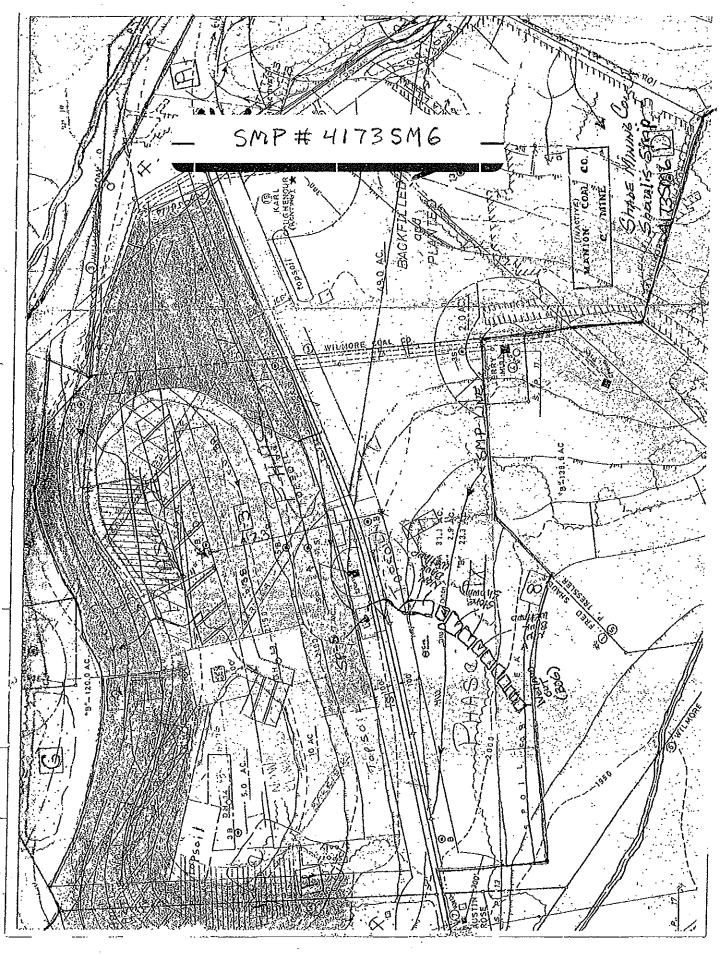
### List of Exhibits

- 1. Summary of Reclamation Bonds
- 2. Mine Site Maps 2.1 2.2
- 3. Raw Mine Water Quality
- 4. Effluent Limits
- 5. Consent to Right of Entry Form
- 6. AMD Treat Recapitalization Cost
- 7. Annual Treatment Costs
- 8. Present Value of Fully Funded Trust
- 9. Post-Mining Discharge Treatment Trust Agreement Form
- 10. Assignment of Collateral Bonds
- 11. Distribution or Contribution Payment Amounts
- 12. Primary Target Valuation
- 13. Bill of Sale and License Agreement
- 14. Annual Payment Schedule

Exhibit 1

PERMIT NO.	BOND TYPE	FINANCIAL GUARANTOR	BOND INSTRUMENT	BOND AMOUNT
4173SM6	Letter of Credit	Somerset Trust Co.	\$48	\$930.00
4173SM6	Letter of Credit	Somerset Trust Co.	S51	\$12,075.00
4173SM6	Letter of Credit	Somerset Trust Co.	S52	\$5,360.00
4173SM6	Letter of Credit	Somerset Trust Co. S53		\$26,280.00
56813050	Letter of Credit	Somerset Trust Co.	S56	\$123,500.00
56813050	Certificate of Deposit	Somerset Trust Co.	200989787	\$87,200.00
56813050	Certificate of Deposit	Somerset Trust Co.	2002989779	\$100,000.00



