams. The site has now been reclaimed to a hay field with abundant grasses. It blends well with the surrounding area and is a productive part of the adjacent farm.

Past Reclamation Award Winners*

<u>Year</u>	<u>Name of Company</u>	<u>Permit</u>
1984	Bridgeview Coal Company	356
1985	Brashear Coal Company	264
1986	Buffalo Coal Company	366
1987	Delta Mining, Inc.	345
1988	Beener Coal Company	143
1989	Brashear Coal Company	264
1990	Action Mining Company	394
1991	Patriot Mining Company	406
1992	S & G Coal Company	348
1993	Buffalo Coal Company	215
1994	G & S Coal Company	365
1995	John Duckworth Coal	372
1996	Buffalo Coal Company	409
1997	Tri Star Mining Inc.	418
1998	G & S Coal Company	325
1999	Buffalo Coal Company	409
2000	Winner Bros. Coal Company	286
2001	Clise Coal Company	315
2002	Win-More Mining	273
2003	Pine Mountain Coal Company	420
2004	G & S Coal Company	365
2005	Mountaineer Mining Corp.	438

*Each year the LRC selects a coal mining operation to receive the reclamation award presented by the Maryland Coal Association. This award is given to an operator that has achieved outstanding reclamation on a permit site.

FOR CALENDAR YEAR 2006 ABANDONED MINE LAND SECTION

The Maryland Bureau of Mines administers two programs to reclaim and restore land and water resources adversely affected by coal mining practices. These two programs are: (1) *Maryland-Federal Abandoned Mine Reclamation Program*, implemented utilizing federal funds made available by the federal Surface Mining Control and Reclamation Act of 1977 (U.S. Public Law 95-87) under the authority of Environment Article, Title 15, Subtitle 11 of the Annotated Code of Maryland, and (2) *Maryland Mine Reclamation Program* implemented utilizing State funds from the Bituminous Coal Open-Pit Mining Reclamation Fund under the authority of Environment Article, Title 15, Subtitle 5; the Deep Mining Fund under the authority of Environment Article, Title 15, Subtitle 6; and the Mine Reclamation and Water Quality Restoration Loan of 1970 under the authority of Environment Article, Title 15, Subtitle 7.

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 2006, grants awarded to Maryland by the U.S. Department of Interior, Office of Surface Mining, provided funds for the following abandoned mine land reclamation projects.

1. PORTER ROAD SUBSIDENCE STABILIZATION PROJECT

Location: Eckhart, Allegany County.
Nature: Stabilization of a 35 linear foot section of Porter Road to eliminate subsidence of the road surface into underground abandoned deep mine workings. Project also involves grouting of abandoned deep mine voids located beneath and adjacent to the residence of Mr. Robert Ryan.
Date Completed: March 14, 2006
Cost: \$34,792.79
Fund Source: MD - Federal AML Reclamation Funds

2. DOUGLAS AVENUE WATERLINE EXTENTION PROJECT

Location: Lonaconing, Allegany County.
Nature: Extension of the Town of Lonaconing Public Water Supply Distribution line to provide a potable water supply to the two residences whose well water had been impacted by acid mine drainage, making them unfit for human consumption.
Date Completed: June 14, 2006
Construction Cost: \$ 31,584.20
Fund Source: MD - Federal AML Funds

3. TD MINING PERMIT 403 MINE AML RECLAMATION PROJECT

Location: 1 mile southwest of Klondike. Allegany County.
Nature: Reclamation of 3 acres of abandoned mine spoil adjacent to the TD Mining Permit SM-84-403 Bond Forfeiture Project. This project was done

in conjunction with the TD Mining Bond Forfeiture Project

Date Completed: May 27, 2006
Construction Cost: \$ 39,307
Fund Source: MD-Federal AML Reclamation Funds

Maryland Mine Reclamation Program

During 2006, the Maryland Bureau of Mines accomplished the following reclamation projects utilizing the Bituminous Coal Open-Pit Mine Reclamation Fund, including bond forfeitures or the Deep Mine Fund.

