SPECIAL POWER OF ATTORNEY

Consolidation Coal Company, a Delaware corporation, with its principal corporate offices at 1800 Washington Road, Pittsburgh, PA 15241 (the "Company") hereby nominates, constitutes and appoints Jonathan Pachter as its Attorney-in-Fact, to act its place and steed and on its behalf in any and all matters relating in any way to the execution, filing or submission of documents of any kind, including but not limited to, applications for permits, licenses, plans, bonds, consents, waivers, changes, renewals or modifications to any such permits or other documents and forms of any kind or character as may be necessary or convenient for the businesses of the Company related to the mining, re-mining, abandonment and reclamation of coal lands and facilities of the Company, including the power to negotiate, sign, execute and deliver on behalf of it any and all filings, forms, submissions, agreements, transfers, assignments, waivers, consents, confirmations or other documents of any kind as may be necessary or convenient to complete any of the above described purposes.

This Power of Attorney shall remain in full force and effect until revoked in writing.

Given under the signature and seal of the above named Company effective the 31stth day January, 2003.

Consolidation Coal Company

By _____

Name: P. B. Lilly

It's Chief Operating Officer

Commonwealth of Pennsylvania
County of Allegheny

On this 31st day of January, 2003, the undersigned, P. B. Lilly, appeared before me and acknowledged himself to be the President of above named company and that as such officer, being authorized to do so, executed the foregoing Power of Attorney for the purposes therein contained, by signing the name of the corporation by himself as President.

In witness whereof, I hereunto set my hand and seal.

_____
Notary Public

My Commission Expires: _____

Seal

Notarial Seal
Jane M. Schaff, Notary Public
Upper St. Clair Twp., Allegheny County
My Commission Expires June 20, 2005
Member, Pennsylvania Association of Notaries

Acceptance: The undersigned hereby accepts the Power of Attorney as granted herein.

_____
Jonathan Pachter

LEGAL NOTICE

Consolidation Coal Company of Pittsburgh, Pennsylvania, hereby announces it's intention to conduct activities incidental to underground mining activities at the Emery Mine. The currently approved permit is ACT/015/015.

Consolidation Coal Company operates the Emery Mine which is located (3) miles south of Emery, Utah within Sections 27, 28, 29, 32 and 33 of Township 22 South, Range 6 East, Salt Lake Base & Meridian.

Emery Mine plans to construct a cattle guard and new entrance road within 100 feet of Emery County Road #915 at the 4th East Portal located near the center of:

Township 22 S, Range 6E, Section 27, Salt Lake Basin Meridian

(INSERT SKETCH)

The area of the construction site has been submitted for approval:

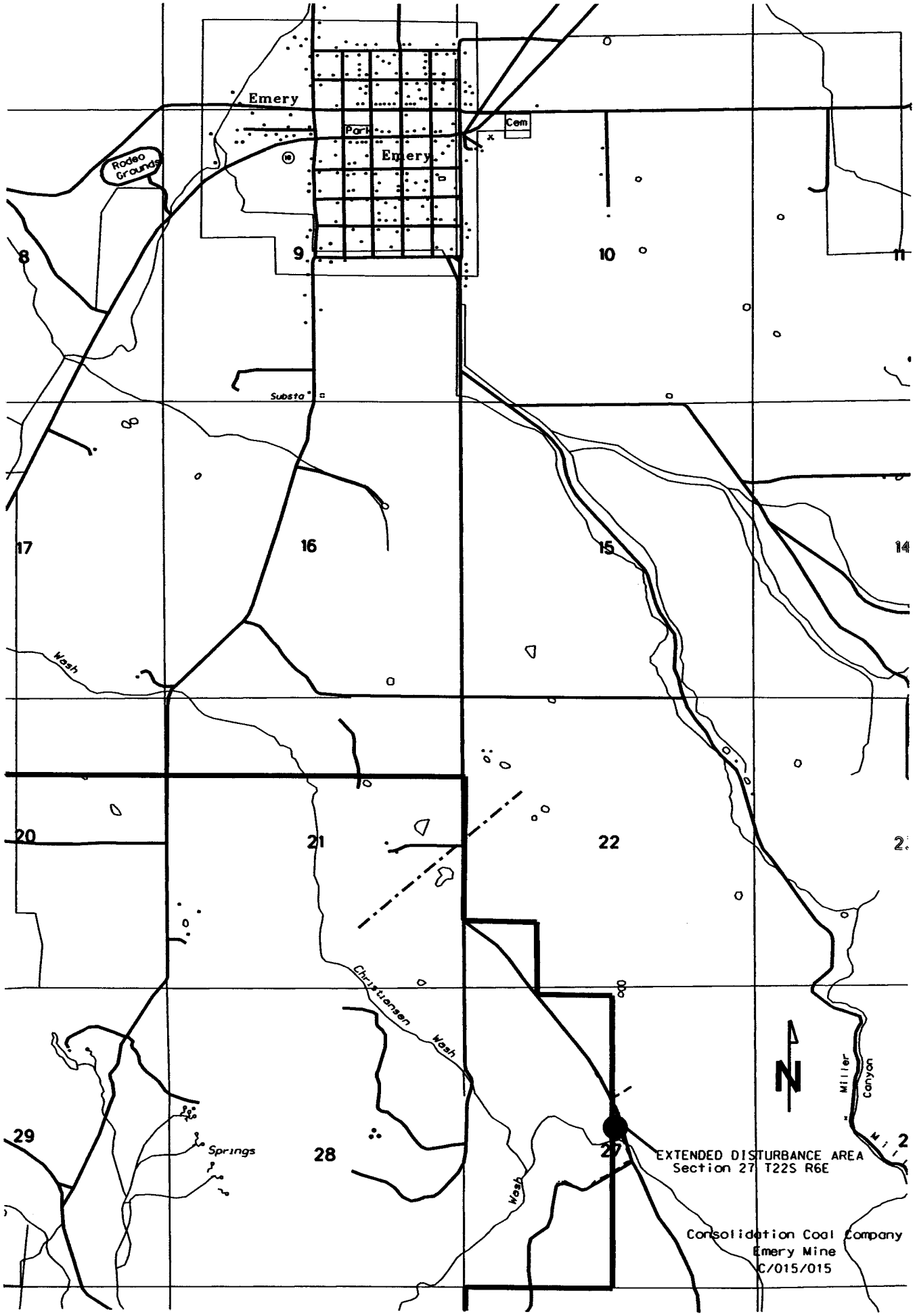
The address of the applicant is:

Consolidation Coal Company
Emery Mine
P.O. Box 527
Emery, Utah 84522
Phone: (435)286-2301

The address of the operator is:

Consol Energy, Inc.
Consol Plaza
1800 Washington Road
Pittsburgh, PA 15241-1421
Phone: (412)831-4000

Written comments or request for a hearing regarding the activities for the construction must be made within 30 days of the last publication of this notice, and may be addressed to the Division of Oil, Gas and Mining, 1594 West North Temple, Suite 1210, Salt Lake City, Utah 84114-5801


Emery
Park
Emery
Cem
Rodeo Grounds
8
9
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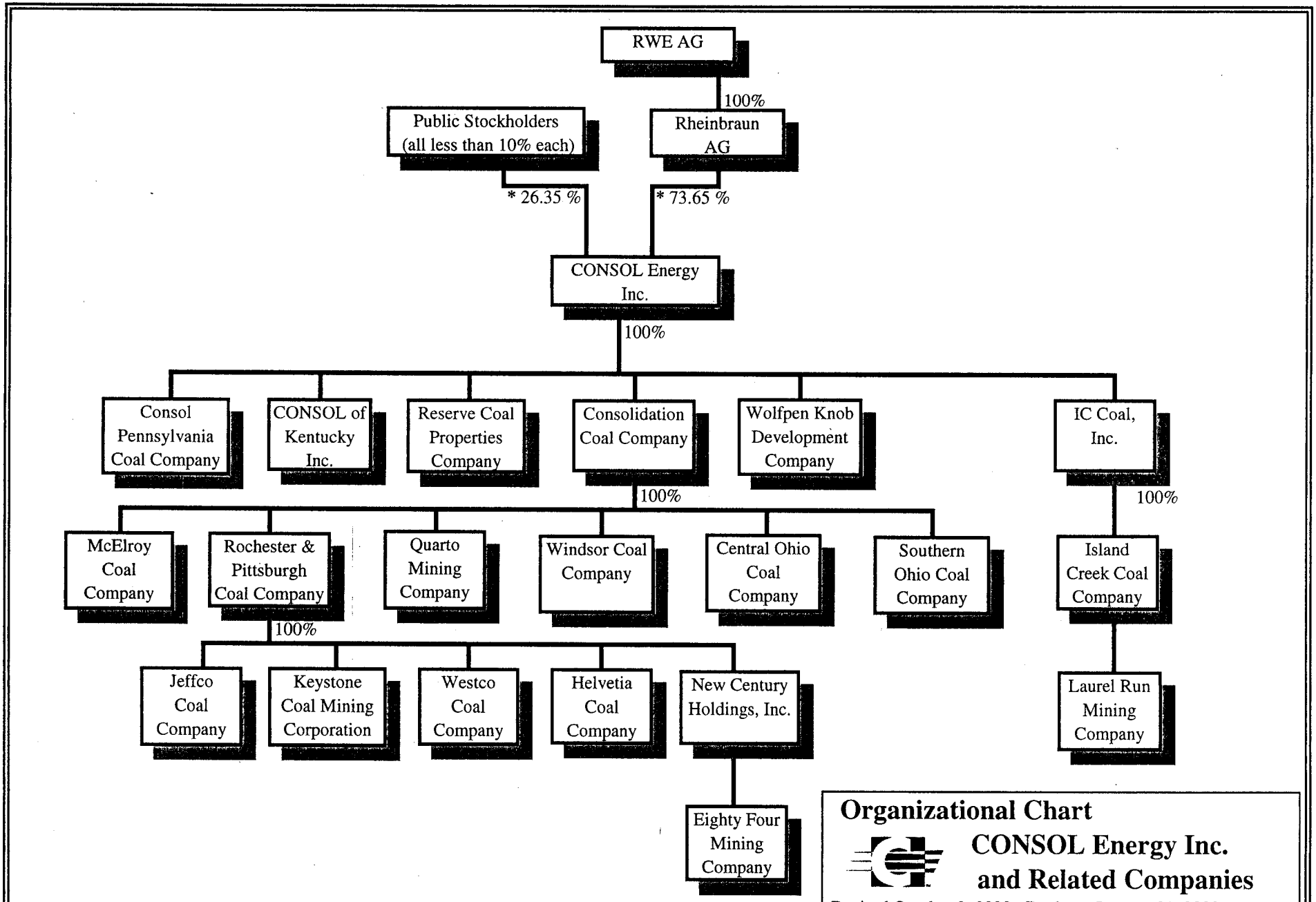
11
Substa
17
16
15
14
Wash
20
21
22
Christiansen Wash
Miller Canyon
29
Springs
28
27
Wash
EXTENDED DISTURBANCE AREA
Section 27 T22S R6E
Consolidation Coal Company
Emery Mine
C/015/015


RWE AG
100%
Public Stockholders (all less than 10% each)
Rheinbraun AG
* 26.35 %
* 73.65 %
CONSOL Energy Inc.
100%
Consol Pennsylvania Coal Company
CONSOL of Kentucky Inc.
Reserve Coal Properties Company
Consolidation Coal Company
Wolfpen Knob Development Company
IC Coal, Inc.
100%
100%
McElroy Coal Company
Rochester & Pittsburgh Coal Company
Quarto Mining Company
Windsor Coal Company
Central Ohio Coal Company
Southern Ohio Coal Company
Island Creek Coal Company
100%
Jeffco Coal Company
Keystone Coal Mining Corporation
Westco Coal Company
Helvetia Coal Company
New Century Holdings, Inc.
Laurel Run Mining Company
Eighty Four Mining Company
Organizational Chart
CONSOL Energy Inc.
and Related Companies
Revised October 3, 2002; Replaces January 21, 2002
* Percentages as of October 2, 2002

Officers, Directors, and Stockholders of Central Ohio Coal Company

Name: Consolidation Coal Company
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 13-2566594
Title: Sole Shareholder **Title Effective Date:** 07/02/2001
Percent Ownership: 100% **Ownership Effective Date:** 07/02/2001
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Central Ohio Coal Company

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 173-40-7443 **FEIN:**
Title: Secretary **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Road.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Central Ohio Coal Company

Name: **Stephen E. Williams**
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: **John F. Zachwieja**
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: General Manager **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of CONSOL Energy Inc.

Name: Philip W. Baxter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: <10%
Ending Date:
FEIN:
Title Effective Date: 08/01/1999
Ownership Effective Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: <10%
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: Berthold A. Bonekamp
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/17/1998
Ownership Effective Date:

Name: Bernd J. Breloer
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/15/1998
Ownership Effective Date:

Name: William A. Bruno
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 047-40-3571
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 09/30/2000
Ownership Effective Date:

Name: Frank P. Burke
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 09/30/2000
Ownership Effective Date:

Officers, Directors, and Stockholders of CONSOL Energy Inc.

Name: Rowland H. Burns, Jr.
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Ass't Secretary **Title Effective Date:** 09/30/2000
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Nicholas J. Deluliis
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 01/01/2002
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Danny L. Fassio
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 182-38-2744 **FEIN:**
Title: Vice President **Title Effective Date:** 11/01/1999
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Patricia A. Hammick
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/11/2001
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Pres,CEO,& Dir. **Title Effective Date:** 01/01/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Thomas F. Hoffman
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 202-36-9233 **FEIN:**
Title: Vice President **Title Effective Date:** 09/30/2000
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of CONSOL Energy Inc.

Name: Jack A. Holt
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 09/30/2000
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Larry W. Hull
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 232-82-8546 **FEIN:**
Title: Vice President **Title Effective Date:** 03/01/2002
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Marshall W. Hunt
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 09/30/2000
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: James D. Kingsley
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 09/30/2000
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Executive Vice President **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 02/01/2001
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of CONSOL Energy Inc.

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Chief Operating Officer
Title Effective Date: 11/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Senior Vice President
Title Effective Date: 12/01/2000
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Chief Financial Officer
Title Effective Date: 12/01/2000
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Controller
Title Effective Date: 01/01/1995
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: Robert F. Pusateri
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 09/30/2000
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Treasurer
Title Effective Date: 10/23/2002
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: Rheinbraun AG
Address: Stuttgenweg 2
50935 Köln, Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Shareholder
Percent Ownership: 73.65%
Ending Date:
FEIN:
Title Effective Date: 01/01/1992
Ownership Effective Date: 10/2/2002

Name: William G. Rieland
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 09/30/2000
Ownership Effective Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 04/01/2003
Ownership Effective Date:

Name: Ronald E. Smith
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 503-52-8341
Title: Executive VP
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 09/30/2000
Ownership Effective Date:

Name: Ronald G. Stovash
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 211-36-5558
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 09/30/2000
Ownership Effective Date:

Name: John L. Whitmire
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: <10%
Ending Date:
FEIN:
Title Effective Date: 03/03/1999
Ownership Effective Date:

Officers, Directors, and Stockholders of CONSOL Energy Inc.

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:**
Title: General Counsel **Title Effective Date:** 04/01/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:**
Title: Vice President **Title Effective Date:** 04/01/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:**
Title: Secretary **Title Effective Date:** 04/01/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Stephen G. Young
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 234-54-4913 **FEIN:**
Title: Vice President **Title Effective Date:** 09/30/2000
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Rolf Zimmermann
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 09/29/1993
Percent Ownership: <10% **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of CONSOL of Kentucky Inc.

Name: CONSOL Energy Inc.
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: **FEIN:** 51-0337383
Title: Sole Shareholder **Title Effective Date:** 01/01/1993
Percent Ownership: 100% **Ownership Effective Date:** 1/1/2001
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Barry D. Dangerfield
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 08/31/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of CONSOL of Kentucky Inc.

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: President
Title Effective Date: 11/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a
FEIN:
Title: Treasurer
Title Effective Date: 09/01/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 173-40-7443
FEIN:
Title: Secretary
Title Effective Date: 03/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Consol Pennsylvania Coal Company

Name: CONSOL Energy Inc.
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No:
Title: Sole Shareholder
Percent Ownership: 100%
Ending Date:
FEIN: 51-0337383
Title Effective Date: 01/01/1993
Ownership Effective Date: 01/01/2001

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/01/2001
Ownership Effective Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Assistant Secretary
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 08/31/1998
Ownership Effective Date:

Name: David D. Hudson
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a
Title: Vice President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 03/01/2002
Ownership Effective Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Officers, Directors, and Stockholders of Consol Pennsylvania Coal Company

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Treasurer
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: Karl T. Skrypak
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 173-40-7443
Title: Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 06/01/1992
Ownership Effective Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Officers, Directors, and Stockholders of Consolidation Coal Company

Name: CONSOL Energy Inc.
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 51-0337383
Title: Sole Shareholder **Title Effective Date:** 01/01/1992
Percent Ownership: 100% **Ownership Effective Date:** 1/1/2001
Ending Date:

Name: Albert A. Aloia
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Barry D. Dangerfield
Address: Route 460
Oakwood VA 24631
Telephone: 703/498-8200
Social Security No: 236-80-5801 **FEIN:**
Title: Vice President **Title Effective Date:** 05/01/1987
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412 - 831-4000
Social Security No: n/a **FEIN:**
Title: President & Director **Title Effective Date:** 01/01/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Consolidation Coal Company

Name: Bart J. Hyita
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/30/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Chief Operating Officer - Coal **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412 - 831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 09/30/2000
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412 - 831-4000
Social Security No: n/a **FEIN:**
Title: VP & Controller **Title Effective Date:** 01/01/1995
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: James J. McCaffrey
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/10/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412 - 831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Samuel P. Skeen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 236-76-7594 **FEIN:**
Title: Ass't Secretary **Title Effective Date:** 06/01/1995
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Ronald E. Smith
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412 - 831-4000
Social Security No: 503-52-8341 **FEIN:**
Title: Director **Title Effective Date:** 02/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Secretary
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: John F. Zachwieja
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: John F. Zachwieja
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a
FEIN:
Title: General Manager
Title Effective Date: 03/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Eighty Four Mining Company

Name: New Century Holdings, Inc.
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No:
FEIN: 51-0344312
Title: Sole shareholder
Title Effective Date: 12/21/1992
Percent Ownership: 100 %
Ownership Effective Date:
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
FEIN:
Title: Assistant Secretary
Title Effective Date: 07/01/2001
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Assistant Secretary
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 09/22/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 11/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: President
Title Effective Date: 11/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Eighty Four Mining Company

Name: James J. McCaffrey
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 03/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Treasurer
Title Effective Date: 11/01/1999
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 173-40-7443
FEIN:
Title: Secretary
Title Effective Date: 09/22/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Ronald E. Smith
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 503-52-8341
FEIN:
Title: Director
Title Effective Date: 09/22/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Eighty Four Mining Company

Name: **Stephen E. Williams**
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Helvetia Coal Company

Name: Rochester & Pittsburgh Coal Company
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 25-0761480
Title: Sole shareholder **Title Effective Date:** 04/07/1966
Percent Ownership: 100% **Ownership Effective Date:** 04/07/1966
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rowland H. Burns, Jr.
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Secretary **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 08/02/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/10/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Helvetia Coal Company

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of IC Coal, Inc.

Name: CONSOL Energy Inc.
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No:
Title: Sole Shareholder
Percent Ownership: 100%
Ending Date:
FEIN: 51-0337383
Title Effective Date: 01/01/2001
Ownership Effective Date: 1/1/2001

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/01/2001
Ownership Effective Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1998
Ownership Effective Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/10/2002
Ownership Effective Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: VP; Controller
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/01/1995
Ownership Effective Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Treasurer
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Officers, Directors, and Stockholders of IC Coal, Inc.

Name: Ronald E. Smith
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 08/02/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Island Creek Coal Company

Name: IC Coal, Inc.
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 95-2917408
Title: sole shareholder **Title Effective Date:** 03/31/2000
Percent Ownership: 100% **Ownership Effective Date:** 3/31/2000
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Barry D. Dangerfield
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 08/01/1996
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 08/31/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Island Creek Coal Company

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 07/01/1993
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 173-40-7443 **FEIN:**
Title: Secretary **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Jeffco Coal Company

Name: Rochester & Pittsburgh Coal Company
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 25-0761480
Title: Sole shareholder **Title Effective Date:** 06/01/1980
Percent Ownership: 100% **Ownership Effective Date:** 6/1/1980
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Marshall W. Hunt
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: V.P., Controller **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Jeffco Coal Company

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Ronald E. Smith
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 503-52-8341 **FEIN:**
Title: Director **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Jeffco Coal Company

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Keystone Coal Mining Corporation

Name: Rochester & Pittsburgh Coal Company
Address: 1800 Washington Rd
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: **FEIN:** 25-0761480
Title: Sole shareholder **Title Effective Date:** 08/08/1977
Percent Ownership: 100% **Ownership Effective Date:** 08/08/1977
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rowland H. Burns, Jr.
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Secretary **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Christoph Koether
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/10/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Keystone Coal Mining Corporation

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: John M. Reilly
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Treasurer
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Officers, Directors, and Stockholders of Keystone Coal Mining Corporation

Name: **William D. Stanhagen**
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Laurel Run Mining Company

Name: Island Creek Coal Company
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 55-0479426
Title: sole shareholder **Title Effective Date:**
Percent Ownership: 100% **Ownership Effective Date:** 07/01/1993
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Barry D. Dangerfield
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director; V.P. **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 08/31/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/30/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Laurel Run Mining Company

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Controller
Title Effective Date: 07/01/1993
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Treasurer
Title Effective Date: 07/01/1993
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: Ronald E. Smith
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 503-52-8341
FEIN:
Title: President
Title Effective Date: 11/01/1999
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Laurel Run Mining Company

Name: Ronald E. Smith
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 503-52-8341
FEIN:
Title: Director
Title Effective Date: 07/01/1993
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Robert M. Vukas
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 235-80-9868
FEIN:
Title: Secretary
Title Effective Date: 07/01/1994
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of McElroy Coal Company

Name: Consolidation Coal Company
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No:
Title: Sole Shareholder
Percent Ownership: 100%
Ending Date:
FEIN: 13-2566594
Title Effective Date: 06/30/1987
Ownership Effective Date: 06/30/1987

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/01/2001
Ownership Effective Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Assistant Secretary
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: J. Brett Harvey
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 08/31/1998
Ownership Effective Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Officers, Directors, and Stockholders of McElroy Coal Company

Name: James J. McCaffrey
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 09/01/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 173-40-7443 **FEIN:**
Title: Secretary **Title Effective Date:** 05/01/1993
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of New Century Holdings, Inc.

Name: Rochester & Pittsburgh Coal Company
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No:
Title: Sole shareholder
Percent Ownership: 100%
Ending Date:
FEIN: 25-0761480
Title Effective Date: 11/20/1992
Ownership Effective Date: 11/20/1992

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/01/2001
Ownership Effective Date:

Name: John P. Garniewski
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Ass't Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/22/1998
Ownership Effective Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/30/2001
Ownership Effective Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/30/2001
Ownership Effective Date:

Officers, Directors, and Stockholders of New Century Holdings, Inc.

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 09/30/2000
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: V.P., Controller
Title Effective Date: 09/22/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Treasurer
Title Effective Date: 11/01/1999
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Secretary
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Quarto Mining Company

Name: Consolidation Coal Company
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 13-2566594
Title: Sole Shareholder **Title Effective Date:** 04/10/1987
Percent Ownership: 100% **Ownership Effective Date:** 04/10/1987
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 08/31/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/10/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/2002
Ownership Effective Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President and Controller
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/01/1995
Ownership Effective Date:

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Treasurer
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Officers, Directors, and Stockholders of Quarto Mining Company

Name: Karl T. Skrypak
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 173-40-7443 **FEIN:**
Title: Secretary **Title Effective Date:** 06/01/1992
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Reserve Coal Properties Company

Name: CONSOL Energy Inc.
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No:
Title: Sole Shareholder
Percent Ownership: 100%
Ending Date:
FEIN: 51-0337383
Title Effective Date: 01/01/1993
Ownership Effective Date: 01/01/2001

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/01/2001
Ownership Effective Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Assistant Secretary
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: Marshall W. Hunt
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/01/1999
Ownership Effective Date:

Name: Marshall W. Hunt
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 05/01/1993
Ownership Effective Date:

Officers, Directors, and Stockholders of Reserve Coal Properties Company

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: John W. Schlueter
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 05/29/1992
Ownership Effective Date:

Name: John W. Schlueter
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 02/15/1989
Ownership Effective Date:

Name: Samuel P. Skeen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 236-76-7594
Title: Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 08/24/1988
Ownership Effective Date:

Name: William D. Stanhagen
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a
Title: Vice President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/01/1995
Ownership Effective Date:

Name: Rudolf Bertram
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 10/01/2000
Ownership Effective Date:

Name: Dietrich Böcker
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/01/1992
Ownership Effective Date:

Name: Walther Boecker
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 10/01/2000
Ownership Effective Date:

Name: Berthold A. Bonekamp
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Chairman of Vorstand
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 10/19/1999
Ownership Effective Date:

Name: Bernd Jobst Breloer
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/01/1993
Ownership Effective Date:

Name: Wilfried Eßer
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/02/1998
Ownership Effective Date:

Officers, Directors, and Stockholders of Rheinbraun AG

Name: Dieter Faust
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 06/27/2002
Ownership Effective Date:

Name: Horst Grosspeter
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 10/01/2000
Ownership Effective Date:

Name: Norbert Haak
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/18/2001
Ownership Effective Date:

Name: Manfred Holz
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/05/2000
Ownership Effective Date:

Name: Hans Peter Lafos
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 06/27/2002
Ownership Effective Date:

Name: Johannes Lambertz
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 04/01/2002
Ownership Effective Date:

Name: Hans-Detlef Loosz
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 06/27/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Gert Maichel
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Chairman of Aufsichtsrat
Title Effective Date: 10/01/2000
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Carl Meulenbergh
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 10/01/2000
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Edgar Moron
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 11/16/2000
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Alfons Müller
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 01/01/1992
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Wilhelm Nölling
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 01/01/1992
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Rheinbraun AG

Name: Alfred Freiherr von Oppenheim
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 01/01/1992
Ownership Effective Date:

Name: Dieter Patt
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 10/01/2000
Ownership Effective Date:

Name: RWE AG
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Sole Shareholder
Percent Ownership: 100%
Ending Date:
FEIN:
Title Effective Date: 01/01/1992
Ownership Effective Date:

Name: Fritz Schramma
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/19/2001
Ownership Effective Date:

Name: Hermann-Josef Sester
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 06/27/2002
Ownership Effective Date:

Name: Gerd Spaniol
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 02/15/2001
Ownership Effective Date:

Officers, Directors, and Stockholders of Rheinbraun AG

05-Sep-03

Name: Klaus-Dieter Südhofer
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 01/01/1992
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Horst R. Wolf
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 10/01/2000
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Jan Zilius
Address: Stuttgenweg 2
50935 Köln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 09/21/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Rheinbraun US GmbH

Name: Achim Görtz
Address: Stuttgenweg 2
50935 Koln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Geschäftsführer
Percent Ownership: zero
Ending Date: 01/01/2002

FEIN:
Title Effective Date: 01/01/2001
Ownership Effective Date:

Name: Rheinbraun AG
Address: Stuttgenweg 2
50935 Koln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Sole Shareholder
Percent Ownership: 100%
Ending Date: 01/01/2002

FEIN:
Title Effective Date: 06/20/1995
Ownership Effective Date: 06/20/1995

Name: Rolf Zimmermann
Address: Stuttgenweg 2
50935 Koln (Lindenthal), Germany
Telephone: 011 49 221-4801
Social Security No: n/a
Title: Geschäftsführer
Percent Ownership: zero
Ending Date: 01/01/2002

FEIN:
Title Effective Date: 03/23/1994
Ownership Effective Date:

Officers, Directors, and Stockholders of Rochester & Pittsburgh Coal Company

Name: Consolidation Coal Company
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No:
Title: Sole shareholder
Percent Ownership: 100%
Ending Date:
FEIN: 13-2566594
Title Effective Date: 09/22/1998
Ownership Effective Date: 09/22/1998

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192
Title: Assistant Secretary
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 07/01/2001
Ownership Effective Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Assistant Secretary
Percent Ownership: n/a
Ending Date:
FEIN:
Title Effective Date: 06/15/2003
Ownership Effective Date:

Name: J. Brett Harvey
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Director and President
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/22/1998
Ownership Effective Date:

Name: Christoph Koether
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
Title: Director
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 11/30/2001
Ownership Effective Date:

Name: William J. Lyons
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
Title: Vice President and Controller
Percent Ownership: zero
Ending Date:
FEIN:
Title Effective Date: 09/22/1998
Ownership Effective Date:

Officers, Directors, and Stockholders of Rochester & Pittsburgh Coal Company

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Treasurer
Title Effective Date: 11/01/1999
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: n/a
Ownership Effective Date:
Ending Date:

Name: Ronald E. Smith
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 503-52-8341
FEIN:
Title: Director
Title Effective Date: 11/01/1999
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 09/22/1998
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Secretary
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Rochester & Pittsburgh Coal Company

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Vice President
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: Paul Achleitner
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 09/11/2000
Ownership Effective Date:

Name: Carl-Ludwig von Boehm-Bezing
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/05/2001
Ownership Effective Date:

Name: Franz Bsirske
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/09/2001
Ownership Effective Date:

Name: Burkhard Drescher
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/05/2001
Ownership Effective Date:

Name: Wilfried Eickenberg
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 11/08/2001
Ownership Effective Date:

Name: Ralf Hiltenkamp
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 05/23/2001
Ownership Effective Date:

Name: Heinz-Eberhard Holl
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 09/11/2000
Ownership Effective Date:

Name: Berthold Huber
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/09/2001
Ownership Effective Date:

Name: Richard R. Klein
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 11/24/2000
Ownership Effective Date:

Name: Berthold Krell
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/09/2001
Ownership Effective Date:

Name: Dietmar Kuhnt
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Chairman of Vorstand
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/01/1995
Ownership Effective Date:

Name: Gerhard Langemeyer
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/05/2001
Ownership Effective Date:

Name: Gert Maichel
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 11/24/2000
Ownership Effective Date:

Name: Friedel Neuber
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 12/10/1992
Ownership Effective Date:

Name: Josef Pitz
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 11/08/2001
Ownership Effective Date:

Name: Wolfgang Reiniger
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/05/2001
Ownership Effective Date:

Name: Manfred Remmel
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 11/24/2000
Ownership Effective Date:

Name: Günter Reppien
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/09/2001
Ownership Effective Date:

Name: Bernhard von Rothkirch
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/09/2001
Ownership Effective Date:

Name: Manfred Schneider
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 12/10/1992
Ownership Effective Date:

Name: Klaus Sturany
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Vorstand
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 09/11/2000
Ownership Effective Date:

Name: Klaus-Dieter Südhofer
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/09/2001
Ownership Effective Date:

Name: Alfons Friedrich Titzrath
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 01/05/2001
Ownership Effective Date:

Name: Karel Van Miert
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
Title: Member of Aufsichtsrat
Percent Ownership: N/A
Ending Date:
FEIN:
Title Effective Date: 06/07/2001
Ownership Effective Date:

Officers, Directors, and Stockholders of RWE AG

Name: **Erwin Winkel**
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
FEIN:
Title: Member of Aufsichtsrat
Title Effective Date: 09/11/2000
Percent Ownership: N/A
Ownership Effective Date:
Ending Date:

Name: **Jan Zilius**
Address: Kruppstrasse 5
45128 Essen, Germany
Telephone: 011 49 201-1850
Social Security No: n/a
FEIN:
Title: Member of Vorstand
Title Effective Date: 09/11/2000
Percent Ownership: N/A
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Southern Ohio Coal Company

Name: Consolidation Coal Company
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 13-2566594
Title: Sole Shareholder **Title Effective Date:** 07/02/2001
Percent Ownership: 100% **Ownership Effective Date:** 07/02/2001
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Southern Ohio Coal Company

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 173-40-7443 **FEIN:**
Title: Secretary **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Southern Ohio Coal Company

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: John F. Zachwieja
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a **FEIN:**
Title: General Manager **Title Effective Date:** 03/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Westco Coal Company

Name: Rochester & Pittsburgh Coal Company
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 25-0761480
Title: Sole shareholder **Title Effective Date:** 07/09/1980
Percent Ownership: 100% **Ownership Effective Date:** 07/09/1980
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Danny L. Fassio
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 182-38-2744 **FEIN:**
Title: V.P., Secretary **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: V.P., Controller **Title Effective Date:** 09/22/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Westco Coal Company

Name: Ronald E. Smith
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 503-52-8341 **FEIN:**
Title: Director **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Windsor Coal Company

Name: Consolidation Coal Company
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 13-2566594
Title: Sole Shareholder **Title Effective Date:** 07/02/2001
Percent Ownership: 100% **Ownership Effective Date:** 07/02/2001
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Windsor Coal Company

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Karl T. Skrypak
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 173-40-7443 **FEIN:**
Title: Secretary **Title Effective Date:** 07/02/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Windsor Coal Company

Name: Stephen E. Williams
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a
FEIN:
Title: Director
Title Effective Date: 06/15/2003
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Name: John F. Zachwieja
Address: 172 Route 519
Eighty Four PA 15330
Telephone: 724-206-2005
Social Security No: n/a
FEIN:
Title: General Manager
Title Effective Date: 03/01/2002
Percent Ownership: zero
Ownership Effective Date:
Ending Date:

Officers, Directors, and Stockholders of Wolfpen Knob Development Company

Name: CONSOL Energy Inc.
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: **FEIN:** 51-0337383
Title: SoleShareholder **Title Effective Date:** 01/01/1993
Percent Ownership: 100% **Ownership Effective Date:** 01/01/2001
Ending Date:

Name: Gary J. Bench
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: 187-48-7192 **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 07/01/2001
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Rodney E. Ford
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Assistant Secretary **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: J. Brett Harvey
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 08/31/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Peter B. Lilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: President **Title Effective Date:** 11/01/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: William J. Lyons
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Director **Title Effective Date:** 07/10/2002
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Wolfpen Knob Development Company

Name: James N. Magro
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 11/01/1999
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Lloyd C. Price
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John M. Reilly
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: n/a **FEIN:**
Title: Treasurer **Title Effective Date:** 09/01/1998
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Walter J. Scheller
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: John W. Schlueter
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: n/a **Ownership Effective Date:**
Ending Date:

Name: Ronald E. Smith
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412/831-4000
Social Security No: 503-52-8341 **FEIN:**
Title: Director **Title Effective Date:** 04/01/1990
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Officers, Directors, and Stockholders of Wolfpen Knob Development Company

05-Sep-03

Name: William D. Stanhagen
Address: 1800 Washington Rd.
Pittsburgh PA 15241
Telephone: 412-831-4000
Social Security No: n/a **FEIN:**
Title: Vice President **Title Effective Date:** 06/15/2003
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

Name: Robert M. Vukas
Address: 1800 Washington Road
Pittsburgh PA 15241
Telephone: (412) 831-4000
Social Security No: 235-80-9868 **FEIN:**
Title: Secretary **Title Effective Date:** 05/01/1993
Percent Ownership: zero **Ownership Effective Date:**
Ending Date:

CONSOLIDATION COAL COMPANY - Mining Permit Listing

Mailing Address 1800 Washington Road

City: Pittsburgh **State:** PA **ZIP:** 15241 **Telephone No.** (412) 831-4000

Permittee: Beatrice Pocahontas Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
VA						
1400493	VA DMLR		Beatrice Mine	12/29/1983	02/29/2000	Permit transferred to Island Creek Coal on 2/29/2000.

Permittee: Central Ohio Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
OH						
D-127	OH DMRM			04/07/1983	04/30/1997	Final bond release 4/30/1997
D-274	OH DMRM			02/06/1984	08/05/1999	Final bond release 8/5/1999
D-455	OH DMRM			03/04/1985	09/17/1998	Final bond release 9/17/1998
D-978	OH DMRM			03/20/1992	12/08/2000	Final bond release 12/8/2000
D-1034	OH DMRM		Brannon Fork	09/09/1993		
D-2047	OH DMRM		Dinner Fork	05/12/2000		
D-322	OH DMRM		Haulroad	04/30/1984		
D-378	OH DMRM		Haulroad - N. Tipple Area	07/13/1984		
D-313	OH DMRM		aulroad- Complex to 3 mile islar	04/17/1984		
D-1084	OH DMRM		Horse Run	07/21/1994		
D-246	OH DMRM		Interconnector Haulroad	12/01/1983		
D-839	OH DMRM		Knowlton	05/15/1989		
D-56	OH DMRM		North Tipple Area	08/16/1982		
D-420	OH DMRM		OCTAD	10/11/1984		
D-678	OH DMRM		Olive Green South	06/15/1987		
D-215	OH DMRM		Preparation Plant	12/20/1983		
D-321	OH DMRM		Skyline Drive Haulroad	04/30/1984		
D-261	OH DMRM		State Route 340	01/13/1984		
D-559	OH DMRM		Titlon Run	03/13/1986		
D-820	OH DMRM		Windy Hill	12/14/1988		

Permittee: CONSOL of Kentucky Inc.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
KY						
413-0510	KY DSMR			12/09/1980		final bond release, no record in KYDSMRE SMIS
413-5057	KY DSMR			06/09/1988		final bond release, no record in KYDSMRE SMIS
867-0369	KY DSM			07/12/1988		former Fairbanks Coal 867-0299
413-0146	KY DSMR			10/05/1988	04/15/1998	final bond release
413-0118	KY DSMR			10/05/1988	04/30/1998	final bond release 4/30/98
413-7005	KY DSMR			10/05/1988	02/11/1997	Transferred to Addington Enterprises Inc.
813-0028	KY DSM			10/05/1988	01/19/1999	Final bond release 1/19/99; Phase I bond rel 7/20/89
413-7010	KY DSMR			10/05/1988	04/15/1998	final bond release
413-7009	KY DSMR			10/05/1988	12/03/1996	Transferred to Addington Enterprises Inc.
413-0144	KY DSMR			10/05/1988	12/21/1997	final bond release
413-5005	KY DSMR			10/05/1988	12/03/1997	final bond release
413-0007	KY DSMR			10/05/1988	02/11/1997	transferred to Addington Enterprises Inc.
413-7007	KY DSMR			10/06/1988	04/30/1998	final bond release 4/30/98
413-7003	KY DSMR			10/06/1988	12/03/1996	Transferred to Addington Enterprises Inc.
413-0148	KY DSMR			10/12/1988	02/27/1997	final bond release
413-7002	KY DSM			10/18/1988	07/14/1998	Final bond release 7/14/98
413-5047	KY DSMR			01/09/1989	11/25/1996	final bond release
413-0127	KY DSM			02/08/1989	01/18/1999	Phase III bond release - 1/18/99; Phase I release 12/05/86
413-0145	KY DSMR			04/14/1989	02/27/1997	final bond release
813-0113	KY DSMR			05/26/1989	12/02/1996	final bond release
460-0113	KY DSM			06/07/1989	07/02/2001	Final Bond Release - 7/2/01.
867-0370	KY DSM	Fairbanks Coal Co Inc		05/11/1990		former Fairbanks Coal 867-0324
860-5115	KY DSM			04/02/1991	03/25/2002	Final Bond Release - 3/25/02.
860-5116	KY DSM			04/02/1991		
860-5148	KY DSM			05/05/1992	01/05/2001	Final Bond Release - 1/5/01.

