

**COMMONWEALTH OF PENNSYLVANIA  
DEPARTMENT OF ENVIRONMENTAL PROTECTION**

*In the Matter of:*

ACE-INA	:	EHB Docket No. 2001-076-R
1501 Chestnut Street	:	(Consolidated with 2001-077-R)
Philadelphia, PA 19192-2201	:	Mine Drainage Permit No. 6576SM4
	:	Allegheny Township
Utica Mutual Insurance Company	:	Blair County, PA
P.O. Box 530	:	
Utica, NY 13503-0530	:	(Ace Drilling Coal Company)
	:	
and	:	Docket No. 023093
	:	
Travelers Indemnity Company	:	
One Tower Square	:	
Hartford, CT 06183	:	

**CONSENT ORDER AND AGREEMENT**

This Consent Order and Agreement is entered into this 27<sup>th</sup> day of November, 2002, by and between the Commonwealth of Pennsylvania, Department of Environmental Protection (the "Department") and Utica Mutual Insurance Co. ("Utica"), ACE-INA ("ACE-INA"), Travelers Indemnity Company ("Travelers") (collectively, the "Sureties").

**FINDINGS**

The Department has found and determined the following findings which the Sureties agree are true and correct.

A. The Department is the agency with the duty and authority to administer and enforce the Surface Mining Conservation and Reclamation Act of May 31, 1945, P.L. 1198, as amended, 52 P.S. § 1396.1 et seq. ("Surface Mining Act"); the Clean Streams Law, Act of June 22, 1937, P.L. 1987, as amended, 35 P.S. § 691.1 et seq. ("Clean Streams Law"); Section 1917-A

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of the Administrative Code of 1929, Act of April 9, 1929, P.L. 177, as amended, 71 P.S. § 510-17 (“Administrative Code”) and the rules and regulations promulgated thereunder (the “Rules and Regulations”).

B. ACE-INA is a corporation with a business address of 1601 Chestnut Street, Philadelphia, PA 19192-2201, whose business includes, among other things, the issuance of surety bonds for mining operations in Pennsylvania.

C. ACE-INA is the successor in interest to Cigna Property & Casualty Inc. Co. (“Cigna”), whose business included, among other things, the issuance of surety bonds for mining operations in Pennsylvania.

D. Utica is a corporation with a business address of P.O. Box 530, Utica, NY 13503-0530, whose business includes, among other things, the issuance of surety bonds for mining operations in Pennsylvania.

E. Travelers is a corporation with a business address of One Tower Square, Hartford, CT 06183, whose business includes, among other things, the issuance of surety bonds for mining operations in Pennsylvania.

F. Ace Drilling Coal Company, Inc. (“Ace Drilling”) was a corporation with a business address of P.O. Box 269, Summerhill, PA 15958, whose business included the surface mining of coal in Pennsylvania.

G. At all times material hereto, Ace Drilling was authorized to conduct surface mining in Pennsylvania pursuant to Surface Mining Operator’s License No. 5-10218, which is now expired.

H. Ace Drilling conducted coal surface mining at the Cresson Mountain Mine (the "Site") in Allegheny Township, Blair County, pursuant to Mine Drainage Permit ("MDP") No. 6576SM4 issued by the Department.

I. In support of, and as a condition to, the Department's issuance of MDP No. 6576SM4-01-0, Ace Drilling posted the following bonds in the following amounts issued by the following sureties:

<b>Bond No.</b>	<b>Bond Amount</b>	<b>Surety</b>
S797772	\$223,740	Cigna
S806247	\$135,510	Cigna
SU36333	\$520	Utica
SU36334	\$41,240	Utica
558E4317	\$12,100	Travelers
170848F9850	\$54,880	Travelers

J. A postmining discharge emanating from and hydrologically connected to MDP No. 6576SM4 developed on the Site. This discharge is commonly referred to as MP-26.

K. A separate postmining discharge, also emanating from and hydrologically connected to MDP No. 6576SM4, developed on the Site. This discharge is commonly referred to as MP-26A.

L. MP-26 and MP-26A were initially treated by Ace Drilling.

M. In a letter dated June 21, 1999, the Department was informed by the Estate of Evan L. Jones, former owner/operator and president of Ace Drilling, that treatment of the discharges had ceased.

N. On June 22, 1999, the Department inspected the Site and determined that treatment had ceased and that the discharges were violating the effluent limitations of 25 Pa. Code § 87.102.