1. FILER MINE DRAINAGE ABATEMENT PROJECT

Location: Midlothian, Allegany County.
Nature: Collection and removal of acid mine drainage seepage into the residence of Ms. Margaret Filer to eliminate public health and safety hazards to her residence and property.
Date Completed: February 20, 2006
Cost: \$ 8,759.00
Fund Source: State Deep Mine Funds

2. OCEAN MINE NUMBER 10 PORTAL CLOSURE PROJECT

Location: 1.5 miles North of Midland, Allegany County.
Nature: Stabilization and Closure of the Consolidated Coal Company Ocean Mine #10 abandoned deep mine portal and ventilation shaft to eliminate public health and safety hazards associated with the site.
Date Completed: June 6, 2006
Construction Cost: \$ 10,530.00
Fund Source: State Deep Mine Fund

3. TD MINING PERMIT 403 MINE FORFEITURE RECLAMATION PROJECT-PHASE I

Location: 1 mile southwest of Klondike. Allegany County.
Nature: Reclamation of 35 acres of surface coal mine bond forfeiture land associated with the TD Mining Permit SM-84-403 Bond Forfeiture.
Date Completed: May 27, 2006
Construction Cost: \$ 424,146.00
Fund Source: Bond Supplement Fund

STATE OF MARYLAND
BUREAU OF MINES
Annual Report 2006
Acid Mine Drainage Section
Constance A. Lyons, Section Chief

Prepared by Joseph E. Mills and Tamara Davis

The Acid Mine Drainage Section (AMDS), during the period of January 1, 2006 and December 31, 2006, completed two new treatment systems and upgraded the McDonald Mine Doser in Georges Creek, Allegany County to improve operation and maintenance of the system. The Railroad Street (Coney Silk Mill) SAPS Project was designed and constructed by the Abandoned Mine Lands Section in consultation with AMDS. During the year, AMDS also continued design for two additional AMD remediation projects in the Aaron Run watershed with construction scheduled for the summer of 2007. Since AMD remediation efforts were initiated in 1992, a total of 30 mine drainage controls have been constructed and are continuously operated and maintained by Bureau of Mines personnel. These controls require ongoing maintenance and are improving 83 miles of AMD impaired stream in the Maryland coal region. Construction and upgrade costs for the work completed by AMDS in 2006 totaled \$338,174.

JAY RICE PYROLUCITE PROJECT

PAD: MD000006WCA

Federal Grant: ACSI FY 2004

Location: 1 mile south of Crellin, Garrett County, Maryland.

Size: 2 acres.

Nature, Goal, Type of Treatment System: Construction of a Pyrolucite Bed. This system will treat about 20 gallons of AMD per minute with a pH 3.0 and an iron concentration of about 30 mg/l. The resultant discharge pH will be 7.0 with iron concentration of less than 3.0 mg/l with excess alkalinity.

Current Status: Complete

Construction Start: September 2006

Construction Completion: November 2006

Cost: \$135,581

BOM Coordinator: Joe Mills working with the Youghiogheny River Watershed Association, and the RC&D.

Fund Sources: \$25,581 from Appalachian Clean Streams Initiative Grant to BOM, \$110,000 from Watershed Cooperative Grant to the Western MD RC&D.

McDONALD MINE BOXHOLM DOSER SLIDE GATE INSTALLATION

PAD: MD-169-SGA

Federal Grant: ACSI FY 2002

Location: One mile south of Barton, MD on the west side of Georges Creek.

Size: 2 acres.

Nature, Goal, Type of Treatment System: Install a slide gate to facilitate repairs to the doser.

Status: Complete.

Contractor: Environmental Doser International, LLC
Construction Start: July 2006
Construction Completion: August 2006
Cost: \$8,293
BOM Coordinator: Joe Mills
Fund Source: 10 % Set-Aside Account

McDONALD MINE BOXHOLM DOSER AMD PIPE INSTALLATION

PAD: MD-169-SGA
Federal Grant: ACSI FY 2002
Location: One mile south of Barton, MD on the west side of Georges Creek.
Size: 2 acres.
Nature, Goal, Type of Treatment System: Divert the AMD from the McDonald Mine through a pipe and into the doser to increase the efficiency and effectiveness of the doser treatment.
Status: Complete.
Contractor: Environmental Doser International, LLC
Construction Start: October 2006
Construction Completion: October 2006
Cost: \$5,300
BOM Coordinator: Joe Mills
Fund Source: 10 % Set-Aside Account