Permittee: CONSOL of Kentucky Inc.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
860-5154	KY DSM			05/25/1993		reclaimed, some increments final bond release
860-0333	KY DSM	Knott Floyd Land Co		11/10/1993		
813-0178	KY DSMR			12/10/1993	12/03/1996	Transferred to Addington Enterprises Inc.
867-0400	KY DSM			04/05/1995		former Fairbanks Coal 867-0362
867-0394	KY DSM			08/11/1998		
860-5229	KY DSM			03/19/1999		
867-5225	KY DSM			08/23/1999		
860-0390	KY DSMRE			08/30/2001		Permit approved 8/30/2001; Application submitted 4/24/2000.
860-7007	KY DSMRE			10/25/2001		Permit approved 10/25/2001; Application submitted 5/1/2001
860-5179	KY DSM		13A	10/19/1993	02/11/2000	Final bond released 2/11/00; closed mine; face-up overlapped by 860-9000
813-0182	KY DSM		Airport	06/01/1992	11/05/2001	Final Bond Release - 11/5/01; Phase I release 1/23/98
413-7006	KY DSM		Airport Road	02/08/1989	12/03/2001	Final Bond Release - 12/3/01.
860-0312	KY DSM		Big Springs	06/15/1993		
860-5212	KY DSM		Blazing Saddles	08/06/1984		mine closed
860-5181	KY DSM		Brushy 11	02/18/1994		closed mine
867-0404	KY DSM		CKI	01/13/2000		
867-5198	KY DSM	Clas Coal Co	Clas	10/11/1989		
867-8040	KY DSM		Deane Processing	05/17/1995	05/04/2000	Final bond released 5/4/00; site reclaimed.
867-5182	KY DSM		E3 Mill Creek	02/04/1994		
867-0407	KY DSMRE		Fairbanks-Crane Fk, CT	06/09/2000		Includes Hughes Drive Mine and Long Fork Mine
860-5255	KY DSMRE	Dennis Mining LLC	Fourmile Branch Elkhorn #3	01/29/2003		Permit issued 1/29/2003.
867-5183	KY DSM		Indian Gap	05/18/1995	10/15/1999	Final bond released 10/15/99; overlapped by 867-0394.
860-5202	KY DSM	Jarisa Inc	Jarisa	12/11/1992		
836-6015	KY DSM		Jett Loadout	08/24/1987		
860-8005	KY DSM		Jones Foek Prep Plant	11/13/1990		
860-9000	KY DSM		Jones Fork Slurry Impdt	02/06/1991		

Permittee: CONSOL of Kentucky Inc.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
860-9007	KY DSM		Jones Fork-Right Fork Ref	05/17/1999		
836-5238	KY DSM		Lick Fork	08/06/1990		
867-5192	KY DSM		Loves Branch	02/29/1996		
867-0383	KY DSM	Fairbanks Coal Co Inc	Lower Appletree	04/21/1997		
860-5010	KY DSM	Marine Coal Co	Marine Coal E3	01/04/1984		
867-8042	KY DSM		Mill Creek Loadout	04/24/1995		
867-8041	KY DSM		Mill Creek Prep Plant	04/24/1995		
867-9007	KY DSM		Mill Creek Slurry Impdt	04/24/1995		
867-0428	KY DSMRE	Reedy Coal Co.	Mill Creek/Quillen Br. - Area 70	02/26/2002		Permit approved 2/26/2002; Application submitted 4/26/01.
867-0409	KY DSMRE		Mill Creek/Wiley - Area #1	07/17/2002		Permit approved 7/17/02 - MSHA number to be issued. Application submitted 8/25/99
860-5147	KY DSM		Mott's Branch #1	11/23/1992		
813-0186	KY DSM		MT-19	11/05/1992	11/05/2001	Final Bond Release - 11/5/01; Phase I release 01/07/98
813-0119	KY DSM		MT-31	01/17/1989	10/08/2001	Final Bond Release - 10/08/01; Phase I rel 7/20/89
836-5327	KY DSM	North Star Mining Inc	Northstar #3	03/01/1993		
860-5117	KY DSM		office and bath house	02/06/1991		
413-5009	KY DSM		Prater P-3	02/08/1989	10/08/2001	Final Bond Release 10/08/01; Phase I release 11/10/97
867-5184	KY DSM		Rhoades Branch	08/03/1989		
836-5363	KY DSM		Ridge #8	07/24/1997	08/30/2001	Final Bond Release - 8/30/01.
860-5218	KY DSM		Saltlick #10	09/11/1998		
460-5092	KY DSM		Sycamore Fork	06/10/1983		
860-0349	KY DSM		Triplett Br. (Wiley)	06/13/1996		inactive MTR
860-5221	KY DSM		Turtle Branch Portal	05/05/1998		
867-0391	KY DSM		Wiley contour strip	10/02/1997		
867-0405	KY DSMRE		Wiley-Upper Appletree CT	08/28/2000		
WV						
O-25-82	WV DEP			04/11/1996		trans from Fremont Coal Company

Permittee: CONSOL of Kentucky Inc.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
S-94-85	WV DEP			04/11/1996		trans from Fremont Coal Company
S-71-82	WV DEP			04/11/1996		trans from Fremont Coal Company
O-24-82	WV DEP			04/11/1996		trans from Fremont Coal Company
S-5038-93	WV DEP		Miller Creek MT-11	04/14/1997		MSHA 1211-WV4-0240-01 (formerly Fremont Coal Co.)
S-5039-93	WV DEP		Miller Creek MT-13	04/14/1997	08/22/2002	Trans. To Appalachian Fuels LLC; MSHA 1211-WV4-0240-01
S-5040-93	WV DEP		Miller Creek MT-34	04/14/1997		MSHA 1211-WV4-0240-01 (formerly Fremont Coal Co.)
O-5036-93	WV DEP		ler Creek refuse area & prep pl	04/14/1997		MSHA 1211-WV4-0240-01 (formerly Fremont Coal Co.)
U-5038-86	WV DEP		Mine No. CB-7	04/11/1996		trans from Fremont Coal Company

Permittee: Consol Pennsylvania Coal Co.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
30810703	PA DEP		Bailey	02/27/1986		Bailey Refuse Permit
30841316	PA DEP		Bailey	01/09/1990		
30841317	PA DEP		Enlow Fork	03/08/1996		trans from Enlow Fork Mining Co 03/08/96
WV						
Y-1007-99	WV DEP		Bailey	03/20/1999		Out of state tracking permit, no bond has been posted.
U-2006-01	WV DEP		Bailey	03/11/2003		Application submitted 4/4/01. Approved 3-11-2003.

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
IL						
264	IL DMM			06/10/1992		
258	IL DMM		Burning Star #2			
468-76	IL DMM		Burning Star #2	06/23/1975		
522-78	IL DMM		Burning Star #2	01/26/1976		
573-79	IL DMM		Burning Star #2	07/07/1976		
880-83	IL DMM		Burning Star #2	08/27/1980		
121	IL DMM		Burning Star #2	03/21/1984		
70	IL DMM		Burning Star #2	08/13/1984		
69	IL DMM		Burning Star #2	08/13/1984		
67	IL DMM		Burning Star #2	10/30/1984		
149	IL DMM		Burning Star #2	07/23/1985		
68	IL DMM		Burning Star #2	09/10/1986		
515-78	IL DMM		Burning Star #3	11/18/1975		
574-79	IL DMM		Burning Star #3	07/08/1976		
814-82	IL DMM		Burning Star #3	10/08/1979		
890-83	IL DMM		Burning Star #3	09/15/1980		
71	IL DMM		Burning Star #3	03/28/1985		
286-75	IL DMM		Burning Star #4	05/01/1974		
470-76	IL DMM		Burning Star #4	06/23/1975		
572-79	IL DMM		Burning Star #4	07/01/1976		
74	IL DMM		Burning Star #4	08/01/1984		
73	IL DMM		Burning Star #4	10/30/1984		
152	IL DMM		Burning Star #4	05/08/1986		
120	IL DMM		Burning Star #4	08/04/1987		
262	IL DMM		Burning Star #4	11/13/1992		

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
471-76	IL DMM		Burning Star #5	06/23/1975		
570-79	IL DMM		Burning Star #5	04/07/1976		
941-83	IL DMM		Burning Star #5	07/10/1980		
922-83	IL DMM		Burning Star #5	08/01/1980		
882-83	IL DMM		Burning Star #5	08/27/1980		
112	IL DMM		Burning Star #5	09/23/1983		
77	IL DMM		Burning Star #5	05/25/1984		
75	IL DMM		Burning Star #5	06/11/1984		
130	IL DMM		Burning Star #5	10/02/1984		
199	IL DMM		Burning Star #5	06/09/1989		
88-A	IL DMM		Hillsboro	03/21/1984		
281	IL DMM		Rend Lake			
IL-004	IL DMM		Rend Lake	08/01/1984		
162	IL DMM		Rend Lake	11/27/1985		
43	IL DMM		Rend Lake	01/14/1986		
202	IL DMM		Rend Lake	12/02/1987		
217	IL DMM		Rend Lake	08/01/1988		
244	IL DMM		Rend Lake	09/11/1990		
274	IL DMM		Rend Lake	01/03/1994		
44	IL DMM		Wheeler Creek	08/11/1986		
ND						
54	ND PSC		Velva	06/26/1979		
CCVV-8107	ND PSC		Velva	12/28/1983		
NM						
8	NM SMC		Burnham	12/16/1977		
OH						
D-0357	OH DOR					bond release pending

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
D-0323	OH DOR		Franklin			bond release pending
D-0174	OH DOR		Franklin			
D-0102	OH DOR		Georgetown 24			bond release pending
D-0334	OH DOR		Georgetown 24			inactive
D-192	OH DOR		Georgetown P.P.			
D-0054	OH DOR		Mahoning Valley #33			bond release pending
D-0051	OH DOR		Mahoning Valley #33			
D-0414	OH DOR		Mahoning Valley #33			bond release pending
D-0452	OH DOR		Mahoning Valley #33			bond release pending
D-2100	OH DMRM		Mahoning Valley #33	04/20/2001		
D-0826	OH DOR	Charlotte Coal Co.	Mahoning Valley #36			
D-0784	OH DOR	Charlotte Coal Co.	Mahoning Valley #36			
PA						
02733702	PA DER					pre-SMCRA permit; mine closed
65881701	PA DER					pre-SMCRA permit; mine closed
30841601	PA DEP			09/04/1986		
30743702	PA DEP		Blacksville #1	12/23/1983		
30841319	PA DEP		Blacksville #1	02/27/1986		
D30-033A	PA DEP		Blacksville #1	06/30/1987		
30841312	PA DEP		Blacksville #2	02/27/1986		
30830701	PA DEP		Dilworth	07/23/1984		
30841313	PA DEP		Dilworth	08/13/1986		
30841302	PA DEP		Humphrey #7	02/27/1986		
6377302 (IW)	PA DER		Montour #4			Pre-SMCRA permit; mine closed
3084301	PA DEP		Pursglove #15	06/07/1984	07/18/2000	Bond released 7-18-2000
30733707(R)	PA DEP		Robena	11/25/1986		

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
63981301	PA DEP		Shoemaker	05/27/1999		
63733709	PA DER		Westland #2		11/07/1999	Pre-SMCRA permit; mine closed; phase II final bond release - 11/7/99.
63851702	PA DER		Westland #2			Pre-SMCRA permit; mine closed
63831301	PA DEP		Westland #2	08/13/1986		
TN						
2449	TN OSMRE		Matthews P.P.	02/11/1986		Inc. 2 Ph. I bond release - 6/29/2001; Inc. 1 Ph. I & II release 10/12/2001.
UT						
ACT/015/015	UT DOGM		Emery			
ACT/015/007	UT DOGM		Hidden Valley			
VA						
1301107	VA DMLR			03/29/1983		
1201325	VA DMLR			03/27/1991		
1201367	VA DMLR	Pigeon Branch Coal		07/23/1991		Operator - Pigeon Branch Coal
1201653	VA DMLR			08/13/1998		
1201761	VA DMLR			11/02/2000		
1201754	VA DMLR		Amonate - Hipoe #8	08/09/2000		
1200360	VA DMLR		Amonate Dunford	12/08/1983		Dunford portal
1200352	VA DMLR		Amonate Greasy Creek	12/07/1983	07/11/2003	Greasy Creek shaft; Phase III bond released on 7/11/2003.
1300410	VA DMLR		Amonate P.P.	12/21/1983		Refuse area
1200006	VA DMLR		Amonate South Shaft	12/08/1983	08/27/2001	South shaft; Phase III final bond release - 8/27/2001.
1200727	VA DMLR		Ball Creek (B-1)	07/01/1985		Transferred from Permac Inc./Raven Coal Co.
1201193	VA DMLR		Ball Creek (B-3)	02/24/1989		Transferred from Permac Inc./Raven Coal Co.
1201311	VA DMLR		Ball Creek (B-4)	01/23/1991		Transferred from Permac Inc./Raven Coal Co.
1201412	VA DMLR		Ball Creek (B-5)	04/28/1992		Transferred from Permac Inc./Raven Coal Co.
1201145	VA DMLR		Ball Creek (O-3)	02/22/1996		Transferred from Permac Inc./Raven Coal Co.
1301365	VA DMLR		Bandy #1 Scalp Rock	07/22/1991	12/11/2002	Phase III bond released - 12/11/2002.
1300314	VA DMLR		Bishop P.P.	11/23/1983	11/29/2000	Phase III bond release - 11/29/00 (Brewster Hollow Ponds)

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
1301149	VA DMLR		Bishop P.P.	12/28/1983		includes permit 1300464
1201502	VA DMLR		Black Eagle	07/20/1994		
1400047	VA DMLR		Buchanan	03/08/1993		
1201057	VA DMLR		C-4	10/08/1986		Transferred from Permac Inc./Raven Coal Co.
1201154	VA DMLR		Clifton Creek (E-10)	10/06/1988		Transferred from Permac Inc./Raven Coal Co.
1200839	VA DMLR		Clifton Fork (E-9)	04/18/1986		Transferred from Permac Inc./Raven Coal Co.
1201371	VA DMLR		Clinch Valley #3	08/23/1991	08/02/2001	Phase III final bond release - 8/2/2001.
1201368	VA DMLR		Clinch Valley Mine #2	07/23/1991	11/29/2000	Phase III bond release - 11/29/00
1200308	VA DMLR		Dismal Creek (E-2)	11/23/1983		Transferred from Permac Inc./Raven Coal Co.
1301461	VA DMLR		Fiddle Scalp			Pending application #0301991 issued 4/17/93; scalped rock disposal area
1201477	VA DMLR		Gum Branch (P-33)	09/03/1993		Trans.from Permac Inc./Raven Coal Co.; Mine is off Rt. 632.
1200070	VA DMLR		Hale Branch (P-14)	06/01/1983		Transferred from Permac Inc./Raven Coal Co.
1200369	VA DMLR		Hale Branch (P-28)	12/09/1983		Transferred from Permac Inc./Raven Coal Co.
1200700	VA DMLR		Hale Branch (P-31)	04/17/1985		Transferred from Permac Inc./Raven Coal Co.
1100389	VA DMLR		Horsepen Strip #1	12/19/1983		Bond released
1201772	VA DMLR		Jawbone Mine #2	03/29/2001		Succession of 1201557 from New Life Energy (Rheinbraun)
1201511	VA DMLR		Little Hurricane (E-11)	08/02/1989		Transferred from Permac. Mine is off Rt. 628.
1201129	VA DMLR		Miles Branch Mine	11/23/1983		includes permit 1200315
1201625	VA DMLR		Nine Mile Branch (P-32)	08/20/1990		Transferred from Permac Inc./Raven Coal Co.
1300338	VA DMLR		Prep Plant (P-18)	12/02/1983		Transferred from Permac Inc./Raven Coal Co.
1700864	VA DMLR		Prep Plant New Refuse Fill	06/23/1986		Trans. from Permac Inc./Raven Coal; MSHA Impoundment I.D. 1211VA50064006
1500384	VA DMLR		Prep Plant Old Refuse Fill	12/15/1983		Trans. from Permac Inc./Raven Coal; MSHA Impoundment I.D. 1211VA50064053
1200636	VA DMLR		Robinson Fork (E-4)	12/13/1984		Transferred from Permac Inc./Raven Coal Co.
1201407	VA DMLR		Slate Creek (O-2)	03/13/1992		Transferred from Permac Inc./Raven Coal Co.
WV						
U-209-83	WV DEP		Amonate	11/14/1983		

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
S-4005-01	WV DEP		Amonate Auger No. 1	09/06/2001		Permit approved 9/6/2001. Application submitted 4/20/2001.
U-4002-98	WV DEP		Amonate No. 5 Seam	06/10/1998		
O-150-83	WV DEP		Amonate plant	11/14/1983		
U-70-83	WV DEP		Arkwright	03/31/1983		
U-12-84	WV DEP	Hiope Mining	Beechfork	01/17/1984		
U-35-85	WV DEP		Bentley #2	06/29/1987		trans from Bentley Coal; phase II release - 6/5/1998
U-4016-96	WV DEP	Styx River Coal Co	Big Creek No. 2	02/27/1997		Phase I release - 10/18/2000
U-214-83	WV DEP	Corbin Coal Inc.	Bishop	11/21/1983		also MSHA 46-01868, 46-02369
U-45-84	WV DEP		Blacksville #1	05/30/1984		mine closed
U-46-84	WV DEP		Blacksville #2	05/03/1984		
O-1011-93	WV DEP		Blacksville #2 - Hughes Hollow	05/17/1995		
U-4027-86	WV DEP		Blackwolfe	06/23/1986	04/15/1998	Phase III bond release 4/15/1998.
I-539	WV DEP		Booth Tipple	11/17/1988		
U-4032-88	WV DEP		Clinch Valley #5	03/14/1996	09/23/1998	Trans. from Clinch Valley Coal 03/14/96; phase III release 9/23/98.
U-4028-86	WV DEP		Clinch Valley No. 4	10/23/1986	04/06/2000	Phase III bond release - 4/6/00, phase II - 9/23/98, phase I - 12/9/91
UO-577	WV DEP		Crane Creek #12	06/11/1983	06/10/2002	Phase I release - 1/6/1997; final bond release - 6/10/2002.
U-217-83	WV DEP		Crane Creek #6	11/28/1983	07/31/1998	Phase III bond release 7/31/1998.
UO-692	WV DEP		Crane Creek #9	06/11/1983		Phase I release - 12/16/1996
O-136-83	WV DEP		Crane Creek plant	10/26/1983		
O-7-82	WV DEP		Crane Creek stockpile	10/18/1982	06/12/2002	Final bond released on 6/12/2002.
U-100-83	WV DEP		Four States	05/18/1983		
U-4021-89	WV DEP		Gordy #3	01/17/1990		Phase I release - 5/4/00. Transferred from Katelyn Coal Co. on 7/26/99
U-11-85	WV DEP	Hiope Mining	Greasy Creek #2	12/19/1995		
U-119-83	WV DEP		Humphrey	06/10/1983		
O-1022-92	WV DEP		Humphrey refuse	11/22/1993		
U-191-83	WV DEP		Ireland	12/26/1983		

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
U-15-84	WV DEP		Itmann #1	08/10/1995		name change from Itmann Coal Company 08/10/95
U-16-84	WV DEP		Itmann #2	08/10/1995		name change from Itmann Coal Company 08/10/95
U-17-84	WV DEP		Itmann #3	08/10/1995		name change from Itmann Coal Company 08/10/95
O-11-85	WV DEP		Itmann plant	08/10/1995		name change from Itmann Coal Company 08/10/95
U-198-83	WV DEP		Jenkinjones #4	10/27/1983	04/12/2000	Phase II and III bond release - 4/12/2000, phase I - 1/6/97.
U-221-83	WV DEP		Jenkinjones #6 & #7	11/28/1983	04/11/2000	Transferred to Mid-Vol Leasing Inc. 4/11/2000.
O-147-83	WV DEP	Recon Resources LLC	Jenkinjones plant	11/14/1983	04/11/2000	Transferred to Mid-Vol Leasing Inc. 4/11/00
U-78-83	WV DEP		Loveridge	09/18/1983		
O-1044-91	WV DEP		Loveridge	06/17/1992		
UO-541	WV DEP		Maitland	02/22/1980		Transferred to USX
UO-431	WV DEP		Nailler	06/28/1979		
U-4018-88	WV DEP	Omega Square	Omega Square	02/07/1989		Phase I release - 1/31/2001
U-4015-86	WV DEP		Omega Square haulroad	10/10/1986		Phase I release - 1/30/2001
U-53-83	WV DEP		Osage	03/02/1983		
O-164-83	WV DEP	Star Buck Coal	Pageton plant	11/28/1983	12/29/1999	Transferred to Deepgreen West Virginia, Inc. 12/29/1999.
UO-374	WV DEP	Hiope Mining Inc.	Pigeon Branch #8	03/15/1993	10/18/2000	Phase III bond release - 10/18/2000.
U-86-83	WV DEP		Pursglove	05/04/1983		
S-72-82	WV DEP		Red Fox	08/02/1982	04/17/2001	Transferred to Bluestone Coal Corp. on 4/17/2001.
U-104-83	WV DEP		Robinson Run #95	06/10/1983		incl. old D-67-82, O-108-83
U-1025-92	WV DEP		Robinson Run #95	03/03/1993		
U-113-83	WV DEP		Rowland	06/09/1983	11/21/1996	overbonded by U-3024-89
UO-440	WV DEP		Rowland	10/07/1983		Repermitted under UO-130
UO-130	WV DEP		Rowland #11	10/07/1983	04/11/2000	Transferred to Clear Fork Coal Company 4/11/2000.
D-40-81	WV DEP		Rowland #14	11/16/1983	04/11/2000	Transferred to Clear Fork Coal Co. 4/11/2000.
U-88-83	WV DEP		Rowland #3	05/12/1983	04/11/2000	Transferred to Clear Fork Coal Company 4/11/2000.
U-3024-89	WV DEP		Rowland #6	08/31/1989	04/11/2000	Transferred to Clear Fork Coal Company 4/11/2000.

Permittee: Consolidation Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
U-83-83	WV DEP		Rowland #9	05/04/1983	04/11/2000	Transferred to Clear Fork Coal Company 4/11/2000.
S-142-78	WV DEP		Rowland Hilltop	12/29/1982	04/11/2000	Transferred to Clear Fork Coal Company 4/11/00.
O-125-83	WV DEP		Rowland plant	09/27/1983	04/11/2000	Transferred to Clear Fork Coal Co. 4/11/2000.
28-81	WV DEP		Shawnee	09/03/1982	06/14/1999	Phase III bond release 6/14/1999
U-146-82	WV DEP		Shoemaker	12/17/1982	11/21/1996	Final release prior to 11/21/96
U-1045-91	WV DEP		Shoemaker	12/23/1991		
U-1025-91	WV DEP		Shoemaker	12/31/1991		
O-1001-00	WV DEP		Shoemaker	01/11/2000		Cunningham Hollow Refuse application approved 4/19/2002, submitted 1/11/00.
UO-225	WV DEP		Shoemaker Britts Run	01/04/1978	05/15/2002	Phase III release 5/15/2002
U-4004-91	WV DEP	Hiope Mining Inc	Squire Jim	12/11/1991		
U-11-84	WV DEP		Turkey Gap	01/17/1984		
UO-584	WV DEP		Turkey Gap shaft	01/17/1984		Phase I bond rel. 11/27/97
UO-471	WV DEP		Westigan	10/23/1979	07/12/2000	Transferred to Riverside Energy Inc. - 7/12/00

Permittee: Eighty Four Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
63831302	PA DEP		Eighty Four Mine	03/30/1987		
63743702	PA DEP		Eighty Four Refuse	12/27/1985		

Permittee: Glenrock Coal Co

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WY						
291T2	WY DEQ			03/11/1985	12/31/1997	J. B. Harvey resigned 12/31/97
WY0022	WY DEQ			03/11/1986	12/31/1997	J. B. Harvey resigned 12/31/97
291T3	WY DEQ			03/09/1990	12/31/1997	J. B. Harvey resigned 12/31/97
291T5	WY DEQ			01/25/1992	12/31/1997	J. B. Harvey resigned 12/31/97
291T4	WY DEQ			01/25/1992	12/31/1997	J. B. Harvey resigned 12/31/97

Permittee: Helvetia Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
32743710	PA DEP		Helvetia #1	04/12/1985		Refuse disposal area
32743711	PA DEP		Helvetia #2	10/03/1985		Refuse disposal area
32851302	PA DEP		Lucerne #6 Extension	02/02/1987		Mining inactive, water treatment continues.
32841303	PA DEP		Lucerne #6 Mine	09/15/1986		Mining inactive, water treatment continues.
32841320	PA DEP		Lucerne #8 Mine	04/15/1986		Mining inactive, water treatment continues.
32841317	PA DEP		Lucerne #9 Mine	08/08/1985		Mining inactive, water treatment continues. (2nd MSHA #: 36-04597)
32921302	PA DEP		Marshall Run Deep	08/13/1993		Mining inactive

Permittee: Island Creek Coal Co (supp)

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
I-678	WV DEP					
I-700	WV DEP					
I-700	WV DEP					
P-590	WV DEP					
I-678	WV DEP					
O-130-83	WV DEP					
U-5042-91	WV DEP					
P-672	WV DEP		Beaver Creek/Alpine AMD			
I-700	WV DEP		Beaver Creek/Alpine AMD			
I-700	WV DEP		Beaver Creek/Alpine AMD			
I-700	WV DEP		Beaver Creek/Alpine AMD			
I-678	WV DEP		North AMD			
I-678	WV DEP		North AMD			
O-129-83	WV DEP		North Branch Fuel Supply			
U-5068-87	WV DEP		Roach Branch 5 block		10/23/1997	final bond release 10/23/97

Permittee: Island Creek Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
KY						
498-5424	KY DSMRE					
498-5423	KY DSMRE					
498-0191	KY DSMRE					
698-5325	KY DSMRE					
836-5119	KY DSMRE					
898-5234	KY DSMRE					
898-8011	KY DSMRE					
898-5426	KY DSMRE					
498-5372	KY DSMRE		Big Creek #1			
654-5004	KY DSMRE		Fies #9 P.P.		11/25/1998	Transferred to Pennyrile Coal Co. 11/25/98
713-5002	KY DSMRE		Hamilton #1			
713-5001	KY DSMRE		Hamilton #2			
713-5000	KY DSMRE		Ohio 11			
436-8006	KY DSMRE		Spurlock P.P.			
VA						
1400493	VA DMLR		Beatrice Mine			Transferred from Beatrice Pocahontas on 2/29/2000
1400496	VA DMLR		Mine #3			
1300341	VA DMLR		Saw Mill Storage Area			
1400492	VA DMLR		VP 1			
1401232	VA DMLR		VP 2			
1400498	VA DMLR		VP 4			
1401489	VA DMLR		VP 5			Permit 1400497 transferred from VP5 Mining Co. & reissued as 1401489.
1401531	VA DMLR		VP 8			Also MSHA # 44-04517
WV						
O-2012-96	WV DEP					
D-28-82	WV DEP					Not started

Permittee: Island Creek Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
EM-72	WV DEP					
D-93-82	WV DEP			11/01/1995	09/21/1999	Final bond release 9/21/99; transfer from Cline Brothers 11/1/95
U-134-83	WV DEP		Abb's #1 Mine	11/09/1994	07/16/1998	Final bond rel.7/16/98; trans from Abbs11/09/94
U-5076-86	WV DEP		Abb's #3	10/29/1993		Inactive, trans. from Abb's Resources Inc. 10/29/93; phase I release - 6/76/2001
U-5076-87	WV DEP		ake Energy #3	10/03/1995	09/18/2000	Phase III bond release 9/18/00. Transferred from Top Kat Mining 10/03/95
U-4011-89	WV DEP		Alpine #1 deep	12/14/1989	01/30/1997	Transferred to Still Run Coal Co;Final bond rel 01/30/97
U-4012-89	WV DEP		Alpine #3 deep	08/08/1989	01/30/1997	Transferred to Still Run Coal Co;Final bond rel 01/30/97
U-5064-88	WV DEP		ARB #1	11/09/1994	04/16/2002	Transferred from ARB Mining 11/09/94; phase II release - 8/4/1998; phase III release 4/16/2002.
UO-352	WV DEP		Baron #1	12/09/1994	09/29/1998	Phase II bond release 9/29/98. Transferred from Baron Coal Co Inc 12/09/94.
I-700	WV DEP		Beaver Creek/Alpine AMD			
H-84	WV DEP		Billy Ridge Road			Phase I bond release 06/21/89
U-5035-91	WV DEP	Brandy Mining Inc, Mine#2	Brandy #2	07/25/1991	06/07/2001	Phase III release - 6/7/2001
O-5037-91	WV DEP		Buckeye haulroad	07/25/1991	11/13/1997	O-5037-91 has been totally overbonded by H-456
EM-55	WV DEP		C&G #1	03/04/1991	09/18/2000	Phase III bond release - 9/18/00, phase I - 5/25/93. Transferred from C&G CoalCo
U-5036-91	WV DEP	Cline Brothers Mining Inc	Cline Bros. #6 deep	07/25/1991	06/07/2001	Phase III release - 6/7/2001
U-167-83	WV DEP		Crazy Horse / Hi-Top		12/01/1998	Phase III bond release - 12/1/98
U-130-83	WV DEP		D-9 C seam deep	06/24/1988	05/17/2000	Phase III bond release 5/17/2000. Not started
UO-212	WV DEP		Dear Creek	08/08/1989	07/16/1998	final bond release 7/16/98
U-5075-87	WV DEP		Dingess Branch deep	01/20/1988	05/17/2000	Phase III bond release 5/17/2000. Not started
S-5049-86	WV DEP		Dorothy	08/18/1991	12/03/1997	Final bond rel 12/3/97; Trans. to Jupiter Coal Co
U-5065-86	WV DEP		Eagle Delta #1	11/09/1994	09/29/1998	Phase III bond release 9/29/98. Transferred from Eagle Delta Coal Corp 11/09/94
U-5026-86	WV DEP		Eagle Delta #2	08/10/1995	10/13/1998	Phase III bond release 10/13/98. Transferred from Slick Rock Coal Co 08/10/95
U-4006-86	WV DEP	Paybra Mining Co Inc	Eagle-2 Gas deep	04/16/1991	05/17/2000	Phase III bond release 5/17/2000. Not started; Paybra had approved DR-19, never op'd
P-590	WV DEP		Elk Creek #10 plant	01/04/1993		
H-456	WV DEP		Elk Creek haulroad	01/04/1993		
U-5096-88	WV DEP		Gemstone #1	11/09/1994	10/05/1999	Final Bond Release 10/5/99; transfer from Gemstone Coal 11/9/94

Permittee: Island Creek Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
U-58-85	WV DEP		Har Mat #1 deep	03/24/1995		Reclaimed; trans from Har Mat Coal Co Inc 3/24/95
UO-665	WV DEP		Har Mat #2 deep	03/24/1995		Phase I rel 6/11/93; trans from Har Mat Coal Co
U-5008-86	WV DEP		Har-Mat #3	12/08/1993	12/03/1997	Final bond rel 12/03/97; Trans to Jupiter Coal Co
O-4027-89	WV DEP		Haulroad	02/01/1990	01/30/1997	Transferred to Still Run Coal Co;Final bond rel 01/30/97
U-229-83	WV DEP		Hernshaw #2 deep	12/28/1988	12/03/1997	Final bond rel. 12/03/97; Trans to Jupiter Coal Co
U-230-83	WV DEP		Hernshaw #3 deep	12/28/1988	12/03/1997	Final bond rel. 12/03/97; Trans to Jupiter Coal Co
S-5064-91	WV DEP		Hiwall Miner #1	02/23/1994	05/17/2000	Phase III bond release - 5/17/00; not started
S-5053-86	WV DEP		Kittanning Strip	08/18/1991		Reclaimed; phase I released
S-2019-88	WV DEP		Knight Ink #1	09/02/1988		Not started
U-5056-87	WV DEP	Shield Mining, Inc.	Lynk #1	10/29/1993	03/04/1997	Released operator - 3/4/1997
UO-442	WV DEP		Mackline #1	12/13/1992	09/21/1999	Phase III release - 9/21/1999
UO-550	WV DEP		Mackline #3	12/13/1987	07/16/1998	Final bond release 07/16/98
O-4016-89	WV DEP		Marianna loadout	02/01/1990	01/30/1997	Transferred to Still Run Coal Co;Final bond rel 01/30/97
53-75	WV DEP		Mill's Creek			Phase I bond release 07/22/93
59-77	WV DEP		Mill's Creek			Phase I bond release 07/22/93
I-678	WV DEP		North AMD			
EM-69	WV DEP		North Branch Airshaft	02/24/1988		
O-129-83	WV DEP		North Branch Fuel Supply	10/26/1988		
EM-100	WV DEP		North Portal,11A airshaft			
P-672	WV DEP		North Prep Plant			
U-5050-91	WV DEP		Old 10K Mine	03/01/1994		
U-5065-88	WV DEP	P-F Mining Inc.	P-F Mining #6	01/31/1989	09/18/2000	Phase III bond release - 9/18/2000. P-F's last production 07/13/91
UO-531	WV DEP		Phillips	03/24/1995		Phase I rel 6/10/91; trans from Phillips Coal Co
EM-47	WV DEP		Phillips #1	03/24/1995		Phase I rel 3/21/91; trans from Phillips Coal Co
U-5034-91	WV DEP	Pine Creek Mining Inc	Pine Creek #5 deep	07/25/1991	06/07/2001	Phase III release - 6/7/2001
U-5029-92	WV DEP	Pine Creek Mining IV, Inc	Pine Creek IV, Mine #1	09/24/1993		Phase I bond release - 12/1/1998

Permittee: Island Creek Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
U-5051-87	WV DEP	Pine Creek Mining IV Inc.	Pine Creek IV, Mine #2	12/13/1994		Transferred from Thunder Mountain Energy, phase I release - 6/7/2001
U-5056-87	WV DEP	Pine Creek IV	Pine Creek IV, Mine #3	10/29/1993		
H-537	WV DEP		Pond Fork haulroad	01/04/1993	12/03/1997	Final bond rel. 12/03/97; Trans to Jupiter Coal Co
P-605	WV DEP		Pond Fork plant	01/04/1993	12/03/1997	Final bond rel. 12/03/97; Trans to Jupiter Coal Co
O-26-82	WV DEP		Pond Fork top hill road	06/07/1992	12/03/1997	Final bond rel. 12/03/97; Trans to Jupiter Coal Co
UO-649	WV DEP		Red Rose	08/16/1988	10/13/1998	Phase III bond release 10/13/98, phase II 2/15/96, phasel 05/05/93
D-23-82	WV DEP		Ritter/Greene			Phase I bond release 08/ /91
U-5068-87	WV DEP		Roach Branch 5 Block	02/08/1993	10/23/1997	Not started, final bond rel. 10/23/97
U-5061-86	WV DEP		S&M #7	01/01/1996		Phase I bond release 3/16/99. Transferred from S & M Coal
U-222-83	WV DEP		Saturn #3 deep	11/11/1986	12/03/1997	Final bond rel. 12/03/97; Trans to Jupiter Coal Co
U-5085-86	WV DEP		Saturn deep	03/24/1995		Phase I rel 10/21/91; trans from Saturn Coal Co
U-5026-97	WV DEP		School House Alma	12/15/1997		Not Started
U-5042-91	WV DEP	Stonecoal Branch Mining Inc	Stonecoal Branch, Mine #1	07/07/1993		
U-5025-96	WV DEP	Stonecoal Branch Min. Inc	Stonecoal Branch, Mine #2	02/10/1997		
H-195	WV DEP		Sugartree haulroad	04/11/1993	11/18/1997	H-195 has been totally overbonded by H-456
U-5079-88	WV DEP		Thunder Mtn #5 deep	05/10/1989	05/21/1999	Phase III released - 5/21/99; Thunder Mtn. Energy operator 2/1/90-5/18/91
U-5014-97	WV DEP		Turkeypen #2 Gas	11/19/1997		Not Started
O-32-82	WV DEP		Verner Ramp	07/02/1992	09/07/2000	Phase III bond release 9/7/00.
UO-30	WV DEP		West Portal subsidence			
P-674	WV DEP		West Prep Plant	02/24/1988		
O-130-83	WV DEP		West Refuse Area #1	10/26/1988		
U-5074-87	WV DEP	Brandy Mining Inc Mine #2	Wynchester #21-C	10/29/1993		Inactive, from Wynchester Mining; also MSHA 46-07776(11/4/94)

Permittee: Island Creek Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
H-613	WV DEP					Total bond release 03/24/93
H-536	WV DEP					Inactive
57-80	WV DEP		#5 shop & office			Reclaimed
S-108-82	WV DEP		#7 Tenney area			Reclaimed
S-12-82	WV DEP		#8 D Hinkle area			Reclaimed
163-76	WV DEP		Bean's Mill			Reclaiming
I-699	WV DEP		Bean's Mill loadout			Reclaiming
S-91-83	WV DEP		Job 10			Reclaimed
P-698	WV DEP		prep plant			Inactive
D-55-82	WV DEP		T'ville #3			Reclaimed
O-12-83	WV DEP		Upshur			Not started
O-61-82	WV DEP		Upshur			Inactive

Permittee: Island Creek Mining Company (s

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
57-80	WV DEP					
S-12-82	WV DEP					

Permittee: Jeffco Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
33723006	PA DEP		Wilson #7 Mine	07/01/1985		transferred from Maud Mining Co. 1/17/2002.