O. Accordingly, on July 21, 1999, the Department issued Compliance Order No. 993076 to Ace Drilling for allowing acid mine drainage to discharge from the Cresson Mountain Mine in violation of the effluent limitations of 25 Pa. Code § 87.102. Neither Ace Drilling nor any of the Sureties appealed this Compliance Order.

P. On August 4, 1999, the Department again inspected the Site and determined that: (1) the operator had not resumed treatment and the discharges continued to violate the effluent limitations of 25 Pa. Code § 87.102; and (2) the operator failed to monitor groundwater and surface water on the Site and submit results to the Department for the second quarter of 1999, in violation of 25 Pa. Code §§ 87.116 and 87.117.

Q. Accordingly, on August 11, 1999, the Department issued Compliance Order No. 993082 to Ace Drilling for failure to comply with an Order of the Department, specifically Compliance Order No. 993076 issued July 21, 1999. Neither Ace Drilling nor any of the Sureties appealed this Compliance Order.

R. In addition, on August 11, 1999, the Department issued Compliance Order No. 993083 to Ace Drilling for failure to monitor groundwater and surface water on the Site and submit results to the Department for the second quarter of 1999 in violation of 25 Pa. Code §§ 87.116 and 87.117. Neither Ace Drilling nor any of the Sureties appealed this Compliance Order.

S. On September 1, 1999, the Department again inspected the Site and determined that: (1) the discharges continued to flow untreated and continued to violate the effluent limitations of 25 Pa. Code § 87.102; and (2) the operator did not comply with Compliance Order

No. 993083, which required the operator to conduct groundwater and surface water monitoring on the Site and submit results to the Department no later than August 27, 1999.

T. Accordingly, on September 11, 1999, the Department issued Compliance Order No. 993091 to Ace Drilling for failure to comply with an Order of the Department, specifically Compliance Order No. 993083 issued August 11, 1999. Neither Ace Drilling nor any of the Sureties appealed this Compliance Order.

U. The bonds issued by the Sureties may be forfeited for any violation of the law or regulations including, but not limited to, the Surface Mining Act, The Clean Streams Law, the Rules and Regulations, the terms and conditions of Ace Drilling's permit, and Department orders pertaining to Ace Drilling's conduct under the permit.

V. On October 27, 1999, the Department notified Ace Drilling that, as a result of Ace Drilling's failure to comply with and correct the violations noted in Compliance Orders Nos. 993076, 993082, 993083 and 990391, MDP No. 6576SM4 was suspended and the Department intended to forfeit the bonds posted for the Cresson Mountain Mine.

W. On February 27, 2001, the Department forfeited the bonds posted for the Cresson Mountain Mine, including all six bonds listed in Paragraph I, above.

X. On March 27, 2001, Utica appealed the Department's forfeiture action to the Environmental Hearing Board. This appeal was docketed as EHB Docket No. 2001-076-R.

Y. On March 27, 2001, ACE-INA appealed the Department's forfeiture action to the Environmental Hearing Board. This appeal was docketed as EHB Docket No. 2001-077-R, and was later consolidated with the appeal filed by Utica.

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Z. Travelers did not appeal the Department's forfeiture action. On April 4, 2001, Travelers paid to the Department an amount of \$66,980, the total amount of Bond No. 170848F9850 and Bond No. 558E4317. The Department deposited this amount into the Surface Mining Conservation and Reclamation Fund on April 23, 2001.

AA. Presently, the MP-26 and MP-26A discharges continue to flow untreated from the Cresson Mountain Mine. The discharges continue to be in violation of the effluent limitations of 25 Pa. Code § 87.102.

BB. Under Section 4(h) of the Surface Mining Act, 52 P.S. § 1396.4(h), a corporate surety issuing bonds that are forfeited by the Department shall have the option of reclaiming the forfeited site upon the consent and approval of the Department.

CC. The Sureties have elected to reclaim the Cresson Mountain Mine by constructing passive treatment systems to treat discharges MP-26 and MP-26A.

DD. ACE-INA has submitted and the Department has approved a plan for the treating of discharges MP-26 and MP-26A (the "Plan"). The Plan is attached to this Consent Order and Agreement as Exhibit "A" and is incorporated herein by reference.

EE. Utica is willing to set aside bond money for the establishment of a trust fund as a financial guarantee for the continual operation and maintenance of the treatment systems for MP-26 and MP-26A.

FF. Travelers is willing to set aside bond money for the establishment of a trust fund as a financial guarantee for the continual operation and maintenance of the treatment systems for MP-26 and MP-26A.