RAILROAD STREET (CONEY SILK MILL) SAPS/ALD PROJECT

PAD: MD 241 SGA
Federal Grant: Federal AML
Location: Behind Silk Mill, Lonaconing, Allegany County, Maryland.
Size: 5 acres.
Nature, Goal, Type of Treatment System: Construction of two Alkalinity Producing Cells, an Oxidizing/Settling Pond, a Limestone Channel and the installation of an automatic flushing system. The System will treat an average of 100 gallons of AMD per minute. The effluent will be net alkaline.
Construction Start: July 2006
Construction Completion: Spring 2007
Estimated Cost: \$189,000 for construction of the AMD portion.
BOM Coordinator: Brad Nee, AML Engineer
Funding Sources: \$89,000 of Title IV funds and \$100,000 from Watershed Cooperative Grant Program to the Georges Creek Watershed Association.

FOR CALENDAR YEAR 2006

**MINE FOREMAN AND FIRE BOSS
EXAMINATIONS AND CERTIFICATIONS**

The number of Mine Foreman and Fire Boss applicants examined and certified from 1992 through 2006 are identified below.

YEAR	APPLICANTS EXAMINED		APPLICANTS CERTIFIED	
	Mine Foreman	Fire Boss	Mine Foreman	Fire Boss
2006	6	5	15*	5
2005	0	0	0	0
2004	1	4	3	4
2003	0	0	0	0
2002	12	2	12	2
2001	0	0	0	0
2000	14	8	14	8
1999	17	5	17	5
1998	13	5	13	5
1997	18	5	18	5
1996	0	0	4	0
1995	0	0	14	0
1994	24	4	24	4
1993	25	8	25	8
1992	0	0	5	0

*Nine of the Mine Foreman certifications were issued to applicants certified by the State of West Virginia in accordance with a reciprocity agreement between the two states.

**INSPECTION AND ENFORCEMENT ACTIVITIES
2002-2006**

TYPE OF ACTION	2002	2003	2004	2005	2006
Inspections	960	919	879	1,019	934
Notices of Violations	9	19	17	26	70
Cessation Orders	1	4	2	0	32
Citizen Complaints	48	27	30	30	27
Bond Forfeitures	0	0	1	0	1

MINING PERMITS ISSUED BY YEAR AND PERMITTEE

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
1	1955	The George's Creek Lumber Company*
2	1955	Allegany Engineering Company*
3	1955	B.M.W. Coal Company*
4	1955	Old Hampshire Coal Company, Inc.*
5	1955	Car and Goffelty Construction Co.*
6	1955	M.H. Bigan Coal Company*
7	1955	Moran Coal Company*
8	1955	Allegany Engineering Company*
9	1955	Schell Mining Company, Inc.*
10	1955	B & U Coal Company*
11	1955	Morgan Contracting Company**
12	1955	Romadale Coal Corporation*
13	1955	Cross Fuel Company*
14	1955	Highland Construction Company*
15	1955	Phoenix Big Vein Coal Company (Repermitted 338)*
16	1955	Moran Coal Company*
17	1955	T.J. Cramblett**
18	1955	Moscow-Georges Creek Coal Company*
19	1955	J.R. Thrasher Contracting & Stripping Co.*
20	1956	Moran Coal Company (Repermitted 333)*
21	1956	Schell Mining Company, Inc.**
22	1956	Savage Coal Company*
23	1956	Moran Coal Company*
24	1956	The Georges Creek Coal & Land Co.*
25	1957	Charles T. Clise*
26	1957	Allegany Engineering Company*
27	1957	Goodwill Fuel Company*
28	1957	D.B.&B. Coal Company*
29	1957	Queen George's Creek Coal Company**
30	1957	Mack Coal Company**
31	1957	White Crest Coal Company, Inc.**
32	1957	D.B.&B. Coal Company*
33	1957	Moran Coal Company*
34	1957	Chelsie A. Liller*
35	1957	J.E. George Trucking Company**
36	1957	D.B.&B. Coal Company*
37	1957	J.&M. Coal Company**
38	1957	Casey Construction Company**
39	1958	Moran Coal Company*
40	1958	United Energy Coal, Inc.
41	1958	Buffalo Coal Company, Inc.*
42	1958	Casey Construction Company**
43	1958	Sara-Ki Coal Company, Inc.*