Permittee: Kent Coal Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
03850105R	PA DEP		Brickchurch #3 Mine	06/19/1984		
03793072C	PA DEP		Iselin #10	02/15/1985		Completed, water treatment continues.
3279103	PA DEP		Iselin #11			Completed/ Stage II/ Water Quality
2869BSM13	PA DEP		Iselin #6	02/13/1975		Completed/ Stage II/ Water Quality
32803037	PA DEP		Kent #53	06/27/1984		Completed/ Stage II
32860106	PA DEP		Kent #55	07/13/1987		Completed/ Water Quality
32803010	PA DEP		Kent #56	08/06/1984		Completed, water treatment continues.
32890109	PA DEP		Kent #57	10/15/1990		Completed, water treatment continues.
32803712	PA DEP		Lewisville Recovery Plant	01/16/1986		Completed, water treatment continues.
32940105	PA DEP		Lucerne #2	05/09/1995		Completed/ Water Quality
03890113	PA DEP		Margaret #50	01/25/1991		Completed/ Stage II
32920102	PA DEP		Marshall Run Mine #1	04/14/1993		Completed/ Stage II
32970103	PA DEP		Marshall Run Mine #2	08/15/1997		Completed/ Stage II
32930101	PA DEP		Tide #3 Mine	09/10/1993	08/08/2001	Phase III final bond release - 8/8/2001
32813031	PA DEP		Waterman #1	06/19/1984		Completed, water treatment continues.

Permittee: Keystone Coal Mining Corp.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
32941301	PA DEP		Crooked Creek	01/09/1995		
32931301	PA DEP		Dutch Run	04/09/1996		
03841307	PA DEP		Emilie #4 Mine	07/28/1986		Mining inactive, water treatment continues.
03773706	PA DEP		Emilie #4 Refuse	05/28/1985		Refuse disposal area
03841305	PA DEP		Emilie Mine	08/11/1986		
03831305	PA DEP		Jane Mine	01/03/1986		Mining inactive, water treatment continues.
03813704	PA DEP		Keystone #1	06/28/1985		Refuse disposal area
03970701	PA DEP		Keystone #2			Refuse disposal area
03940701	PA DEP		Keystone #2 CRD	01/04/1996		
03951601	PA DEP		Keystone Cleaning Plant	02/29/1996		
0380302	PA DEP		Margaret #7	02/25/1987		Mining inactive, water treatment continues.
03841304	PA DEP		Margaret 11	08/27/1985		
03851304	PA DEP		Margaret 11	04/07/1993		
03891301	PA DEP		Margaret 11 - No 2 Portal	02/21/1991		Mining inactive
500121	PA DEP		Margaret Refuse			Refuse disposal area
3576SM24	PA DEP		Margaret Refuse Recovery			Mining inactive, water treatment continues.
3274301	PA DEP		O'Donnell #4 - Manor 8	09/05/1974		Mining inactive, water treatment continues.
32841321	PA DEP		O'Donnell Mine #3	11/15/1995		Mining inactive
32921301	PA DEP		Plumcreek #1 Mine	11/07/1993		Mining inactive. Phase II & partial phase III release on 4/10/2002.
32841313	PA DEP		Urling #2 Mine	02/20/1986		Mining inactive, water treatment continues.
32841323	PA DEP		Urling #3-E	02/20/1986		Permitted reserve
32841312	PA DEP		Urling Nos. 1 & 3 Mines	06/10/1986		Mining inactive, water treatment continues.
03753705	PA DEP		Urling Nos. 1 & 3 Refuse	09/26/1985		Refuse disposal area

Permittee: Laurel Run Mining Co (supp)

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
O-54-82	WV DEP					
O-139-83	WV DEP					
O-139-83	WV DEP					
O-37-85	WV DEP					
O-139-83	WV DEP					
S-5084-86	WV DEP					
U-139-83	WV DEP		Potomac			

Permittee: Laurel Run Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
63841304	PA DEP		Vesta	12/22/1998		transfer from Massey; reclamation only
WV						
O-111-83	WV DEP		#12 loadout	03/02/1990	09/23/1998	Phase III bond release 9/23/98, phase II 8/28/96, phase I 10/30/92
O-37-85	WV DEP		#29 impoundment	01/19/1994	07/19/1999	Trans to Logan Mining Co
O-27-82	WV DEP		#29A Loadout	11/30/1994	07/19/1999	trans to Logan Mining Co
U-5060-88	WV DEP		20DA Dorothy Deep	01/19/1994	07/16/1999	Trans to Logan Mining Co
U-5061-88	WV DEP		20DB Dorothy Deep	01/19/1994	07/16/1999	Trans to Logan Mining Co
UO-609	WV DEP		Academy #2	03/17/1995	11/06/1996	Final bond release 11/06/96 (ex Academy Coal Co)
O-1039-90	WV DEP		Alpine Refuse #2			
D-38-81	WV DEP		Brandy #1	11/01/1995	04/15/1998	trans from Cline Bros 11/1/95; final rel. 4/15/98
U-5047-86	WV DEP		Brandy #1A Mine	11/01/1995	08/11/1998	trans fr.Cline Bros 11/1/95; final bond release - 8/11/1998.
O-5014-87	WV DEP		Brandy #1A Road	11/01/1995	04/15/1998	trans from Cline Bros 11/1/95; final rel. 4/15/98
U-172-83	WV DEP		Brandy #2	11/01/1995	04/15/1998	trans from Cline Bros 11/1/95; final rel. 4/15/98
U-5045-86	WV DEP		Brandy #2 Mine	11/01/1995	04/15/1998	trans from Cline Bros 11/1/95; final rel. 4/15/98
U-5044-86	WV DEP		Brandy #3 Mine	11/01/1995	07/16/1999	trans to Logan Mining Co
U-72-85	WV DEP		Brandy 2A Mine	11/01/1995	04/15/1998	trans from Cline Bros 11/1/95; final rel. 4/15/98
S-4020-96	WV DEP		Coal Mountain No. 1	05/07/1997		
S-4021-96	WV DEP		Coal Mountain Valley Fill	05/07/1997		
H-477	WV DEP		Coal Mtn #9 road	03/02/1990		
EM-65	WV DEP		Coal Mtn #9E tunnel	03/02/1990	09/23/1998	Phase III bond release 9/23/98, phase II - 1/7/97, phase I - 12/03/93
P-586	WV DEP	Childress Service Corp	Coal Mtn. plant	03/02/1990		Inactive
S-117-85	WV DEP		contour and haulroad	01/19/1994	07/19/1999	Trans to Logan Mining Co
S-5058-88	WV DEP		Contour Coal Strip	01/30/1994	06/01/1998	Phase III release 6/1/98, totally overbonded by S-5017-96. Trans. from Contour Coal Inc.
UO-432	WV DEP		Double E	04/17/1995		Reclaimed; trans from Double E Mining 4/17/95
U-5022-86	WV DEP		Elm #6 Mine	11/30/1994	06/26/1997	trans.from Twin Branch Coal Co; final rel. 6/26/97

Permittee: Laurel Run Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
124-78	WV DEP		Elm Strip	11/30/1994	04/01/1999	Phase III bond release - 4/1/99. Transfer from Twin Branch Coal Co 11/30/94
O-53-82	WV DEP		Haulroad to Laurel	01/19/1994	07/19/1999	Trans to Logan Mining Co
P-581	WV DEP		Holden 29 plant	01/19/1994	07/19/1999	Trans to Logan Mining Co
UO-610	WV DEP		L. D. R.	03/17/1995	11/06/1996	Final bond release 11/06/96 (ex Academy Coal Co)
U-5043-86	WV DEP		Logan Coals #4	01/19/1994	06/13/1997	Trans.from War Eagle Constr; final rel 6/13/97
S-5041-89	WV DEP	Magnet Coal, Inc.	Magnet #2 Strip	11/30/1994	07/19/1999	trans to Logan Mining Co
S-5017-96	WV DEP	Magnet Coal Inc.	Magnet $4 Strip	03/18/1997	07/19/1999	Trans to Logan Mining Co
EM-74	WV DEP		Marcus #4	04/17/1995		Phase I rel 8/13/88;trans from Marcus Coal 4/17/95
O-5042-86	WV DEP		Mutual #1 Road	02/09/1996	07/19/1999	trans to Logan Mining Co
S-5062-88	WV DEP	Mutual Mining Inc	Mutual #1 Strip	03/17/1995	07/19/1999	Trans to Logan Mining co
S-5042-88	WV DEP		Mutual #1 Strip	02/09/1996	07/19/1999	trans to Logan Mining Co
S-5041-86	WV DEP		Mutual #1 Strip	02/09/1996	07/19/1999	trans to Logan Mining Co
S-5012-89	WV DEP		Mutual #2 Strip	02/09/1996	05/23/1997	transfer from Mutual Mining; final bond rel
U-5021-86	WV DEP		Old 20D Mine	11/30/1994	06/13/1997	trans.from Twin Branch Coal Co; final rel. 6/13/97
O-5046-91	WV DEP		Overland Belt	05/04/1995	07/19/1999	trans to Logan Mining Co
U-177-83	WV DEP		Paybra #4	02/16/1994	10/30/2000	Phase III bond release 10/30/2000
U-5043-88	WV DEP		Pine Creek #8	11/30/1994	10/22/1997	transfer from Twin Branch Coal Co; phase III release - 10/22/1997.
U-139-83	WV DEP		Potomac			also MSHA 46-04190 (12/20/78), 1211WV30102 (12/75)
O-31-82	WV DEP		ROM loadout - Twin Branch	01/19/1994		Transfer from Twin Branch Coal Co
D-15-82	WV DEP		S & M #5	05/19/1995	11/06/1996	Final bond release 11/06/96 (ex S & M Coal)
U-153-83	WV DEP		S&M #6	05/19/1995	09/10/1998	Trans from S&M 5/19/95; Final bond rel. 9/10/98
U-49-85	WV DEP		Shabeth #3	10/31/1995	06/18/1998	final bond rel.6/18/98; trans from Shabeth
S-2-79	WV DEP		Silver Creek Strip	11/30/1994	07/19/1999	trans to Logan Mining Co
S-5084-86	WV DEP		South Copperas	11/30/1994	07/16/1999	trans to Logan Mining Co
U-5013-93	WV DEP		Spring Branch	02/04/1997		
O-54-82	WV DEP		Twin Branch Prep Plant	01/19/1994	05/23/1997	Trans from Twin Branch Coal Co; final bond rel

Permittee: Laurel Run Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
S-5053-89	WV DEP		Whitman #2 Strip	11/30/1994	07/19/1999	trans to Logan Mining Co
S-5054-89	WV DEP		Whitman #3 Strip	11/30/1994	07/19/1999	Trans to Logan Mining Co
S-5-80	WV DEP		Whitman C&A	11/30/1994	07/19/1999	trans. to Logan Mining Co
S-9-85	WV DEP		Whitman C&A	11/30/1994	07/19/1999	trans to Logan Mining Co
U-5063-88	WV DEP		Whitman Dorothy Mine	11/30/1994	10/22/1997	transfer from Twin Branch Coal Co; phase III release - 10/22/1997.

Permittee: Maud Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
PA						
33910103	PA DEP		Adrian #1	07/25/1991	02/20/2001	Phase III final release - 2/20/2001.
33900115	PA DEP		Eleanora #1	04/30/1991	09/20/2001	Phase III final release - 9/20/2001.
33910102	PA DEP		Eleanora #2	09/13/1991	12/22/1999	Phase III final release - 12/22/1999.
33940103	PA DEP		Fuller Bridge #1	08/30/1994	06/30/1999	Phase III final release - 6/30/1999.
33773120	PA DEP		Lewis Mine	05/22/1985	03/05/2000	Phase III final release - 3/5/2000.
24910101	PA DEP		Medix Run #1	06/26/1992	09/13/2001	Phase III final release - 9/13/2001.
17880110	PA DEP		routville #1	11/30/1989	04/17/1998	Phase III final release - 4/17/1998.
33820150	PA DEP		Wilson #5	12/12/1986	08/17/1998	Phase III final release - 8/17/1998.
33723006	PA DEP		Wilson #7 Mine	07/01/1985	01/17/2002	transferred to Jeffco Coal Co. 1/17/2002.

Permittee: McElroy Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
U-1026-92	WV DEP		Blakes Ridge - McElroy	05/04/1993		
U-33-83	WV DEP		McElroy	02/10/1983		
O-1023-92	WV DEP		McElroy refuse area	02/10/1996		

Permittee: Pacificorp Energy Inc

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
UT						
ACT015019	UT OGM	Energy West Mining Co		07/06/1994	12/31/1997	J. B. Harvey resigned 12/31/97
ACT015009	UT OGM	Energy West Mining Co		02/21/1995	12/31/1997	J. B. Harvey resigned 12/31/97
ACT015017	UT OGM	Energy West Mining Co		08/29/1995	12/31/1997	J. B. Harvey resigned 12/31/97
ACT015018	UT OGM	Energy West Mining Co		02/07/1996	12/31/1997	J. B. Harvey resigned 12/31/97
WA						
WA0001D	WA DEP	Centralia Mining Co		11/21/1995	12/31/1997	J. B. Harvey resigned 12/31/97

Permittee: Quarto Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
OH						
D-433	OH DMRM		Powhatan #4	11/29/1984		
D-422	OH DMRM		Powhatan #7	10/19/1984		

Permittee: Southern Ohio Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
OH						
D-354	OH DMRM		Meigs #1	06/12/1984		
D-355	OH DMRM		Meigs #2	06/12/1984		
D-463	OH DMRM		Raccoon #3	04/09/1985		

Permittee: Welco Mining Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
UO-350	WV DEP		Hill #1	01/28/1993	08/08/1997	
UO-696	WV DEP		Hill #2	01/28/1993	08/08/1997	

Permittee: Windsor Coal Company

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
O-485	WV DEP			01/17/1985		
P-744	WV DEP			01/26/1988		
E-128-00	WV DEP			01/26/1988		

Permittee: Wolfpen Knob Development Co.

Permit Number	State Regulatory Authority	Operator *(If different from permittee)*	Mine Name	Permit Issue Date	END DATE	Comments
WV						
U-2015-92	WV DEP			01/28/1998		
O-1052-91	WV DEP			01/28/1998		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-5182	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1855	DATE VIOL. ISSUED:	07/25/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance when constructing Haul Road G				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:					

PERMIT NO:	860-5221	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-1032	DATE VIOL. ISSUED:	07/25/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Adequate sediment control has not been provided. (2) An unapproved fill has been created. (3) An off-site disturbance has been created. (4) a diversion ditch has been breached.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:					

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0414	DATE VIOL. ISSUED:	07/24/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) & (2) Pond 1 effluent exceeds pH discharge limits				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Required work has been completed, violation terminated.				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1854	DATE VIOL. ISSUED:	07/02/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Permittte allowed material on steepslopes and downslopes within the permit area of Big John Hollow and Shelby Fork.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension granted by inspector to 9/2/03.				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0745	DATE VIOL. ISSUED:	06/25/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Off permit disturbance on Increment #8 (2) Failed to properly maintain Silt Pond #P-1				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension to 8/25/03 granted by inspector.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-0409	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	53-1680	DATE VIOL. ISSUED:	06/20/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1)&(2)Failed to pass all drainage through approved sediment control. (3)Failed to build Sidehill Fill as per design. (4)Allowed deposition of material on downslopes.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension granted to 8/19/03 by inspector.				

PERMIT NO:	860-9000	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0529	DATE VIOL. ISSUED:	06/16/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Discharged water during rain event that exceeded settleable solids limits.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Required work completed, violation terminated				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1852	DATE VIOL. ISSUED:	05/20/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance; 0.25 acre slide of spoil and debris occurred on Increment 5.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension granted to 8/21/03. Extension requested of the Director prior to 8/21/2003.				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1851	DATE VIOL. ISSUED:	05/13/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance occurred. Material on downslope face of pond D moved from the permitted area. 5/20/03 NOV modified to include second off permit disturbance.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extensiion granted by inspector to 8/13/03. Extension has been requested of Director prior to 8/13/03				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0744	DATE VIOL. ISSUED:	04/29/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1)Allowed substandard water to by-pass pond P-2. (2) By-passed water exceeded effluent limitations. (3) Cut through natural barrier allowing by-pass. (4) Placed spoil material off permit.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	(1) & (2) are non correctable. (3) work on barrier complete, item 3 terminated (4) Extension grantedby the Director to 9/23/2003				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0408	DATE VIOL. ISSUED:	04/25/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) & (2) Pond 1 discharge exceeds iron discharge limits				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Required work completed - violations terminated.				

PERMIT NO:	867-0400	MSHA NO:		MSHA DATE:	
VIOLATION NO:	53-2342	DATE VIOL. ISSUED:	04/16/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance in which slide occurred below bench pond 2. Order modified on 4/24/03 to include 2nd slide located on Inc. #1				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	An extension has been requested through the Director's office. Extension granted by the Director to 9/10/03.				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0742	DATE VIOL. ISSUED:	03/26/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance at five locations.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension requested of the Director Extension granted by the Director to 8/25/03				

PERMIT NO:	867-0407	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0741	DATE VIOL. ISSUED:	03/25/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance caused by three slides				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	An extension beyond 90 days has been made with the Director. Director granted extension to 8/22/03.				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1850	DATE VIOL. ISSUED:	03/18/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Allowed spoil and debris from grubbing to be placed downslope				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/19/2003
ABATEMENT ACTIONS:	Required work was completed; violation terminated.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-5225	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1672	DATE VIOL. ISSUED:	03/14/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance; borehole started without authorization.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension to 8/11/03 has been granted by the Director. Extension has been requested of the Director prior to 8/11/03.				

PERMIT NO:	867-9007	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	53-2340	DATE VIOL. ISSUED:	03/12/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Slurry line break discharged slurry to Razor Blade Br. (2) Non correctable - Sslurry discharged into Rockhouse Creek (3) Rockhouse Creek contaminated with slurry.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	(1) Terminated slurry discharge stopped.				

PERMIT NO:	860-9000	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0527	DATE VIOL. ISSUED:	03/12/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Allowed slurry water to encroach onto Equitable Production Co. gas well without approval.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/22/2003
ABATEMENT ACTIONS:	Order modified to allow pumping with water level restrictions Required work completed; violation terminated.				

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0403	DATE VIOL. ISSUED:	02/19/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) & (2) Pond 1 discharge exceeds iron discharge limits (3) Failed to properly maintain diversion ditch #2 (4) Failed to properly maintain Haul Road B drain pipes				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/21/2003
ABATEMENT ACTIONS:	(1), (2), (3) & (4) All violations terminated. Required work completed.				

PERMIT NO:	860-9000	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0735	DATE VIOL. ISSUED:	01/31/2003	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Failed to maintain durable surface on access road. (2) Company tracked material onto public road and material slide into public road ditchline (3) Failed to certify sedimentation pond.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/04/2003
ABATEMENT ACTIONS:	(1), (2) & (3) All violations terminated. Required work completed.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-8041	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1053	DATE VIOL. ISSUED:	12/26/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Failed to properly maintain diversion around raw coal stockpile.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/12/2003
ABATEMENT ACTIONS:	Required work has been completed, violation terminated.				

PERMIT NO:	867-5182	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1050	DATE VIOL. ISSUED:	09/18/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance at proposed mine portal.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	12/04/2002
ABATEMENT ACTIONS:	Required work completed, violation terminated.				

PERMIT NO:	867-9007	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	53-1049	DATE VIOL. ISSUED:	08/28/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Slurry line break discharged slurry to Rockhouse Creek. (2) Rockhouse Creek contaminated with slurry spill.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/11/2002
ABATEMENT ACTIONS:	Required worked completed, violation terminated.				

PERMIT NO:	867-5184	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0786	DATE VIOL. ISSUED:	06/24/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Subsidence cracks to surface property have not been repaired in a timely manner.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	An extension from the Director has been requested. Director has approved extension to 8/1/2003. An extension has been requested of the Director prior to 8/1/03				

PERMIT NO:	860-9000	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0526	DATE VIOL. ISSUED:	05/16/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Refuse embankment not built as designed. (2) Pond is full and has no sediment control left.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Violation (2) terminated 10/17/2002 since required work is done. Extension granted for violation (1) by Director to 8/18/2003.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-0428	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	53-1044	DATE VIOL. ISSUED:	05/14/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Coal trucks tracking mud off permit.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Mud was cleaned from road by 1:00 PM on 5/14/02				

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0392	DATE VIOL. ISSUED:	05/06/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) & (2) Water from breached diversion exceeded iron and suspended solids limits. (3) (4) & (5) Failed to properly maintain sediment structures.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	(1) (2) (3) & (5) Required work has been completed by 5/8/02.. (4) Required work completed.				

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0391	DATE VIOL. ISSUED:	04/24/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Two off-permit disturbance areas were created. (2) Failed to properly dispose of non-coal waste.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/20/2002
ABATEMENT ACTIONS:	(2) Terminated - required actions completed. Additional time granted to 10/02/2002. (1) Terminated - required actions completed.				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1043	DATE VIOL. ISSUED:	04/04/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance at Increment #8. Notice Modified - 4/15/2002 Extension granted to 12/4/2002.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension requested of Director - 10/2/2002. Extension granted to 1/15/2003. Extension requested of Director.				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-1041	DATE VIOL. ISSUED:	03/29/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Operator is using a highwall miner in violation of approved method of operation. 4/1/2002 - Notice modified.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Required work completed.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0384	DATE VIOL. ISSUED:	03/06/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Failure to pass disturbed area above Access Road A through approved sediment control.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	03/22/2002
ABATEMENT ACTIONS:	Required actions completed.				

PERMIT NO:	867-0407	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0783	DATE VIOL. ISSUED:	02/13/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Haul road 3 not built to plans. Rebuild & certify or revise permit. (2) Slide has created offsite disturbance. (3) Dugout #3 was not built and certified in a timely manner.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	11/18/2002
ABATEMENT ACTIONS:	(3) Terminated - work has been completed. (1) and (2) Terminated - work has been completed.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	53-0782	DATE VIOL. ISSUED:	01/25/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Diversion ditch breached during 4-5 inch rainfall washing dirt and rocks off permit.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/12/2002
ABATEMENT ACTIONS:	Required actions have been completed.				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0383	DATE VIOL. ISSUED:	01/24/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Discharging water from pond P-2 high in settleable solids. (2) Discharging high settleable solids water off permit.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/30/2002
ABATEMENT ACTIONS:	Required work has been completed.				

PERMIT NO:	860-7007	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0382	DATE VIOL. ISSUED:	01/09/2002	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Haulroad construction caused off-permit disturbance and did not follow approved grade design. (2) Failed to monitor air blast as required.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/15/2002
ABATEMENT ACTIONS:	Additional time requested through Director's office - 5/14/2002 Additional time granted by Director's office to 7/15/2002 Required work completed; violation terminated.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0380	DATE VIOL. ISSUED:	12/27/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Failed to pass disturbed area drainage through a pond.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/17/2002
ABATEMENT ACTIONS:	Required corrective actions have been made.				

PERMIT NO:	860-0390	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	43-0379	DATE VIOL. ISSUED:	12/21/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Failed to properly build ponds P-1 & P-2. Both ponds leak. (2) Pond P-2 created 0.63 acre off-permit disturbance. (3) Failed to follow approved Pond Access Plan				
CURRENT STATUS:	TERMINATED			STATUS DATE:	04/29/2002
ABATEMENT ACTIONS:					

PERMIT NO:	867-5182	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	53-1038	DATE VIOL. ISSUED:	12/13/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Failed to follow approved method of operation.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/31/2002
ABATEMENT ACTIONS:	Extension granted by inspector. Required work has been completed.				

PERMIT NO:	860-0312	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-1780	DATE VIOL. ISSUED:	11/13/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Grading and backfilling work needed on part of Inc. #4				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/11/2002
ABATEMENT ACTIONS:	Extension granted to 6/17/02 due to wet weather. Required work has been completed.				

PERMIT NO:	S-71-82	MSHA NO:	46-06760	MSHA DATE:	01/16/87
VIOLATION NO:	S-71-82 (40)	DATE VIOL. ISSUED:	11/05/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to properly maintain pond #1.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/10/2002
ABATEMENT ACTIONS:	Pond 1 has been eliminated and the violation terminated.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5229	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-1779	DATE VIOL. ISSUED:	10/24/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Reclamation grading, seeding and drainage control do not meet standards.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	11/13/2001
ABATEMENT ACTIONS:	Backfilling, grading and seeding work completed as required.				

PERMIT NO:	S-94-85	MSHA NO:	46-06760	MSHA DATE:	01/16/87
VIOLATION NO:	S-94-85 (18)	DATE VIOL. ISSUED:	10/09/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to renew NPDES permit before it expired.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Partially abated since NPDES permit renewal is pending Violation terminated when NPDES permit was renewed.				

PERMIT NO:	U-5038-86	MSHA NO:	46-06760	MSHA DATE:	01/16/87
VIOLATION NO:	U-5038-86 (6)	DATE VIOL. ISSUED:	10/09/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to renew NPDES permit before it expired.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/25/2002
ABATEMENT ACTIONS:	Partially abated since NPDES permit renewal is pending Violation terminated when NPDES permit was renewed.				

PERMIT NO:	S-71-82	MSHA NO:	46-06760	MSHA DATE:	01/16/87
VIOLATION NO:	S-71-82 (38/39)	DATE VIOL. ISSUED:	10/09/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to renew NPDES permit before it expired.				
CURRENT STATUS:	WITHDRAWN			STATUS DATE:	01/10/2002
ABATEMENT ACTIONS:	Partially abated since NPDES permit renewal is pending A timely renewal was submitted. Violation is withdrawn.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	05-1943	DATE VIOL. ISSUED:	09/07/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Blasting caused imminent danger to off site dwelling.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/10/2001
ABATEMENT ACTIONS:	Remedial work has been completed				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-2240	DATE VIOL. ISSUED:	09/07/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Blasting forced boulder off permit to within 200' of a dwelling. (2) Off permit disturbance; (3) Blasting posed imminent danger. Cease blasting, revise blasting plan to prevent future similar events.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/10/2001
ABATEMENT ACTIONS:	All corrective actions have been taken; violation terminated.				

PERMIT NO:	867-0407	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2192	DATE VIOL. ISSUED:	08/29/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Material off-permit in several locations. (2) Failed to maintain 15' berms. Berms have been disturbed and removed. Violation 2 is non-correctable.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	
ABATEMENT ACTIONS:	Additional time requested through Director's office on 10/15/02. Extension request to 12/03/2002 granted. Required work completed; violation terminated.				

PERMIT NO:	860-5010	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-0179	DATE VIOL. ISSUED:	08/17/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Discharged substandard water from pond. (2) KPDES violation for substandard water discharge				
CURRENT STATUS:	TERMINATED			STATUS DATE:	08/21/2001
ABATEMENT ACTIONS:	Required action taken, pond is not discharging.				

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-2148	DATE VIOL. ISSUED:	08/14/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Off permit disturbance adjacent to Increment 3 (2) Failed to follow pre-blast suvey and notification procedures before blasting for mine face up #2.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	12/26/2001
ABATEMENT ACTIONS:	Work for violation (2) finished, violation (2) terminated 10/10/01 Minor field revision submitted 10/8/01 Violation (1) terminated 12/26/2001				

PERMIT NO:	867-5198	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-2470	DATE VIOL. ISSUED:	08/07/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance for ventililation borehole.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	12/21/2001
ABATEMENT ACTIONS:	Additional time requested through Director's office - 11/05/2001. Required work has been completed.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-2190	DATE VIOL. ISSUED:	08/06/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Sediment pond needs cleanded out.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/10/2001
ABATEMENT ACTIONS:	Found pond 50% cleaned out on 9/4/2001. All coorective actions have been taken				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2191	DATE VIOL. ISSUED:	08/06/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Pond 3, Incr 7 is full of sediment. (2) Off permit disturbance occurred.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/05/2001
ABATEMENT ACTIONS:	Required work has been completed.				

PERMIT NO:	860-0312	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-1777	DATE VIOL. ISSUED:	08/02/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Failed to certify sediment structures #2 and #5				
CURRENT STATUS:	TERMINATED			STATUS DATE:	08/17/2001
ABATEMENT ACTIONS:	Required certifications were submitted.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-2188	DATE VIOL. ISSUED:	07/23/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Flyrock traveled along ground & off-permit. (2) Off permit disturbance due to blasting (3) Company allowed unsafe blasting practices				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/12/2002
ABATEMENT ACTIONS:	Corrective actions completed for (1) and (3) Additional time being requested through the Director Permit revision approved to abate violation 2.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	05-3041	DATE VIOL. ISSUED:	07/23/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Blasting caused imminent danger to off site dwelling.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/26/2001
ABATEMENT ACTIONS:	Remedial work has been completed				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-1071	DATE VIOL. ISSUED:	07/23/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Off permit disturbance (2) Section of Road B was not built to approved plans.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	03/22/2002
ABATEMENT ACTIONS:	(1) Required actions completed; KAR 7:040 terminated (2) Required actions completed; KAR 18:230 terminated				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	05-3044	DATE VIOL. ISSUED:	07/12/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Blasting caused imminent danger to off site dwelling.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/13/2001
ABATEMENT ACTIONS:	Required actions completed				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-2187	DATE VIOL. ISSUED:	07/12/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Blasting forced boulder off permit to within 300' of a dwelling. (2) Off permit disturbance; (3) Blasting posed imminent danger. (4) Failed to notify Cabinet of emergency condition (non-correctable).				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/20/2001
ABATEMENT ACTIONS:	Violations (2) & (3) remedial work completed. Revised blasting plan approved.				

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	41-2145	DATE VIOL. ISSUED:	06/21/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Failed to properly build Hollowfill #1 rock underdrain				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/18/2001
ABATEMENT ACTIONS:	Required work has been completed.				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-2069	DATE VIOL. ISSUED:	04/04/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Off permit disturbance				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Additional time being requested through director - 9/5/01				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5202	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	41-2132	DATE VIOL. ISSUED:	04/02/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Dugout sediment pond discharge exceeded iron limits.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	04/04/2001
ABATEMENT ACTIONS:	Water treated for iron, discharge is in compliance.				

PERMIT NO:	860-0333	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	41-1776	DATE VIOL. ISSUED:	04/02/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Slides & slumps on increment #4 between ponds 4 & 5. (2) Slide has moved off permit.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	03/11/2002
ABATEMENT ACTIONS:	Required work for 405 KAR 7:040 completed. Extension granted to complete work on (1) Required work for 405 KAR 16:190 completed.				

PERMIT NO:	867-5182	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2114	DATE VIOL. ISSUED:	03/30/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Approved mine plan 50% coal recovery exceeded in certain area.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Permit revision has been requested. Extension request to 7/29/2002 granted. Additional time requested of Director - 8/2/02.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2072	DATE VIOL. ISSUED:	03/07/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Access road B not built according to approved design				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:					

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2075	DATE VIOL. ISSUED:	03/07/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Haulroad #1 on Increment #1 not built according to plans				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Permit revision was requested. Additional time being requested through director on 9/5/2001.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2071	DATE VIOL. ISSUED:	02/26/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) Failure to pass all drainage thru a pond-non correctable (2) Substandard water entered stream - non correctable				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/26/2000
ABATEMENT ACTIONS:	Violations were non correctable				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2067	DATE VIOL. ISSUED:	02/20/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) mining has exceeded the 4,500' contemporaneous variance (2) ponds are not built, certified or maintained as approved				
CURRENT STATUS:	TERMINATED			STATUS DATE:	12/02/2002
ABATEMENT ACTIONS:	Extension requested of Director on 7/22/02. FINAL Extension granted to 11/26/2002 by Director. Required work has been completed, violation terminated.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2070	DATE VIOL. ISSUED:	02/16/2001	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Slides off permit have occurred at Access Road B, Incr. 1.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/12/2002
ABATEMENT ACTIONS:	Additional time being requested through director - 5/18/01 Additional time granted by director thru 12/17/2001 Required work has been completed.				

PERMIT NO:	867-9007	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	51-1993	DATE VIOL. ISSUED:	12/04/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Coarse refuse placed above approved elevation.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	08/30/2002
ABATEMENT ACTIONS:	Additional time requested through Director's office - 6/27/2002. Extension request to 8/29/2002 granted. Required work has been completed.				

PERMIT NO:	867-0405	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-1866	DATE VIOL. ISSUED:	11/20/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Slide occurred off permit.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/04/2001
ABATEMENT ACTIONS:	required remedial work has been completed				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: CONSOL of Kentucky Inc.

PERMIT NO:	860-5010	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	41-0167	DATE VIOL. ISSUED:	11/01/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Constructed deep mine openings on wrong side of drainage.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	11/20/2000
ABATEMENT ACTIONS:	Revision submitted and subsequently approved on 11/13/00.				

PERMIT NO:	867-0394	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-2401	DATE VIOL. ISSUED:	09/18/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	blasting record deficiencies from 3/2 - 3/30/2000				
CURRENT STATUS:	TERMINATED			STATUS DATE:	10/20/2000
ABATEMENT ACTIONS:	deficiencies in blasting records corrected				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-1864	DATE VIOL. ISSUED:	08/24/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	Problems with sedimentation ponds and diversions.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	11/21/2000
ABATEMENT ACTIONS:	Necessary actions taken.				

PERMIT NO:	867-0404	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-1862	DATE VIOL. ISSUED:	08/10/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	(1) ponds BS17 & BS19 have not been built; BS20 was not build to plans. (2) pond BS20 discharged substandard water				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:					

PERMIT NO:	867-0407	MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	51-1863	DATE VIOL. ISSUED:	08/10/2000	ISSUED BY:	KY DSMRE
VIOLATION DESCRIPTION:	failed to construct access road 6 according to approved plans				
CURRENT STATUS:	TERMINATED			STATUS DATE:	11/17/2000
ABATEMENT ACTIONS:	Minor revision #1 issued 11/14/00.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consol Pennsylvania Coal Company

PERMIT NO:	30841316	MSHA NO:	36-07230	MSHA DATE:	10/01/81
VIOLATION NO:		DATE VIOL. ISSUED:	06/10/2003	ISSUED BY:	PA DEP
VIOLATION DESCRIPTION:	Pond discharge exceeded suspended solids limits due to inoperable sump pump.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/11/2003
ABATEMENT ACTIONS:	Required actions completed - violation terminated.				

PERMIT NO:	30841316	MSHA NO:	36-07230	MSHA DATE:	10/01/81
VIOLATION NO:		DATE VIOL. ISSUED:	03/14/2003	ISSUED BY:	PA DEP
VIOLATION DESCRIPTION:	Failed to perform a pre-mining subsidence survey at property number 2207-141C				
CURRENT STATUS:	TERMINATED			STATUS DATE:	03/14/2003
ABATEMENT ACTIONS:					

PERMIT NO:	Y-1007-99	MSHA NO:	36-07230	MSHA DATE:	10/01/81
VIOLATION NO:	Y-1007-99 (1)	DATE VIOL. ISSUED:	06/04/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to perform and obtain approval of pre-subsidence surveys.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/24/2002
ABATEMENT ACTIONS:	Required pre-subsidence survey work was conducted.				

PERMIT NO:	30841316	MSHA NO:	36-07230	MSHA DATE:	10/01/81
VIOLATION NO:	011033	DATE VIOL. ISSUED:	05/08/2001	ISSUED BY:	PA DEP
VIOLATION DESCRIPTION:	(1) Unpermitted discharge of mine water to unnamed Enlow Fork trib from broken nipple on pressure gage on line to slurry pond. (2) Failure to report unpermitted discharge.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/08/2001
ABATEMENT ACTIONS:	Fixed valve nipple and stopped potential discharge.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	ACT/015/015	MSHA NO:	42-00079	MSHA DATE:	05/13/75
VIOLATION NO:	N 03-38-1-1	DATE VIOL. ISSUED:	08/05/2003	ISSUED BY:	UT DOGM

VIOLATION DESCRIPTION: Permittee conducted mining activities outside of permitted area.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	1401825	MSHA NO:	N/A	MSHA DATE:	n/a
VIOLATION NO:	TMM0003253	DATE VIOL. ISSUED:	07/16/2003	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Sediment Basin SB-1 discharge exceeded maximum daily limit for total suspended solids.

CURRENT STATUS: TERMINATED STATUS DATE: 07/16/2003

ABATEMENT ACTIONS: Non-remedial, violation terminated.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (36)	DATE VIOL. ISSUED:	07/03/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly maintain an approved drainage control structure in that a large slip has developed at the 8N #2 airshaft site.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS: Required pre-subsidence surveys have been conducted and approved.

PERMIT NO:	30841313	MSHA NO:	36-04281	MSHA DATE:	08/13/86
VIOLATION NO:		DATE VIOL. ISSUED:	06/16/2003	ISSUED BY:	PA DER

VIOLATION DESCRIPTION: Failed to perform a pre-mining water supply survey at Edward and Christina Malanowski property.

CURRENT STATUS: TERMINATED STATUS DATE: 06/16/2003

ABATEMENT ACTIONS: Violation terminated since it is non-correctible.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (35)	DATE VIOL. ISSUED:	06/11/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to submit & obtain pre-subsidence surveys for Travis Fonner and Scott Ross properties.