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GG. Reclamation of the Cresson Mountain Mine can be accomplished more quickly and effectively by the Sureties under this Consent Order and Agreement than it could if the Department forfeited and collected the bonds.

HH. The Department and the Sureties are desirous of expeditiously abating the discharges at the Cresson Mountain Mine and avoiding the need for litigation concerning the bond forfeiture action of February 27, 2001 and, therefore, enter into this Consent Order and Agreement.

The parties desire to resolve the foregoing matters without resorting to further litigation.

### **ORDER**

After full and complete negotiation of all matters set forth in this Consent Order and Agreement and upon mutual exchange of covenants contained herein, the parties intending to be legally bound, it is hereby ORDERED by the Department and AGREED to by the Sureties as follows:

1. **Authority.** This Consent Order and Agreement is an Order of the Department authorized and issued pursuant to Sections 4.2 and 4.3 of the Surface Mining Act, 52 P.S. §§ 1396.4b, 1396.4c and 1396.4(h), Section 5 of the Clean Streams Law, 35 P.S. § 691.5, and Section 1917-A of the Administrative Code of 1929, 71 Pa. C.S. § 510-17. The failure of the Sureties to comply with the terms or conditions of this Consent Order and Agreement shall subject the Sureties to all penalties and remedies provided by those statutes for failing to comply with an Order of the Department.

2. **Findings.** The Sureties agree that the findings in Paragraphs A through HH are true and correct and, in any matter or proceeding involving the Department and the Sureties, the Sureties shall not challenge the accuracy or validity of these findings. The parties do not authorize any other persons to use the findings in this Consent Order and Agreement in any other matter or proceeding.

3. **Forbearance of Collection.** Execution of this Consent Order and Agreement constitutes an agreement by the Department to forbear collection of Bond Nos. S797772 and S806247 issued by Cigna and Bond Nos. SU36333 and SU36334 issued by Utica.

4. **Withdrawal of Appeals.** Upon execution of this Consent Order and Agreement, ACE-INA shall withdraw its appeal to the Environmental Hearing Board docketed at No. 2001-077-R and Utica shall withdraw its appeal to the Environmental Hearing Board docketed at No. 2001-076-R.

5. **Treatment of Discharges.**

a. Within twenty (20) days of the execution of this Consent Order and Agreement, the Sureties shall commence construction of the treatment system to treat discharges MP-26 and MP-26A as set forth in the Plan approved by the Department and attached to this Consent Order and Agreement as Exhibit "A".

b. Subject to Paragraph 17 (relating to Force Majeure), the Sureties shall complete construction and installation of the treatment systems within ninety (90) days of the execution of this Consent Order and Agreement. However, in no event shall any extensions granted under Paragraph 17 (relating to Force Majeure) exceed July 30, 2003.



c. The Sureties shall obtain any and all approvals, variances or permits required by law to construct and install the treatment systems and to treat discharges MP-26 and MP-26A.

6. **Financial Guarantee for Treatment.** Within thirty (30) days of the completion of the work specified in the Plan (Exhibit "A"), the Sureties shall establish, and fully fund, a financial mechanism through the Clean Streams Foundation Trust (the "Trust") as a financial guarantee for the continuing treatment of discharges MP-26 and MP-26A in the amount of \$108,740. Utica will fund the trust by contributing \$41,760 cash. Travelers will fund the Trust by contributing \$66,980 in cash.

7. **Release of Financial Guarantee and Return of Monies Paid.** Upon completion of the work specified in the Plan (Exhibit "A") and the establishment of the Trust as required by Paragraph 6 of the Consent Order and Agreement, the Department shall:

- a. Release \$359,250 to ACE-INA according to the following schedule:
  - (i) 85% upon installation of the passive treatment systems and drainage control structures; and
  - (ii) 15% upon a demonstration of successful revegetation of disturbed areas.
- b. Release \$41,760 to Utica.
- c. Return to Travelers the \$66,980 paid to the Department in connection with the Department's forfeiture of bonds for the Cresson Mountain Mine. The Department shall initiate procedures to return the \$66,980 immediately upon receiving notice that the reclamation work required by Paragraph 5 of the Consent Order and Agreement has been completed. Upon a

date to be determined, there shall be a closing at which time Travelers shall fund the Trust as required by Paragraph 6 of the Consent Order and Agreement and the Department shall return to Travelers the \$66,980 paid to the Department. The Department's withholding return of this money until the date that Travelers funds the Trust constitutes acceptable financial assurances pursuant to Section 4(h) of the Surface Mining Act, 52 P.S. § 1396.4(h).