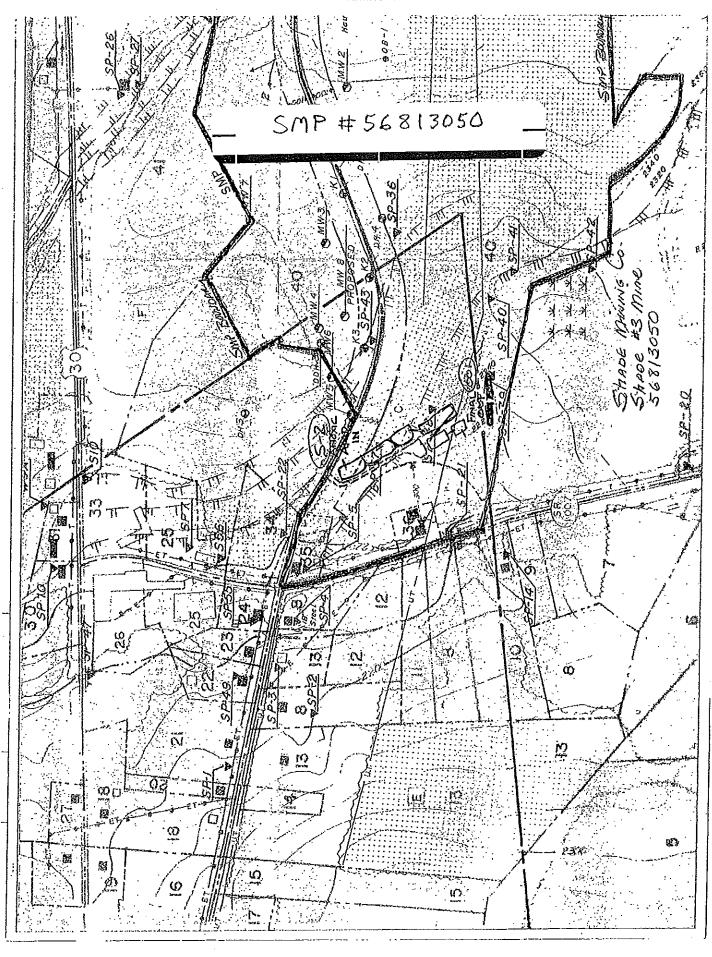


Exhibit 3 Discharges - Average Quality and Quantity

			1					į			
			₹	Alkalimity	Acidity	Fe	Ma	Al	Sulfates	Flow Max	Flow
Permit No. 4173SM6	ID No.	Ħď	ಶ	(mg/I)	(Mg/I)	(mg/l)	(mg/l)	(me/I)	Γ	(spm)	Ave. (opm)
-	SP-5		5.0	10.0	55.0	03	11.0	6.0	200	4	5.0
•		ų			-					4	

		Alkalinity	Acidity	Fe	Ma	ΑΊ	Sulfates	Flow Max.	Flow
Ħ		(mg/l)	(Mg/l)	(Mg/L)	(mg/l)	(Ingm)	(Typus/I)	(gpm)	Ave. (gom)
62	~ 1	315.0	37.0	100	95.0	0.5	4000	100.0	30.0

The required effluent limits applicable for the SP-5 and S-2 discharges are as follows. But these limits are reviewed and may change with each five year NPDES renewal or with changes in the stream TMDL's.

### **Effluent Limits for SP-5**

	30-Day	Daily	Instantaneous
Parameter	Average	Maximum	Maximum
Iron (total)	3.0 mg/l	6.0 mg/l	7.0 mg/l
Manganese (total)	2.0 mg/l	4.0 mg/l	5.0 mg/l
Suspended solids	35 mg/l	. 70 mg/l	90 mg/l

pH<sup>1</sup>
Alkalinity greater than acidity<sup>1</sup>

### **Effluent Limits for S-2**

	30-Day	Daily	Instantaneous
Parameter	Average	Maximum	Maximum
Iron (total)	3.0 mg/l	6.0 mg/l	7.0 mg/l
Manganese (total)	2.0 mg/l	4.0 mg/l	5.0 mg/l
Suspended solids	35 mg/l	70 mg/l	90 mg/l

pH1 Alkalinity greater than acidity.

greater than 6.0; less than 9.0

greater than 6.0; less than 9.0

<sup>&</sup>lt;sup>1</sup>The parameter is applicable at all times.

<sup>1</sup> The parameter is applicable at all times.



### COMMONWEALTH OF PENNSYLVANIA DEPARTMENT OF ENVIRONMENTAL PROTECTION BUREAU OF MINING AND RECLAMATION

Per	mit No.	