CURRENT STATUS: TERMINATED STATUS DATE: 07/07/2003

ABATEMENT ACTIONS: Required pre-subsidence surveys have been conducted and approved.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-100-83	MSHA NO:	46-01431	MSHA DATE:	n/a
VIOLATION NO:	U-100-83 (1)	DATE VIOL. ISSUED:	06/10/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to submit in a timely manner all renewal application information.

CURRENT STATUS: PENDING STATUS DATE:
ABATEMENT ACTIONS:

PERMIT NO:	UO-431	MSHA NO:	46-05620	MSHA DATE:	n/a
VIOLATION NO:	UO-431 (1)	DATE VIOL. ISSUED:	06/10/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to submit in a timely manner all renewal application information.

CURRENT STATUS: PENDING STATUS DATE:
ABATEMENT ACTIONS:

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (34)	DATE VIOL. ISSUED:	06/06/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to meet effluent limitations by discharging water high in iron from sump at Brown's run Refuse lower slope belt.

CURRENT STATUS: TERMINATED STATUS DATE: 06/13/2003
ABATEMENT ACTIONS: Required work has been completed, violation terminated.

PERMIT NO:	U-1025-92	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-1025-92 (9)	DATE VIOL. ISSUED:	04/28/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to stabilize and protect all surface areas from erosion and attendant air and water pollution.

CURRENT STATUS: PENDING STATUS DATE:
ABATEMENT ACTIONS:

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (54)	DATE VIOL. ISSUED:	04/23/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to contruct required compaction testing for expansion of Niles Run slurry inpoundment.

CURRENT STATUS: TERMINATED STATUS DATE: 06/16/2003
ABATEMENT ACTIONS: Required work completed; violation terminated.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	O-1001-00	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	O-1001-00 (4)	DATE VIOL. ISSUED:	04/10/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to install sediment control prior to disturbance.

CURRENT STATUS: TERMINATED STATUS DATE: 05/02/2003

ABATEMENT ACTIONS: Required work completed - violation terminated.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (33)	DATE VIOL. ISSUED:	04/03/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly maintain refuse haul road.

CURRENT STATUS: TERMINATED STATUS DATE: 05/02/2003

ABATEMENT ACTIONS: Required work completed - violation terminated.

PERMIT NO:	U-46-84	MSHA NO:	46-01968	MSHA DATE:	00/00/00
VIOLATION NO:	U-46-84 (25)	DATE VIOL. ISSUED:	03/17/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to establish permanent permit markers and provide correct information on permit signs.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (53)	DATE VIOL. ISSUED:	03/14/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Allowed slurry from pipeline break to be deposited off-site.

CURRENT STATUS: TERMINATED STATUS DATE: 04/11/2003

ABATEMENT ACTIONS: Required actions completed - violation terminated.

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (52)	DATE VIOL. ISSUED:	02/25/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly contruct and maintain the refuse haulroad to adequately control erosion and siltation.

CURRENT STATUS: TERMINATED STATUS DATE: 06/25/2003

ABATEMENT ACTIONS: Required work completed, violation terminated.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	O-1001-00	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	O-1001-00 (3)	DATE VIOL. ISSUED:	02/14/2003	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to protect hydrologic balance by allowing discolored discharge to Boggs Run.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/21/2003
ABATEMENT ACTIONS:	Required work completed. Sedimentation pond completed and certified. Boggs Run stream is flowing clear.				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (51)	DATE VIOL. ISSUED:	02/13/2003	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to dispose of coarse refuse at the Nolan's Run embankment according to approved plan.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:					

PERMIT NO:	U-45-84	MSHA NO:	46-01867	MSHA DATE:	00/00/00
VIOLATION NO:	U-45-84 (14)	DATE VIOL. ISSUED:	01/29/2003	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to meet Fe and Mn effluent limits at outfall 002				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/29/2003
ABATEMENT ACTIONS:	Completed work that stopped discharge				

PERMIT NO:	1400047	MSHA NO:	44-04856	MSHA DATE:	n/a
VIOLATION NO:	TIM0003177	DATE VIOL. ISSUED:	01/13/2003	ISSUED BY:	VA DMLR
VIOLATION DESCRIPTION:	All required groundwater monitoring sites were not sampled for 3rd quarter 2002.				
CURRENT STATUS:	TERMINATED, NON-REMEDIAL			STATUS DATE:	01/13/2003
ABATEMENT ACTIONS:	no action is required; violation is non-remedial				

PERMIT NO:	ACT/015/015	MSHA NO:	42-00079	MSHA DATE:	05/13/75
VIOLATION NO:	N 03-39-1-1	DATE VIOL. ISSUED:	01/09/2003	ISSUED BY:	UT DOGM
VIOLATION DESCRIPTION:	Coal fines from stockpile were blown outside of permitted area.				
CURRENT STATUS:	PENDING			STATUS DATE:	
ABATEMENT ACTIONS:	Extension gratnted to 9/12/03 to file permit revision.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-119-83	MSHA NO:	46-01453	MSHA DATE:	00/00/00
VIOLATION NO:	U-119-83 (26)	DATE VIOL. ISSUED:	01/08/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with approved subsidence control plan.

CURRENT STATUS: TERMINATED STATUS DATE: 04/08/2003

ABATEMENT ACTIONS: Violation termianted - required actions completed.

PERMIT NO:	O-1001-00	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	O-1001-00 (2)	DATE VIOL. ISSUED:	01/03/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to protect hydrologic balance by allowing discolored discharge to Boggs Run.

CURRENT STATUS: TERMINATED STATUS DATE: 01/06/2003

ABATEMENT ACTIONS: Terminated - required actions completed.

PERMIT NO:	1201653	MSHA NO:	44-05616	MSHA DATE:	11/24/1981
VIOLATION NO:	TMM0002968	DATE VIOL. ISSUED:	12/11/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Suspended solids effluent violation on 9/25/02 at Outfall 005.

CURRENT STATUS: VACATED STATUS DATE: 04/24/2003

ABATEMENT ACTIONS: Violation was withdrawn because water sample was taken at the wrong location and not at the permitted discharge point.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	W-02-M-120602-01	DATE VIOL. ISSUED:	12/06/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Allowed petroleum product to escape from a storage container such that it could impact groundwater quality.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	W-02-M-120602-02	DATE VIOL. ISSUED:	12/06/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Stored drums whose contents could contaminate groundwater in a manner that would not contain spills.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (32)	DATE VIOL. ISSUED:	12/05/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Indiscriminate dumping or disposal of material.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	O-150-83	MSHA NO:	46-05449	MSHA DATE:	n/a
VIOLATION NO:	NOV Division of W	DATE VIOL. ISSUED:	11/14/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to clean up released used oil.
Failed to label "used oil" containers.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	ACT/015/015	MSHA NO:	42-00079	MSHA DATE:	05/13/75
VIOLATION NO:	N 02-39-2-1	DATE VIOL. ISSUED:	10/22/2002	ISSUED BY:	UT DOGM

VIOLATION DESCRIPTION: Failed to protect vegetation and topsoil in undisturbed area by allowing vehicles to travel over and park in these areas.

CURRENT STATUS: TERMINATED STATUS DATE: 11/26/2002

ABATEMENT ACTIONS: Required work completed; abatement plan submitted on time.

PERMIT NO:	O-1001-00	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	O-1001-00 (1)	DATE VIOL. ISSUED:	10/22/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to install drainage control prior to mining activities

CURRENT STATUS: TERMINATED STATUS DATE: 04/03/2003

ABATEMENT ACTIONS: Terminated - required actions completed.

PERMIT NO:	1201129	MSHA NO:	46-01868	MSHA DATE:	09/01/85
VIOLATION NO:	TMM0002862	DATE VIOL. ISSUED:	09/24/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Company reported Discharge 004 discharge results that exceeded iron limits for the months of March, April, May and June 2002.

CURRENT STATUS: TERMINATED STATUS DATE: 09/24/2002

ABATEMENT ACTIONS: Violation is non-remedial.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	ACT/015/015	MSHA NO:	42-00079	MSHA DATE:	05/13/75
VIOLATION NO:	C02-39-1-1	DATE VIOL. ISSUED:	09/17/2002	ISSUED BY:	UT DOGM
VIOLATION DESCRIPTION:	Operated unlincensed mine vehicle on public roads.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/17/2002
ABATEMENT ACTIONS:	Permittee committed to not driving unlincensed mine vehicles outside of permit area.				

PERMIT NO:	ACT/015/015	MSHA NO:	42-00079	MSHA DATE:	05/13/75
VIOLATION NO:	N02-39-1-2	DATE VIOL. ISSUED:	09/13/2002	ISSUED BY:	UT DOGM
VIOLATION DESCRIPTION:	(1) semi-trailer parked on area where topsoil and vegetation was not removed. (2) Sediment containing water flowed off-site by main gate.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/17/2002
ABATEMENT ACTIONS:	Required actions have been taken violations terminated.				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (31)	DATE VIOL. ISSUED:	08/12/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to comply with administrative order issued 6/10/02.				
CURRENT STATUS:	WITHDRAWN			STATUS DATE:	09/27/2002
ABATEMENT ACTIONS:	Violation withdrawn by agency.				

PERMIT NO:	U-11-84	MSHA NO:	46-01443	MSHA DATE:	00/00/00
VIOLATION NO:	U-11-84 (9)	DATE VIOL. ISSUED:	08/09/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to comply with administrative order issued 6/5/02.				
CURRENT STATUS:	WITHDRAWN			STATUS DATE:	10/03/2002
ABATEMENT ACTIONS:	Violation was withdrawn based on decision of the West Virginia Surface Mine Board				

PERMIT NO:	U-78-83	MSHA NO:	46-01433	MSHA DATE:	n/a
VIOLATION NO:	U-78-83 (33)	DATE VIOL. ISSUED:	08/07/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to comply with administrative order issued 6/7/02.				
CURRENT STATUS:	WITHDRAWN			STATUS DATE:	09/30/2002
ABATEMENT ACTIONS:	Violation withdrawn				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (50)	DATE VIOL. ISSUED:	08/07/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with administrative order issued 6/7/02.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	09/30/2002
ABATEMENT ACTIONS:	Violation withdrawn by agency.		

PERMIT NO:	U-45-84	MSHA NO:	46-01867	MSHA DATE:	00/00/00
VIOLATION NO:	U-45-84 (13)	DATE VIOL. ISSUED:	08/07/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with administrative order issued 6/6/02.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	10/09/2002
ABATEMENT ACTIONS:	Violation was withdrawn based on decision of the West Virginia Surface Mine Board		

PERMIT NO:	U-46-84	MSHA NO:	46-01968	MSHA DATE:	00/00/00
VIOLATION NO:	U-46-84 (24)	DATE VIOL. ISSUED:	08/07/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with administrative order issued 6/6/02.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	10/09/2002
ABATEMENT ACTIONS:	Violation was withdrawn based on decision of the West Virginia Surface Mine Board		

PERMIT NO:	O-150-83	MSHA NO:	46-05449	MSHA DATE:	n/a
VIOLATION NO:	O-150-83 (14)	DATE VIOL. ISSUED:	08/06/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with administrative order issued 6/3/02.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	10/07/2002
ABATEMENT ACTIONS:	Violation was withdrawn based on decision of the West Virginia Surface Mine Board		

PERMIT NO:	U-214-83	MSHA NO:	46-01886	MSHA DATE:	09/01/85
VIOLATION NO:	U-214-83 (10)	DATE VIOL. ISSUED:	08/06/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with administrative order issued 6/3/02.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	10/07/2002
ABATEMENT ACTIONS:	Violation was withdrawn based on decision of the West Virginia Surface Mine Board		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-119-83	MSHA NO:	46-01453	MSHA DATE:	00/00/00
VIOLATION NO:	U-119-83 (25)	DATE VIOL. ISSUED:	08/06/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to comply with administrative order issued 6/5/02.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	09/30/2002
ABATEMENT ACTIONS:	Violation was withdrawn based on decision of the West Virginia Surface Mine Board		

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (30)	DATE VIOL. ISSUED:	07/18/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Off-permit disturbance

CURRENT STATUS:	TERMINATED	STATUS DATE:	07/25/2002
ABATEMENT ACTIONS:	Required actions completed. Violation terminated.		

PERMIT NO:	U-78-83	MSHA NO:	46-01433	MSHA DATE:	n/a
VIOLATION NO:	U-78-83 (31)	DATE VIOL. ISSUED:	06/28/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Off permit disturbance

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/22/2003
ABATEMENT ACTIONS:	Required work completed, violation terminated.		

PERMIT NO:	U-78-83	MSHA NO:	46-01433	MSHA DATE:	n/a
VIOLATION NO:	U-78-83 (30)	DATE VIOL. ISSUED:	06/28/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Disturbed land within 100 ft. of stream without obtaining waiver.

CURRENT STATUS:	WITHDRAWN	STATUS DATE:	07/24/2002
ABATEMENT ACTIONS:	Violation withdrawn- IBR 44 permitting pipeline was issued prior to violation		

PERMIT NO:	O-1044-91	MSHA NO:	46-01433	MSHA DATE:	00/00/00
VIOLATION NO:	O-1044-91(4)	DATE VIOL. ISSUED:	06/28/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Deposited non-coal mine wastes in a refuse pile.

CURRENT STATUS:	TERMINATED	STATUS DATE:	09/25/2002
ABATEMENT ACTIONS:	Required action completed - violation terminated.		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-78-83	MSHA NO:	46-01433	MSHA DATE:	n/a
VIOLATION NO:	U-78-83 (32)	DATE VIOL. ISSUED:	06/28/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to minimize erosion on two acres at toe of 2 & 5 refuse embankment				
CURRENT STATUS:	WITHDRAWN			STATUS DATE:	07/24/2002
ABATEMENT ACTIONS:	Violation withdrawn				

PERMIT NO:	U-1025-92	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-1025-92 (8)	DATE VIOL. ISSUED:	05/22/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Pumped muddy water off-site from at outfall 022.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/23/2002
ABATEMENT ACTIONS:	Required corrective actions were taken.				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (48)	DATE VIOL. ISSUED:	05/02/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Nolans Run haulroad sumps discharged water high in solids.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/10/2002
ABATEMENT ACTIONS:					

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (49)	DATE VIOL. ISSUED:	05/02/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to properly maintain haulroad and sediment controls to Nolans Run Slurry Impoundment.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/15/2002
ABATEMENT ACTIONS:	Required actions completed.				

PERMIT NO:	1201761	MSHA NO:	44-06239	MSHA DATE:	8/13/1985
VIOLATION NO:	JCL0002549	DATE VIOL. ISSUED:	04/05/2002	ISSUED BY:	VA DMLR
VIOLATION DESCRIPTION:	Mining has occurred beyond the 50' outcrop barrier.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/23/2002
ABATEMENT ACTIONS:	Required actions taken				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	1201129	MSHA NO:	46-01868	MSHA DATE:	09/01/85
VIOLATION NO:	TMM0002603	DATE VIOL. ISSUED:	03/06/2002	ISSUED BY:	VA DMLR
VIOLATION DESCRIPTION:	Operator allowed accumulation of non-coal wastes on permit areas not permitted for such wastes.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/22/2002
ABATEMENT ACTIONS:	Required actions taken				

PERMIT NO:	D-0784	MSHA NO:	33-04143	MSHA DATE:	09/01/88
VIOLATION NO:	19619	DATE VIOL. ISSUED:	02/28/2002	ISSUED BY:	OH DMRM
VIOLATION DESCRIPTION:	Severe erosion exists on drainageway leading to pond #013.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/10/2002
ABATEMENT ACTIONS:	Required actions completed, violation terminated.				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (29)	DATE VIOL. ISSUED:	02/07/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to control dust from haulroads and/or access roads.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/08/2002
ABATEMENT ACTIONS:	Effective road watering was implemented				

PERMIT NO:	1301107	MSHA NO:	44-05746	MSHA DATE:	03/29/1983
VIOLATION NO:	TMM0002558	DATE VIOL. ISSUED:	02/04/2002	ISSUED BY:	VA DMLR
VIOLATION DESCRIPTION:	(1) Slide in backfill entered ditch TD-1 & destroyed piezomenter P-1. (2) Failed to properly maintain diversion ditches TD-1 & TD-1A. (3) Failed to maintain piezometer P-1 as per monitoring plan.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	04/15/2002
ABATEMENT ACTIONS:	Terminated - required work completed				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (28)	DATE VIOL. ISSUED:	01/23/2002	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to properly maintain diversion ditch CD-1.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	03/01/2002
ABATEMENT ACTIONS:	Required work has been completed.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	30841302	MSHA NO:	46--01453	MSHA DATE:	n/a
VIOLATION NO:	011100	DATE VIOL. ISSUED:	12/19/2001	ISSUED BY:	PA DEP
VIOLATION DESCRIPTION:	Failure to maintain adequate erosion and sedimentation controls as required by Violation # 011094				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/02/2002
ABATEMENT ACTIONS:	Required actions completed, violation terminated.				

PERMIT NO:	1201761	MSHA NO:	44-06239	MSHA DATE:	8/13/1985
VIOLATION NO:	TMM0002467	DATE VIOL. ISSUED:	12/07/2001	ISSUED BY:	VA DMLR
VIOLATION DESCRIPTION:	Improper maintenance has allowed a discharge from a hole in the embankment of Sediment Basin #2.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/08/2002
ABATEMENT ACTIONS:	Required actions taken				

PERMIT NO:	30841302	MSHA NO:	46--01453	MSHA DATE:	n/a
VIOLATION NO:	011094	DATE VIOL. ISSUED:	11/27/2001	ISSUED BY:	PA DEP
VIOLATION DESCRIPTION:	Failure to maintain adequate erosion and sedimentation controls.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/02/2002
ABATEMENT ACTIONS:	Required actions completed, violation terminated.				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (27)	DATE VIOL. ISSUED:	11/06/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Unpermitted discharge of water from collection barge below sample house spill pan.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	11/06/2001
ABATEMENT ACTIONS:	Unpermitted discharge stop. Procedures established to properly handle discharge.				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (26)	DATE VIOL. ISSUED:	11/06/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to maintain & install permit signs as required.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	01/22/2002
ABATEMENT ACTIONS:	Required corrective actions have been taken.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	O-150-83	MSHA NO:	46-05449	MSHA DATE:	n/a
VIOLATION NO:	O-150-83 (13)	DATE VIOL. ISSUED:	11/01/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Disposed of solid waste on permitted area without a solid waste permit.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/03/2002
ABATEMENT ACTIONS:	Solid waste permit has been obtained.				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (25)	DATE VIOL. ISSUED:	10/03/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Placed spoil material outside of permitted area.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	10/05/2001
ABATEMENT ACTIONS:	Required corrective actions taken.				

PERMIT NO:	1201129	MSHA NO:	46-01868	MSHA DATE:	09/01/85
VIOLATION NO:	TMM0002361	DATE VIOL. ISSUED:	09/21/2001	ISSUED BY:	VA DMLR
VIOLATION DESCRIPTION:	Drainage pipe blocked, drainage by-passed sediment structure				
CURRENT STATUS:	TERMINATED			STATUS DATE:	10/11/2001
ABATEMENT ACTIONS:	Required actions taken				

PERMIT NO:	D-0784	MSHA NO:	33-04143	MSHA DATE:	09/01/88
VIOLATION NO:	19629	DATE VIOL. ISSUED:	09/19/2001	ISSUED BY:	OH DMRM
VIOLATION DESCRIPTION:	Reclamation of 11th & 12th yearly segments not done in a contemporaneous manner.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/16/2002
ABATEMENT ACTIONS:	Required actions completed.				

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (24)	DATE VIOL. ISSUED:	07/18/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Placed spoil/topsoil outside of bonded area.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	12/07/2001
ABATEMENT ACTIONS:	IBR #15 and NPDES permit Modification #12 issued.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-78-83	MSHA NO:	46-01433	MSHA DATE:	n/a
VIOLATION NO:	U-78-83 (29)	DATE VIOL. ISSUED:	06/27/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	placed junked equipment on reclaimed refuse area				
CURRENT STATUS:	TERMINATED			STATUS DATE:	10/29/2001
ABATEMENT ACTIONS:	permit revised to allow storage on refuse area				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (46)	DATE VIOL. ISSUED:	06/13/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Lack of adequate vegetation at four sites.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	08/08/2001
ABATEMENT ACTIONS:	Deficient areas were retreated.				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (45)	DATE VIOL. ISSUED:	06/13/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to maintain haulroad to Nolan's Run Slurry pond.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	08/08/2001
ABATEMENT ACTIONS:	Work completed as required.				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (44)	DATE VIOL. ISSUED:	06/13/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Non-coal waste was placed on refuse area.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/11/2001
ABATEMENT ACTIONS:	Required actions are completed.				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (47)	DATE VIOL. ISSUED:	06/13/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Failed to maintain erosion control measures at Nolan's Run slurry impoundment.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/25/2001
ABATEMENT ACTIONS:	Required actions completed.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (43)	DATE VIOL. ISSUED:	05/18/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Cessation Order #42C modified to Notice of Violation #43N Discharged high suspended solids & iron slurry water to stream. Caused adverse hydrologic impacts.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	09/14/2001
ABATEMENT ACTIONS:	Required corrective actions taken; violation terminated.				

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (42)	DATE VIOL. ISSUED:	05/17/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Leaks in slurry pipeline discharging to Robinson Run				
CURRENT STATUS:	TERMINATED			STATUS DATE:	05/18/2001
ABATEMENT ACTIONS:	Pipeline repairs made. Slurry leaks to Robinson Run stopped. Cessation Order #42C modified to Notice of Violation #43N				

PERMIT NO:	U-70-83	MSHA NO:	46-01452	MSHA DATE:	00/00/00
VIOLATION NO:	U-70-83 (35)	DATE VIOL. ISSUED:	04/20/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Discharged water/sludge from Flaggy Meadows AMD holding pond that did not meet effluent limits.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	08/27/2001
ABATEMENT ACTIONS:	Partially abated due to regrading, seeding & mulching Totally abated after required restoration paid.				

PERMIT NO:	U-70-83	MSHA NO:	46-01452	MSHA DATE:	00/00/00
VIOLATION NO:	U-70-83 (34)	DATE VIOL. ISSUED:	04/20/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Discharged water/sludge from Flaggy Meadows AMD holding pond that did not meet effluent limits and caused a fishkill.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	04/22/2001
ABATEMENT ACTIONS:	Stopped and contained discharge. Cessation order #34 modified to Violation #35				

PERMIT NO:	U-214-83	MSHA NO:	46-01886	MSHA DATE:	09/01/85
VIOLATION NO:	U-214-83 (9)	DATE VIOL. ISSUED:	04/03/2001	ISSUED BY:	WV DEP
VIOLATION DESCRIPTION:	Old prep plant no longer needed for mining.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	07/18/2002
ABATEMENT ACTIONS:	Violation stayed by WV Surface Mine Board. Consent Agreement signed. Area has been reclaimed and vegetated.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	1201129	MSHA NO:	46-01868	MSHA DATE:	09/01/85
VIOLATION NO:	TMM0002088	DATE VIOL. ISSUED:	03/26/2001	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: diversion ditch blocked by spilled coal, failure to maintain ditch

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/12/2001
ABATEMENT ACTIONS:	required actions taken		

PERMIT NO:	U-11-85	MSHA NO:	46-04421	MSHA DATE:	n/a
VIOLATION NO:	U-11-85 (2)	DATE VIOL. ISSUED:	03/20/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failure to maintain several pipes in drainage control system.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/11/2001
ABATEMENT ACTIONS:	Pipes were cleaned to 100% design capacity.		

PERMIT NO:	U-4002-98	MSHA NO:	46-08707	MSHA DATE:	n/a
VIOLATION NO:	U-4002-98 (2)	DATE VIOL. ISSUED:	03/20/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failure to drain IBR 2 acres to Pond A

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/11/2001
ABATEMENT ACTIONS:	All drainage was directed to Pond A.		

PERMIT NO:	U-78-83	MSHA NO:	46-01433	MSHA DATE:	n/a
VIOLATION NO:	U-78-83 (28N)	DATE VIOL. ISSUED:	02/27/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: prospect drilling on bonded site not allowed by approved permit

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/05/2001
ABATEMENT ACTIONS:	prospect permit P201201 issued 3/15/01		

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (41)	DATE VIOL. ISSUED:	11/14/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to certify IBR 40 pond,ditches, road & cuttings pit.

CURRENT STATUS:	TERMINATED	STATUS DATE:	12/11/2000
ABATEMENT ACTIONS:	Proper certifications submitted		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-1025-92	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-1025-92 (6)	DATE VIOL. ISSUED:	10/31/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to certify construction of 10 specified roads.

CURRENT STATUS: TERMINATED STATUS DATE: 01/26/2001

ABATEMENT ACTIONS: roads certified as required

PERMIT NO:	U-1025-92	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-1025-92 (7)	DATE VIOL. ISSUED:	10/31/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Allowed coal build-up on 500 feet of conveyor access road.

CURRENT STATUS: TERMINATED STATUS DATE: 12/28/2000

ABATEMENT ACTIONS: Coal has been removed & road resurfaced with stone.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (23)	DATE VIOL. ISSUED:	10/26/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to contemporaneously reclaim refuse pile.

CURRENT STATUS: TERMINATED STATUS DATE: 12/13/2000

ABATEMENT ACTIONS: Lime applied and soil cover placed. Seeding postponed until spring.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (22)	DATE VIOL. ISSUED:	10/17/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Approved 2S vent borehole access road location not followed.

CURRENT STATUS: TERMINATED STATUS DATE: 10/23/2000

ABATEMENT ACTIONS: Revision obtained, road relocation approved.

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (39)	DATE VIOL. ISSUED:	09/25/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to use best technology available to protect hydrologic balance.
Failed to pass all runoff from disturbed area thru a sediment structure.

CURRENT STATUS: TERMINATED STATUS DATE: 10/10/2000

ABATEMENT ACTIONS: Required actions taken

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Consolidation Coal Company

PERMIT NO:	U-104-83	MSHA NO:	46-01318	MSHA DATE:	n/a
VIOLATION NO:	U-104-83 (40)	DATE VIOL. ISSUED:	09/25/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to meet iron & ph effluent limits at outfall 002, pond #1.

CURRENT STATUS:	TERMINATED	STATUS DATE:	09/26/2000

ABATEMENT ACTIONS: Pumped pond to Nolan's Run AMD stopping discharge.

PERMIT NO:	U-1025-91	MSHA NO:	46-01436	MSHA DATE:	n/a
VIOLATION NO:	U-1025-91 (21)	DATE VIOL. ISSUED:	08/14/2000	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to control dust on refuse pile and haulageways.

CURRENT STATUS:	TERMINATED	STATUS DATE:	08/15/2000

ABATEMENT ACTIONS: Roads and haulageways watered as required.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Eighty-Four Mining Company

PERMIT NO:	63743702	MSHA NO:	36-00958	MSHA DATE:	12/20/76
VIOLATION NO:	021060	DATE VIOL. ISSUED:	07/11/2002	ISSUED BY:	PA DEP

VIOLATION DESCRIPTION: Slurry pipeline discharge at Outfall 009 to Pigeon Creek

CURRENT STATUS:	TERMINATED	STATUS DATE:	07/11/2002

ABATEMENT ACTIONS: Required actions completed, violation abated.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Island Creek Coal Company

PERMIT NO:	I-700	MSHA NO:	46-01308	MSHA DATE:	05/09/80
VIOLATION NO:	I-700 (8)	DATE VIOL. ISSUED:	03/20/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Discharged from outlet 006 before authorized by NPDES permit.

CURRENT STATUS:	TERMINATED	STATUS DATE:	03/20/2003

ABATEMENT ACTIONS: required action complete. Violation terminated.

PERMIT NO:	1401489	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002704	DATE VIOL. ISSUED:	02/07/2003	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Failed to notify Division of anticipated water by passes.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/18/2003

ABATEMENT ACTIONS: Two NPDES discharge points were added to permit.

PERMIT NO:	1401232	MSHA NO:	44-01009	MSHA DATE:	2/18/68
VIOLATION NO:	BXB0003043	DATE VIOL. ISSUED:	02/04/2003	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Allowed an erosional gully to develop face of one of the lifts of the refuse disposal area.

CURRENT STATUS:	TERMINATED	STATUS DATE:	06/03/2003

ABATEMENT ACTIONS: Required work completed; violation terminated.

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002694	DATE VIOL. ISSUED:	01/29/2003	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Allowed black water from the variance area at toe of refuse fill to flow into Garden Creek.

CURRENT STATUS:	TERMINATED	STATUS DATE:	02/10/2003

ABATEMENT ACTIONS: Violation terminated. Required work completed.

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002474	DATE VIOL. ISSUED:	09/17/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Company reported Pond 2 discharge results exceeded total suspended solids permit limits.

CURRENT STATUS:	TERMINATED	STATUS DATE:	09/17/2002

ABATEMENT ACTIONS: Non-remedial. Terminated on date of issuance.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Island Creek Coal Company

PERMIT NO:	U-5051-87	MSHA NO:	N/A	MSHA DATE:	N/A
VIOLATION NO:	U-5051-87 (3N)	DATE VIOL. ISSUED:	08/30/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to maintain sediment capacity in Pond 2.

CURRENT STATUS: TERMINATED STATUS DATE: 09/20/2002

ABATEMENT ACTIONS: Required actions completed, violation abated.

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002408	DATE VIOL. ISSUED:	08/12/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Drainage from refuse haulage road discharged to Garden Creek without going through a sediment control structure.

CURRENT STATUS: TERMINATED STATUS DATE: 09/17/2002

ABATEMENT ACTIONS: Required actions were completed; violation terminated.

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002409	DATE VIOL. ISSUED:	08/12/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Unauthorized discharge of artesian boreholes outside of permit berm. Total iron concentration exceeds allowable limits.

CURRENT STATUS: TERMINATED STATUS DATE: 09/17/2002

ABATEMENT ACTIONS: Required actions were completed; violation terminated.

PERMIT NO:	I-700	MSHA NO:	46-01308	MSHA DATE:	05/09/80
VIOLATION NO:	I-700 (7)	DATE VIOL. ISSUED:	07/05/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Pipeline pumping AMD from Dobbin Mine to AMD plant ruptured.

CURRENT STATUS: TERMINATED STATUS DATE: 07/05/2002

ABATEMENT ACTIONS: Pump has been shutdown until repairs are made. Violation terminated.

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002353	DATE VIOL. ISSUED:	06/21/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Company reported Pond 3 discharge results exceeded total suspended solids permit limits.

CURRENT STATUS: TERMINATED STATUS DATE: 06/21/2002

ABATEMENT ACTIONS: Non-remedial. Terminated on date of issuance.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Island Creek Coal Company

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002348	DATE VIOL. ISSUED:	06/17/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Pond 4 discharged black water to Garden Creek on 6/13/2002.

CURRENT STATUS:	TERMINATED	STATUS DATE:	06/17/2002
ABATEMENT ACTIONS:	Non-remedial. Terminated on date of issuance.		

PERMIT NO:	1400498	MSHA NO:	44-02134	MSHA DATE:	5/19/71
VIOLATION NO:	RBA0002239	DATE VIOL. ISSUED:	04/11/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Failed to submit water data for outfalls 005 & 006 from 1/2001 thru 3/2002. Violation is non-remedial.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/11/2002
ABATEMENT ACTIONS:	Violation is non-remedial.		

PERMIT NO:	1401232	MSHA NO:	44-01009	MSHA DATE:	2/18/68
VIOLATION NO:	RBA0002236	DATE VIOL. ISSUED:	04/11/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Failed to submit water data for outfall 001 from June - Nov 2001 Violation is non-remedial.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/11/2002
ABATEMENT ACTIONS:	Violation is non-remedial.		

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	RYH0002135	DATE VIOL. ISSUED:	01/31/2002	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Discharged black water to Garden Creek on 1/24/2002.

CURRENT STATUS:	TERMINATED	STATUS DATE:	01/31/2002
ABATEMENT ACTIONS:	Non-remedial. Terminated on date of issuance.		

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	TIM0002471	DATE VIOL. ISSUED:	10/01/2001	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Failed to submit water data for GW-1 since 3rd Qtr. 1999.

CURRENT STATUS:	TERMINATED	STATUS DATE:	10/01/2001
ABATEMENT ACTIONS:	Required corrective actions completed.		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Island Creek Coal Company

PERMIT NO:	P-590	MSHA NO:	46-0244	MSHA DATE:	03/16/73
VIOLATION NO:	P-590 (21)	DATE VIOL. ISSUED:	08/16/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to maintain impoundment haulroad and drainage structures.

CURRENT STATUS:	TERMINATED	STATUS DATE:	09/28/2001
ABATEMENT ACTIONS:	Required work completed ; violation terminated.		

PERMIT NO:	1401489	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	DLH0002139	DATE VIOL. ISSUED:	08/08/2001	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Failure to mainten plant access road caused coal material to be tracked onto SR657.

CURRENT STATUS:	TERMINATED	STATUS DATE:	08/13/2001
ABATEMENT ACTIONS:	Required corrective actions taken		

PERMIT NO:	1401531	MSHA NO:	44-03795	MSHA DATE:	9/20/1974
VIOLATION NO:	TIM0002308	DATE VIOL. ISSUED:	06/28/2001	ISSUED BY:	VA DMLR

VIOLATION DESCRIPTION: Discolored water discharged from pond 02 due to a short intense storm on 6/26/01.

CURRENT STATUS:	TERMINATED	STATUS DATE:	06/28/2001
ABATEMENT ACTIONS:	Non-remedial		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Kent Coal Mining Company

PERMIT NO:		MSHA NO:	N/A	MSHA DATE:	00/00/00
VIOLATION NO:	011048	DATE VIOL. ISSUED:	06/01/2001	ISSUED BY:	PA DEP

VIOLATION DESCRIPTION: NPDES discharge exceeded manganese limits

CURRENT STATUS: ABATED STATUS DATE: 07/12/2001

ABATEMENT ACTIONS:

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Laurel Run Mining Company

PERMIT NO:	63841304	MSHA NO:	n/a	MSHA DATE:	n/a
VIOLATION NO:	21052	DATE VIOL. ISSUED:	06/25/2002	ISSUED BY:	PA DEP
VIOLATION DESCRIPTION:	Water discharged from breach in 3 butt B collection pipe exceeded iron limits based on sample collected on 5/23/2002.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	06/25/2002
ABATEMENT ACTIONS:	Required actions were taken. All discharged water meets effluent limits.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: McElroy Coal Company

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (17)	DATE VIOL. ISSUED:	08/07/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to maintain access road from refuse toe drain to collection area in Graveyard Run.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (40)	DATE VIOL. ISSUED:	06/11/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to submit drainage control certifications at 5S 1L Bleeder Shaft site before surface disturbances started.

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (39)	DATE VIOL. ISSUED:	06/06/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly maintain drainage control structure at the 5North #1 airshaft site.

CURRENT STATUS: TERMINATED STATUS DATE: 07/25/2003

ABATEMENT ACTIONS: Required work has been completed, violation terminated.

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (16)	DATE VIOL. ISSUED:	04/23/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to follow approved plan for stages of refuse placement at Conner's Run refuse site

CURRENT STATUS: PENDING STATUS DATE:

ABATEMENT ACTIONS:

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (15)	DATE VIOL. ISSUED:	03/05/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly maintain east haulroad at entrance from Fish Creek Road.

CURRENT STATUS: TERMINATED STATUS DATE: 03/26/2003

ABATEMENT ACTIONS: Required actions completed.

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: McElroy Coal Company

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (38)	DATE VIOL. ISSUED:	03/05/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly maintain pond embankment at 5N #1 Airshaft

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/29/2003
ABATEMENT ACTIONS:	Required work completed; violation terminated.		

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (14)	DATE VIOL. ISSUED:	02/05/2003	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Discharging water high in iron from pond 023.

CURRENT STATUS:	TERMINATED	STATUS DATE:	02/07/2003
ABATEMENT ACTIONS:	Required actions completed.		

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (13)	DATE VIOL. ISSUED:	12/19/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to properly maintain sediment control structure.

CURRENT STATUS:	TERMINATED	STATUS DATE:	01/09/2003
ABATEMENT ACTIONS:	Required actions completed - violation terminated.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (37)	DATE VIOL. ISSUED:	12/19/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Off-site area disturbed by waste concrete dust.

CURRENT STATUS:	TERMINATED	STATUS DATE:	01/10/2003
ABATEMENT ACTIONS:	Required work has been completed - violation terminated.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (36)	DATE VIOL. ISSUED:	11/08/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Area disturbed off permit by de-gas borehole.

CURRENT STATUS:	TERMINATED	STATUS DATE:	05/20/2003
ABATEMENT ACTIONS:	Permit IBR 31 approved; violation terminated.		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: McElroy Coal Company

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (35)	DATE VIOL. ISSUED:	09/26/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Area disturbed by construction before all sediment controls were in place

CURRENT STATUS:	TERMINATED	STATUS DATE:	10/04/2002
ABATEMENT ACTIONS:	Required actions completed - violation terminated.		

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (12)	DATE VIOL. ISSUED:	04/02/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Discharge 023 failed to meet iron and manganese effluent limits.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/04/2002
ABATEMENT ACTIONS:	Required actions completed.		

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (10)	DATE VIOL. ISSUED:	02/25/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Ruptured pipe released AMD to Graveyard Creek.

CURRENT STATUS:	TERMINATED	STATUS DATE:	03/07/2002
ABATEMENT ACTIONS:	Ruptured pipe repaired.		

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (11)	DATE VIOL. ISSUED:	02/25/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Repaired pipe failed causing 2nd AMD release to Graveyard Creek.

CURRENT STATUS:	TERMINATED	STATUS DATE:	03/07/2002
ABATEMENT ACTIONS:	Required actions completed.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	n/a
VIOLATION NO:	U-33-83 (34)	DATE VIOL. ISSUED:	01/03/2002	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to adequately replace livestock water supplies in that heaters have not been installed to prevent freeze-ups.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/25/2003
ABATEMENT ACTIONS:	Required work completed; violation terminated		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: McElroy Coal Company

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (9)	DATE VIOL. ISSUED:	12/20/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Outlet #023 discharge violated iron effluent limitations.