8. **Limitation of Liability.** For purposes of this Consent Order and Agreement, the Sureties shall not, by virtue of this Consent Order and Agreement or any activities hereunder: (i) be deemed an "operator of a mine" or an "occupier of land" or a party related to Ace Drilling under Section 315 or 316 of The Clean Streams Law, 35 P.S. §§ 691.315 or 691.316, or under the Surface Mining Act, or any regulations promulgated thereunder; or (ii) be deemed to have assumed any liabilities or obligations of Ace Drilling, except to the extent expressly set forth in this Consent Order and Agreement. This Consent Order and Agreement is not intended to create rights in any party other than the parties who have signed this Consent Order and Agreement.

9. **Stipulated Civil Penalties.** With the exception of Travelers and Utica whose only obligation under this Agreement is the transfer of funds to The Clean Streams Foundation Trust in accord with paragraph 6 herein, in the event that the Sureties fail to comply in a timely manner with the terms or provisions of this Consent Order and Agreement, the Sureties shall be in violation of this Consent Order and Agreement and, in addition to other applicable remedies, shall pay a civil penalty in the amount of ONE HUNDRED FIFTY DOLLARS (\$150.00) per day for each violation. The penalty shall be due automatically and without notice. Such penalty payments shall be payable monthly on or before the fifteenth day of each succeeding month, and shall be made by corporate check or the like made payable to Commonwealth of Pennsylvania

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Surface Mining and Reclamation Fund and sent to Donald R. Barnes, District Mining Manager, Department of Environmental Protection, Cambria District Mining Operations, 286 Industrial Park Road, Ebensburg, PA 15931. It is understood by the parties hereto that payment of any money under this Paragraph shall neither constitute a waiver of the Sureties' duty to meet its obligations under this Consent Order and Agreement nor preclude the Department from commencing an action to compel the Sureties' compliance with the terms and conditions of this Consent Order and Agreement, or any applicable statute, rule, regulation, permit or order of the Department.

—10. **Existing Obligations Unaffected.** Nothing set forth in this Consent Order and Agreement is intended, nor shall be construed, to relieve or limit the Sureties' obligation to comply with any existing or subsequent statute, regulation, permit or order. In addition, nothing set forth in this Consent Order and Agreement is intended, nor shall be construed, to authorize any violation of any statute, regulation, order, or permit issued or administered by the Department.

11. **Additional Remedies.** In the event that the Sureties fail to comply with any provision of this Consent Order and Agreement, the Department may, in addition to the remedies prescribed herein, pursue any remedy available for a violation of an order of the Department, including an action to enforce this Consent Order and Agreement. The remedies provided by this Paragraph and Paragraph 9 (relating to Stipulated Civil Penalties) are cumulative and the exercise of one does not preclude the exercise of any other. The failure of the Department to pursue any remedy shall not be deemed to be a waiver of that remedy. The payment of a

stipulated civil penalty, however, shall preclude any further assessment of civil penalties for the violation for which the stipulated civil penalty is paid.

12. **Reservation of Rights.** With regard to matters not addressed by this Consent Order and Agreement, the Department specifically reserves all rights to institute equitable, administrative, civil and criminal actions for any past, present or future violation of any statute, regulation, permit or order, or for any pollution or potential pollution to the air, land or waters of the Commonwealth.

13. **Liability of Operator.** The Sureties shall inform all persons necessary for the implementation of this Consent Order and Agreement of the terms and conditions of this Consent Order and Agreement. The Sureties shall be liable for any violations of the Consent Order and Agreement, including those caused by, contributed to, or allowed by their directors, officers, agents, managers, servants, employees, privies and any persons, contractors or consultants acting under or for the Sureties. Except as provided in Paragraph 17 (relating to Force Majeure), the Sureties remain liable for any violation of this Consent Order and Agreement caused, contributed to or allowed by its successors and assigns.