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
44	1958	Yantus & Zubek Coal Company*
45	1958	Moran Coal Company*
46	1958	Casey Construction Company**
47	1958	Moran Coal Company*
48	1958	Moran Coal Company*
49	1958	Sara-Ki Coal Company, Inc.*
50	1958	Laurel Creek Company, Inc.**
51	1958	D.B.&B. Coal Company**
52	1958	Moon and Sons*
53	1959	George L. Smith Contracting Company*
54	1959	The Georges Creek Lumber Company*
55	1959	Moran Coal Company*
56	1959	North Branch Coal Corporation*
57	1959	George Coal Company**
58	1959	Samuel Compton & Company**
59	1959	Hoover & White*
60	1959	Laurel Creek Company, Inc.**
61	1959	The Eddy Fuel Company**
62	1959	J.R. Thrasher Contracting & Stripping Co.*
63	1959	Pittsburgh Coal Company*
64	1959	Mineral Coal Company, Inc., of West Virginia*
65	1959	Laurel Creek Company, Inc.*
66	1959	The Georges Creek Lumber Company*
67	1959	Chelsie A. Liller*
68	1959	Casey Contracting Company**
69	1959	Pine Mountain Coal Company*
70	1959	Opel and Brenneman*
71	1959	The Georges Creek Lumber Company*
72	1959	P.&J. Coal Company*
73	1959	Casey Contracting Company**
74	1959	Goodwill Fuel Company*
75	1959	D.B.&B. Coal Company*
76	1960	Baughman Contracting Company, Inc.*
77	1960	P&K Coal Company*
78	1960	Morgan Contracting Company*
79	1960	Buffalo Coal Company, Inc.*
80	1960	Buffalo Coal Company, Inc.*
81	1960	Randall Robertson*
82	1960	Hoover & White**
83	1960	James E. George*
84	1960	B.M.W. Coal Company, Inc.*
85	1960	Casey Contracting Company**
86	1960	Beener Coal Company*
87	1960	Moran Coal Company, Inc.*
88	1960	D&K Coal Company*
89	1960	Brenneman Brothers*

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
90	1960	Mack Coal Company*
91	1960	Clarence Rodamar*
92	1960	James E. George*
93	1961	Casey Contracting Company**
94	1961	Winner Brothers*
95	1961	Moran Coal Company, Inc.*
96	1961	Big Vein Coal Company*
97	1961	Maryland Fuel Company, Inc.*
98	1961	Yantus-Zubek Coal Company*
99	1961	J.R. Thrasher Contracting & Stripping Co.*
100	1961	Trefall Bros., Inc.*
101	1961	Mack Coal Comany*
102	1961	C.A. Liller Company*
103	1961	Cross & Brumage Coal Company*
104	1961	Beener Coal Company*
105	1961	D&K Coal Company*
106	1961	Mack Coal Company*
107	1961	Yantus and Zubek*
108	1961	Potomac Mining Company*
109	1962	Casey Contracting Company*
110	1962	Wilhelm Coal Company*
111	1962	The Georges Creek Lumber Company*
112	1962	Clark Coal Company*
113	1962	Casey Contracting Company*
114	1962	Casey Contracting Company*
115	1962	Douglas Coal Company*
116	1962	Red Lion Mining Corporation**
117	1962	Ebensburg Coal and Clay Company*
118	1963	James E. George*
119	1963	Ebensburg Coal and Clay Company*
120	1963	J.R. Thrasher Contracting & Stripping Co.*
121	1963	Moran Coal Company, Inc.*
122	1963	Buffalo Coal Company, Inc.*
123	1963	J.R. Thrasher Contracting & Stripping Co.*
124	1963	Win-More Mining & Construction Co., Inc.*
125	1963	Beener Coal Company*
126	1964	W.R. Nethken and Company, Inc.*
127	1964	Mack Coal Company*
128	1964	J.R. Thrasher Contracting & Stripping Co.*
129	1964	J. Russell Cravener*
130	1964	Chelsie A. Liller*
131	1964	The Georges Creek Lumber Company*
132	1964	Brenneman Brothers*
133	1965	W.R. Nethken and Company, Inc.*
134	1965	Richards and Parnell Coal Company*
135	1965	William Brashear*