CURRENT STATUS:	TERMINATED	STATUS DATE:	12/26/2001
ABATEMENT ACTIONS:	Water has been treated as required.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	U-33-83 (33)	DATE VIOL. ISSUED:	10/30/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to install all required drainage control before starting to construct 5-South #2 Airshaft

CURRENT STATUS:	TERMINATED	STATUS DATE:	11/07/2001
ABATEMENT ACTIONS:	Drainage structure installed and certified.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	U-33-83 (32)	DATE VIOL. ISSUED:	10/16/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Slurry line leak discharged unacceptable water to stream.

CURRENT STATUS:	TERMINATED	STATUS DATE:	
ABATEMENT ACTIONS:	Corrective measures taken.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	U-33-83 (31)	DATE VIOL. ISSUED:	08/14/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to correct material damage to surface lands from subsidence.

CURRENT STATUS:	TERMINATED	STATUS DATE:	08/21/2001
ABATEMENT ACTIONS:	Work started 8/15/01 and finished 8/21/01		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	U-33-83 (30)	DATE VIOL. ISSUED:	06/12/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: failed to correct or compensate for material damage from subsidence

CURRENT STATUS:	TERMINATED	STATUS DATE:	06/27/2001
ABATEMENT ACTIONS:			

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: McElroy Coal Company

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (8)	DATE VIOL. ISSUED:	05/22/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to collect and treat all acid mine drainage at Western Slope pumphouse.

CURRENT STATUS:	TERMINATED	STATUS DATE:	08/23/2001
ABATEMENT ACTIONS:	Treatment system has been upgarded as required.		

PERMIT NO:	O-1023-92	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	O-1023-92 (7)	DATE VIOL. ISSUED:	04/19/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Released acid mine drainage into watershed before treating.

CURRENT STATUS:	TERMINATED	STATUS DATE:	07/19/2001
ABATEMENT ACTIONS:	Pump repaired Collection pump system is being rebuilt. Required work completed, violation terminated.		

PERMIT NO:	U-33-83	MSHA NO:	46-01437	MSHA DATE:	00/00/00
VIOLATION NO:	U-33-83 (29)	DATE VIOL. ISSUED:	02/08/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to maintain sediment control system at loadout.

CURRENT STATUS:	TERMINATED	STATUS DATE:	02/18/2001
ABATEMENT ACTIONS:	Required actions completed, violation terminated.		

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Quarto Mining Company

PERMIT NO:	D-0433	MSHA NO:	33-01157	MSHA DATE:	00/00/00
VIOLATION NO:	24359	DATE VIOL. ISSUED:	03/18/2003	ISSUED BY:	OH DOR
VIOLATION DESCRIPTION:	Pond 8 discharge exceeded pH and iron permit limits.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	03/21/2003
ABATEMENT ACTIONS:	Required work completed. Violation terminated.				

PERMIT NO:	D-0433	MSHA NO:	33-01157	MSHA DATE:	00/00/00
VIOLATION NO:	21958	DATE VIOL. ISSUED:	01/29/2002	ISSUED BY:	OH DOR
VIOLATION DESCRIPTION:	Slurry pond 06 embankment was breached.				
CURRENT STATUS:	TERMINATED			STATUS DATE:	02/14/2002
ABATEMENT ACTIONS:	Required work completed on 2/14/2002.				

CONSOL Energy Inc. and Related Companies - Violation History

August 1,2000 - September 5, 2003

Entity to whom violation(s) were issued: Windsor Coal Company

PERMIT NO:	E-128-00	MSHA NO:	46-01286	MSHA DATE:	n/a
VIOLATION NO:	E-128-00 (14)	DATE VIOL. ISSUED:	11/08/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Indiscriminate discarding on non coal wastes.

CURRENT STATUS:	TERMINATED	STATUS DATE:	12/07/2001
ABATEMENT ACTIONS:	Required actions were conducted.		

PERMIT NO:	E-128-00	MSHA NO:	46-01286	MSHA DATE:	n/a
VIOLATION NO:	E-128-00 (13)	DATE VIOL. ISSUED:	11/08/2001	ISSUED BY:	WV DEP

VIOLATION DESCRIPTION: Failed to maintain sediment pond 2 and ditches.

CURRENT STATUS:	TERMINATED	STATUS DATE:	04/25/2002
ABATEMENT ACTIONS:	Required actions completed.		

4 EAST PORTAL STRUCTURES - No structure listed for the 4th East Portal existed prior to disturbance for the boxcut with the exception of a subsidence marker.

Topsoil Stockpile & Topsoil Berms

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This stockpile is located in the northwest corner of the proposed disturbance. The stockpile will be fully bermed to contain a 100 yr/24 hr rainfall event. The stockpile and berms is sized to contain approximately ~~13,000~~ 7,900 cubic yards of topsoil material. Berms constructed with topsoil make up the north and western portion of the excavation stockpile and the west perimeter of the disturbance boundary. These berms contain approximately 1,400 cubic yards of topsoil.

Excavation Material Stockpile

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This stockpile is located on the west edge of the portal excavation. The pile is sized to contain approximately 128,000 cubic yards of material. Material placed in the pile will come from the portal and airshaft excavation. Additional material from the construction of the coal handling facilities may also be placed within the pile. Placement of a material berm will be constructed around the pile to assist in sediment control. The berm shall be constructed with an interior retention basin sized to fully contain a 100 yr/ 24 hr rainfall event. The non-topsoil material will be utilized in the reclamation of the portal entries, backfilling the boxcut excavation and airshaft.

Sediment Pond #9

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This sediment pond is proposed to be placed in the northeast corner of the 4 East disturbance site. The pond will be partially incised (0.2 ac-ft) of sediment volume. An embankment will be constructed along the west and north sides to provide required storage volume for runoff. This pond is designed to fully contain a 10 yr/24 hr storm event. The dewatering of the pond following 24 hours will be through a 15-inch PVC pipe equipped with a slide gate. An emergency spillway has been designed to handle events in excess of a 10 yr/24 hr storm.

Inserted 10/2002
Revised 9/2003

Coal Handling Facilities & Stockpiles

Map Code: identified on Plate II-3
Status: existing - 4th quarter 2002

The coal exits the mine portal via a 54-inch conveyor belt and is delivered to a transfer point located on the lower bench of the boxcut excavation. The transfer point moves the coal to a 42-inch conveyor belt which moves the coal off the lower bench to the crusher/screen building located on the top area of the site. This transfer point will be equipped with the ability to dump coal onto a surge coal pile located on the lower bench within the portal excavation. Crushing is performed as the coal is transferred to a 5' by 10' fixed sloping screen. Coal passing through the screen is fed to a third conveyor. Coal trapped by the screen is fed into a crusher for processing.

The crushed coal leaves the crusher/screen building by conveyor belt to a radial stacker. The radial stacker can be fed directly into a hopper/feeder which conveys the coal to the truck loadout facility. The radial stacker will also feed a small coal stockpile when haul trucks are not available. The coal from the stacker stockpile will be fed into the hopper/feeder by front-end loaders.

This facility will handle a throughput capacity of approximately 1,300,000 tons of coal per year.

Surface drainage from the lower coal stockpile located on the lower bench area runs to a sump located on the portal entry level. Some drainage runoff may flow into the underground mine workings. Runoff collected in the sump will be pumped to the underground mine. Surface runoff from the radial stockpile and truck loadout facilities is conveyed by berms and culverts to sedimentation pond no. 9.

Stream Diversion - Unaffected Drainage

Map Code: identified on Plate II-3
Status: existing - 3rd quarter 2002

This diversion is propose as a temporary diversion. The diversion will intercept and divert natural drainage from the upstream watershed around the site. The natural stream is ephemeral.

Inserted 10/2002
revised 9/2003

County Road - Cowboy Mine Road No. 915

Map Code: identified on Plate II-3
Status: Existing

This road is used by local farmers and the Live Earth operation.

Storage Area

Map Code: identified on Plate II-3
Status:existing - 4th quarter 2002

This supply yard is located adjacent to the portal ramp and contains parts and bulk supply items used on a continual basis for either the surface or the underground operation. The yard is used to store inventory parts, machinery, and bulk items in a consistent and easily accessible manner. The supply yard is located within the proposed surface drainage control area and reports to sedimentation pond no. 9.

Airshaft

Map Code: identified on Plate II-3
Status: existing - 4th quarter 2002

The proposed airshaft will be located in the southwest portion of the disturbance area. The 16 ft diameter vertical shaft will be approximately 70 feet in depth. The airshaft and associated exhaust fan and housing is required to ventilate the underground mine workings.

Rock Dust Bin

Map Code: identified on Plate II-3
Status: existing - 4th quarter 2002

This structure is a supported steel bin 11 ft. in diameter and 38 ft. high. It is used for bulk storage and delivery of rock dust and has a capacity of 100 tons. Surface drainage from the bin area will report to sedimentation pond #9.

Inserted 10/2002
Revised 9/2003

Water Tank

Map Code: identified on Plate II-3
Status: Existing - 4th Quarter 2002

The 100,000- gallon tank measures 25 feet high by 26 feet in diameter, and will be located near the southwest corner of the topsoil stockpile. The tank will sit upon a concrete base. It is equipped with an overflow, level indicator, and a bank of valves to direct flow.

The water tank serves as a surge tank for both surface and underground water supplies. Water from underground is pumped to the tank through a bi-directional pipeline.

Surface drainage from the tank area flows into the northwest corner of the disturbed portal yard where it discharges through a silt fence. The tank shall be equipped with an automatic level control to eliminate any overflow discharge.

Truck Scale

Map Code: identified on Plate II-3
Status: Existing - 4th quarter 2002

The truck scale will be a standard highway scale unit of a size and capacity suitable for weighing highway coal trucks. Also associated with the scale is a small metal building to house the controls and read-out . The scales shall be calibrated and certified by the State at least once per year. Surface runoff from the scale area will report to sediment pond #9.

Silt Fence
Map Code: identified on Plate II-3
Status: Existing - 3rd quarter 2002

To treat surface runoff leaving the disturbance area. Provides alternate sediment control for small areas which do not report through sediment pond #9 or full containment retention basins. The fence is located along the northern and northwest corner of the disturbance area. This silt fence controls untreated drainage between the topsoil stockpile and outside slope of sediment basin #9 and the fence line. The silt fence located in the northwest corner treats drainage off the primary road leading to the ventilation fan site. A small section of silt fence will also be installed along the southern berm to provide a discharge point for the small watershed collected along the berm.

Inserted 10/2002
Revised 9/2003

Ventilation Fan Road

Map Code: identified on Plate II-3
Status: Existing - 4th quarter of 2002

Classified as a primary roadway. Light truck traffic will use the road to access the ventilation fan.

Coal Loadout Road

Map Code: identified on Plate II-3
Status: Proposed - 4th quarter of 2002

Classified as a primary road. ~~The roadway will loop around the top coal stockpile area to access the coal loadout facility and truck scale.~~ The roadway will enter the loadout along the east fence line from County Road No. 915. Coal trucks will load from the loadout bin and proceed across the scales located near the northeast corner of the permit area. Trucks & other vehicles will exit onto Emery County Road No. 915 (referred locally as "Cowboy Mine Road"). Drainage off the road will be conveyed to sediment pond 9.

Jersey Barriers

Status: Proposed - 4th quarter of 2003

These barriers will be strategically placed alond the perimeter of the stockpile to prevent encroachment of coal fines into the adjacent plant area.

Wind Fence

Map Code: Identified on Plate II-3
Status: Proposed - 4th quarter of 2003

Wind fence(s) will be constructed upstream of the stockpile. The wind fence disrupts the mechanism that causes dust particles to become airborne.

Water Cannon

Map Code: Installed near stockpile, perhaps integrated with/on wind fence.
Status: Proposed - 4th quarter of 2003

Used to control fugitive emissions during high wind events. System automated based on wind velocities.

Inserted 10/2002
Revised 9/2003

Cattle Guard

Map Code: Identified on Map II-3
Status: Proposed 4th quarter of 2003

Used to assist in collecting solids which may dislodge from truck tires under both overly wet and dry conditions. This collection sump makes it less likely for solids to be re-entrained.

Inserted 9/2003

UMC 784.18

Two (2) structures, associated with underground mining activities, are located within 100 ft. of the right-of-way of County Road 9-07. The location of Borehole Pump Facility #3 and the Northwest Coal Stockpile are shown on Plates VI-18 and II-1, respectively. They were approved by the Division and subsequently constructed according to the approved plan.

~~Two~~ Three structures associated with the 4th East Portal site are located within 100 ft. of the right of way of County Road 9-15. These structures consist of cattle guard, berms and the perimeter fencing.

Other than future access or haul roads joining the public roads, Consol does not propose any other facilities within 100 ft. of a right-of-way. To protect the general public the entrance gate will be posted with a stop sign prior to entering onto the county road from the mine property. The county road will be posted with warning signs as to the existence of the mine entrance. Flagman will be used to protect the general public and employees during construction activities where operation of large equipment or transportation of supplies may create a safety concern.

No public road relocations are proposed for the permit area.

UMC 784.23(a), (b) (1 through 12)

This permit renewal application contains the necessary maps, plans and cross-sections to provide compliance with the appropriate regulations.

UMC 784.24

Descriptions for transportation facilities, specifically roads and conveyor systems, whether existing or proposed, have been provided previously in this part.

For the sake of continuity we are providing all design information in Chapter IV. Chapter IV also covers the designs for relocation of natural drainage ways.

UMC 786.21

All existing structures have been found by the Division to be in compliance with this regulation.

UMC 817.150 - 176

Detailed design information for all roads, to show compliance with these performance standards, is contained in Chapter IV.

Revised 10/2002
Revised 9/2003

UMC 817.52

In addition to NPDES monitoring of discharge points, a monitoring program of surface and ground water sites has been established to assess mining impacts on these resources. The current operational monitoring plan is described in Sec, VI.A.5.

UMC 817.95

Protection of air resources during operation of the mine is discussed in Part C of Chapter X. Appendix X.C-1 evaluates emissions from the proposed preparation plant. Fugitive dust (particulate) is considered the only potentially significant air pollutant generated by both facilities. Appendix X.C-2 evaluates emissions from the 4th East Portal. Appendix X.C-3, Norwest's evaluation and recommendation of engineering controls and other measures to minimize generation of dusting from the 4th East Portal.

Control measures employed at the current operation utilize water sprays at all product transfer points, a silt fence downwind of the conical product stockpile, a water truck to wet down unpaved roads, and revegetation of topsoil and subsoil stockpiles. Measures to be used at the proposed coal preparation plant will include fully hooded conveyor belts, totally enclosed transfer points with water sprays, stacking tubes with water sprays at storage pile loading points, revegetation of topsoil and subsoil stockpiles, and water spraying of unpaved roads.

All control equipment will be properly installed, maintained, and operated such that visible emissions from the facilities will not exceed opacity limits established by the Utah Division of Environmental Health and applicable requirements of the Clean Air Act. No air monitoring plan has been proposed.

UMC 817.97

Protection of fish and wildlife during operation of the mine is discussed in Chapter IX, The discussion addresses mining impacts on these resources and mitigative measures that will be employed at the mine. A study of fish and wildlife and their habitats, within the permit area, was conducted by Mine Reclamation Consultants, Inc. in 1980 and their report is attached in Appendix IX-1.

A fish and macro-invertebrate count was performed in September of 2002 by JBR Consultants. The study was conducted in Quitchupah Creek and Christiansen Wash. The completed report from JBR is attached as Appendix IX-2.

- plant species for revegetation have been selected for their compatibility with habitat restoration and grazing as well as erosion control and survival.

- recommendations from the Utah Department of Wildlife Resources will be followed to insure minimal impact on fish and wild-life.

- water spraying throughout the operations and reclamation process, on a regular basis is and will be used to control air pollutants.

- a subsidence monitoring and mitigation plan is in effect which will protect established buffer zones and repair any damage elsewhere.

UMC 783.24(i)

The permit area does not contain any public parks. All cultural resource issues are covered in Part A of Chapter X.

UMC 783.24 (k)

The permit area and adjacent area does ~~not~~ contain ~~any~~ land which is within the boundaries of any units of the National System of Trails or the Wild and Scenic Rivers System, including study rivers designated under Section 5(a) of the Wild and Scenic Rivers Act.

Portions of the designated disturbance area under the Emery Mine permit was placed under the National Trails System in late 2002. The Act cited as the "Old Spanish Trail Recognition Act of 2002" was by the President on December 4, 2002. Notation as to the trails existence is located on the "Cultural Resource Map", Plate X-A-1.

TABLE III-1

SURFACE OPERATIONS AREA
PRE- AND POST-MINING LAND USES

Land Use	Acres Pre-Mining	Acres Post-Mining
Grazing/Wildlife	~~415.7~~ 417.2	~~435.2~~ 436.7
Industrial (Coal Mining)	19.5	0
Roads	5.8	5.8
TOTAL	~~441.0~~ 0442.5	~~441.0~~ 442.5

TABLE III-2

EXISTING AND FUTURE
SURFACE DISTURBANCE AREAS

	Acres	%
Prior to August 3, 1977 Area	19.5	4
August 3, 1977 to May 3, 1978 Area	4.7	1
May 3, 1978 to January 5, 1986 Area	17.9	4
Post January 5, 1986 Area	8.6	2
[1]Proposed Near Future Disturbance Area	~~85.7~~ 86.2	20
Post July 1, 2002 Area at 4th East Portal	~~15.0~~ 16.0	3
Potential Surface Operations Area	289.6	66
TOTAL	~~441.0~~ 442.5	100

III.A.2 TIMING, SEQUENCE AND BONDING

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[1]Includes ~~7.5~~ 8.0 acres at 4E Portal Site.

Revised 10/2002
Revised 9/2003

Reclamation of the underground development waste disposal site and excess cut material site will be initiated as soon as all the material presently being stored at the northwest coal stockpile area is placed in the waste disposal site. During excavation of the initial disposal site, excavation material will be stockpiled to provide four (4) feet of non-toxic material to cover the wastes. Based upon differences in soil quality, the cover material will be segregated into two stockpiles. One stockpile will be designated as a subsoil stockpile and the other will be designated as a topsoil stockpile. These stockpiles will be independently bermed and contemporaneously revegetated. Excess cut material will be conveyed and placed in a bermed depression west of the office building. After the existing temporarily stored wastes are placed in the disposal site, the wastes will be covered with subsoil and topsoil, and revegetated. The remaining portion of the disposal site will be developed and reclaimed in a similar manner on an as-needed basis as additional underground development wastes are generated. In order to reclaim the active portion of the site, sufficient cover material will be maintained in stockpiles adjacent to the active area. Temporary stabilization will be established by broadcasting the following seed mix:

Species	Lbs PLS/Acre
Crested wheatgrass	3
Streambank wheatgrass	3
Russian wildrye	3
Western wheatgrass	3.5
Fourwing saltbush	*1.5*
~~Yellow Sweetclover~~	~~1.5~~
TOTAL	14.0

Permanent cover will be established by utilizing seed mix A as described in Chapter III.F.1 and Chapter VIII.C.4. Additional detail concerning backfilling and grading of these sites may be found in Chapter III.C.1. The soil quality and design parameters for the disposal site are described in Chapter VII - Appendix 2 and Chapter IV.C.1. respectively.

Contemporaneous grading will be conducted at the coarse refuse disposal site as the refuse is deposited. As the refuse disposal bank is constructed, grading will be conducted on the lower face to insure stability and maintain the design slope (2.5H to 1V). A small 25 foot wide terrace will be constructed above each grade lower face to control drainage. In addition, grading will be conducted on all lower faces to repair any gullies which occur during the life of the facility. The slurry impoundment is projected to be constructed in conjunction with the coarse refuse disposal site construction. Therefore, the slurry impoundment borrow area shown on Plate III-3 will be contemporaneously reclaimed as described in Chapter III.C.1. The borrow area will be jointly reclaimed with the contemporaneous grading of the coarse refuse

disposal site within one (1) year of the construction of these two (2) facilities. Upon final cessation of active use, the final grading and backfilling as described in Chapter III.C.1 will be completed according to the reclamation schedule. Topsoiling and revegetation will be completed as described in Chapter III.E.1 and Chapter III.F.1. Additional detail concerning the design parameters and drainage control can be found in Chapter IV.C and Chapter VI.C respectively.

All surface land areas affected by mining activities will be restored in a timely manner and reclaimed as contemporaneously as practicable with mining operations. Seeding and planting of disturbed areas will be conducted immediately after final site preparation and during the first normal period for favorable planting conditions. When necessary to effectively control erosion, any disturbed area will be seeded and planted, contemporaneously with the completion of grading, with the temporary seed mix described in Chapter VIII.C.3 until a permanent cover is established.

UMC 800.11-UMC 800.13, UMC 800.15-UMC 800.50

After the permit renewal application has been approved, but before the permit renewal is issued, a bond or bonds for performance will be filed with DOGM on the required forms furnished by DOGM to comply with UMC 800.11-UMC 800.13 and UMC 800.15-UMC 800.50.

UMC 800.14

The following information applies to the existing and anticipated near future surface disturbances at the Emery Mine. Furthermore it is assumed that these costs shall be updated with each permit renewal and therefore only reflect the cost of reclamation during the permit term. For additional detail of the unit costs and assumptions for this estimate, please refer to Chapter IV.B.

Existing Facilities
Reclamation Costs at Time of Abandonment

Item	Cost
Structure Demolition and Removal	$172,522
Backfilling and Grading	334,600
Topsoil Preparation and distribution	86,600
Revegetation	146,270
Erosion Control	36,600
Incidental Disturbance	15,650
4th East Portal Bond Calculation	586,751 ~~584,929~~
Subtotal	$1,378,993 ~~*$1,377,171*~~
10% Maintenance and Monitoring Costs	137,893 ~~137,717~~
10% Contingency and Engineering Costs	137,893 ~~137,717~~
Total Reclamation Cost (1998 Dollars)	$1,654,779 ~~*$1,652,606*~~

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impoundment with the excavated dirt forming an embankment around the pond. Prior to reclamation, the accumulated sediment may be removed and disposed of in the same manner as the coal fines described in Chapter III.B.1. Reclamation grading will require the dozing of the embankment material back into the pond so that approximate original topography is replaced.

Pond No. 4 was also constructed prior to Aug 3, 1977. This structure is an evaporation lagoon for the waste produce of the reverse osmosis water treatment system. Reclamation of this site will include the removal of the embankment so that approximate original topography is achieved. Analysis of the soils in the bottom of this pond will be made to determine if evaporative salts have accumulated to a toxic level. Soils that are found to be toxic will be removed or covered with sufficient material to comply with UMC 817.103.

Existing ponds No. 5 and No. 6 and proposed pond No. 7 are all incised structures. Prior to reclamation, the accumulated sediment may be removed and disposed of in the same manner as the coal fines described in Chapter III.B.1. Reclamation grading will require the dozing of the embankment material back into the ponds so that approximate original topography is replaced. However, subsoil and topsoil which are removed and stockpiled from these sites will also be utilized in the reclamation of these ponds.

~~Proposed~~ Existing sediment pond no.9 collects and treats runoff from the 4 East Portal site. Reclamation of this site will include the removal of the embankment and filling the incised volume so that original topography is achieved. Analysis of the soils in the bottom of this pond will be made to determine if evaporative salts have accumulated to a toxic level. Soils that are found to be toxic will be removed or covered with sufficient material to comply with rules and regulations. However, subsoil and topsoil which are removed and stockpiled from this site will also be utilized in the reclamation of this pond.

For additional detail concerning the topsoil and revegetation of these sites, please refer to Chapter III.E.1 and Chapter III.F.1. Additional detail concerning the volume of material in the embankments and design information for Pond No. 1, 2, 3, 4, 5, 6 and 9 is contained in Chapter IV.B and Chapter VI.C respectively. The location of these structures may be found on Plates II-1,II-2 and II-3 and on Plate VI-10.

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Topsoil material contained within stockpiles will be sampled and analyzed for soil texture, available potassium, phosphorus, total nitrogen, and pH prior to redistribution.

After respreading and soil testing have been completed, the seedbed may have, fertilizer broadcasted or sprayed onto the soil. Incorporation of the fertilizer and other amendments into the rooting zone by surface roughening prior to seeding the approved seed mix described in Chapter VIII.C.4.

Reclamation of subsoil and topsoil stockpile areas will be completed in the same manner as other disturbed areas. Subsoil stockpiles will be removed to the original ground surface during grading and backfilling operations. Topsoil stockpiles will be removed until the required topsoil depth is retained over the stockpile site. Thus, topsoil respread operations need only to be conducted on the subsoil stockpile sites. Surface preparation on all subsoil and topsoil stockpile sites will be conducted as previously described.

Plates III-1, III-2, III-3, III-4 and III-4A, indicate the location of all existing and near-future disturbance areas at Emery Mine. For additional information pertaining to the topsoil quality, data, and substitution plans, please refer to Chapter VII.

During final reclamation at the 4th East Portal the topsoil will be respread to an average depth of 7 to 8 inches. This average is derived from taking the loose cubic yards placed in the topsoil stockpile of 7,840 cu. yds plus topsoil berms (1,400 cu. yds) and estimated 1,200 yards from the disturbed land (1.0 ac.) of the extension area (avg. 9 inch) over a total ~~9.0~~ 10.0 acres of disturbed land (~~10~~ 11.0 acres disturbed minus 1.0 acre of rock outcrop) where topsoil was salvaged. The 7,840 cu. yds. contained within the current topsoil stockpile was obtained from the as-built certification of the stockpile. ~~The previous yardage reported of 12,900 cu. yds. was a rough calculation taking only a few elevations and assuming an overall average height for the stockpile. Based on the resurvey, the overall height of the stockpile was found to less than first assumed.~~

Area to Topsoil: 10.0 acres * 43,560 sq ft/acre = 435,600 sq ft
Volume of Material Available: 10,440 cu yds * 27 cu ft /cu yd = 281,880 cu ft

Depth of Cover (D in ft): Area for Topsoiling (435,600 sq ft) * D = Available Topsoil (281,880 cu. ft.)

therefore, D = 281,880 cu ft/435,600 sq ft or D = .64 ft or 7.7 inches

The topsoiled surface will be roughened by pocking with a backhoe or excavator. Following the roughening the site will be seeded with the appropriate warm season seed mixture described in Chapter VIII.C.4.

If cryptogamic soils were harvested, they should be applied following seeding. They should be planted in a selective location, such as along the interior edges of gouged depressions.

Inserted 10/2002
Revised 9/2003

BOND AMOUNT COMPUTATION

Applicant: Consolidation Coal Company

Permit Number: 015/015 **Permitted Acreage:** ~~22.5~~ 24.0 (~~15.0~~ 16.0) Disturbed

Bonding Scheme (permit area, incremental, cumulative): Permit Area

If Incremental:

Increment Number: _____

Increment Acreage: _____

If Cumulative:

Acres previously authorized for disturbance: _____

New acres proposed for disturbance: _____

Type of Operation: Surface Facility (Underground Coal Mine)

Location: Emery Mine, 4th East Portal, Emery County, UT

Prepared by: Timothy Kirschbaum

Date: October 30, 2002 Revised 9/03

Total Bond Amount: $ ~~584,929~~ 586,751

WORKSHEET 1
DESCRIPTION OF THE WORST-CASE RECLAMATION SCENARIO

Worst Case - is at completion of mining when the coal reserve is exhausted, all facilities have been constructed and abandoned. Coal stockpile has been sold and removed from the site leaving the coal base. Coal handling facility were neglected the final years of maintenance and major parts for resale of salvage has already been removed. The site contains no valuable assets or mobile equipment.

The following discussion will present the tasks needed to be performed for returning the mine site to the original premining condition. See Plate III-1 of Chapter III of MRP.

I. Structure Demolition:

When returning site to post mining land use, all surface structures most be removed. This includes all man made items to include the following:

a. Crusher/Screen Facility - sized 25' x 30' x 40' constructed of metal sheeting, steel I-beams and reinforced concrete slab floor 25'x 30' x 2'. Cost of demolition includes removing floor and building.

b. Five structures included for the process coal transportation from the mine mouth to the loadout. Each structure is connected with the conveyor system. Two belts (740') transport the coal from the mine mouth to the crusher/screen processing building. The 200' section from the crusher to the coal stockpile is a radial stacker. The final 100' section of belt moves the coal from the stockpile to the loadout.

- 250' of 54" belt from the mine mouth to transfer point
- 490' of 48" belt from transfer point to the crusher/screen facility
- 200' of 48" belt on the radial stacker to the loadout.
- 100' of 48" from the pile to the loadout.
- Loadout structure 26' x 26' x 35'

c. 1.4 miles of powerline from the mine's main substation to the 4th East Portal. Powerline consists of 5 line hung on 32 overhead poles.

d. Water supply tank installed on concrete pad (37' dia x 1'). Cost of Demolition includes the cost of removing tank and concrete slab.

e. Rock dust tank - placed on concrete pad (8' x 10' x 1') - cost of demolition includes the cost of removing tank and concrete pad.

f. Ventilation Fan - concrete collar 16.5' diameter hole, fan and housing. Demolition cost includes fan housing, fan, and concrete collar. Backfilling included in earthwork.

g. Radial stacker - 10' x 75' x 1' - reinforced concrete.

Earthmoving Activity -

4th East development involved excavating a boxcut to ramp down to the coal seam. Ramp constructed 10% grade. with depth of approximately 70 ft. The boxcut is to be backfilled and restoration of an ephemeral stream channel through the backfilled boxcut. The portal consists of three entries which will require MSHA approved seals be constructed and backfilled in accordance with MRP (refer to page 16, chapter III). Site is to be returned to approximate original contour (AOC). Backfill material to come from the stored excavation material stockpile (see Plate IV-3 thru 3b, Chapter IV). Fill material is to be placed in three (3') foot lifts and compacted. The fill material primarily consists of blasted rock (sandstone) from the original excavation of the boxcut. The final three (3) foot lift is not to be compacted. Travel over the final lift should be limited and avoided by heavy rubber tired equipment.

In addition all waste coal material from the stockpile area is to be placed in the bottom of the boxcut. Sedimentation Pond #9 and the Diversion ditch are to be backfilled and graded into the surrounding topography.

Sedimentation pond is partially incised 0.3 ac-ft of sediment volume. The pod bottom to be sampled for toxicity and sediment placed in the mine's refuse pile if needed. Volume incised is 460 b.c.y.

Diversion ditch measures 500 feet in length with an average depth of 5 feet, bottom width of 6 ft and side slope of 2H:1V. Volume is 1,500 b.c.y.

Ventilation shaft to be backfilled with non toxic material from the excavation stockpile. Shaft measures 16.5 ft in diameter with a depth of 70 feet.

Topsoil Replacement

Topsoil stockpile is located adjacent to the excavation stockpile. The MRP requires for 9 to 10-inches of topsoil be spread over the disturbed area where topsoil was salvaged. The plan notes the segregation of top 2-inch crust be salvaged and used for top dressing of the respread topsoil. Topsoil removal area is ~~9~~ 11 acres. Refer to Plate III-1, Chapter III.

Revegetation

Under this MRP, topsoil was saved in-place underneath the excavation stockpile. The MRP requires that this in-place topsoil along with the original surface of the topsoil stockpile be ripped. The area involves 5 acres. The ripping of 12-inches with a spacing of 2-feet is required to decompress the soil horizons. These five acres will be seeded with warm season mix and mulched. The ~~9~~ 11 acres where topsoil is to be respread will be surface roughened prior to seeding and mulching with the warm season mix. The surface roughening involves using a backhoe or excavator to develop shallow depressions randomly to the disturbed surface.

Other - Non topsoil berms need to be graded back into the surrounding topography. This earthwork can be included with the final grading of the backfill prior to topsoiling. Rubber liner required (300' x 14') as part of stream restoration.

WORKSHEET 2

STRUCTURE DEMOLITION AND DISPOSAL COSTS

Structures to be Demolished:

Item	Construction Material	Volume	unit	Unit Cost Basis ($)	unit	Demolition Cost ($)
Crusher/Screen Building	Metal	30,000	c.ft	$0.20	c.ft	6,000
Crusher/screen building	Concrete	55	c. yd	$13.56	c. yd	746
Conveyor System	Metal	1,060	c.ft	$0.20	c.ft	212
Radial Stacker	Concrete	46	c. yd	$13.56	c. yd	624
Water Tank	Metal	17,177	c.ft	$0.20	c.ft	3,435
Water Tank	Concrete	3	c. yd	$13.56	c. yd	43
Rock Dust Bin	Metal	1,600	c.ft	$0.20	c.ft	320
Rock Dust Bin	Concrete	3	c. yd	$13.56	c. yd	41
Ventilation Fan	Metal	1		$7,000.00	unit	7,000
Fan Collar	Concrete	44	c. yd	$13.56	c. yd	597
Coal Stockpile Feeder	Metal	150	c.ft	$0.20	c.ft	30
Loadout	Metal	23,660	c.ft	$0.20	c.ft	4,732
Powerline Poles	each	32	poles	$125.00	each	4,000
Powerline Wire	5 Wire	36,960	l. ft	$0.23	l. ft.	8,501
SUBTOTAL						$36,279.61

Debris Handling and Disposal Costs:

Truck Haulage	10 trucks	+$160/TRUCK	$1,600.00
Disposal	10 trucks	+$450/TRUCK	$4,500.00

Total Demolition and Disposal **$42,379.61**

WORKSHEET 3
MATERIAL HANDLING PLAN SUMMARY

Earthmoving Activity	Volume (LCY)	Origin	Destination	Haul Distance (ft)	Grade (%)	Equipment To Be Used
Boxcut Backfill	132,149	Excavation Stockpile	Portal Boxcut	500	10	Two – 35 ton Cat 769 Trucks Cat 988 Loader Cat 825 B Compactor
Ventilation Shaft	706	Excavatation Stockpile Berm	VentShaft	100	2	Cat 988 Loader
Sediment Pond #9	580	Embankment	Pond Area	100	2	Cat D8N
Berms	2,300	Berms	Disturbed Area	100	3	Cat D6
Stream Diversion	1,800		Diversion	300	3	Dozer & 1- Cat 769 Truck
Topsoil Berms	~~1,400~~ - 300	West Berm Excavation Berm	Disturbed area	100	3	Cat D6 Two – End Dump Trucks 988 Loader Cat D6
Topsoil	~~10,600~~ 7,680 + 300 + 1,200	Stockpile	Disturbed Area	500	5	Cat D6 Two – End Dump Trucks 988 Loader Cat D6
Surface Roughening			Disturbed - Topsoiled			416 Backhoe
Ripping In-Place Topsoil			In-Place Topsoil			Cat D6 w/ Ripper 3 shanks

Project: 4th East Portal
Date: 10/30/02 revised 9/2003
Prepared by: TDK

WORKSHEET 4B
EARTHWORK QUANTITY

Site Grading –

Backfill Entries – 8' x 16' 100' x 3 entries x 20% swell = 1,706 L.C.Y.

Backfill Portal Boxcut – 132,149 L.C.Y. (see worksheet 4A)
¾ - Moved by 35 T. Cat 769 Truck & 988 Loader = 99,111 L.C.Y
¼ - Moved by D8N = 33,038 L.C.Y.

Diversion: 500' length x 6' bottom x 5' depth (avg) + 2H:1V Side Slopes = 1,500 B.C.Y.
Swell -20% = 1,800 B.C.Y.

Sediment Pond – Incised Volume = 0.29 ac. Ft. x 43,560 sq.ft./ac. / 27 cu.ft./cu.yd. =
467 B.C.Y. Swell – 20% = 560 L.C.Y. (D8N)

Berms – 4,168 l.f. x 24 sq.ft. (cross sectional area avg.) = 3,721 L.C.Y. (D6)

Ventilation Shaft – 16.5' dia. X 70' depth x 20% = 706 L.C.Y.

Topsoil – Cover depth for 10.0 ac. = 0.7 ft.
~~10~~ 11 ac. x 43,560 sq.ft./ac. X 0.7 ft. / 27 cu.ft./cu.yd. = 12,400 L.C.Y.
2 – Dump Trucks & 988 Loader

Ripping – Ripper Depth for 5.0 ac. = 1.5'
5 ac. X 43,560 sq.ft/ac. X 1,5 ft. / 27 cu.ft./cu.yd. = 12,100 B.C.Y.
D6 with Ripper

Roughening – Re-topsoiled areas – 10 ac. – 50% roughening random effective ratio of area.
~~10~~ 11 ac. X 43,560 sq.ft./ac. X 1 ft. / 27 cu.ft./cu.yd. = ~~16,133~~ 17,746 L.C.Y. x 50%
(area) = ~~8,066~~ 8,873 L.C.Y.

Data Source(s):

Worksheet 4A
MRP, Chapter VI-7, Pond 9
Plate VI-21, Stream Diversion

Project: 4th East Portal
Date: 10/30/02
Prepared by: T.D.K.

WORKSHEET 5
PRODUCTIVITY AND HOURS REQUIRED FOR DOZER USE

Earthmoving Activity:

Grading berm material back into surrounding topography.

Characterization of Dozer Used (type, size, etc.):

CAT D6 SU

Description of Dozer Use (origin, destination, grade, haul distance, material, etc.):

Berms, adjacent disturbed ground, 3% avg. 100 max. dirt (inc. small rock)

Productivity Calculations:

Operating Adjustment Factor = .75 (operator factor) x 0.90 (material factor) x 0.80 (efficiency factor) x 1.0 (grade factor)

x 1.0 (weight correction factor) x 1.0 (production method/blade factor) x 1.0 (visibility factor) x 1.0 (elevation factor) = 0.54

Net Hourly Production = 350 (normal hourly production) LCY/hr x 0.54 (operating adjustment factor) = 189 LCY/hr

Hours Required = 3,721 (volume to be moved) LCY ÷ 189 (net hourly production) LCY/hr = 20 hr

Data Source(s):

Volume: 4,186 L.F. Plate IV-3 Average Berm 3 ft. high, 2 ft. top width, 2H:IV Slope

CAT Handbook

Project: 4th East Portal
Date: 10/30/02
Prepared by: T.D.K.