14. **Transfer of Site.**

a. The duties and obligations under this Consent Order and Agreement shall not be modified, diminished, terminated or otherwise altered by the transfer of any legal or equitable interest in the Site or any part thereof.

b. Should any of the Sureties intend to transfer any legal or equitable interest in the Site which is affected by this Consent Order and Agreement, the Surety(ies) shall serve a copy of this Consent Order and Agreement upon the prospective transferee of the legal and

equitable interest at least thirty (30) days prior to the contemplated transfer and shall simultaneously inform the Cambria District Office of the Department of such intent.

c. The Department in its sole discretion may agree to modify or terminate the Sureties' duties and obligations under this Consent Order and Agreement upon the transfer of any legal or equitable interest in the Site. The Sureties waive any right that it may have to challenge the Department's decision in this regard.

15. **Correspondence with Department.** All correspondence with the Department concerning this Consent Order and Agreement shall be addressed to:

—Donald R. Barnes  
District Mining Manager  
Cambria District Office  
286 Industrial Park Road  
Ebensburg, PA 15931  
(814) 472-1900

with a copy to:

Matthew B. Royer  
Southcentral Regional Office  
Office of Chief Counsel  
909 Elmerton Avenue  
Harrisburg, PA 17110-8200

16. **Correspondence with the Sureties.** All correspondence with the Sureties concerning this Consent Order and Agreement shall be addressed to:

For ACE-INA:  
Henry R. Minissale, Esquire  
1601 Chestnut Street, TL33L  
Two Liberty Place  
Philadelphia, PA 19101-1484  
(215) 640-2641

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For Utica:  
Bernard J. Turi, Esquire  
Utica Mutual Insurance Company  
P.O. Box 6568  
Utica, NY 13504-6568  
1-800-274-1914, Ext. 2815

and

For Travelers:  
Frank E. Caufield, Esquire  
Travelers Casualty & Surety Company of America  
One Tower Square, 14CV  
Hartford, CT 06183-9062  
(860) 277-4280

with a copy to:

William T. Gorton III, Esquire  
Stites & Harbison PLLC  
250 Lexington Financial Center  
Lexington, KY 40507-1758  
(859) 226-2300

The Sureties shall notify the Department whenever there is a change in the contact person's name, title, or address. The Sureties agree that service of any notice or any legal process for any purpose under this Consent Order and Agreement, including its enforcement, may be made by mailing a copy by first class mail to the above address.

**17. Force Majeure.**

a. In the event that the Sureties are prevented from complying in a timely manner with any time limit imposed in this Consent Order and Agreement solely because of a strike, fire, flood, act of God, or other circumstances beyond the Sureties' control and which the Sureties, by the exercise of all reasonable diligence, is unable to prevent, then the Sureties may petition the Department for an extension of time. An increase in the cost of performing the

obligations set forth in this Consent Order and Agreement shall not constitute circumstances beyond the Sureties' control. The Sureties' economic inability to comply with any of the obligations of this Consent Order and Agreement shall not be grounds for any extension of time.

b. The Sureties shall only be entitled to the benefits of this Paragraph if they notify the Department within five (5) working days by telephone and within ten (10) working days in writing of the date they become aware or reasonably should have become aware of the event impeding performance. The written submission shall include all necessary documentation, as well as a notarized affidavit from an authorized individual specifying the reasons for the delay, the expected duration of the delay, and the efforts which have been made and are being made by the Sureties to mitigate the effects of the event and to minimize the length of the delay. The initial written submission may be supplemented within ten (10) working days of its submission. The Sureties' failure to comply with the requirements of this Paragraph specifically and in a timely fashion shall render this Paragraph null and of no effect as to the particular incident involved.

c. The Department will decide whether to grant all or part of the extension requested on the basis of all documentation submitted by the Sureties and other information available to the Department. In any subsequent litigation, the Sureties shall have the burden of proving that the Department's refusal to grant the requested extension was an abuse of discretion based upon the information then available to it.

18. **Severability.** The Paragraphs of this Consent Order and Agreement shall be severable and should any part hereof be declared invalid or unenforceable, the remainder shall continue in full force and effect between the parties.

19. **Entire Agreement.** This Consent Order and Agreement shall constitute the entire integrated agreement of the parties. No prior or contemporaneous communications or prior drafts shall be relevant or admissible for purposes of determining the meaning or extent of any provisions herein in any litigation or any other proceeding.

20. **Modifications.** Except as provided in Paragraph 17 (relating to Force Majeure), no changes, additions, modifications, or amendments of this Consent Order and Agreement shall be effective unless they are set out in writing and signed by the parties hereto.

21. **Attorney Fees.** The parties shall bear their respective attorney fees, expenses and other costs in the prosecution or defense of this matter or any related matters, arising prior to execution of this Consent Order and Agreement.