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
136	1965	W.R. Nethken and Company, Inc.*
137	1965	G&S Coal Company, Inc.*
138	1966	J.R. Thrasher Contracting & Stripping Co.*
139	1966	J.R. Thrasher Contracting & Stripping Co.*
140	1966	Shallmar Coal Company, Inc.*
141	1966	Randall Robertson**
142	1966	Ace Drilling Coal Company, Inc.*
143	1966	Beener Coal Company*
144	1966	Clarence Rodamer*
145	1967	Ginniman Coal Company*
146	1967	Raymond A. Wolf Mining Company*
147	1967	Menallen Coke Company*
148	1967	Russel Shafer*
149	1967	Homage Coal Co. (Emmett Duppstadt)*
150	1967	Twin States Coal Company**
151	1967	M.F. Fetterolf Coal Company, Inc.*
152	1967	Ebensburg Coal and Clay Company*
153	1968	Raymond A. Wolf Mining Co. (UPRC)*
154	1968	Michael Rostosky*
155	1968	Ginniman & Ware Coal Company*
156	1968	Harold H. Upole Coal Company*
157	1968	T.G.&C. Coal Company, Inc.*
158	1969	Clarence Rodamer Coal Company*
159	1969	Michael Rostosky Coal Company*
160	1969	Russel Shafer Coal Company*
161	1969	Buffalo Coal Company, Inc.*
162	1969	J.R. Thrasher Contracting & Stripping Co.***
163	1969	Buffalo Coal Company, Inc.*
164	1969	Union Coal Company*
165	1970	Win-More Mining & Construction Co., Inc.*
166	1970	Ginniman Coal Company*
167	1970	Upperman Coal Company*
168	1970	Frank Pulford**
169	1970	Winner Bros. Coal Company, Inc.*
170	1970	Russel Shafer*
171	1970	The Chief Coal Company*
172	1970	Mary Ruth Corporation*
173	1970	Oakland Coal Company*
174	1971	Bernard C. Drees*
175	1971	Delta Mining, Inc.*
176	1971	D&K Coal Company, Inc.*
177	1971	T.G.&C. Coal Company, Inc.*
178	1971	Emmett Duppstadt*
179	1971	Somerset Excavating, Inc.*
180	1971	Ayers Coal Company*
181	1971	Delta Mining, Inc.*

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
182	1971	Patriot Mining Company, Inc.*
183	1971	Chief Coal Company*
184	1971	Cobra Mining, Inc.
185	1971	Bessemer Iron & Coal Company*
186	1971	Coal Lick Coal Company*
187	1971	Phillips Big Vein Coal Company*
188	1971	Ace Drilling Coal Company, Inc.*
189	1971	Buffalo Coal Company, Inc.*
190	1971	Buffalo Coal Company, Inc.*
191	1971	Keystone Coal and Development Company (Liability Assumed by Garrett County Roads Department)
192	1971	Ace Drilling Company, Inc.*
193	1972	Wilhelm Coal, Inc.*
194	1972	M.F. Fetterolf Coal Company, Inc.***
195	1972	Buffalo Coal Company, Inc.*
196	1972	Bessemer Iron & Coal Company*
197	1972	Grafton Coal Company*
198	1972	Jet Fuel Coal Company*
199	1972	Bessemer Iron & Coal Company*
200	1972	Chief Coal Company*
201	1972	Brashear Coal Company*
202	1972	Winner Bros. Coal Company, Inc.*
203	1972	Mary Ruth Corporation*
204	1972	Grafton Coal Company*
205	1972	Chief Coal Company*
206	1972	Upperman Coal Company*
207	1972	United Energy Coal, Inc.
208	1973	Sanner Bros. Coal Company*
209	1973	Delta Mining, Inc.*
210	1973	Markat, Inc.*
211	1973	Oakland Coal Company*
212	1973	Bessemer Iron & Coal Company*
213	1973	Clise Coal Company
214	1973	Inter-State Lumber Company*
215	1973	Buffalo Coal Company, Inc.*
216	1973	Brashear Coal Company***
217	1973	Bernard Drees Coal Company*
218	1973	Buffalo Coal Company, Inc.*
219	1973	G&S Coal Company, Inc.*
220	1974	Evans Coal Company*
221	1974	Bridgeview Coal Company*
222	1974	John Duckworth Coal Company*
223	1974	Edward Mikel*
224	1974	Delta Mining, Inc.*
225	1974	Northwest Coal Company, Inc.*
226	1974	Thrasher Coal Company**