WORKSHEET 5
PRODUCTIVITY AND HOURS REQUIRED FOR DOZER USE

Earthmoving Activity:

Partial backfilling of portal boxcut, fill ventilation shaft, fill sediment pond.

Characterization of Dozer Used (type, size, etc.):

CAT D8 - SU Blade

Description of Dozer Use (origin, destination, grade, haul distance, material, etc.):

Boxcut - excavation material stockpile (-5%) grade at 200' max. distance, sandstone and dirt.
Vent. & Pond - +2% grade, 100' max. distance, sandstone and dirt.

Productivity Calculations:

Operating Adjustment Factor = .75 (operator factor) x .70 (material factor) x .80 (efficiency factor) x 1.1 (grade factor)

x 1.0 (weight correction factor) x 1.0 (production method/blade factor) x 1.0 (visibility factor) x 1.0 (elevation factor) = 0.41

Net Hourly Production = 700 (normal hourly production) LCY/hr x 0.41 (operating adjustment factor) = 287 LCY/hr

Hours Required = 33,011+560+706 (volume to be moved) LCY ÷ 287 (net hourly production) LCY/hr = 120 hr

Data Source(s):

Project: 4th East Portal
Date: 10/30/02
Prepared by: T.D.K.

WORKSHEET 7
PRODUCTIVITY AND HOURS REQUIRED FOR RIPPER-EQUIPPED DOZER USE

Ripping Activity:
Reclamation of In-Place stored topsoil (excavation stockpile & topsoil stockpile)

Characterization of Dozer and Ripper Use:
D6H

Description of Ripping (ripping depth, cut spacing, cut length, and material to be ripped):
1.5 depth @ 2 ft. spacing - cut length 300'

Productivity Calculation:

Cycle Time = (300 ft (cut length) ÷ 88 ft/min (speed)) + 0.30 min (fixed turn time *) = 1.03 min/pass

Passes/Hour = 60 min/hr ÷ 1.03 min/pass (cycle time) x .75 (efficiency factor) = 43.7 passes/hr

Volume Cut/Pass = (1.5 ft (tool penetration) x 2 ft (cut spacing) x 300 ft (cut length)) ÷ 27 ft^3/yd^3

= 33.3 BCY/pass

Hourly Production = 33.3 BCY/pass x 43.7 passes/hr = 1,455 BCY/hr

Hours Required = 12,100 BCY (bank volume to be ripped **) ÷ 1,455 BCY/hr (hourly production) = 8.3 hr

* Fixed turn time depends upon dozer used. 0.25 min/turn is normal.

** Remember to use the swell factor to convert from bank cubic yards to loose cubic yards when applying these data to *Worksheet 5*. Calculate separate dozer hauling of ripped material for each lift on that worksheet.

Data Source(s):
CAT Handbook
Worksheet 4B

Project: 4th East Portal
Date: 10/30/02
Prepared by: T.D.K.

WORKSHEET 8
PRODUCTIVITY AND HOURS REQUIRED FOR LOADER USE

Earthmoving Activity:

Loading 35 (T) off road CAT 769

Characterization of Loader Use (type, size, etc.):

CAT 988 - 7.0 cu.yd. bucket

Description of Loader Use (origin, destination, grade, haul distance, etc.):

Work off flat benches excavation material stockpile, load truck, 100' work area

Productivity Calculations:

Cycle time = 0.12 min (haul time (loaded)) + 0.1 min (return time (empty)) + 0.55 min (basic cycle time) = 0.77 min

Net Bucket Capacity = 7.0 LCY (heaped bucket capacity) x 0.8 (bucket fill factor*) = 5.6 LCY

Blasted rock average

Hourly Production = 5.6 LCY (net bucket capacity) ÷ 0.77 min (cycle time) x 0.8 (efficiency factor) x 60 min/hr = 349 LCY/hr

Hours Required = 99,011 + 1800 + 12,900 LCY (volume to be moved) ÷ 349 LCY/hr (hourly production) = 325 hr

3/4 Boxcut Backfill + Diversion Backfill + Topsoil Loading

* See loader section of equipment manual.

Data Source(s):

CAT Handbook
Worksheet 4B

Project: 4th East Portal
Date: 10/30/02 Revised 9/03
Prepared by: T.D.K.

WORKSHEET 9
PRODUCTIVITY AND HOURS REQUIRED FOR TRUCK USE

Earthmoving Activity:
Move Topsoil for Respread

Characterization of Truck Use (type, size, etc.):
Dump truck tandem axle

Description of Truck Use (origin, destination, grade, haul distance, capacity, etc.):
Topsoil stockpile, disturbed area, 500 avg. 12 tons/9 cu.yd. 2% to 3% grade

Productivity Calculations:

No. Loader Passes/Truck = 9 (truck capacity *) LCY ÷ 5.6 (loader bucket net capacity) LCY = 1.6 - 1.0 (round down to nearest whole number) passes

Net Truck Capacity = 5.6 (loader bucket net capacity) LCY x 1 (no. loader passes/truck) = 5.6 LCY

Loading Time/Truck = 0.77 (loader cycle time (from *Worksheet 8* or *10*)) min x 1 (no. loader passes/truck) = 0.77 min

Truck Cycle Time = 0.5 (haul time) min + 0.5 (return time) min + 0.77 (loading time) min + 1.0 (dump and maneuver time) min = 2.77 min

No. Trucks Required = 2.77 (truck cycle time) min ÷ 0.77 (total loading time) min = 3.6 trucks

Production Rate = 9 (net truck capacity) LCY x 3 (no. trucks) ÷ 2.77 (truck cycle time) min = 9.7 LCY/min

Hourly Production = 9.7 (production rate) LCY/min x 60 min/hr x 0.8 (efficiency factor) = 465 LCY/hr

Hours Required = ~~12,900~~ 12,400 (volume to be moved) LCY ÷ 465 (hourly production) LCY/hr = ~~27.7~~ 26.7 hr

* Use the average of the struck and heaped capacities.

Data Source(s):
Assumption made for haul time and return time.

Project: 4th East Portal
Date: 10/30/02
Prepared by: T.D.K.

WORKSHEET 9
PRODUCTIVITY AND HOURS REQUIRED FOR TRUCK USE

Earthmoving Activity:

Have rock material for backfilling portal boxcut area. Assume 3/4 volume plus diversion.

Characterization of Truck Use (type, size, etc.):

CAT 769 - Off Road Truck - 35 tons 28 avg. cap.

Description of Truck Use (origin, destination, grade, haul distance, capacity, etc.):

Productivity Calculations:

No. Loader Passes/Truck = 28 (truck capacity *) LCY ÷ 5.6 (loader bucket net capacity) LCY = 5 (round down to nearest whole number) passes

Net Truck Capacity = 5.6 (loader bucket net capacity) LCY x 5 (no. loader passes/truck) = 28 LCY

Loading Time/Truck = 0.77 (loader cycle time (from *Worksheet 8* or *10*)) min x 5 (no. loader passes/truck) = 3.85 min

Truck Cycle Time = 1.40 (haul time) min + 0.70 (return time) min + 3.85 (loading time) min + 1.20 (dump and maneuver time) min = 7.15 min

No. Trucks Required = 7.15 (truck cycle time) min ÷ 3.85 (total loading time) min = 1.85 trucks

Production Rate = 28 (net truck capacity) LCY x 2 (no. trucks) ÷ 7.15 (truck cycle time) min = 7.8 LCY/min

Hourly Production = 7.8 (production rate) LCY/min x 60 min/hr x .75 (efficiency factor) = 351 LCY/hr

Hours Required = 99,111 + 1800 (volume to be moved) LCY ÷ 351 (hourly production) LCY/hr = 287.5 hr

* Use the average of the struck and heaped capacities.

Data Source(s):

CAT Handbook
Worksheet 4B

Project: 4th East Portal
Date: 10/30/02 Revised 9/03
Prepared by: T.D.K.

WORKSHEET 10
PRODUCTIVITY FOR HYDRAULIC EXCAVATOR USE (BACKHOE OR POWER SHOVEL)

Earthmoving Activities:

Roughening - Placed Topsoil (Pocking)

Characterization of the Excavator Used (type, size, etc.):

CAT 416 Series II Backhoe

Description of Excavator Used (loading geometry, materials, etc.):

Develop shallow depressions randomly of topsoiled disturbance area.
Depth of depressions 6" to 1" - effective coverage ratio 50%

Productivity Calculations:

Net Bucket Capacity = 1.0 (heaped bucket capacity) LCY x 1.0 (bucket fill factor *) = 1.0 LCY

Hourly Production = 1.0 (net bucket capacity) LCY x 60 min/hr ÷ 0.25 (cycle time **) min x 0.8 (efficiency factor) = 192 LCY/hr

Hours Required = ~~8,066~~ 8,873 (volume to be handled) LCY ÷ 192 (net hourly production) LCY/hr = ~~42~~ 46 hr

* See loader section of the equipment manual.
** See excavator section of equipment manual.

Data Source(s):

CAT Handbook
Worksheet 4B

Project: 4th East Portal
Date: 10/30/02 Revised 9/03
Prepared by: T.D.K.

WORKSHEET 13
SUMMARY CALCULATION OF EARTHMOVING COSTS

Equipment *	Ownership & Operation Cost ($/hr)	Labor Cost ($/hr)	Total Hours Required **	Total Cost *** ($)
CAT 769 - 35 T. Truck	112	47.15	287.5	45,756
CAT D8N - Dozer SU Blade	128	47.15	120	21,018
CAT D6 Dozer	60	47.15	20+8.5+28	6,054
CAT 416 Backhoe	35	38.00	~~42~~ 46	3,358 ~~3,066~~
CAT 988G Loader	135	47.15	325 + 28	64,299
CAT 825 Compacter	92	47.15	325	45,223
5,000 Gal Water Truck	60	38.00	325 + 28	34,594
Dump Truck (12 Ton)	40	38.00	28	2,184
			Grand Total	222,486 ~~222,194~~

* Include all necessary attachments and accessories for each item of equipment. Also, add support equipment such as water wagons and graders to match total project time as appropriate.

** Account for multiple units in truck and/or scraper teams.

*** To compute Total Cost: Add Ownership & Operation Cost and Labor Cost columns then multiply by Total Hours Required column.

Data Source(s):

Cost sheets provided by Division OIl Gas & Mining 10/29/02

Project: 4th East Portal
Date: 10/30/02 Revised 9/03
Prepared by: T.D.K.

WORKSHEET 14
REVEGETATION COSTS

Name and Description of Area To Be Revegetated:
Disturbed surface of 4th East Portal - 15 ac.

Description of Revegetation Activities:

Cost Calculation for Individual Revegetation Activities:

Initial Seeding

~~15~~ 16 ac x ($ 0 /ac + $ 500 /ac) = $ ~~7,500~~ 8,000
area to be seeded | seedbed preparation | seeding, fertilizing & mulching

Planting Trees and Shrubs

0 ac x ($ _____ /ac + $ _____ /ac) = $ 0
area to be planted | planting | herbicide treatment

Reseeding

~~15~~ 16 ac x .60 x ($ 0 /ac + $ 500 /ac) = $ ~~4,500~~ 4,800
area to be seeded & unreleased disturbed areas | failure rate* | seedbed preparation | seeding, fertilizing & mulching

Replanting Trees and Shrubs

0 ac x _____ x ($ _____ /ac + $ _____ /ac) = $ 0
area to be planted & unreleased disturbed areas | failure rate* | planting | herbicide treatment

Other Necessary Revegetation Activities

(Examples of other activities that may be necessary include soil sampling, irrigation, and rill and gully repair. Describe each activity and provide a cost estimate with documentation. Use additional worksheets if necessary.)
Annual rill & Gully costs assured $2,500 x 10 yrs = $25,000

Other Costs = $ 25,000

TOTAL REVEGETATION COST = $ ~~37,000~~ 37,800

* **Identify failure rate and basis. If anticipated failure rates vary within the area proposed for disturbance, use a separate worksheet for the area subject to each failure rate.**
Roughening of surface in earth work covers seedbed preparation.

Data Source(s):
Assumed Failure Rate of 60% - area is semi-arid.

Project: 4th East Portal
Date: 10/30/02
Prepared by: T.D.K.

WORKSHEET 15
OTHER RECLAMATION ACTIVITY COSTS

(Subsidence damage repair costs, water supply replacement costs, funds required to support long-term treatment of unanticipated acid or ferruginous mine drainage, etc.)

Description of Reclamation, Repair or Pollution Abatement Activity:

Install MSHA approved seal in each entry (3 entries).
Install cap (permanent) over backfilled shaft (vent. shaft).
Plug water borehole - water tank
Install rubber liner in channel of stream restoration.

Assumptions:

Cost Estimate Calculations:

* MSHA seal of entries	$5,200 per entry x 3	= $15,600
* Cap vent shaft		= $ 5,000
* Plug borehole		= $ 5,000
** Rubber liner 300' length x 14' width = 4,200 sq.ft.	@ $5.50	= $23,100

TOTAL COSTS = $ 48,700

Other Documentation or Notes:

(Include additional sheets, maps, calculations, etc., as necessary to document estimate.)

Plate III-10, Chapter III

Data Source(s):

* Cost sheet provided by DOGM 10/29/02
** Previous estimate from Consol Project

Project: 4th East Portal
Date: 10/30/02 Revised 9/03
Prepared by: T.D.K.

WORKSHEET 16
RECLAMATION BOND SUMMARY SHEET

1.	Total Facility and Structure Removal Costs	$ 42,380	
2.	Total Earthmoving Costs	$ 222,486 ~~222,194~~	
3.	Total Revegetation Costs	$ 37,800 ~~37,000~~	
4.	Total Other Reclamation Activities Costs	$ 48,700	
5.	Total Direct Costs (sum of Lines 1 through 4)	$ 351,366 ~~350,274~~	
6.	*Inflated Total Direct Costs* (Line 5 x inflation factor *)		$ 395,919 ~~394,689~~
7.	Mobilization/Demobilization (10 % of Line 6) (1% to 10% of Line 6)	$ 39,591 ~~39,469~~	
8.	Contingencies (5 % of Line 6) (3% to 5% of Line 6)	$ 19,796 ~~19,734~~	
9.	Engineering Redesign Fee (3 % of Line 6) (2.5% to 6% of Line 6)	$ 11,877 ~~11,841~~	
10.	Contractor Profit/ Overhead (25 % of Line 6) (see Graph 1)	$ 98,980 ~~98,672~~	
11.	Project Management Fee (5.2 % of Line 6) (see Graph 2)	$ 20,588 ~~20,524~~	
12.	*Total Indirect Costs* (sum of Lines 7 through 11)		$ 190,832 ~~190,240~~
13.	GRAND TOTAL BOND AMOUNT (sum of Lines 6 and 12)		$ 586,751 ~~584,929~~

* Inflation factor = ENR Construction Cost Index (CCI) for current mo/yr / ENR CCI for mo/yr 5 years prior to current mo/yr = 6,578 / 5,838 = 1,1268

Identify current month/year used in formula above: Nov. '02
Identify prior month/year used in formula above: Nov. '97

ENR = *Engineering News Record*, McGraw-Hill Construction Information Group, New York, NY; http://www.enr.com.

Formula assumes permit term or time until next bond adequacy evaluation is 5 years. Adjust timeframe as necessary.

Soils and Vegetation

Refer to Chapter VII, Appendix VII-3 & Appendix VII-4 for narrative of soil resources at the 4 East Portal Area. Prior to portal and diversion excavation, the area will be checked for topsoil thickness. Once the thickness is determined, depth stakes, thickness maps or similar measures will be used to ensure total recovery. All topsoil designated on Plate III-1 for topsoil removal shall be removed and stockpiled in the topsoil stockpile location refer to Plate II-3 and/or IV-3.

Salvage of topsoil material from the 4th East Portal area will involve the following deviation from the topsoil handling plan outlined in Chapter III.E.1.

1. The topsoil which lies within the interior of the excavation material stockpile and topsoil stockpile will be preserved in-place.

2. The interface of the in-place original topsoil and the place material will be marcated with a 4" yellow tape. The tape shall be placed in a 10 ft by 10 ft. grid. and shall remain in place until final reclamation.

3. The topsoil stockpile will be roughened by pocking the surface.

4. Following seeding of the topsoil pile it will be irrigated and records kept as to date and amount of water applied.

The topsoil material from the excavation material and the topsoil stockpile will remain preserved in-place. This practice deviates from normal topsoil handling practices. This deviation is requested in an attempt to preserve the soil structures and cryptogam's within the area. Prior to placement of excavated overburden material on top of the in-place topsoil, the interface was delineated in the field with 4-inch wide yellow tape. The tape was applied in a 10 ft by 10 ft grid pattern. Material from the excavation will be placed over top the in-place topsoil. No toxic material will be placed within this excavation pile.

The topsoil stockpile interface between the in-place and placed topsoil was marked with the grid pattern utilizing the yellow tape. The top few inches 3"-4" was segregated and temporarily stored while the remaining topsoil material was picked up and placed in the topsoil stockpile. This segregation was performed to salvage as much of the vegetation root structures, organic matter and crpytogam's as possible. This organic matter was then spread over the constructed topsoil stockpile. The surface was roughened by a backhoe leaving the undulating pocking. The topsoil stockpile was hydro-seeded and tactified on July 10,2002, with the cold season mixture defined in Chapter VIII.C.3 This seed mix involved Crested Wheatgrass, Fourwing Saltbush and Russian Wildrye. The topsoil berm was seeded with the warm season contemporary (interim) seed mix which included Shadscale, Fourwing Saltbush, Castle Valley Clover, Streambank Wheatgrass, Scarlet Globemallow, Winter Fat, Blue Grama, Indian Ricegrass and Alkali Sacaton.

Topsoil Stockpile was reseeded and hydro mulched August 19, 2003. The seed mix included warm season species. The seed mix has been provided to DOGM.

Revised 10/2002
Revised 9/2003

Irrigation of the south and west side of the topsoil berm (only) began on July 11,2002 by applying one-quarter inch of water. The following table represents the date and amount of water sprayed on the berm.

July 12 - 1/4"	July 18 - 3/4"	July 29 - 1/2"
July 15 - 1/2"	July 19 - 1/2"	Aug 1 - 1/2" Rain
July 16 - 1/4"	July 22 - 1/4"	Aug 2 - 1/2" Rain
July 17 - 1/4"	July 23 - 1/4"	Periodic Rains Have Continued No Further Manual Watering

The topsoil stockpile was not irrigated because of seeding with cool season mix.

Salvage of topsoil contaminated by wind blown coal fines at the 4th East Portal site will be handled in the following manner:

Prior to any topsoil salvage operation, coal fines will be vacuumed up to the best extent possible. This vacuuming operation will be done in a manner which attempts to minimize further disturbance of the topsoil and it's vegetation. On completion of the vacuuming operation, the one acre area of surface disturbance will be checked for cryptogamic matter. Should cryptogams be found within the area, the organic matter will be collected and transplanted within a small pocked area on top of the existing topsoil stockpile. The area of placement of the cryptogamic matter will be noted and record kept of area for historical interest.

The existing stockpile berm of the southwest corner and south side of the stockpile will be crowded into the existing stockpile (see Figure IV-15). Topsoil currently in-place between the water tank and the topsoil stockpile will be picked up and placed as berm material. The topsoil from the additional 1 acre of disturbance associated with construction of the re-route road will be picked up and moved to the existing topsoil stockpile, where, it will be used to rebuild the berm. This topsoil will be placed in a manner to allow for minimal side slope, but, still retains the runoff from the stockpile. The disturbed portions of the topsoil stockpile and berm will be randomly pocked and seeded. Prior to seeding, the Division of Oil Gas & Mining will be notified of the seed mix. Seed tag will be saved and date of seeding recorded. Copy of seed tag will be forwarded to DOGM. The affected berm(s) and stockpile will then be mulched.

Inserted 10/2002
Revised 9/2003

Wildlife

The disturbance area was inspected on April 11, 1989 by Mr. L. B. Dalton of the Division of Wildlife Resources, Department of Natural Resources, State of Utah. Mr. Dalton finds that "the portal development will have minimal impacts on the wildlife resource." These findings, in letter form, are attached for reference.

The 4 East portal site was resurveyed in May 2002 by Mt. Nebo Scientific Consultants. The survey was performed by request from the Division of Oil Gas and Mining. The report in contained as Appendix VIII-3 in Chapter VII.

The vegetation map for the extension area of 1.5 acres at the 4th East Portal was modified by Patrick Collins, Ph.D. of Mt. Nebo Consultants. Mr. Collins letter is located in Chapter VII, Appendice VII-4.

Sampling of fish and macro invertebrates were conducted in September 2002 by JBR Environmental Consultants. The survey was conducted in Quitchupah Creek and Christiansen Wash. The sampling was performed to provide new baseline data for the reactivation of mining operations. Because of the minimal number of samples taken, a second sampling will be performed in September of 2003. The process methods and final report of the 2002 sampling is contained as Appendix IX-2. In accordance with DOGM requirements for perennial streams the micro invertebrate sampling will be performed every three years following the 2003 sampling. Results of these sampling's will be included as part of the annual report for that year.

Cultural Resources

The area of disturbance was surveyed in 1975, as part of an 880 acre area of investigation, by Mr. Michael S. Berry, Assistant Utah State Archaeologist. After traversing the entire area on 50 to 75 foot intervals, three (3) sites were located and recorded. The nearest of these sites is approximately 0.5 miles to the southwest of the proposed 4 East Portal Site. As a result, we do not anticipate any cultural resource impacts from this development.

Mr. Berry's report on this investigation is contained in Chapter X.

The 4 East portal site was resurveyed in May 2002 by Montgomery Archaeological Consultants. The survey was performed by request from the Division of Oil Gas and Mining. The report is contained as Appendix 5-5 in Chapter X. In March 2003, Montgomery Archaeological Consultants extended the cultural resource survey of the 4th East Portal site. This report is contained as Appendix 5-7 in Chapter X.

Inserted 10/2002
Revised 9/2003

APPENDIX IV-7-G 4th EAST PORTAL ROADS

The proposed road system for the 4th East Portal is comprised of two (2) primary roads. These roads are to be constructed fairly flat, following the existing topography with topsoil removed. The first primary road noted as the Coal Loadout Road, begins just southeast of the loadout off exiting to the right off Emery County Road 915. Coal trucks will access coal loadout bin from the south and exit the loadout at the northeast corner of the site. The surface of the road will be rocked, dust suppressant will be utilized to control fugitive dust. For further detail on the road and use of chemical suppressants, refer to Appendix X.C-3 in Chapter X. The second primary road noted as the Ventilation Fan Road, branches off the coal loadout road at the west edge of the boxcut ramp and proceeds along the west side of the disturbed area to access the ventilation fan site. This section of the road is to be on bedrock (sandstone) or constructed of materials available on the site. Access to the site will be light truck to perform daily fan checks.

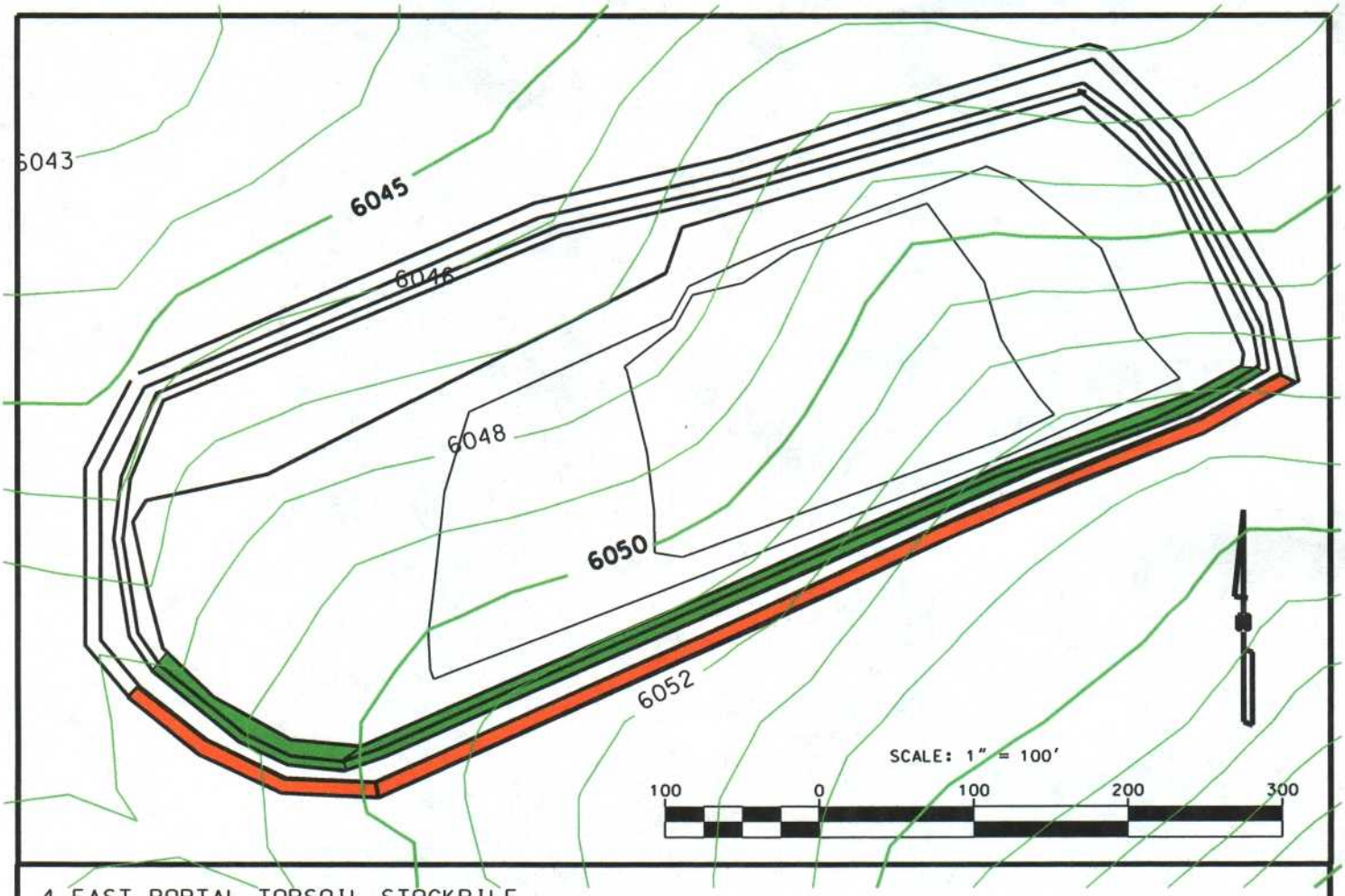
As-built drawings will be filed upon final construction. Please refer to Plate IV-13 for the proposed profile, plans and cross sectional views of the primary Coal Loadout Facility road. Proposed profile for the Ventilation Fan Road is delineated on Plate IV-14.

The portal site is entirely fenced restricting access to and from the site. The ~~only~~ entrances to the site is through two gates located in the northeast corner of the site. These entrances connect directly to Emery County Road No 915, also known as Cowboy Mine Road.

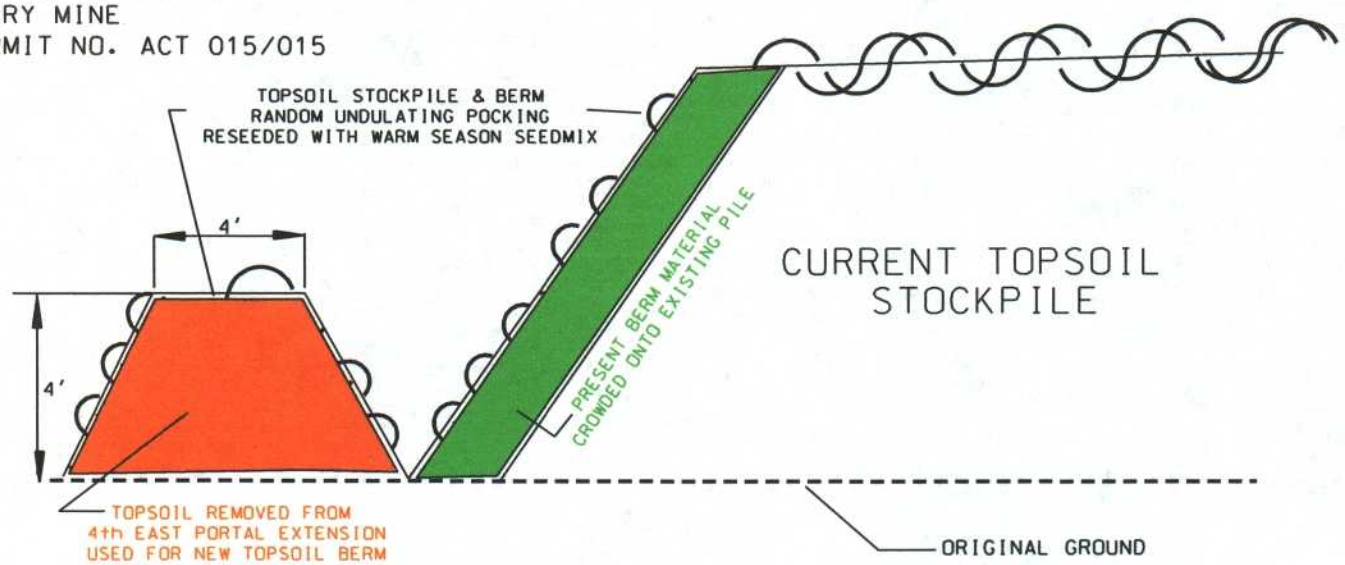
To protect the general public the entrance gate will be posted with a stop sign prior to entering onto the county road from the mine property. The county road will be posted with warning signs as to the existence of the mine entrance. Flagman will be used to protect the general public and employees during construction activities where operation of large equipment or transportation of supplies may create a safety concern. The mine road has excellent visibility in both direction of the county road.

Road Culvert No. 1 - Coal Loadout Road (station 0+90 inlet)
Design information: Drainage collected between the coal loadout facility and the county road right-of-way is conveyed thru the culvert into sedimentation pond #9.

Based on SEDCAD 4 modeling "Emergency Spillway 25YR/24 HR Design Storm" the peak inflow of 2.54 cfs will need to conveyed by the road culvert. Therefore, a corrugated metal pipe 18-inches in diameter is proposed.



4 EAST PORTAL TOPSOIL STOCKPILE
REAFFECTED TOPSOIL STOCKPILE
FIGURE NO. IV-15
EMERY MINE
PERMIT NO. ACT 015/015

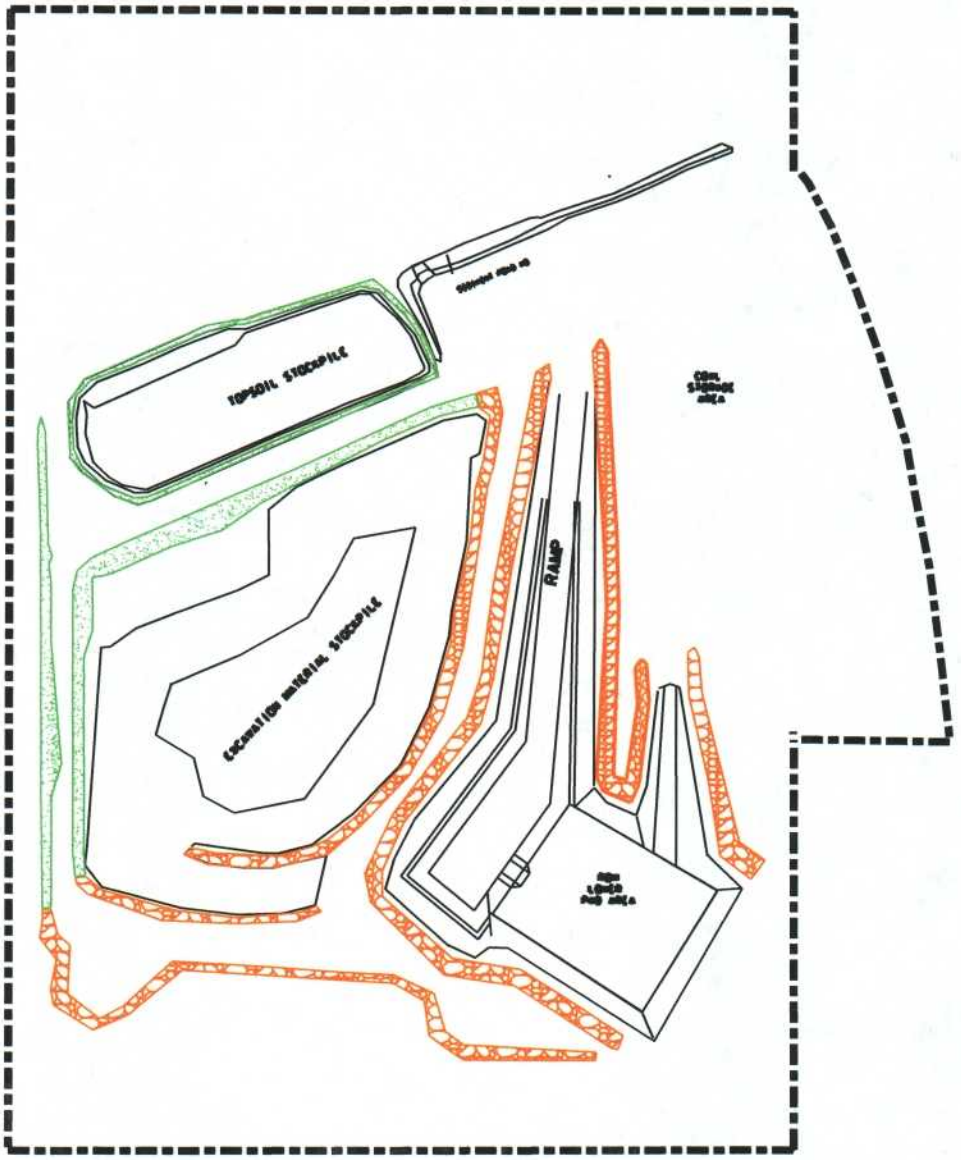


RECONFIGURED TOPSOIL STOCKPILE
ABATEMENT NOV 03-39-1-1

(PERIMETER BERM)

THIS TYPICAL SECTION OF THE
PERIMETER BERM ILLUSTRATES
COLORED SECTION OF THE PLAN VIEW

SCALE: NONE
DATE: 4/2003



TOPSOIL BERM

ROCK & SUBSOIL BERM

100 0 100 200 300

4th EAST PORTAL

CONSTITUENTS OF BERM MATERIAL

EMERY MINE

FIGURE IV-16

9/2003

EMERY PERMIT ACT 015/015

Pond No. 9

I. Hydrologic Information

Drainage Area: ~~3.2~~ 4.9 acres or ~~0.005~~ 0.0077 mi²
Storm Type: SCS Type II
Hydrologic Soil Groups: C
Curve Number: 85 (moderate)
Design Event - Normal Pool: 10 yr/24 hr (1.7 inches)*
Design Event - Spillway: 25 yr/24 hr (2.1 inches)*

*Note: Precipitation value obtained from Precipitation-Frequency Atlas, Volume VI - Utah.

A) Runoff Characteristics

SCS Soil Group	Land Use	Area	Curve No.
C	Mine Yard Area	~~3.2~~ 4.9 Ac.	90

B) Direct Runoff, Q (10 yr/24 hr)

$$Q = \frac{(P - 0.2S)^2}{P + 0.8S}$$

$$= \frac{(1.7 - 0.2\,(1.11))^2}{1.7 + 0.8\,(1.11)}$$

where: P = precipitation (inches)
S = (1000/CN) - 10
= (1000/90) - 10
= 1.11

= 0.84 inches

C) Total Runoff Volume, Vt (10 yr/24 hr)

$$Vt = \frac{(\text{~~3.2~~ 4.9Ac})(0.84 \text{ inches})}{12 \text{ in/ft}}$$

Vt = ~~0.224~~ 0.343 ac-ft

D) Sediment Storage Volume:

The following are sediment yield calculations as predicted by the Universal Soil Loss Equation (USLE) for an estimated life of 5 years. Using the Universal Soil Loss Equation;

A = (R)(K)(LS)(CP) where:

A = Average Soil Loss (tons/ac-yr)
R = Rainfall Erosivity Factor (Annual) = 20
K = Soil Erodibility Factor = 0.35
(SCS Soils Interpretation Record)
*LS = Slope Length and Steepness Factor
**CP = Control Practice Factor

The following USLE Parameters charts illustrate the Control Practice Factor (CP) and topographic characteristics of the watershed for specific time intervals during the estimated 5 year life of the pond. Weighted averages of the USLE Parameters are then applied to the Universal Soil Loss Equation for the period of time specified to predict the sediment yield.

USLE Parameters (1-5 Years)

Location	Area (Ac)	Activity	Avg. Slope (%)	CP
Mine Yard Area	~~3.2~~ 4.9	Disturbed	3.5	1.00

S = 21% **CP = 0.66
*LS = 3.5

A = (20)(0.35)(~~3.2~~ 4.9)(1.00)
A = ~~22.4~~ 34.3 tons/ac-yr

Sediment Yield = (~~22.4~~ 34.3 tons/ac-yr)(~~3.2~~ 4.9ac)(5 yr)
= ~~359~~ 840.4 tons

* Topographic Factor, LS "Applied Hydrology and Sedimentology for Disturbed Areas" p. 334, LS is derived using an Average Slope Length = 100 ft. and an area weighted avg. slope, S.

** Control Practice Factor CP "Applied Hydrology and Sedimentology for Disturbed Areas" p. 390, Appendix 5A. CP represents the area weighted average of the CP values.