## CONSENT TO RIGHT OF ENTRY FOR OPERATION AND MAINTENANCE OF A MINE DRAINAGE TREATMENT FACILITY COVERED BY A BOND OR A POST-MINING DISCHARGE TREATMENT TRUST AGREEMENT

List avaryang with an aumerchin interest in the property which is the subject of this

Agreement.	Simp uncrease in the property	willor to the subject of the
Name:	Name:	· · · · · · · · · · · · · · · · · · ·
Address:	_ Address:	
WHEREAS, the Properly Owner(s) own	surface property containing	acres localed in
Township, described in Deed Book Volume, Page, in (the Property);	the	_ County Recorder's Office
WHEREAS, the Commonwealth of Pennsylv authorized to administer and enforce the S 52 P.S. §§ 1396.1-1396.19a, the Clean Streams Lav regulations, including requiring the construction, operate effects of mine drainage;	urface Mining Conservation v, 35 P.S. §§ 691.1-691.100	and Reclamation Act, 11 and their implementing
WHEREAS,("Oper the Property pursuant to Surface Mining Permit No	ator") conducted surface mining	g activities on or adjacent to
WHEREAS, DEP has determined that mine dra from or passing through the Property, and the mine dr pollution, to waters of the Commonwealth;	ilnage caused by Operator's mi ainage on the Property is caus	ning activities is discharging ing pollution, or a danger of
WHEREAS, Operator is required, under the mir and maintain mine drainage treatment facilities on a p purposes of treating the pollutional discharge(s);	ning law and its surface mining ortion of the Property (the Trea	permit, to construct, operate alment Facility Property), for
WHEREAS, a map showing the boundaries of th	e Treatment Facility Property is	attached as Exhibit A;
WHEREAS, Operator has posted a bond with nstitution as an alternative financial assurance mech Operator's legal obligation to operate and maintain the Operator's obligation for long-term treatment, or abate Property;	nanism, in order to provide su mine drainage treatment facilit	ifficient funds to guarantee ies on the Property and the
WHEREAS, to assure compliance with its legal access to the Treatment Facility Property to conduct and by law and the mining permit;	obligations, <i>Operator</i> and DEP l d/or oversee the mine drainage	[and the Trustee] must have treatment activities required
WHEREAS, Operator and DEP have requested	and the Property Owner(s) is v	villing to grant Operator and

land affected by mining operations, and prevention of pollution to waters of the Commonwealth;

DEP [and Trustee] a right of entry Into, under, over and upon the Treatment Facility Properly to construct, operate

WHEREAS, the Property Owner(s) acknowledge that treatment of the mine drainage on the Property will provide benefits to the Property Owner and to the Commonwealth through abatement of a nuisance, restoration of

and maintain mine drainage treatment facilities;

### 5600-FM-MR0470 4/2009

NOW THEREFORE, in consideration of the benefits which the Property Owner(s) and the general public will receive, and with the intention of being legally bound, it is agreed as follows:

- 1. <u>Right of Entry.</u> The Property Owner(s) hereby grants and conveys to *Operator* and DEP [and Trustee], its employees, agents, servants, contractors and subcontractors, a right of entry into, under, over and upon the Treatment Facility Property. This right of entry includes all necessary rights of Ingress, egress and regress with all personnel, materials, and equipment needed to perform the discharge treatment activities.
- 2. <u>Duration of Right of Entry</u>. The term of this Right of Entry shall extend for the length of time necessary to complete the discharge treatment activities in accordance with applicable law. It is specifically understood and agreed that the term of this Right of Entry extends for the length of time necessary to operate and maintain all mine drainage treatment facilities on the Treatment Facility Property, and shall only terminate when such treatment facilities are no longer necessary to remediate or prevent pollution to waters of the Commonwealth.
- 3. <u>Insurance.</u> DEP will require *Operator* to obtain and keep in force insurance coverage in accordance with the requirements of 25 Pa. Code § 86.168.
- 4. <u>Property Use.</u> During the term of this Right of Entry, the Property Owner(s) will not, without the written consent of DEP, make any use of the Property which will interfere with the construction, operation or maintenance of the mine drainage treatment facilities installed on the Treatment Facility Property.
- 5. Notification. This Consent to Right of Entry shall be recorded by Operator in the County Recorder's Office within thirty days of its execution. In the event that the Property Owner(s) intends to sell, lease, or otherwise transfer any interest in the Property prior to the termination of this Right of Entry, the Property Owners shall advise the prospective owner or lessee of the terms and conditions of this Right of Entry. The Property Owner(s) shall advise DEP, by notifying the Department representative whose signature appears below or his successor, of the Intent to sell the Property prior to any sale.
- 6. <u>Representation of Interests</u>. The Property Owners represent that they are the only persons authorized to grant access to the Treatment Facility Property.
- 7. <u>Binding on Successors.</u> All the covenants, representations, consents, waivers and agreements contained herein shall be binding upon and inure to the benefit of the parties and their heirs, successors and assigns.