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
227	1974	Winner Bros. Coal Company, Inc.*
228	1974	Bittinger Coal Company*
229	1974	Charles M. Filsinger*
230	1974	G&H Coal Company, Inc.*
231	1974	Hi-Note, Inc.*
232	1974	Buffalo Coal Company, Inc.*
233	1974	Oliver Mining Company**
234	1974	Clise Coal Company*
235	1974	Markat, Inc.*
236	1974	Delta Mining, Inc.*
237	1974	Bridgeview Coal Company*
238	1974	Burnham Coal Company, Inc.*
239	1974	Highland Mining*
240	1974	Buffalo Coal Company, Inc.*
241	1975	Buffalo Coal Company, Inc.*
242	1975	Hopwood Strip Mine, Inc.**
243	1975	Ponderosa Coal Company, Inc.*
244	1975	Markat, Inc.*
245	1975	Phillips Coal, Inc.*
246	1975	Lambert Coal Company*
247	1975	United Energy Coal, Inc.
248	1975	Buffalo Coal Company, Inc.*
249	1975	Cobra Fuels*
250	1975	Laoc Coal Company*
251	1975	Tower Resources, Inc.*
252	1975	Phillips Coal, Inc.*
253	1975	Pine Mt. Coal Company*
254	1975	T.G.&C. Coal Company*
255	1975	Allegheny Mining Company*
256	1975	Bridgeview Coal Company*
257	1975	A&R Coal Company*
258	1975	Clinton Coal Company**
259	1975	Tower Resources, Inc.*
260	1975	Yough Tree Farm*
261	1975	Russel Shafer***
262	1975	Northwest Coal Company**
263	1975	Allegheny Mining Corporation*
264	1975	Brashear Coal Company
265	1975	Bittinger Coal Company*
266	1975	Delta Mining, Inc.*
267	1975	Bittinger Coal Company*
268	1975	Clyde Marsh Coal Company*
269	1975	Hungry Hollow Coal Company*
270	1975	Clise Coal Company*
271	1975	A&R Coal Company*
272	1975	Action Mining, Inc.*

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
273	1975	Win-More Mining & Construction *
274	1975	Evans Coal Company*
275	1975	Buffalo Coal Company, Inc.*
276	1975	Buffalo Coal Company, Inc.*
277	1975	Allegheny Mining Corporation *
278	1976	Inter-State Lumber Company*
279	1976	Buffalo Coal Company, Inc.*
280	1976	Delta Mining, Inc.*
281	1976	Rondell Company*
282	1976	Phillips Coal, Inc.*
283	1976	G&H Coal Company, Inc.*
284	1976	Tower Resources, Inc.*
285	1976	Clinton Coal Company**
286	1976	Winner Bros. Coal Company, Inc.*
287	1976	T.L. Moran, Inc.*
288	1976	Delta Mining, Inc.*
289	1976	Pine Mt. Coal Company*
290	1976	Delta Mining, Inc.*
291	1976	George Nolan**
292	1976	Alexander Coal Co.*
293	1976	Pine Mt. Coal Company*
294	1976	Arlen Miller***
295	1976	Action Mining, Inc.*
296	1976	Bessemer Iron & Coal Company**
297	1977	Oakland Coal Company *
298	1977	Bittinger Coal Company*
299	1977	Inter-State Lumber, Inc.*
300	1977	Garbart Coal Company*
301	1977	Pine Mt. Coal Company*
302	1977	L.C. Coal Company, Inc.*
303	1977	Ginniman Brothers Coal Company**
304	1977	Buffalo Coal Company, Inc.*
305	1977	Wood Products, Inc.*
306	1977	Bridgeview Coal Company*
307	1977	T.L. Moran, Inc.*
308	1977	Best Coal Stripping, Inc.**
309	1977	Delta Mining, Inc.*
310	1977	Oakland Coal Company*
311	1977	Primrose Coal Company*
312	1977	R.A.K. Coal Company, Inc.**
313	1977	G&S Coal Company*
314	1977	Wilhelm Coal, Inc.**
315	1977	Clise Coal Company*
316	1977	Brawal Mining, Inc.*
317	1977	John R. Livingston**
318	1977	Winner Bros. Coal Company, Inc. *