Weighted Sediment Density

Mine Yard Area containing coal fines = ~~2.6~~ 2.8 acres

Mine Yard Area containing soil material = ~~0.6~~ 2.1 acres

Soil Density = 68 lb/cf

Coal Density = 54.4 lb/cf

Weighted Sediment Density = $\frac{(\text{~~2.6~~ 2.8 ac})(54.4 \text{ lb/cf}) + (2.1 \text{ ac})(68 \text{ lb/cf})}{\text{~~3.2~~ 4.9 acres}}$

= ~~56.95~~ 60.23 lb/cf

Required Sediment Volume (5 years)

Sediment Yield = ~~359~~ 840.4 tons
Weighted Sediment Density = ~~56.95~~ 60.23 lb/cf

Total Sediment Volume = (~~359~~ 755.6 tons) $\frac{(2000 \text{ lb})}{\text{ton}} \frac{(\text{ft}^3)}{\text{~~56.95~~ 60.23 lb.}} \frac{(\text{ac})}{43560 \text{ ft}^2}$

= ~~0.29~~ 0.64 ac-ft or ~~0.06~~ 0.13 ac-ft/yr

Total Sediment Storage

The dewatering system for Pond No. 9 consists of one (1) ~~12~~15 inch diameter pipe located at the normal pool elevation of ~~6053.0~~ 6052.55 ft. The ~~12~~15 inch pipe furnished with a slide gate which remain closed except when dewatering.

Total Sediment Storage (Elev. 6052.55') = 0.328 ac-ft

60% Sediment Storage (Elev. 6052.1') = 0.20 ac-ft

Inserted 10/2002
Revised 9/2003

Cleanout of Pond No. 9 will be conducted when the sediment level reaches Elev. 6052.0 ft. Based on the estimated annual sediment accumulation of ~~0.06~~ 0.13 ac-ft/yr, the cleanout interval for Pond 9 is approximately ~~3.6~~1.6 years. Please see the following page for storage volume calculations.

E) Pond No. 9 Stage - Storage Information

Listed below is the stage-storage relationship for this pond:

EMERY MINE
POND NO. 9
STAGE VS. STORAGE

ELEVATION (FT)	AREA (AC)	AVG AREA (AC)	DEPTH (FT)	VOLUME (AC-FT)	CUM. VOLUME (AC-FT)
6049.4	0.000				0.000
		0.010	0.6	0.006	
6050.0	0.020				0.006
		0.061	1	0.061	
6051.0	0.101				0.067
		0.145	1	0.145	
6052.0	0.189				0.212
		0.213	0.55	0.117	
6052.6	0.236				0.328
		0.258	0.45	0.116	
6053.0	0.280				0.444
		0.368	1	0.368	
6054.0	0.456				0.812
		0.496	0.55	0.598	
6054.6	0.536				1.411

Inserted 10/2002
Revised 9/2003

F) Design Pool Information (10 yr/24 hr)

Pond No. 9 is designed and will be constructed to provide full containment of runoff from a 10 yr/24 hr event by maintaining the one ~~12~~15 inch CMP slide gate closed at all times except when the pond is being dewatered. From the Stage vs. Storage Curve having a Total Sediment Elev. ~~6053.0~~6052.55', the Peak Pool Elev. during the 10 yr/24 hr event is derived as follows:

Design Pool Volume = Total Sediment Volume + Total Runoff Volume

= ~~0.316~~ 0.328 ac-ft + ~~0.224~~ 0.325ac-ft

= ~~0.654~~ 0.653ac-ft

Peak Pool Elev. (10 yr/24 hr) = ~~6053.9~~ 6053.64 ft.

With the top of the embankment at an elev. 6055.2 ft., full containment of the 10 yr/24 hr runoff is provided. To facilitate Pond No. 9 in discharging precipitation events larger than the 10 year/24 hour storm, the proposed open channel emergency spillway will be constructed ~~0.1~~ 0.9 foot above the peak pool of the 10 yr/24 hr design storm at an elev. 6054.55 feet.

Dewatering of Pond No. 9 will proceed only after a minimum of 24 hours of storm water detention is provided to achieve effluent limitations.

Inserted 10/2002
Revised 9/2003

G) Dewatering Discharge Calculations (10 yr/24 hr event)

The peak discharge for the proposed ~~12~~ 15- inch steel pipe outlet for Pond No. 9 is derived using the full pipe flow equation as derived in "Applied Hydrology and Sedimentology for Disturbed Areas", 1983 and shown below.

$$Q = \frac{a\,(2gH')^{0.5}}{(Kx + Ke + Kb + KcL)^{.5}}$$

where: H' = Peak Pool Elev. - Outlet Elev. + 0.6D

H' = 6053.64' - 6052.55' - 0.6 (~~12~~ 15/12)

H' = 0.34'

$$Q = \frac{a\,[2g(0.34)]^{0.5}}{(Kx + Ke + Kb + KcL)^{0.5}}$$

where: a = pipe area, 3.93 ft²
Kx = exit coefficient, 1.0
Ke = entrance coefficient, 1.0
Kb = bend coefficient, 0.0
Kc = friction coefficient, 0.0715
(using n = 0.015)
L = pipe length, 40 ft.

$$Q = \frac{3.93[2(32.2)(0.34)]^{0.5}}{[1.0 + 1.0 + 0.0 + 0.0715(40)]^{0.5}}$$

Q = ~~6.27~~ 8.36cfs

Inserted 10/2002
Revised 9/2003

H) Dewatering Discharge Rate

The following is an estimate of the time required to discharge the 10 yr/24 hr design storm runoff volume through the ~~12~~ 15-inch outlet pipe after a minimum of 24 hours of detention.

From the previous discharge calculations,

Q max = ~~6.27~~ 8.36cfs
Q avg = ~~3.13~~ 4.18 cfs

$$\text{Estimated Discharge Time} = \frac{\text{Total Runoff Volume (10 yr/24 hr)}}{\text{Q avg}}$$

$$= \frac{(\text{~~0.224~~ 0.325ac-ft})(43560\ \text{ft}^2/\text{ac})}{\text{~~3.13~~ 4.18cfs}} \times \frac{\text{hr}}{3600\text{s}}$$

= ~~0.87~~ 0.94 hours

I) Emergency Spillway Design (25 yr/24 hr storm event)

The proposed emergency overflow spillway will be constructed to discharge stormwater runoff which exceeds a 10 year/24 hour precipitation event. During the 25 year/24 hour design event, Pond No. 9 provides ~~partial~~ full storage of the runoff volume. ~~while the remaining runoff will discharge through the proposed emergency spillway.~~ (See the Outlet Verification, Item J, for routing information.) The spillway will be a trapezoidal shaped broad crested weir. Dimensions of the overflow spillway section is designed as follows:

Bottom Width	:	5 ft.
Sideslopes	:	1V:3H
Manning's "n"	:	0.035 (rocklined)
Depth	:	~~1.2~~ 0.65 ft.
Flowline Elev.	:	~~6054.0~~ 6054.55 ft.
Peak Flow Depth	:	~~0.1~~ 0.0 ft.
Peak Outflow	:	~~0.3~~ 0.0 cfs
Peak Velocity	:	~~0.9~~ 0.0 fps
Channel Slope	:	Flat 1.0% (Min)

The spillway will be constructed in the fill embankment and will discharge into the watershed of Christiansen Wash.

Inserted 10/2002
Revised 9/2003

J) Outlet Verification (25 year/24 hour event)

A SEDCAD computer routing was performed to confirm peak discharge and peak stage values for the 25 year/24 hour storm event. The SCS Type II storm distribution was used in the SEDCAD computer routing. With the ~~12~~ 15" dewatering pipe control valves closed*, ~~partial~~ full storage of the 25 year/24 hour event is provided while the remaining runoff is discharged through the proposed Emergency Spillway. A summary of the results is as follows:

Pond Data

Normal Pool Elev.	=	~~6053.0~~ 6052.55 ft.
Emergency Spillway Elev.	=	~~6054.0~~ 6054.55 ft.
Embankment Crest Elev.	=	6055.2 ft.

Routing Data

Peak Inflow	=	~~3.88~~ 9.58 cfs
Peak Outflow	=	0.00 cfs
Peak Outflow Velocity	=	0.00 fps
Peak Pool Elev.	=	~~6054.3~~ 6053.96 ft.

* Note: SEDCAD modeled with 1-inch corrugated metal pipe to function as a gated valve. Detailed discharge table contained within SEDCAD 4 Report demonstrates discharge from the straight pipe (1-inch principle) is 0.00 at all elevations. The proposed design fully contains the 25 yr/24 hr design storm.

Inserted 10/2002
Revised 9/2003

EMERY MINE
4th EAST PORTAL SITE
ACT/015/015

FULL CONTAINMENT

10 YR/24 HR DESIGN STORM

SEDIMENT POND #9

Revised 9-9-03

Kirschbaum

Island Creek Coal Company
P.O. Box 566
Sesser, IL 62884

Phone: 618-625-6847
Email: timkirschbaum@consolenergy.com

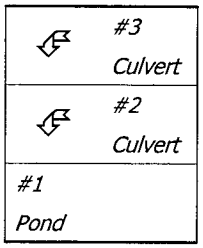
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	10 yr - 24 hr
Rainfall Depth:	1.700 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Pond #9
Culvert	#2	==>	#1	0.000	0.000	18-inch Entrance Rd
Culvert	#3	==>	#1	0.000	0.000	12-inch Vent Rd



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#3		0.600	0.600	0.99	0.05
#2		1.500	1.500	1.48	0.07
#1	In	3.300	5.400	6.93	0.34
	Out			0.00	0.00

Structure Detail:

Structure #3 (Culvert)

12-inch Vent Rd

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
30.00	0.50	0.0150	1.00	0.00	0.90

Culvert Results:

Minimum pipe diameter required: 8 inches

Structure #2 (Culvert)

18-inch Entrance Rd

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
60.00	0.50	0.0150	1.00	0.00	0.90

Culvert Results:

Minimum pipe diameter required: 10 inches

Structure #1 (Pond)

Sediment Pond #9

Pond Inputs:

Permanent Pool Elev:	6,052.55
Permanent Pool:	0.32 ac-ft

Straight Pipe

Barrel Diameter (in)	Barrel Length (ft)	Barrel Slope (%)	Manning's n	Spillway Elev	Entrance Loss Coefficient	Tailwater Depth (ft)
1.00	40.00	0.01	0.0140	6,052.55	0.90	0.00

Pond Results:

Peak Elevation:	6,053.64
H'graph Detention Time:	0.00 hrs
Dewater Time:	0.00 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
6,049.00	0.000	0.000	0.000		
6,049.50	0.012	0.002	0.000		
6,050.00	0.020	0.010	0.000		
6,050.50	0.053	0.028	0.000		
6,051.00	0.101	0.066	0.000		
6,051.50	0.142	0.126	0.000		
6,052.00	0.189	0.208	0.000		
6,052.50	0.232	0.313	0.000		
6,052.55	0.236	0.325	0.000		Spillway #1
6,053.00	0.280	0.441	0.000		
6,053.50	0.363	0.601	0.000		
6,053.64	0.392	0.657	0.000	0.00	Peak Stage
6,054.00	0.456	0.805	0.000		
6,054.50	0.529	1.051	0.000		
6,054.55	0.536	1.078	0.000		
6,055.00	0.537	1.319	0.000		
6,055.20	0.537	1.427	0.000		

Detailed Discharge Table

Elevation	Straight Pipe (cfs)	Combined Total Discharge (cfs)
6,049.00	0.000	0.000
6,049.50	0.000	0.000
6,050.00	0.000	0.000
6,050.50	0.000	0.000
6,051.00	0.000	0.000
6,051.50	0.000	0.000
6,052.00	0.000	0.000
6,052.50	0.000	0.000
6,052.55	0.000	0.000
6,053.00	0.000	0.000
6,053.50	0.000	0.000
6,054.00	0.000	0.000
6,054.50	0.000	0.000

Elevation	Straight Pipe (cfs)	Combined Total Discharge (cfs)
6,054.55	0.000	0.000
6,055.00	0.000	0.000
6,055.20	0.000	0.000

Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#3	1	0.600	0.052	0.000	0.000	92.000	F	0.99	0.05
	Σ	**0.600**						**0.99**	**0.05**
#2	1	1.500	0.056	0.000	0.000	85.000	F	1.48	0.07
	Σ	**1.500**						**1.48**	**0.07**
#1	1	3.300	0.030	0.000	0.000	89.000	F	4.45	0.22
	Σ	**5.400**						**6.93**	**0.34**

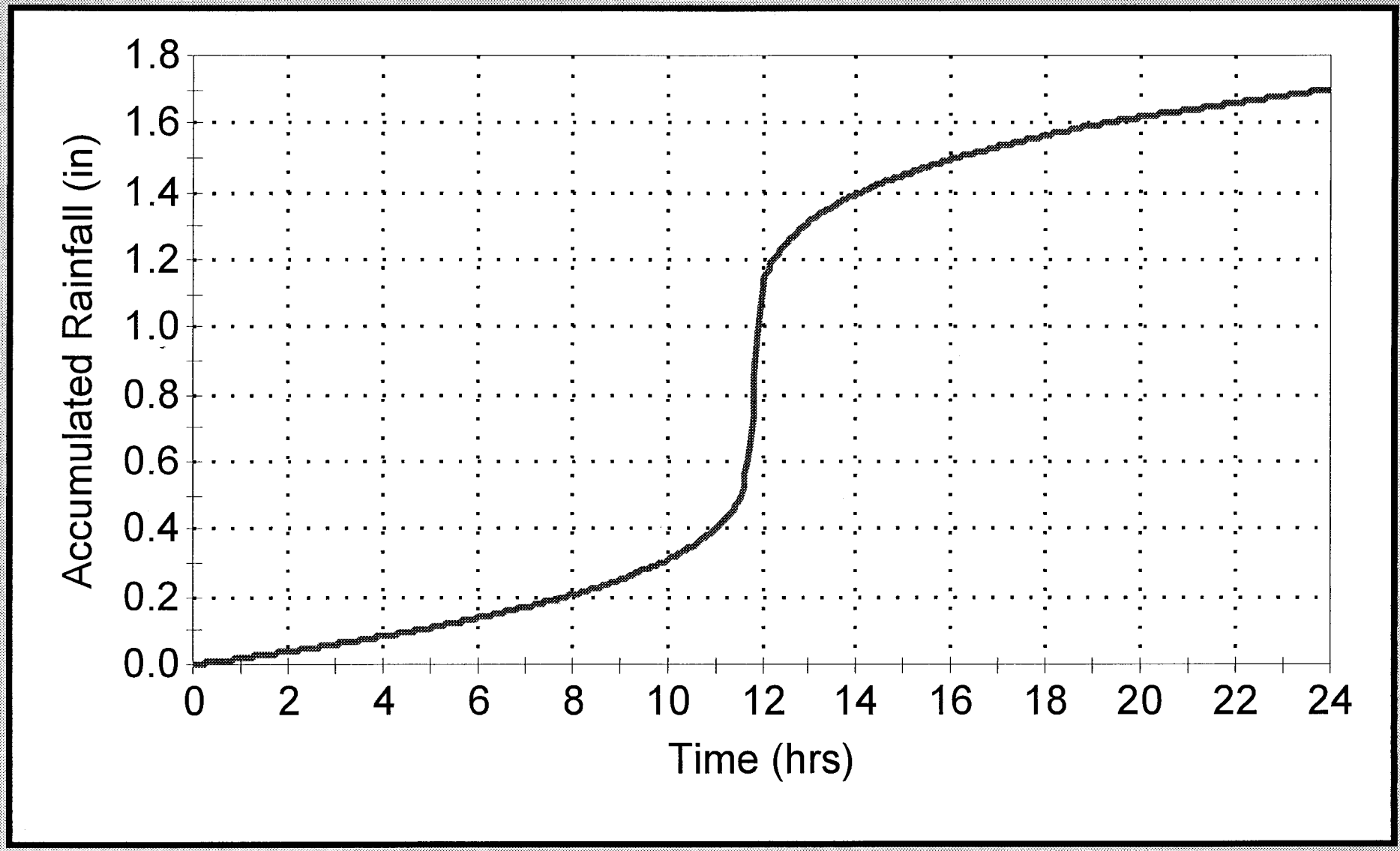
Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	7. Paved area and small upland gullies	5.00	25.00	500.00	4.500	0.030
#1	**1**	**Time of Concentration:**					**0.030**
#2	1	5. Nearly bare and untilled, and alluvial valley fans	6.00	30.00	500.00	2.440	0.056
#2	**1**	**Time of Concentration:**					**0.056**
#3	1	7. Paved area and small upland gullies	2.50	15.00	600.00	3.180	0.052
#3	**1**	**Time of Concentration:**					**0.052**

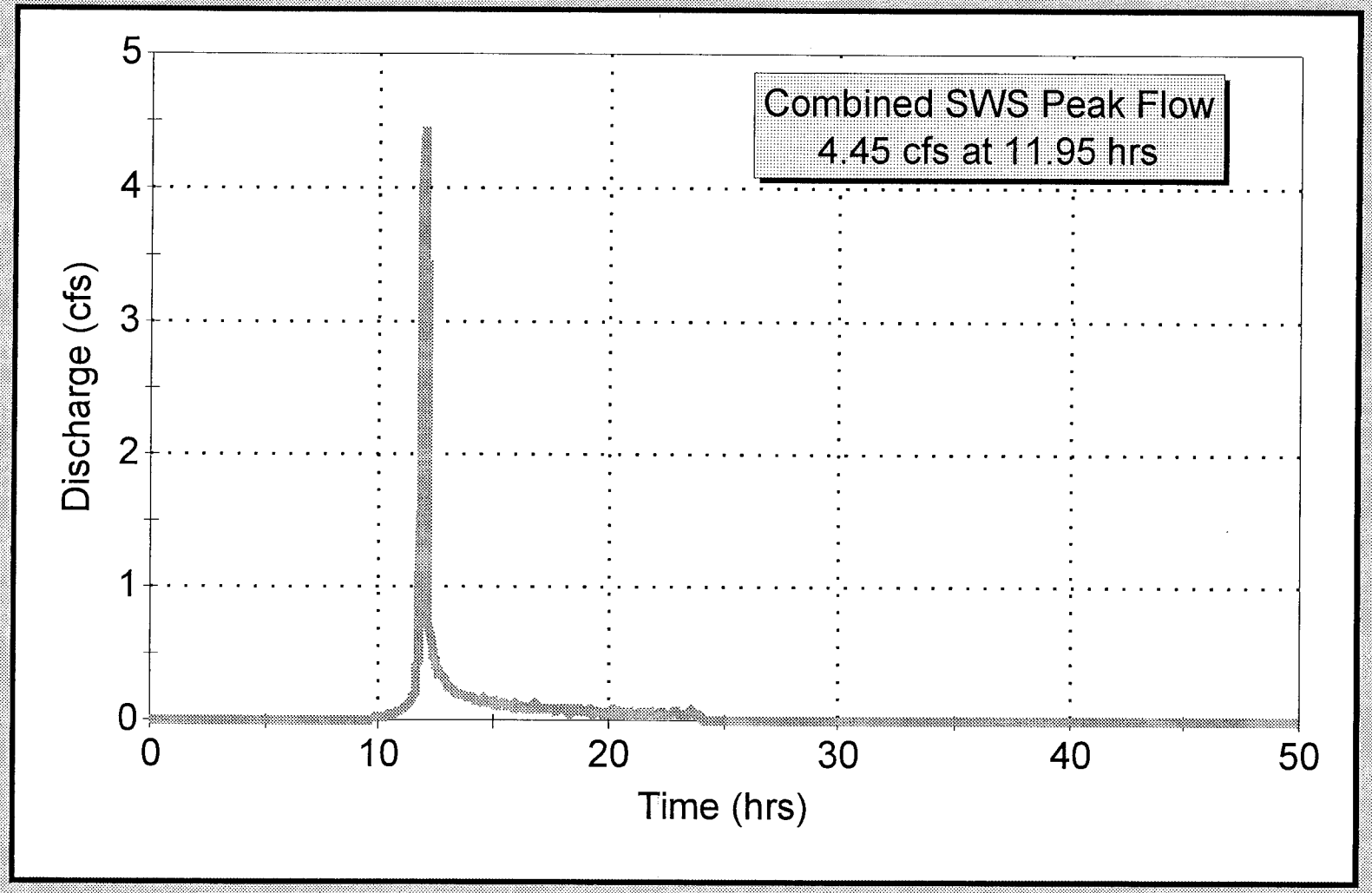
Subwatershed Muskingum Routing Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#2	1		0.00	0.00	0.00	0.000	0.000
#2	**1**	**Muskingum K:**					**0.000**

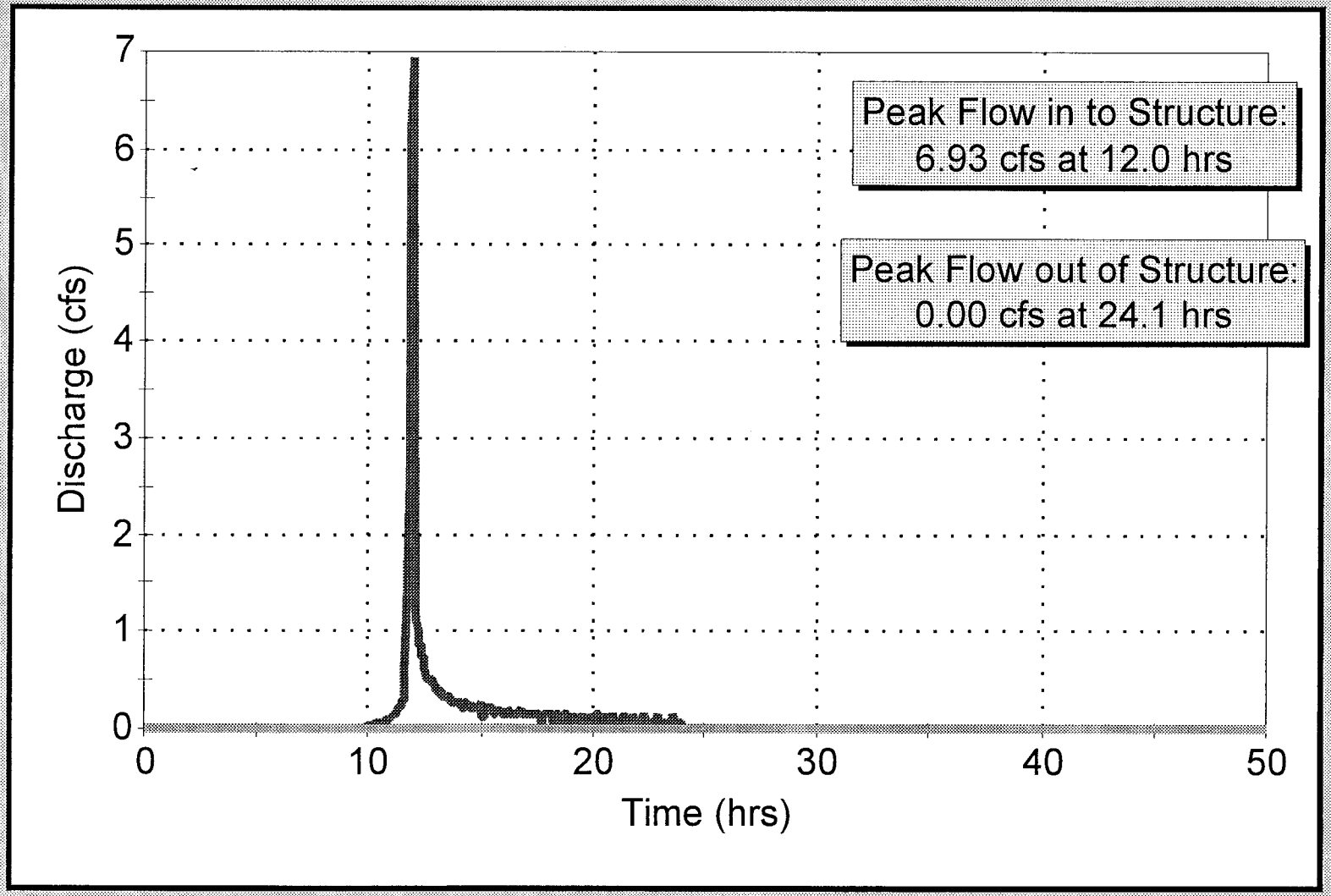
NRCS Type II, 10 yr - 24 hr Storm



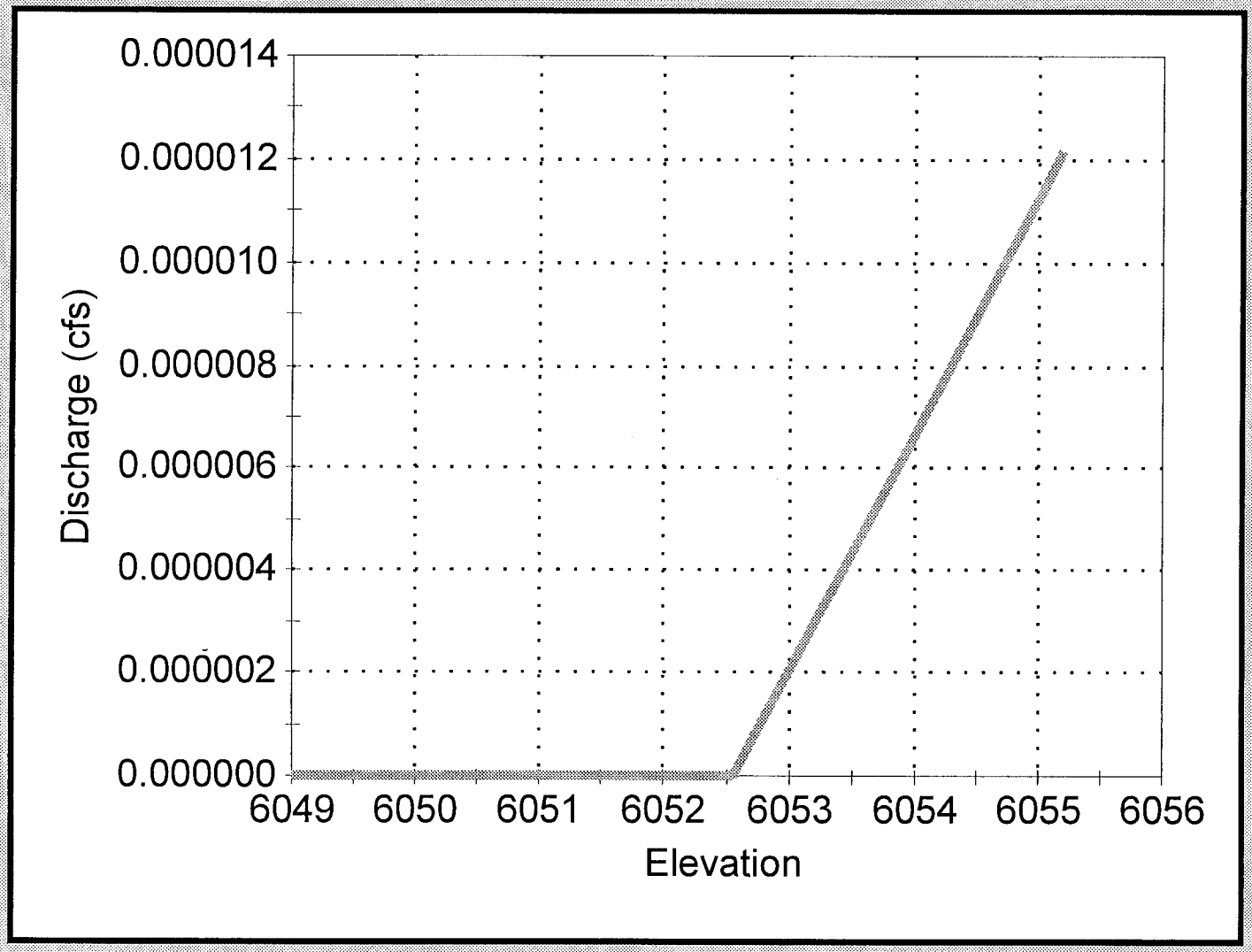
Contributing SWS Hydrograph(s) for Structure # 1
(does not include upstream flow)



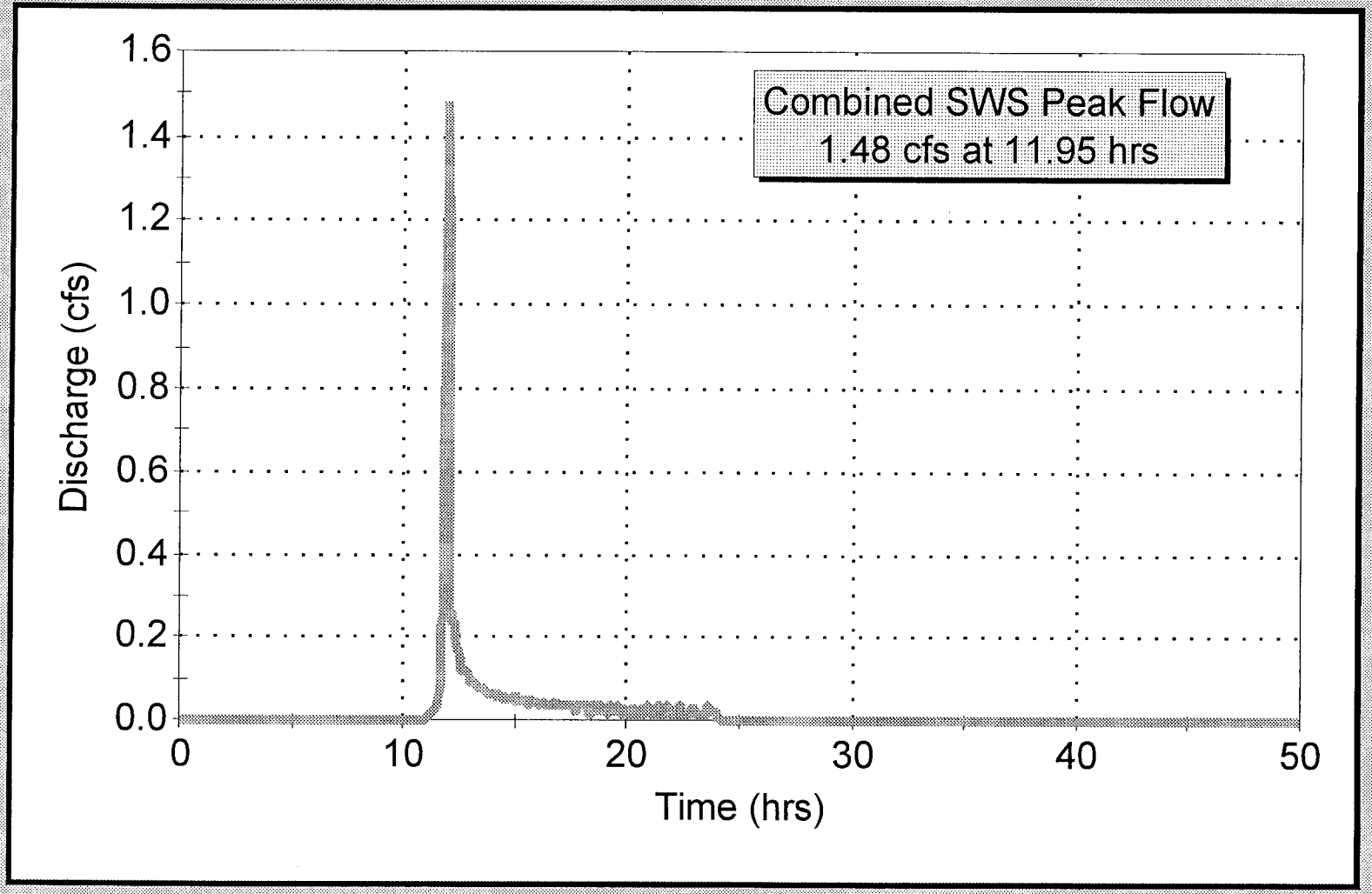
Inflow/Outflow Hydrographs for Structure # 1



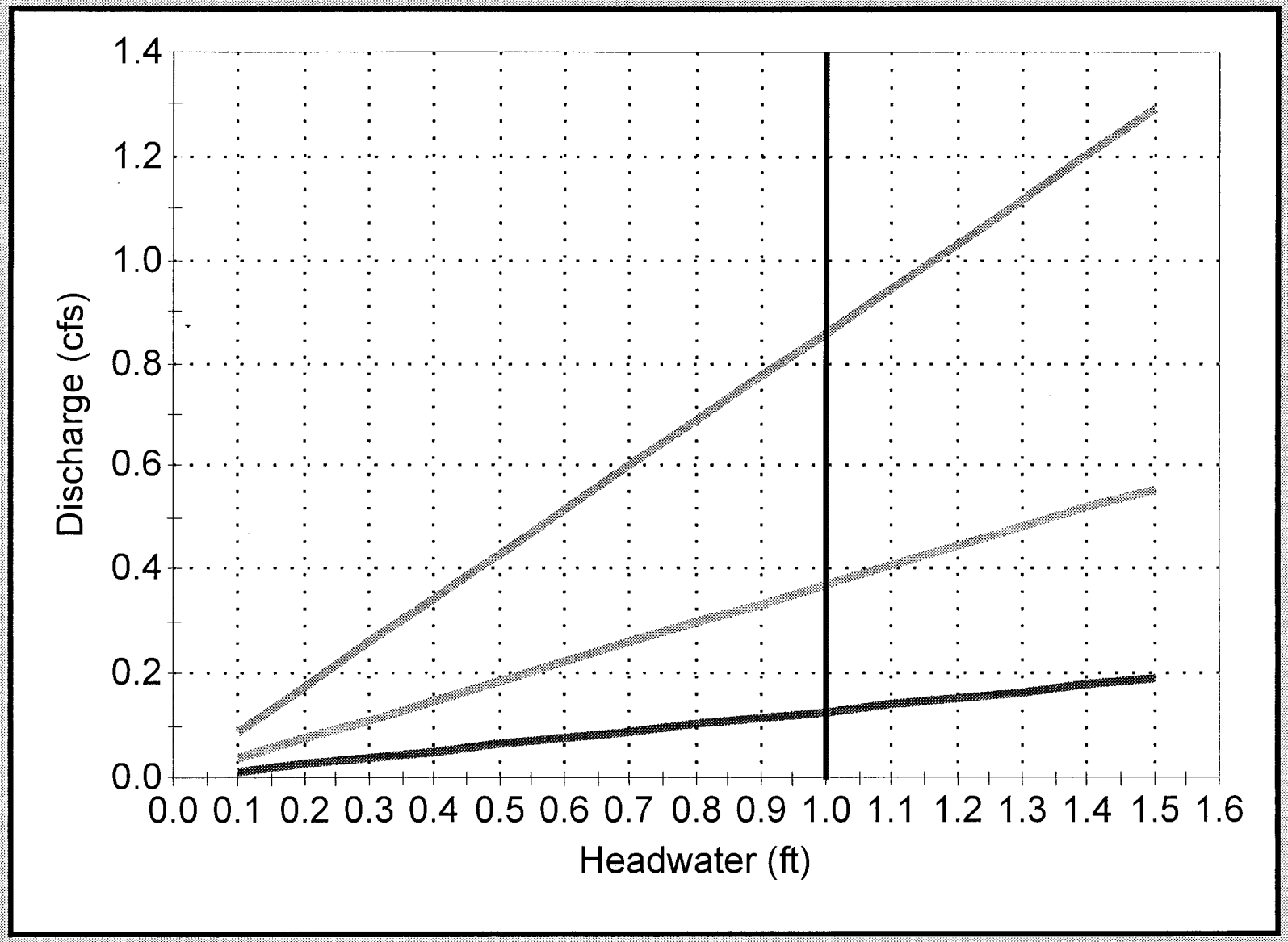
Stage-Discharge Curves for Structure # 1



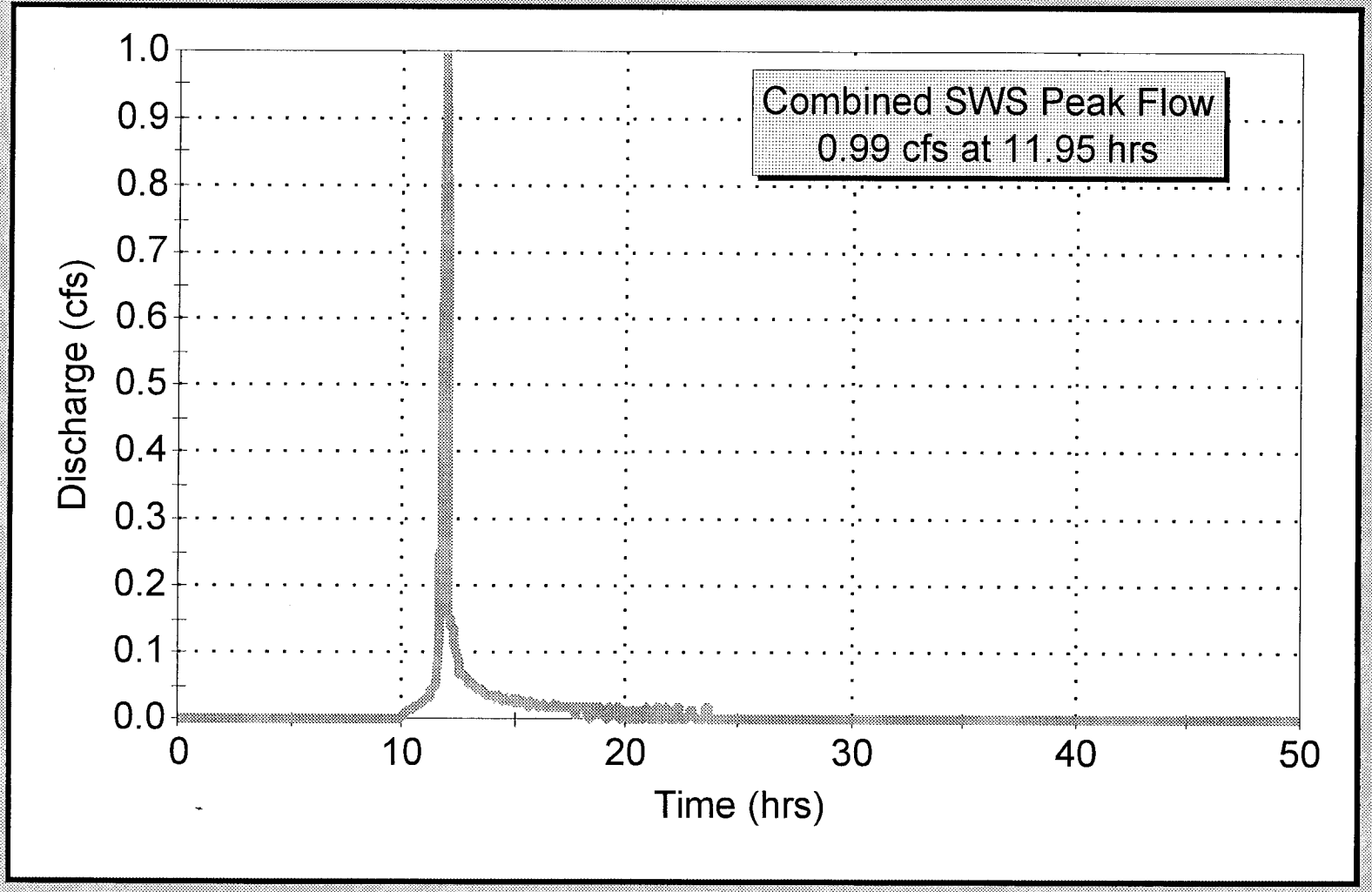
Contributing SWS Hydrograph(s) for Structure # 2 (does not include upstream flow)