22. **Decisions under Consent Order.** Any decision which the Department makes under the provisions of this Consent Order and Agreement shall not be deemed to be a final action under 25 Pa. Code § 1021.2(a), nor an adjudication under 2 Pa. C.S. § 101, and shall not be appealable to the Environmental Hearing Board or to any court. Any objection that the Sureties may have to the decision will be preserved until the Department enforces this Consent Order and Agreement. At no time, however, may the Sureties challenge the content or validity of this Consent Order and Agreement or the Findings agreed to in this Consent Order and Agreement.

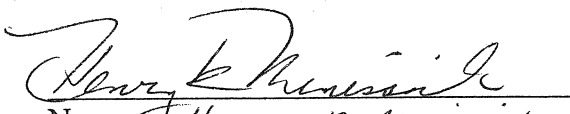
23. **Titles.** A title used at the beginning of any Paragraph of this Consent Order and Agreement is provided solely for the purpose of identification and shall not be used to interpret that Paragraph.



multiple counterparts, each of which shall be deemed an original agreement, and all of which shall constitute one agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representatives of the Sureties certify under penalty of law, as provided by 18 Pa.C.S. § 4904, that they are authorized to execute this Consent Order and Agreement on behalf of the Sureties; that the Sureties consent to the entry of this Consent Order and Agreement and the foregoing Findings as an ORDER of the Department; and that the Sureties hereby knowingly waive their rights to appeal this Consent Order and Agreement and to challenge its content or validity, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13, 1988, P.L. 530, No. 1988-94, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa.C.S. § 103(a); Chapters 5A and 7A; or any other provision of law. Signature of the attorney for the Sureties certifies only that the agreement has been signed after consulting with counsel.

FOR ACE-INA:

  
Name Henry R. Minissile  
Title AVP

FOR THE COMMONWEALTH OF  
PENNSYLVANIA, DEPARTMENT OF  
ENVIRONMENTAL PROTECTION:

\_\_\_\_\_  
Donald R. Barnes  
District Mining Manager

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24. **Counterparts.** This Agreement or any amendment thereto may be executed in multiple counterparts, each of which shall be deemed an original agreement, and all of which shall constitute one agreement between the parties.

IN WITNESS WHEREOF, the parties hereto have caused this Consent Order and Agreement to be executed by their duly authorized representatives. The undersigned representatives of the Sureties certify under penalty of law, as provided by 18 Pa.C.S. § 4904, that they are authorized to execute this Consent Order and Agreement on behalf of the Sureties; that the Sureties consent to the entry of this Consent Order and Agreement and the foregoing Findings as an ORDER of the Department; and that the Sureties hereby knowingly waive their rights to appeal this Consent Order and Agreement and to challenge its content or validity, which rights may be available under Section 4 of the Environmental Hearing Board Act, the Act of July 13, 1988, P.L. 530, No. 1988-94, 35 P.S. § 7514; the Administrative Agency Law, 2 Pa.C.S. § 103(a); Chapters 5A and 7A; or any other provision of law. Signature of the attorney for the Sureties certifies only that the agreement has been signed after consulting with counsel.

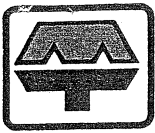
FOR ACE-INA:

\_\_\_\_\_  
Name  
Title

FOR THE COMMONWEALTH OF  
PENNSYLVANIA, DEPARTMENT OF  
ENVIRONMENTAL PROTECTION:



Donald R. Barnes  
District Mining Manager



# MINETECH ENGINEERS

1108 13TH AVE., P.O. Box 791, ALTOONA, PA 16603 • (814) 946-4242 • Fax (814) 942-1175

September 25, 2002

Thomas P. Pongrac, P.G.  
Hydrogeologist  
Bureau of Mining and Reclamation  
286 Industrial Park Road  
Ebensburg, PA 15931-4119

Revised 26 & 26A maps ACF  
Good.

RE: Ace Drilling Coal Co., Inc.  
MDP# 6576SM4  
Allegheny Township,  
Blair County

Dear Tom:

In response to our telephone conversation of yesterday regarding the abatement proposal submitted for the above referenced mine drainage permit, enclosed please find two (2) copies each of the plan sheets for Points 26 and 26A. The 26 plan has been revised to indicate the outlet from the 26 Lower collection drain will be directed to one of the existing ponds. The 26A plan has been revised to show the dimensions for the proposed vertical flow pond (VFP).

If you should have any further questions concerning the information presented on the enclosed plans, please feel free to contact me.