For [Operator]	
Name: Title:	Witness
For the Department of Environmental Protection:	
Name: Tille:	Witness
IN WITNESS WHEREOF, each of the parties s administrators, successors and assigns, intending to be	set its respective hand and seal, for itself, its heirs, executors, a legally bound, this day of, 20
The Property Owner(s) (Each owner sign and print their name under the signature.)	
Name: ,	

### **ACKNOWLEDGEMENT**

STATEOF		:	
COUNTY OF		; ;	SS
On this, the	day of	. 20.	, before me, the undersigned Notary, personally appeared
	-		
			(Name (s))
acknowledged that (he, she	or they) have e.	xecuted the sa	on(s) whose name(s) is/are subscribed to this instrument, and who me and desire it to be recorded.
. IN WITNESS WHE	REOF, I have h	ereunder set n	ny hand and official seal.
(SEAL)	Notary Public		My Commission Expires:

Company Name Shade Mining

Project Shade Trust

Site Name Shade No3 SMP#56813050 . Shaulis SMP#4173SM6

Life of Trust Fund yrs Inflation Rate

### **AMD TREAT RECAPITIZALITION COST**



	Relum Rate	8.43 %	IXLO <sub>F</sub>	)	MLITT	N COST	HOME	EAT
Year	Trust Fund	Trust Fund	Payout		Year	Trust Fund	Trust Fund	Payout
1 1	Growth	Growth	Schedule		) tai	Growth	Growth	Schedule
	Fund Before Payout	Fund After Payout		6902		Fund Before Payout	Fund After Payout	
	26,788	26,788	Initial Fund Amount					~
1	29,046	29,046	. 0		51	84,009	84,009	0
2	31,495	31,495	0		52	91,091	91,091	. 0
3	34,150	* 34,150	0		53	98,770	. 98,770	0
4	37,029	37,029	0		54	107,097	107,097	0
5	40,150	40,150	0		55	116,125	116,125	0
6	43,535	43,535	. 0		56	125,914	125,914	, 0
7	47,205	47,205	0		57	. 136,529	136,529	0
8	51,184	51,184	. 0		58	148,038	148,038	. 0
9	·55,499	55,499	0:		59	160,518	160,518	0
10	60,178	48,643	11,534		60	174,050	86,622	87,427
11	52,744	52,744	0		61	93,925	93,925	0
12	57,190	57,190	0		62	- 101,843	101,843	0
13	62,011	62,011	0		63	110,428	110,428	0
14	67,239	67,239	0		64	119,737	119,737	0
15	72,907	72,907	0		65	129,831	- 129,831	0
16	79,053	79,053	0		66	140,776	140,776	0
17	85,718 92,944	85,718	0		67	152,643	152,643	0
18		92,944	0		68	165,511	165,511	0
19	100,779	. 83,493			69	179,464	179,464	0
20	109,274	90,532	25,781		70	194,593	122,561	72,032
	98,164	98,164	0		71	132,892	132,892	0
22	106,439	106,439	0		72	144,095	144,095	0
24	115,412	115,412	0		73	156,243   169,414	156,243	0
25	125,141	85,223	39,917		74 75	183,695	. 169,414	- 0
26	92,408	92,408	00,911		76	0	0	183,695
27	100,198	100,198	0		77		0	0
28	108,644	108,644	. 0		78	0	0	<del></del>
29	117,803	117,803	<u>o</u>		79	0	0 .	0
30	127,734	106,493	21,241		-80	. 0	0	0
31	115,470	115,470	. 0		- 81	0	0	0
32	125,205	125,205	0		82	0	0	. 0
33	135,759	135,759	0		83	0	0	0
34	147,204	147,204	0		84	0	. 0	. 0
35	159,613	159,613	0		85	0	0	, 0
36	173,089	173,069	0		86	0	0	0
37	187,658	187,658	0		87	0	0	0
38	203,478	203,478	. 0		88	0	0	0
39	220,631	220,631	0		89	0	0	. 0
40	239,230	90,020	149,210		90	0	0	0
41	97,609	97,609	0		91	. 0	0	Ö
42	105,837	105,837	0		92	0	0	0
43	114,759	114,759	. 0		93	0	0	0
44	124,434	124,434	0		94	0	0	0
45	134,923	134,923	0		95	0	. 0	0
46	146,297	146,297	0		96	0	0	0
47	158,630	158,630	0		97	0	0	0
48	. 172,003	172,003	0		98	0	0	0
49	186,503	186,503	0		99	. 0	0	0
50	202,225	77,478	124,747		100	0	0	. 0