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
319	1977	John Duckworth Coal Company*
320	1977	Kelley Enterprises*
321	1978	Delta Mining, Inc.*
322	1978	Bridgeview Coal Company*
323	1978	Ayers Coal Company*
324	1978	John Duckworth Coal Company*
325	1978	G&S Coal Company, Inc.*
326	1978	Buffalo Coal Company, Inc.
327	1978	Buffalo Coal Company, Inc.*
328	1978	Buffalo Coal Company, Inc. *
329	1978	Winner Bros. Coal Company, Inc.*
330	1978	Inter-State Lumber Company*
331	1978	R.A.K. Coal Company***
332	1978	Seneca Mining Company*
333	1978	Westvaco Corporation*
334	1978	Buffalo Coal Company, Inc.*
335	1978	Inter-State Lumber Company**
336	1978	Inter-State Lumber Company*
337	1978	Kirby Energy, Inc.*
338	1978	Barton Mining Company, Inc.
339	1978	Wilhelm Coal, Inc.*
340	1978	Fetterolf Mining, Inc.*
341	1979	Eastern Mining Systems, Inc.**
342	1979	Primrose Coal Company*
343	1979	L.C. Coal Company*
344	1979	Bridgeview Coal Company*
345	1979	Delta Mining, Inc.**
346	1979	Inter-State Lumber Company*
347	1979	Kelley Enterprises*
348	1979	Schwinabart & Green, Joint Venture*
349	1979	Wilhelm Coal, Inc.**
350	1980	Bridgeview Coal Company*
351	1980	Winner Bros. Coal Company, Inc.*
352	1980	John Duckworth Coal Company*
353	1980	Winner Bros. Coal Company, Inc.*
354	1980	Brawal Mining, Inc.*
355	1980	Hi-Note, Inc.*
356	1980	G&S Coal Company, Inc.***
357	1980	Richard Duckworth Coal Company*
358	1980	Bridgeview Coal Company*
359	1980	Buffalo Coal Company, Inc.
360	1980	Buffalo Coal Company, Inc.*
361	1980	Pamela Mines, Inc.**
362	1980	Alpha Mining, Inc.*
363	1980	Pamela Mines, Inc.**

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
364	1980	John Duckworth Coal Company*
365	1980	G&S Coal Company, Inc.
366	1980	Buffalo Coal Company, Inc.*
367	1980	Buffalo Coal Company, Inc.
368	1980	United Energy Coal, Inc.
369	1980	Bittinger Coal Company*
370	1982	Keystone Mt. Development Company*
371	1982	Eagle Mining, Inc.*
372	1982	John Duckworth Coal Company
373	1982	Kirby Energy, Inc. **
374	1982	Winner Bros. Coal Company, Inc. *
375	1982	Win-More Mining & Construction Company *
376	1982	Jones Coal, Inc.**
377	1982	Allegheny Mining Corporation*
378	1982	Delta Mining, Inc.**
379	1982	Masteller Coal Company*
380	1982	Fairview Coal Company (Repermitted 399)*
381	1982	Richard Duckworth Coal Company*
382	1983	Pine Mt. Coal Company*
383	1983	Allegheny Mining Corporation*
384	1983	Evans Coal Company*
385	1983	Winner Bros. Coal Company, Inc.
386	1983	Jones Mining, Inc.*
387	1983	Hilltop Construction Company**
388	1983	Fetterolf Mining, Inc.*
389	1983	Winner Bros. Coal Company, Inc.*
390	1983	C.J. Merlo, Inc.*
391	1983	Oak Springs Coal Company*
392	1984	Westvaco Resources, Inc.*
393	1984	Patriot Mining Company, Inc.
394	1984	Action Mining, Inc.*
395	1984	Stan-Jan Excavating, Inc.*
396	1984	Allegheny Mining Corporation*
397	1985	Michael R. McGowan*
398	1985	Brashear Coal Company
399	1985	Fairview Coal Company
400	1985	Delta Mining, Inc.*
401	1985	Buffalo Coal Company, Inc.***
402	1985	Pine Mt. Coal Company*
403	1985	T.D. Mining Company**
404	1986	Clise Coal Company
405	1986	Jones Coal, Inc.**
406	1986	Patriot Mining Company, Inc.*
407	1986	United Energy Coal, Inc.
408	1986	Tri Star Mining, Inc.*
409	1986	Buffalo Coal Company, Inc.*