Very truly yours,  
Minetech Engineers, Inc.

Todd M. Coleman, P.E.  
Mining Engineer

Enclosures

XC: William T. Gorton III  
Robert S. Hedin, Ph.D.

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## Ace Drilling Site 26 Treatment Plan

Background: Acid mine drainage flows from several points into a series of ponds and into a large constructed wetland. In May 2002, two French drains were installed to collect the AMD so that it could be accurately characterized for flow and chemistry, and to facilitate plans to treat the water. The data for the Upper collection system and the Lower collection system are shown on Table 1. The upper pipe accounts for 90-92% of the flow and contaminant loading. After an initial drawdown period, the upper pipe had pH 4.7 and contained approximately 210 mg/L acidity, 80 mg/L Fe, 2 mg/L Al, and 30 mg/L Mn. At this pH, all the iron is in the reduced ferrous state. The lower pipe discharges water that is somewhat more acidic because of lower alkalinity and higher aluminum concentrations.

Treatment Plan: The existing ponds and wetland contain more than enough capacity to treat the AMD, if it were alkaline. The highest iron loading observed is 46 kg/day (101 lb/day). Assuming that iron is removed at an average rate of 10 g/m<sup>2</sup>/day, the system should contain 50,000 ft<sup>2</sup> of pond and wetland. The existing ponds and wetlands exceed 50,000 ft<sup>2</sup> in surface area. Treatment of the water requires addition of alkalinity to the flow before it enters the ponds and wetlands.

An Anoxic Limestone Drain (ALD) will be constructed for the upper pipe discharge between the collection system and the existing ponds. ALDs are the most effective passive treatment technology for generating alkalinity. The ALD is expected to discharge water with approximately 250 mg/L alkalinity. The major problem that has been realized with ALDs is their potential for clogging with iron and aluminum solids. Ideally, ALDs should receive water that contains negligible dissolved oxygen, <0.1 mg/L ferric iron, and <0.5 mg/L Al. The 26 Upper discharge does not contain appreciable dissolved oxygen or ferric iron, but it contains 2-3 mg/L Al. To lessen the likelihood that the ALD will plug, limestone bed will be sized larger than the case without Al and a flushing system will be installed.

The ALD size is based on an average flow of 50 gpm, a high flow of 100 gpm, an expected discharge of 250 mg/L alkalinity, and a 25 year life expectancy for operation under high flow conditions. Higher flows will not damage the ALD. The calculated limestone tonnage is 1,990 tons. A 50% safety factor has been included to account for the precipitation of aluminum solids. The total tonnage is 2,985 tons. The limestone will be calcitic limestone obtained from New Enterprise Stone at their Tyrone quarry (generally 80-85% CaCO<sub>3</sub> and 85-90% as CaCO<sub>3</sub>). The ALD will be constructed with a flushing system that can be operated manually. The flushing system will be placed at the bottom of the limestone bed and near the influent, where most of the aluminum solids are expected to accumulate.

The ALD discharge will flow to one of the existing treatment ponds where it will mix with the untreated flow from the 26 Lower pipe. At 250 mg/L alkalinity and 55 gpm flow, the ALD will produce 165 lb/day of alkalinity. The combined iron loading for the

two discharges (55 gpm at 82 mg/L Fe plus 5 gpm at 73 mg/L Fe) is 58 lb/day. To balance the acidity of iron oxidation and hydrolysis, (1.8 lb alkalinity per 1.0 lb of Fe) requires 105 lb/day of alkalinity. Thus, there should be an excess of alkalinity and the flow through the ponds and wetland should maintain a pH between 6 and 7.

The alkaline flow will travel through the ponds and wetland, precipitating iron oxide. Some manganese removal will occur, although a decrease to low ( $< 2$  mg/L Mn) is not expected. In order to further enhance Mn removal, a 500 ton aerobic limestone bed will be placed near the end of the wetland. Naturally occurring microbial activity within the limestone bed should decrease Mn further. The limestone bed will also act as a final pH adjustor.

The existing ponds and wetlands will be renovated so as to assure that water will flow through the system, in its intended course, for many years without substantial maintenance. These renovations will include:

- Repairing and regrading the embankments of the existing treatment ponds to increase capacity for better retention/storage of iron solids.
- Renovation of channels that carry water between ponds and the wetland so that there is less likelihood they will plug with litter and iron sludge
- Renovation of the existing constructed wetland by repairing the internal berms so the serpentine flow path is reestablished and installing an aerobic limestone bed and new outlet structure.
- Repair of the existing diversion terraces above the work area to reduce and/or limit the amount of surface water influencing the treatment system.