Project Shade Trust

Site Name  $\underline{Shade\ No3\ SMP\#56813050}$  . Shaulis  $\underline{SMP\#4173SM6}$ 

### AMD TREAT **RECAPITIZALITION COST**



MOTREAT

Calculation Period	75 yrs	Inflation Rate	3.10 %	Net Return Rate	8.43 %	
Recapitizalition Name	Shade No. 3				<del></del>	

Α.	В	С	D	E	F	G
Description of Item	Unit Cost Per Item	Quantity	Total Item Cost	Life Cycle	Number of Periods	f Total PV
1. six ponds	5,000	6	30,000	40	1	3,995
2. two caustic tanks (one may be H2O2 tank)	2,387	2	4,774	· 25	3	1,847
3. sludge drying beds	5,000	1	5,000	10	7	7,405
4. sludge line	2,000	1	2,000	25	3	774
5. aeration pump (or peristaulic pump)	3,500	1	3,500	10	7	5,183
6. electric box and hookup	1,500	1	1,500	25	3	580
7.	0	0	0	0	. 0	. 0
8. Shaulis: Mn bed	8,334	1	8,334	25	3	3,224
9. Shaulis: eleven ponds	500	11	5,500	20	3	3,007
10. Shaulis: ditches	2,000	. 1	2,000	25	3	774
11.	0	0	. 0	. 0	. 0	. 0
12.	0	0	Ó	. 0	0	0
13.	, 0	0	0	0	0	. 0
14.	0	0	` 0	0	0	. 0
15.	0	0	0	0	0	0
16.	0	. 0	. 0	0	. 0	0
17.	- 0	0	. 0	0	. 0	0
18.	0	0	0	0	0	0
19.	0	0	0	0	0	0
20.	0	0	0	0	0	0

,		*
Total Capital Cost 62,608 \$ (PV	V Grand Total 26,788	\$

### Table of Current Annual Operation and Maintenance Costs

Category	Sampling	Labor	Maintenance	Pumping Sludge	Chemical Caustic	Electricity	
Shaulis Site							7
Rate	(\$27/sample)	(\$35/hr.)					1
Annual Cost	\$1,392.00	\$291.00					]= (, 6
							1
No. 3 Mine							7
Rate	(\$27/sample)	(\$35/hr.)					1
Annual Cost	\$1,392.00	\$9,100.00	\$2,196.00	\$2,000.00	\$7,296.00	\$100.00	ړح 2 د [

= 1,683

22,084

# TREATMENT BOND/TRUST CALCULATOR

Prepared For: Treatment System(s) ID:

Shade - No.3 & Shaulis Sites

**EXHIBIT 8** 

Date (mm/dd/yy): May 7, 2015

Inflation Rate:		3.1%	
Yrs to Treat start:		0	
Annual Treatment Cost:		\$23,767.00	
Trust Fees:		0.85%	
Bond (not needed for rec):		\$0.00	
Investment Ratios:			
	stock:	%69	
	:pouq	31%	
Effective Rate of Return:	•	8.43%	
Volatility Index:		1.1378	
Rec Bond Rate of Return:		%00.9	
Remaining Time on Permit:	īÙ	Vears	