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
410	1987	J. Walter Wassell*
411	1987	Jenkins Development Company
412	1987	John Duckworth Coal Company***
413	1988	Buffalo Coal Company, Inc.*
414	1989	United Energy Coal, Inc.
415	1989	Pine Mt. Coal Company*
416	1989	Action Mining, Inc.*
417	1989	Tri Star Mining, Inc.*
418	1991	Tri Star Mining, Inc.*
419	1991	Tri Star Mining, Inc.
420	1991	Pine Mt. Coal Company *
421	1992	G&S Coal Company, Inc.
422	1992	Buffalo Coal Company, Inc. **
423	1992	United Energy Coal, Inc.
424	1995	Pine Mt. Coal Company
425	1995	Tri Star Mining, Inc.*
426	1996	Tri Star Mining, Inc.*
427	1996	Barton Mining Company, Inc.
428	1997	Mettiki Coal, LLC
429	1997	Tri Star Mining, Inc.
430	1998	G&S Coal Company, Inc.
431	1998	Patriot Mining Company, Inc.
432	1999	Barton Mining Company, Inc.
433	1999	Win-More Mining & Construction
434	1999	Tri Star Mining, Inc.
435	2000	G&S Coal Company, Inc.
436	2000	Brashear Coal Mines
437	2001	Cobra Mining, Inc.
438	2001	Mountaineer Mining Corp.
439	2001	United Energy Coal, Inc.
440	2001	G&S Coal Company, Inc.
441	2002	G&S Coal Company, Inc.
442	2002	Buffalo Coal Company, Inc.
443	2002	Vindex Energy Corporation
444	2003	Tri Star Mining, Inc.
445	2004	Moran Coal Company
446	2004	Moran Coal Company
447	2005	Jenkins Development Company
448	2005	Savage Mountain Minerals, Inc.
449	2005	Clise Coal Company
450	2006	LAOC Corporation ***
451	2006	Mountaineer Mining Corporation
452	2006	WPO, Inc.

DEEP MINES

DM 101	1977	Mettiki Coal, LLC
DM 102	1977	Masteller Coal Company*

DM 103	1977	Mt. Top Coal Company*
DM 104	1977	Mettiki Coal Corporation
DM 105	1977	Mettiki Coal Corporation
DM 106	1978	A&J Coal Corporation**
DM 107	1982	Masteller Coal Company*
DM 108	1989	Anker West Virginia Mining Co., Inc.
DM 109	1991	Anker West Virginia Mining Co., Inc.
DM 110	1992	Masteller Coal Company **
DM 111	2000	George Creek, Inc.
DM 112	2003	Backbone Mountain, LLC

<u>Permit No.</u>	<u>Year Issued</u>	<u>Permittee</u>
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TIPPLES AND GOB PILES

SC-83-101	1983	Buffalo Coal Company*
SC-83-102	1983	Buffalo Coal Company*
SC-83-103	1983	Buffalo Coal Company*
SC-83-104	1983	Buffalo Coal Company
SC-83-105	1983	Buffalo Coal Company*
SC-83-106		Permit Not Issued
SC-83-107	1983	Delta Coal Sales, Inc.**
SC-83-108	1984	Delta Coal Sales, Inc.*
SC-83-109		Permit Not Issued
SC-83-110	1983	United Energy Coal, Inc.
SC-83-111	1983	Westvaco Corporation*
SC-83-112	1983	United Energy Coal, Inc.*
SC-83-113		Permit Not Issued
SC-83-114	1984	Ever, Inc.*
SC-83-115		Permit Not Issued
SC-87-116	1987	Franklin Coal Yard, LLC
SC-87-117	1987	Tri Star Mining, Inc.
SC-87-118	1987	Patriot Mining Company, Inc.
SC-06-119	2006	Clise Coal Company, Inc.

* Operation Completed and Bond Released

** Forfeiture of Bond

*** Not Activated