## Ace Drilling Site 26A Treatment Plan

**Background** Acid mine drainage flows from several discharge points to a series of ponds that were used for chemical treatment. During collection of the discharge in May 2002, two distinct sources of AMD were discovered. The higher discharge was collected into a French drain that discharges into a ditch that flows through a weir. Below 26A-1 and above the weir, a second discharge upwells in the ditch. Samples are collected from the 26A-1 pipe and at the weir, 26A-2. The monitoring results are attached as Table 2. The upper flow has low pH and is highly contaminated with Fe, Al and Mn. The flow and chemistry of the lower seep was calculated from the difference of 26A-1 and the weir, 26A-2. The lower seep has approximately twice the flow, has pH 4.5, and contains 140-170 mg/L Fe and 2-5 mg/L Al. The upper seep was dry in July 2002, while the lower seep continued to flow.

Compared to Site 26, Site 26A produces less water with higher contaminant concentrations but lower loads. Summary data for the two areas are shown below.

Site	Flow	Acidity		Fe		Al	
	Gpm	mg/L	kg/d	mg/L	kg/d	mg/L	Kg/d
Site 26 upper pipe	55	222	70	82	26	3.6	1.0
Site 26 lower pipe	5	245	7	73	2	6.1	0.2
Site 26A, all water	6	419	14	134	4	8.5	0.3

Site 26A produces 15% of the acidity loading, 13% of the iron loading, and 20% of the acidity loading.

**Treatment Plan:** The acid mine drainage will be treated with a vertical flow pond that discharges into the existing ponds. The vertical flow pond will consist of four feet of limestone aggregate, overlain by one foot of organic substrate, overlain with up to three feet of water. The limestone layer will contain 1,000 tons of limestone aggregate. The organic layer will contain 230 CY of substrate that will be a mixture of spent mushroom compost, wood chips, hay, and 60 tons of limestone fines. The VFP will have an underdrain system that promotes flow down through the substrate and limestone. Water will discharge from the VFP through an AgriDrain water level control box. The VFP will be flushed by removing panels from the flow control box.

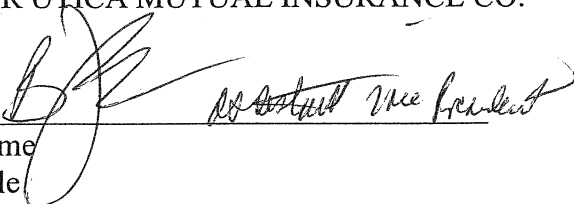
The discharge of the VFP will flow through the existing ponds where iron will precipitate. Past experience suggests that the VFP discharge will likely contain 75-100 mg/L Fe and 80-120 mg/L alkalinity. If these expectations are realized, then precipitation of iron in the sedimentation ponds will consume all the alkalinity and lower the pH to 3-4. In order to provide a second pH adjustment and modest alkalinity addition, the final pond will be modified so that a portion of it contains a shallow aerobic wetland followed by a 500 ton aerobic limestone bed. The purpose of the wetland is to

filter solids from the water before it flows into the limestone bed. The discharge from the limestone bed will be the final effluent for the 26A system.

The existing ponds will be renovated so as to insure that water will flow through the system, in its intended course, for many years without substantial maintenance. These renovations will include:

- Deepening of shallow areas in the ponds so they can retain/store iron solids better
- Renovation of channels that carry water between ponds so that there is less likelihood that they will plug with litter and iron sludge
- Installation of an aerobic limestone bed and new outlet structure at the final pond.
- Repair of the existing diversion terraces above the work area to reduce and/or limit the amount of surface water influencing the treatment system.

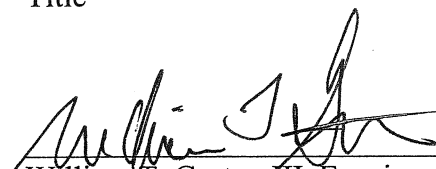
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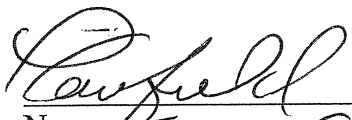


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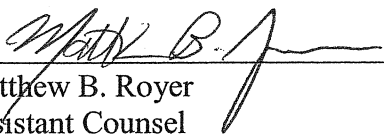
  
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