-			Total	
Options		Total	with Recap	
option #1	O&M only	with Recap	& Insurance	
conventional bond:	\$982,392.57	\$1,046,405.68	\$1,096,791.01	bond in year
bond adjustment:	\$982,392.57	\$1,046,405.68	\$1,096,791.01	ဖ
option #2 fully funded trust:	\$534,336.56	\$561,124.56	5573,739.93	trust in year 1

	\$64,013.11 for bond in year 6
\$26,788.00 for trust in year 1	\$54,951.00 for bond in year 1
3.1% Inf:	3.1% Inf:
Eff RoR &	Eff RoR &
8.43%	%00.9
PV of Recap (todays \$\$) @	PV of Recap (todays \$\$) @ 6

\$12,615.36	\$43,252.46
PV Insurance:	PV Insurance: \$43,252.46
\$561.12 per year	\$1,046.41 per year
\$1.00 per year, per \$1000 in the total PV of the Trust:	\$1.00 per year, per \$1000 in total Bond:
Liability Insurance Factor @	Liability Insurance Factor @

Fields in RED can be updated Fields in BLUE are fixed or calculated Fields in GREEN are partial amounts Highlighted Fields in GREEN are final amounts

### Assignment of Collateral Bonds

This Assignment of Collateral Bond applies to the following Letters of Credit:

Bond No.	Type of Bond	Amount	Issuing Bank
S48	Letter of Credit	\$ 930.00	Somerset Trust Company
\$51	Letter of Credit	\$ 12,075.00	Somerset Trust Company
S52	Letter of Credit	,\$ 5,360.00	Somerset Trust Company
S53	Letter of Credit	\$ 26,280.00	Somerset Trust Company

which were submitted by Shade Mining Company (Shade), License No. 1306, for the Shaulis Strip Mine, SMP # 4173SM6 located in Shade Township of Somerset County.

856	Letter of Credit	\$123,500.00	Somorset Trust Company
200989787	Certificate of Deposit	\$87,200.00	Somerset Trust Company
2002989779	Certificate of Deposit	\$100,000.00	Somerset Trust Company

which was submitted by Shade for the Shade #3 Mine, SMP # 56813050 located in Shade, Stonycreek, and Quemahoning Townships of Somerset County.

The Post-Mining Treatment Trust Agreement and the Consent Order and Agreement between Shade and the Department of Environmental Protection (Department) dated \_\_\_\_\_\_, comprise an alternative financial assurance mechanism established for the benefit of the Department pursuant to the Surface Mining Conservation and Reclamation Act to address Shade's legal obligations to treat mine drainage discharges emanating from or hydrologically connected to the mine sites which are partially secured under the collateral bonds listed above. The treatment trust is being funded by time payments extending over several years. Shade agrees to assign the collateral bonds listed above to the trust until the trust fund is fully funded excluding the bonds. As outlined in paragraph 6. of the Trust COA, the CD's will be transferred into the Trust.

In the event that Shade is unable to complete the funding of the treatment trust fund, Shade agrees that the letters of credit listed above can be cashed by the Department and the funds deposited in the trust fund pursuant to the Department's direction to the issuing bank. Once the trust fund has been fully funded by Shade and the mine drainage treatment facilities on the mine sites are adequately treating the discharges, Shade can apply for the release of the collateral bonds under the Departments normal bond release procedures.

Shade understands, acknowledges, and agrees that their reclamation obligations under the Shaulis and Shade #3 permits which are partially secured by the collateral bonds listed above, and which are obligations of the collateral bond, include Shade's legal obligations to treat post-mining discharges of mine drainage and that, notwithstanding Shade's performing any other reclamation obligations, such legal obligations to treat post-mining discharges of mine drainage shall continue under collateral bonds listed above

uninterrupted, undiminished, and unimpaired until replaced by a fully funded treatment trust fund.

Shade agrees that any dispute arising under the Department's forfeiture of the collateral bonds shall be adjudicated by the Environmental Hearing Board, Commonwealth of Pennsylvania in accordance with the Environmental Hearing Board Act.

Shade understands, acknowledges, and agrees that the rights and powers of the Department established by this assignment of collateral bond are in addition to any the rights and powers of the Commonwealth of Pennsylvania and/or the Department established by the collateral bond documents. Such rights and powers of the Commonwealth of Pennsylvania and/or the Department continue without change or modification, uninterrupted, undiminished, and unimpaired.

IN WITTNESS WHEREOF, Shade has set their hand and seal, intending to be legally bound hereby, as of the \_\_\_\_\_\_\_, 2015.

Shade:

Attest or Witness:

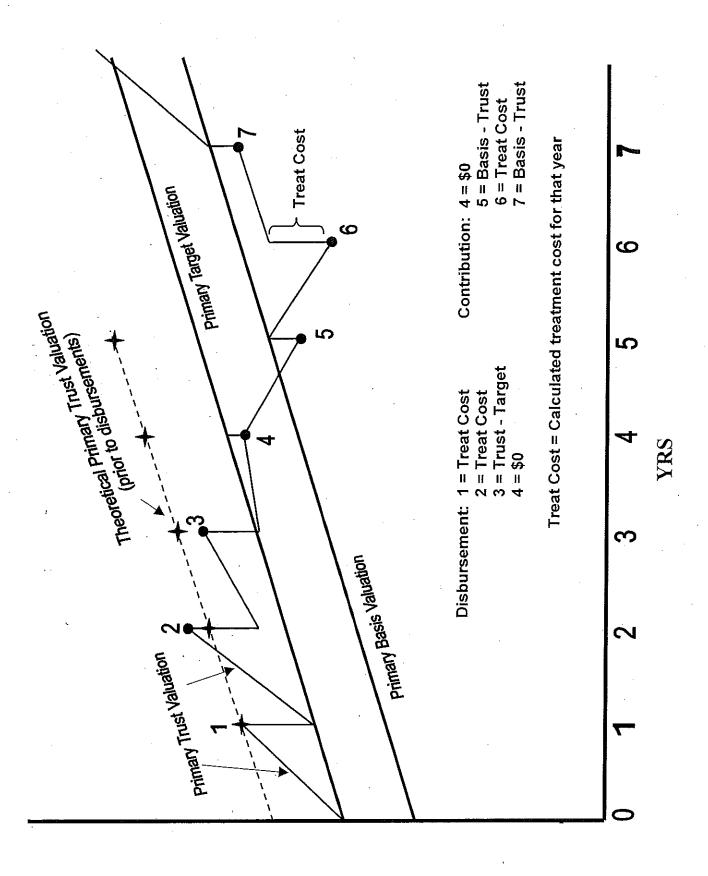
Rangell 4. Who

Donald Hoffman, President

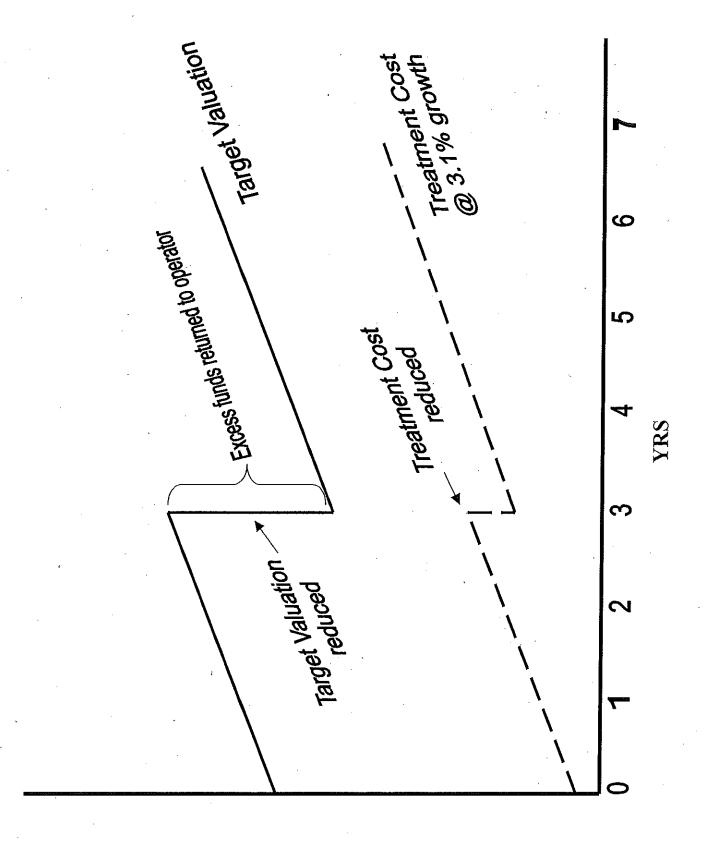
Corporate Seal:

Approved for the Department of Environmental Protection:

Daniel Sanwarco, District Mining Manager



**←** ♦



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### EXHIBIT 13

### BILL OF SALE AND LICENSE AGREEMENT

This Bill or Sale and License Agreement is entered into this day of,
by and between SHADE MINING COMPANY, a partnership, with its principal
place of business at P.O. Box 130, 118 Runway Road, Friedens, PA 15441 ("Transferor") and
SOMERSET TRUST COMPANY, as Trustee of the Shade Mining Company Post-Mining
Discharge Treatment Trust (hereinafter the "Shade Trust") ("Trustee").
Whereas, the Shade Mining Company has entered into a Consent Order and Agreement
("CO&A") dated with the Pennsylvania Department of Environmental
Protection (the "Department"), and
Whereas, the Shade Mining Company has entered into a Post-Mining Discharge
Treatment Trust Agreement dated with Somerset Trust Company which established
the Shade Trust.
Whereas, the Department requires Transferor to continue to treat the post-mining
discharges covered by the CO&A, but also to immediately transfer the water treatment
equipment and facilities to the Trustee to facilitate continued treatment of water and protection of
the environment in the event Shade Mining Company or its successors should cease treating the
post-mining discharges.
KNOW ALL MEN BY THESE PRESENTS that Transferor in consideration of One
Dollar (\$1.00) and other good and valuable consideration, the receipt and adequacy of which is
hereby acknowledged, and intending to be legally bound, does hereby bargain, sell, transfer and convey to Somerset Trust Company, as Trustee of the Shade Trust, all of its right, title and
interest to the equipment, facilities, and other personal property (the "Personal Property")
comprising the Treatment Facilities, including, but not limited to, the
equipment and other property described on Exhibit I, attached hereto and made a part hereof,
such transfer to be effective as of the date hereof (the "Effective Date").
production to an attention of an are and transfer (

Transferor represents and warrants that the Personal Property is transferred to Trustee hereby free and clear of all liens and encumbrances.

PROVIDED, HOWEVER, that Shade Mining Company and its successors shall have a license to use, operate, maintain, construct or reconstruct the Personal Property to treat the post-mining discharges so long as Shade Mining Company, or its successor, is conducting the necessary water treatment operations. Pursuant to the exercise of the rights granted under this License, Shade Mining Company shall at its sole cost and expense be responsible for maintaining and replacing/upgrading, as appropriate, the Personal Property.

Parts, additional equipment, replacements, and upgrades to the Personal Property and the treatment facilities and systems shall be done with the express written consent of the Trustee and

the Department. As a condition of the License hereby granted, Shade Mining Company agrees that all such parts, additional equipment, replacements, and upgrades shall immediately and automatically become the property of the Somerset Trust Company as Trustee of the Shade Trust. As long as this license is in effect and not terminated or revoked, Shade Mining Company, or its successor, shall bear all risk of loss of the Personal Property.

This Bill of Sale and License shall be governed by and construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania, without regard to the conflict of laws provisions thereof.

IN WITNESS WHEREOF, the parties hereto have hereunto set their hands effective the day and year first above written.

TRANSFEROR:

## SHADE MINING COMPANY (signature) By: \_\_\_\_\_\_\_ Its: \_\_\_\_\_\_ TRUSTEE: SOMERSET TRUST COMPANY (signature) Witness: By: \_\_\_\_\_\_\_

### Shade Mining Co. - Payment Plan

Inflation = 3.10% Earnings = 8.43%

<u>Year</u>	Initial <u>Contribution</u>	Annual Contribution	Calculated Trust Value	Necessary <u>Trust Value</u>	
2015	\$187,200.00	\$0.00	\$187,200.00	\$573,739.93	
2016		\$119,670.00	\$322,650.96	\$591,525.87	
2017	•	\$119,670.00	\$469,520.44	\$609,863.17	
2018		\$119,670.00	\$628,771.01	\$628,768.93	three years