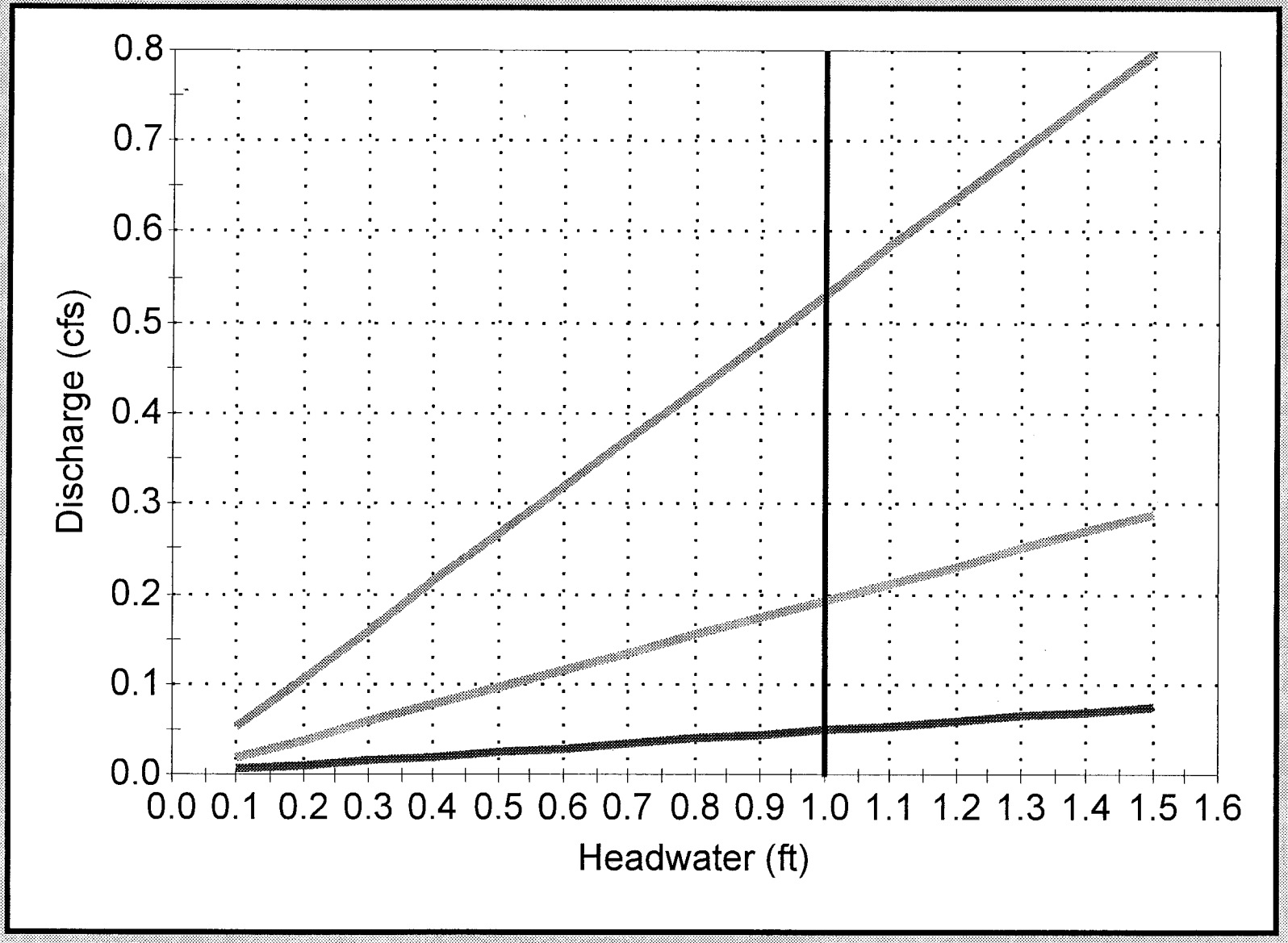
Culvert Performance Curves - Structure # 2



Contributing SWS Hydrograph(s) for Structure # 3 (does not include upstream flow)



Culvert Performance Curves - Structure # 3



EMERY MINE

4th EAST PORTAL SITE

ACT/015/015

EMERGENCY SPILLWAY

25 YR/24 HR DESIGN STORM

SEDIMENT POND #9

Revised 9-9-03

Kirschbaum

Island Creek Coal Company
P.O. Box 566
Sesser, IL 62884

Phone: 618-625-6847
Email: timkirschbaum@consolenergy.com

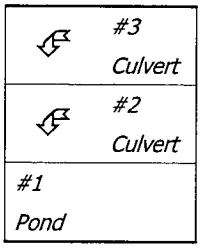
General Information

Storm Information:

Storm Type:	NRCS Type II
Design Storm:	25 yr - 24 hr
Rainfall Depth:	2.100 inches

Structure Networking:

Type	Stru #	(flows into)	Stru #	Musk. K (hrs)	Musk. X	Description
Pond	#1	==>	End	0.000	0.000	Sediment Pond #9
Culvert	#2	==>	#1	0.000	0.000	18-inch Entrance Rd
Culvert	#3	==>	#1	0.000	0.000	12-inch Vent Rd



Structure Summary:

		Immediate Contributing Area (ac)	Total Contributing Area (ac)	Peak Discharge (cfs)	Total Runoff Volume (ac-ft)
#3		0.600	0.600	1.14	0.06
#2		1.500	1.500	2.86	0.14
#1	In	3.300	5.400	10.28	0.50
	Out			0.00	0.00

Structure Detail:

Structure #3 (Culvert)

12-inch Vent Rd

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
30.00	0.50	0.0150	1.00	0.00	0.90

Culvert Results:

Minimum pipe diameter required: 10 inches

Structure #2 (Culvert)

18-inch Entrance Rd

Culvert Inputs:

Length (ft)	Slope (%)	Manning's n	Max. Headwater (ft)	Tailwater (ft)	Entrance Loss Coef. (Ke)
60.00	0.50	0.0150	1.00	0.00	0.90

Culvert Results:

Minimum pipe diameter required: 18 inches

Structure #1 (Pond)

Sediment Pond #9

Pond Inputs:

Permanent Pool Elev:	6,052.55
Permanent Pool:	0.32 ac-ft

Straight Pipe

Barrel Diameter (in)	Barrel Length (ft)	Barrel Slope (%)	Manning's n	Spillway Elev	Entrance Loss Coefficient	Tailwater Depth (ft)
1.00	40.00	0.01	0.0140	6,052.55	0.90	0.00

Emergency Spillway

Spillway Elev	Crest Length (ft)	Left Sideslope	Right Sideslope	Bottom Width (ft)
6,054.55	15.00	2.00:1	2.00:1	5.00

Pond Results:

Peak Elevation:	6,054.04
H'graph Detention Time:	0.00 hrs
Dewater Time:	0.00 days

Dewatering time is calculated from peak stage to lowest spillway

Elevation-Capacity-Discharge Table

Elevation	Area (ac)	Capacity (ac-ft)	Discharge (cfs)	Dewater Time (hrs)	
6,049.00	0.000	0.000	0.000		
6,049.50	0.012	0.002	0.000		
6,050.00	0.020	0.010	0.000		
6,050.50	0.053	0.027	0.000		
6,051.00	0.101	0.065	0.000		
6,051.50	0.142	0.126	0.000		
6,052.00	0.189	0.208	0.000		
6,052.50	0.232	0.313	0.000		
6,052.55	0.236	0.325	0.000		Spillway #1
6,053.00	0.280	0.441	0.000		
6,053.50	0.363	0.601	0.000		
6,054.00	0.456	0.805	0.000		
6,054.04	0.452	0.823	0.000	0.00	Peak Stage
6,054.50	0.529	1.051	0.000		
6,054.55	0.536	1.077	0.000		Spillway #2
6,055.00	0.537	1.319	3.885		
6,055.20	0.537	1.426	5.611		

Detailed Discharge Table

Elevation	Straight Pipe (cfs)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
6,049.00	0.000	0.000	0.000
6,049.50	0.000	0.000	0.000
6,050.00	0.000	0.000	0.000
6,050.50	0.000	0.000	0.000

Elevation	Straight Pipe (cfs)	Emergency Spillway (cfs)	Combined Total Discharge (cfs)
6,051.00	0.000	0.000	0.000
6,051.50	0.000	0.000	0.000
6,052.00	0.000	0.000	0.000
6,052.50	0.000	0.000	0.000
6,052.55	0.000	0.000	0.000
6,053.00	0.000	0.000	0.000
6,053.50	0.000	0.000	0.000
6,054.00	0.000	0.000	0.000
6,054.50	0.000	0.000	0.000
6,054.55	0.000	0.000	0.000
6,055.00	0.000	3.885	3.885
6,055.20	0.000	5.611	5.611

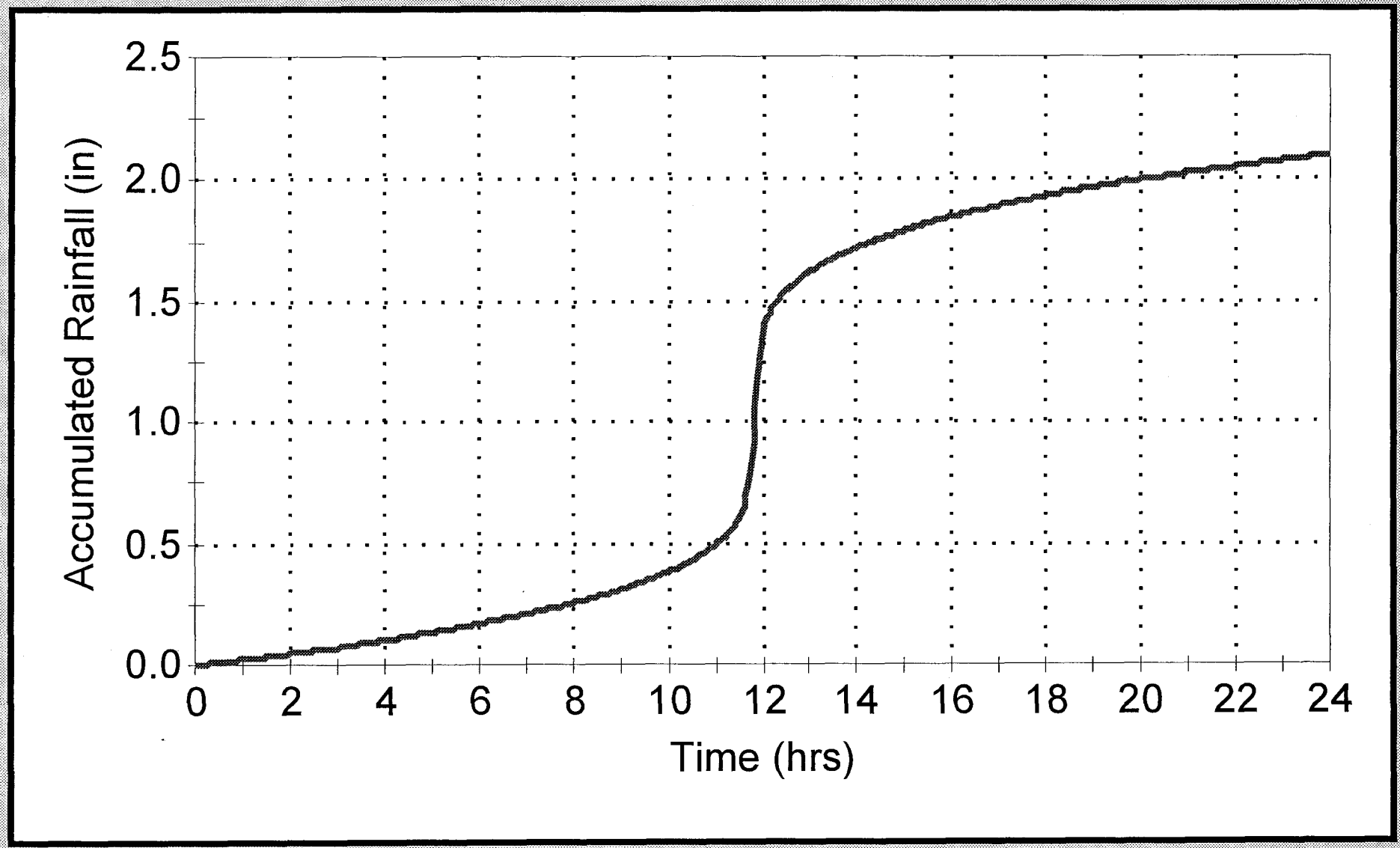
Subwatershed Hydrology Detail:

Stru #	SWS #	SWS Area (ac)	Time of Conc (hrs)	Musk K (hrs)	Musk X	Curve Number	UHS	Peak Discharge (cfs)	Runoff Volume (ac-ft)
#3	1	0.600	0.052	0.000	0.000	89.000	F	1.14	0.06
	Σ	**0.600**						**1.14**	**0.06**
#2	1	1.500	0.056	0.000	0.000	89.000	F	2.86	0.14
	Σ	**1.500**						**2.86**	**0.14**
#1	1	3.300	0.030	0.000	0.000	89.000	F	6.28	0.31
	Σ	**5.400**						**10.28**	**0.50**

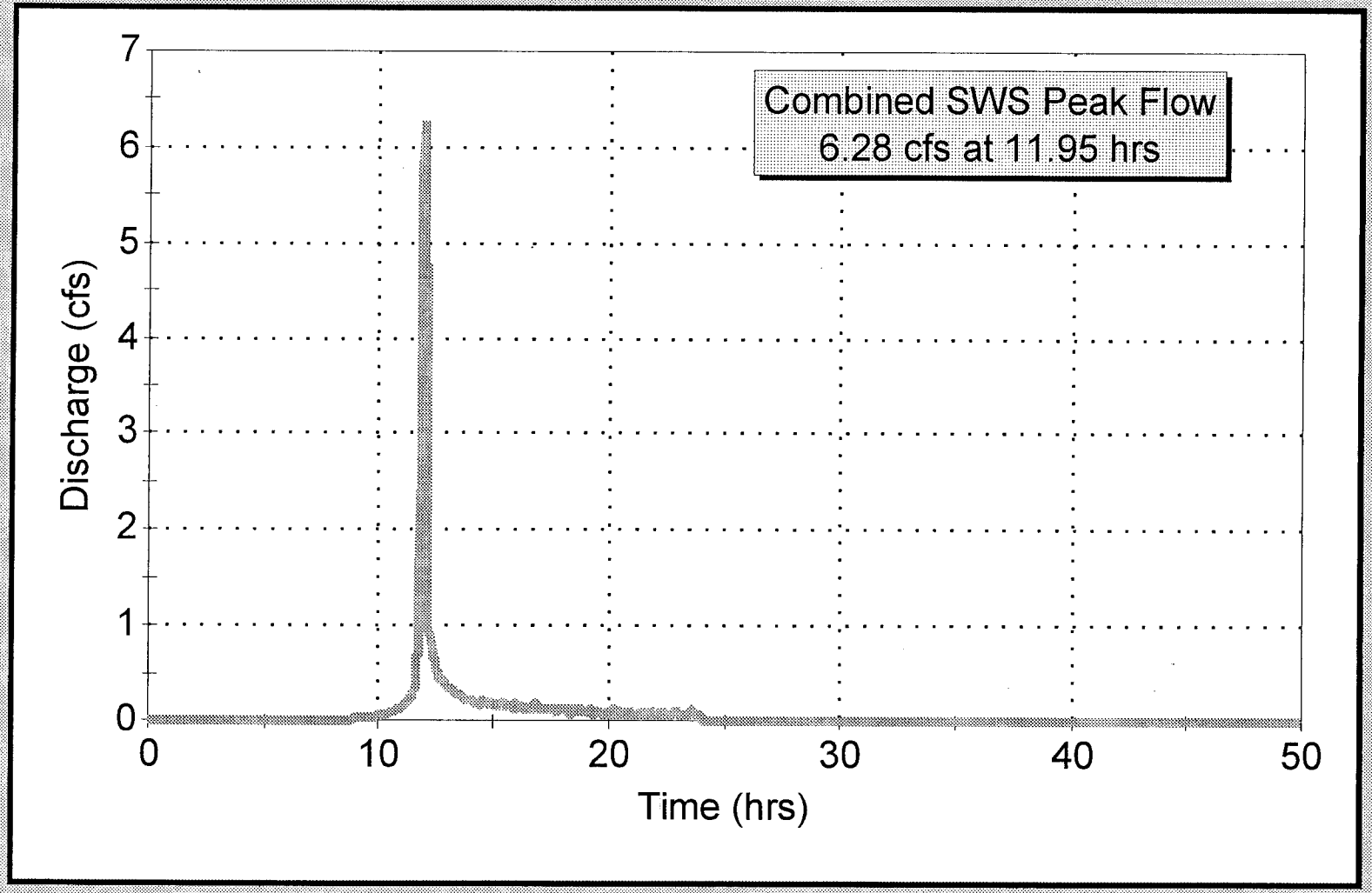
Subwatershed Time of Concentration Details:

Stru #	SWS #	Land Flow Condition	Slope (%)	Vert. Dist. (ft)	Horiz. Dist. (ft)	Velocity (fps)	Time (hrs)
#1	1	7. Paved area and small upland gullies	5.00	25.00	500.00	4.500	0.030
#1	**1**	**Time of Concentration:**					**0.030**
#2	1	5. Nearly bare and untilled, and alluvial valley fans	6.00	30.00	500.00	2.440	0.056
#2	**1**	**Time of Concentration:**					**0.056**
#3	1	7. Paved area and small upland gullies	2.50	15.00	600.00	3.180	0.052
#3	**1**	**Time of Concentration:**					**0.052**

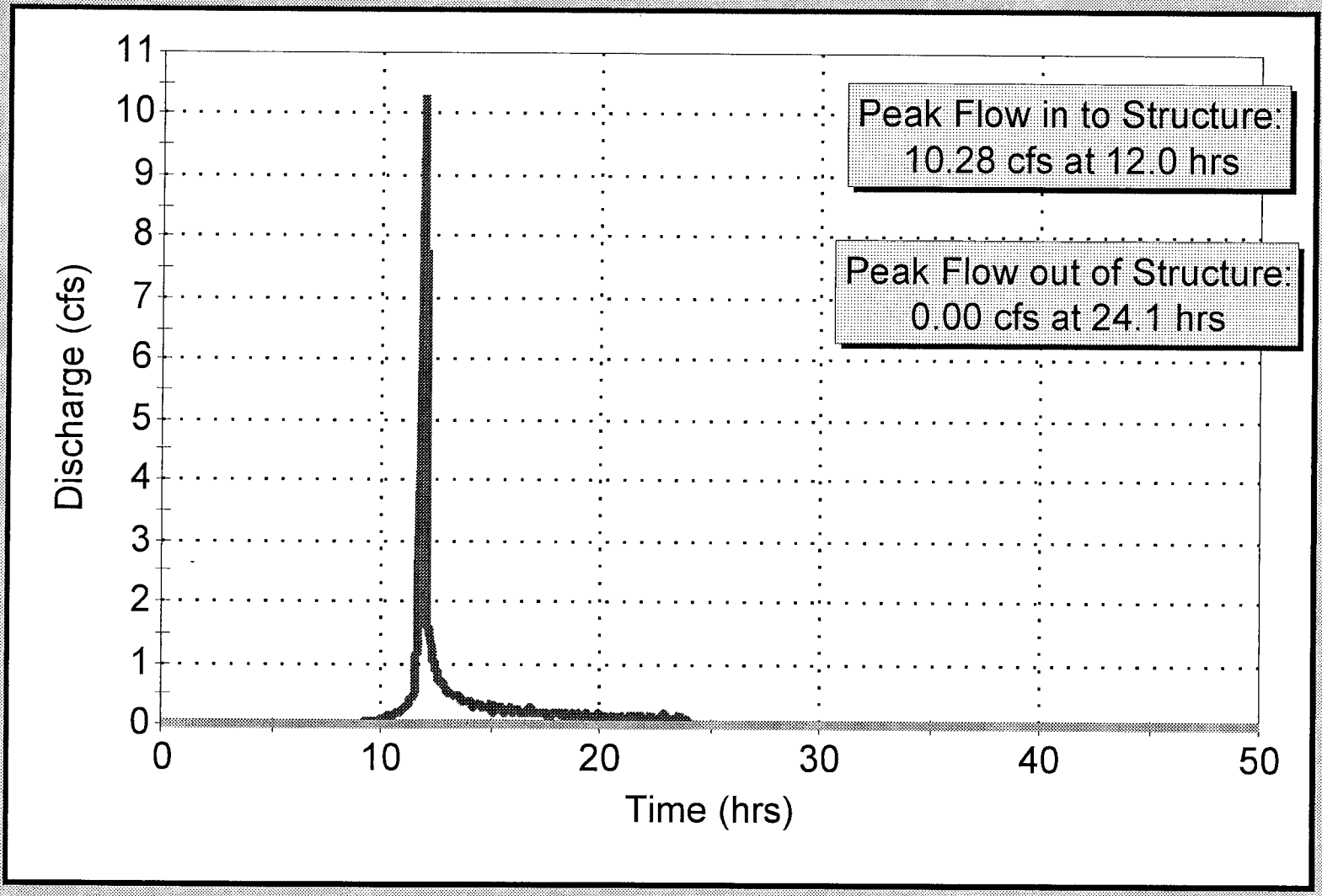
NRCS Type II, 25 yr - 24 hr Storm



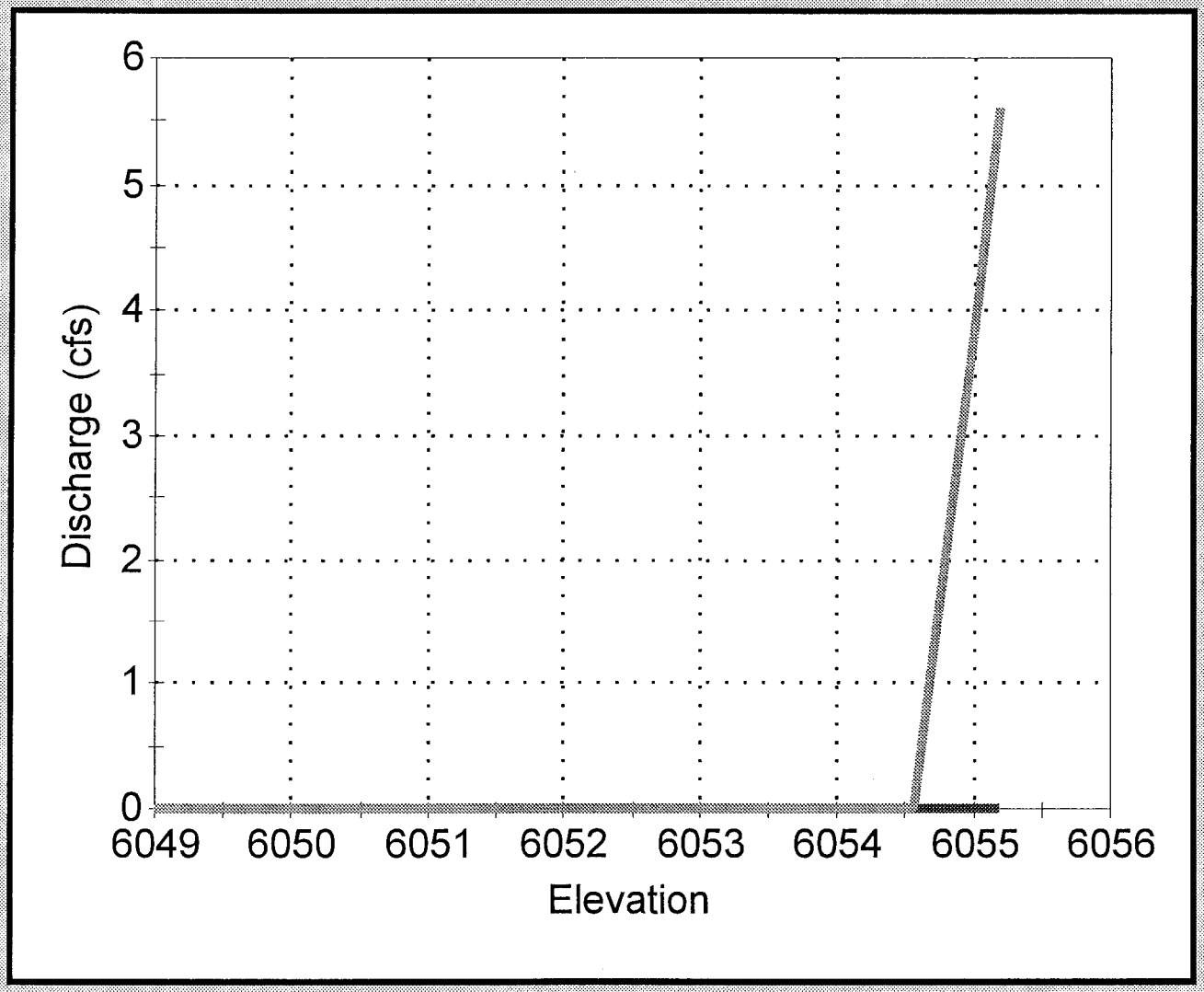
Contributing SWS Hydrograph(s) for Structure # 1 (does not include upstream flow)



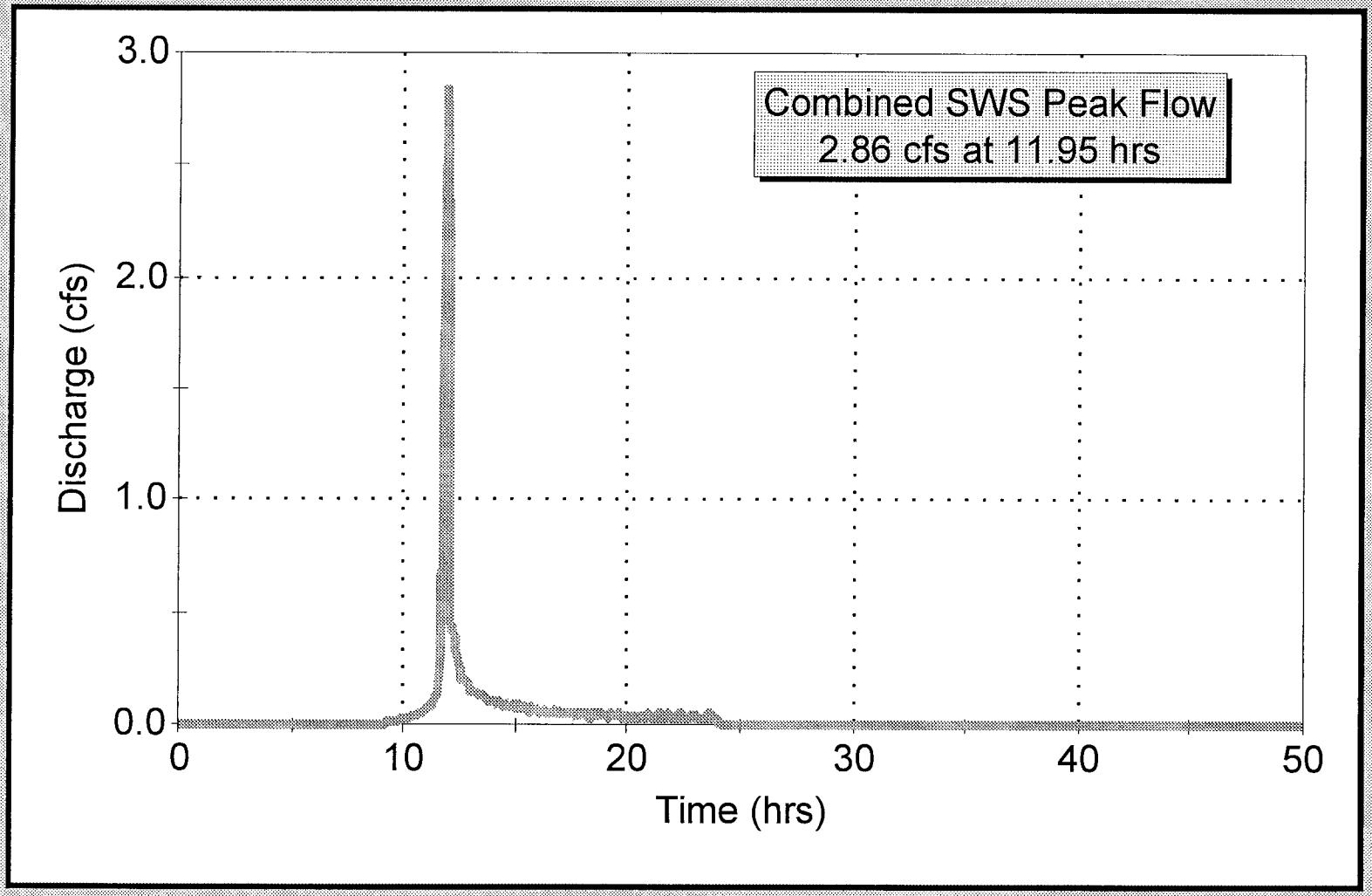
Inflow/Outflow Hydrographs for Structure # 1



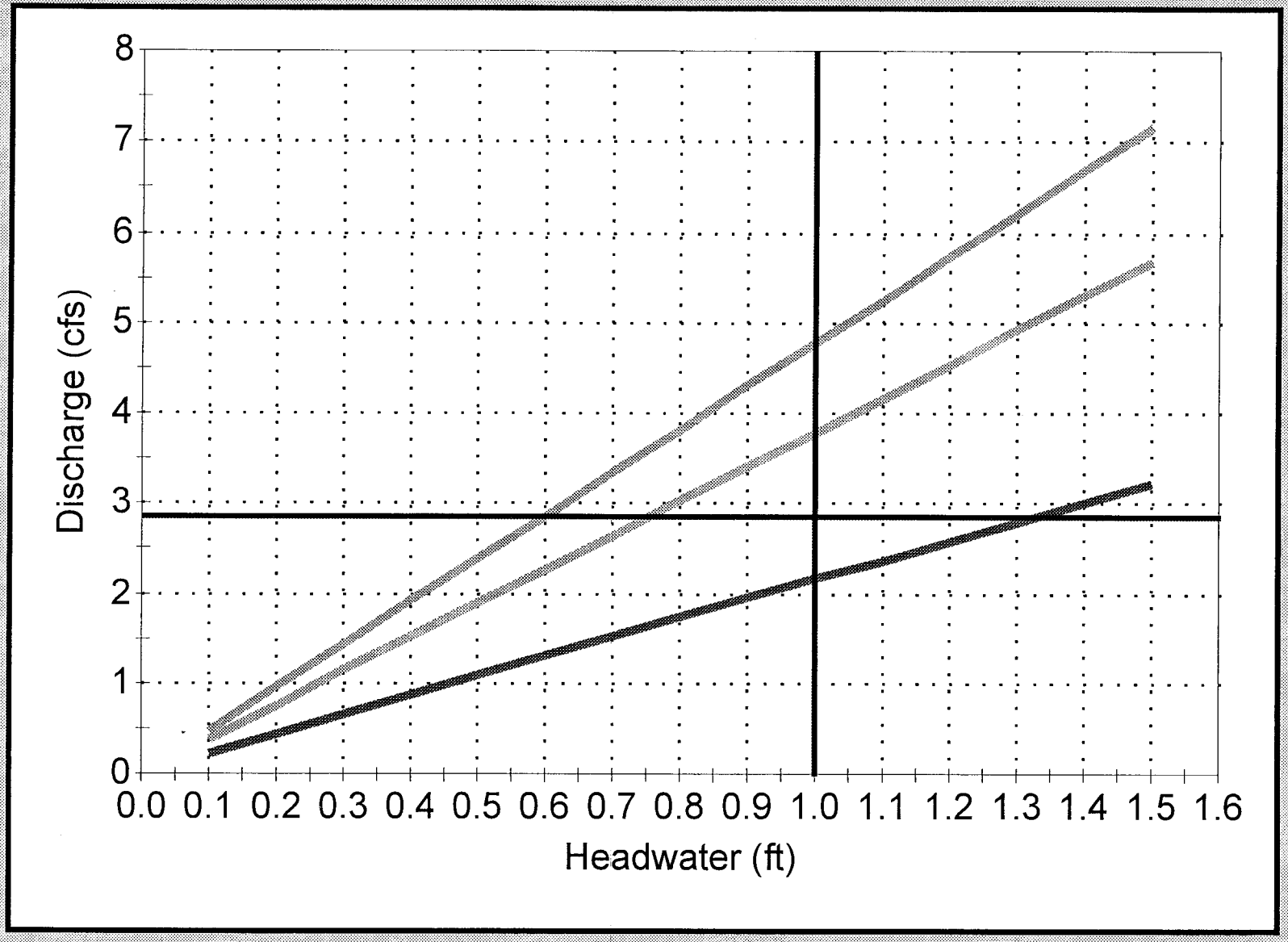
Stage-Discharge Curves for Structure # 1



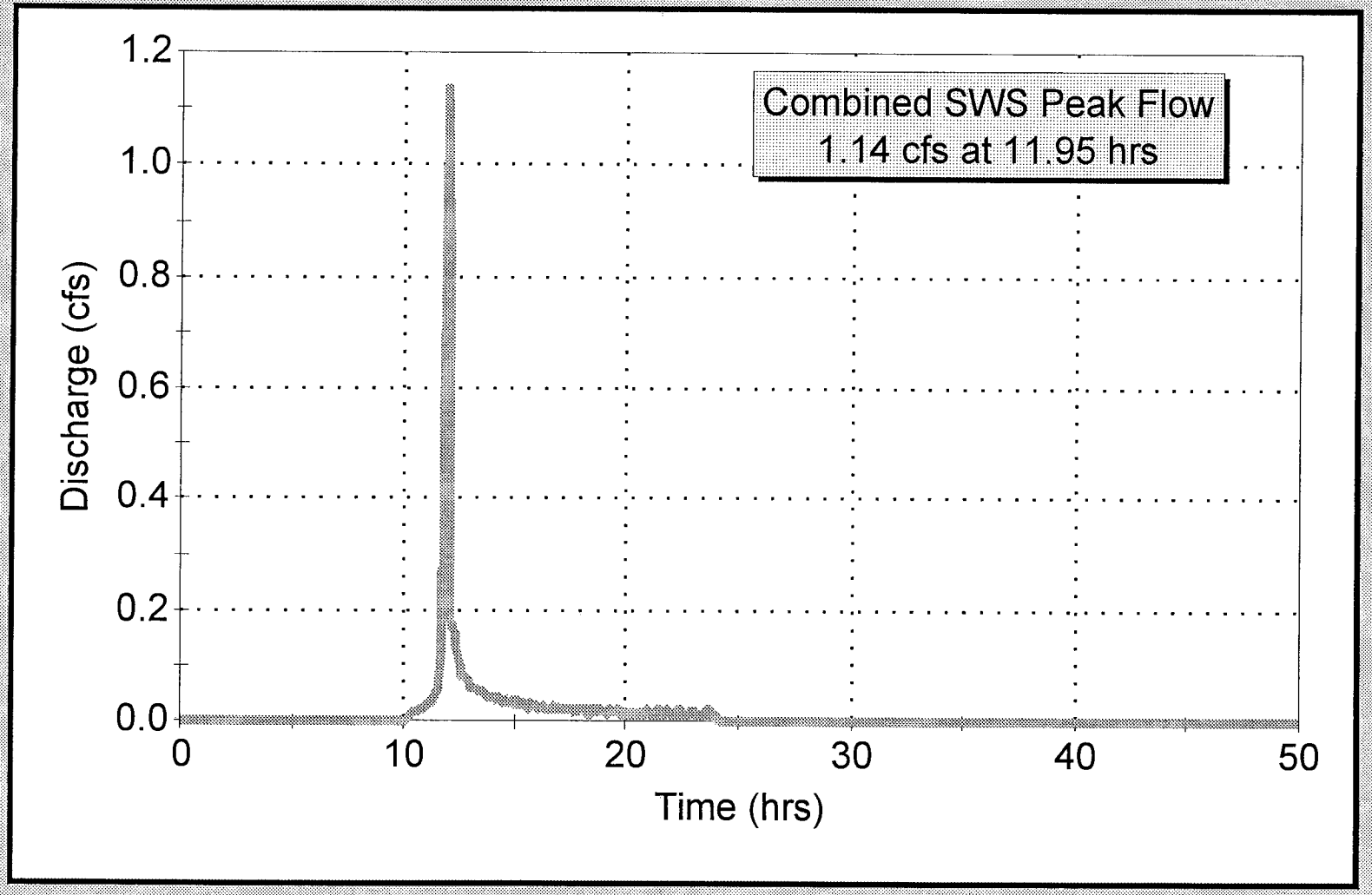
Contributing SWS Hydrograph(s) for Structure # 2 (does not include upstream flow)



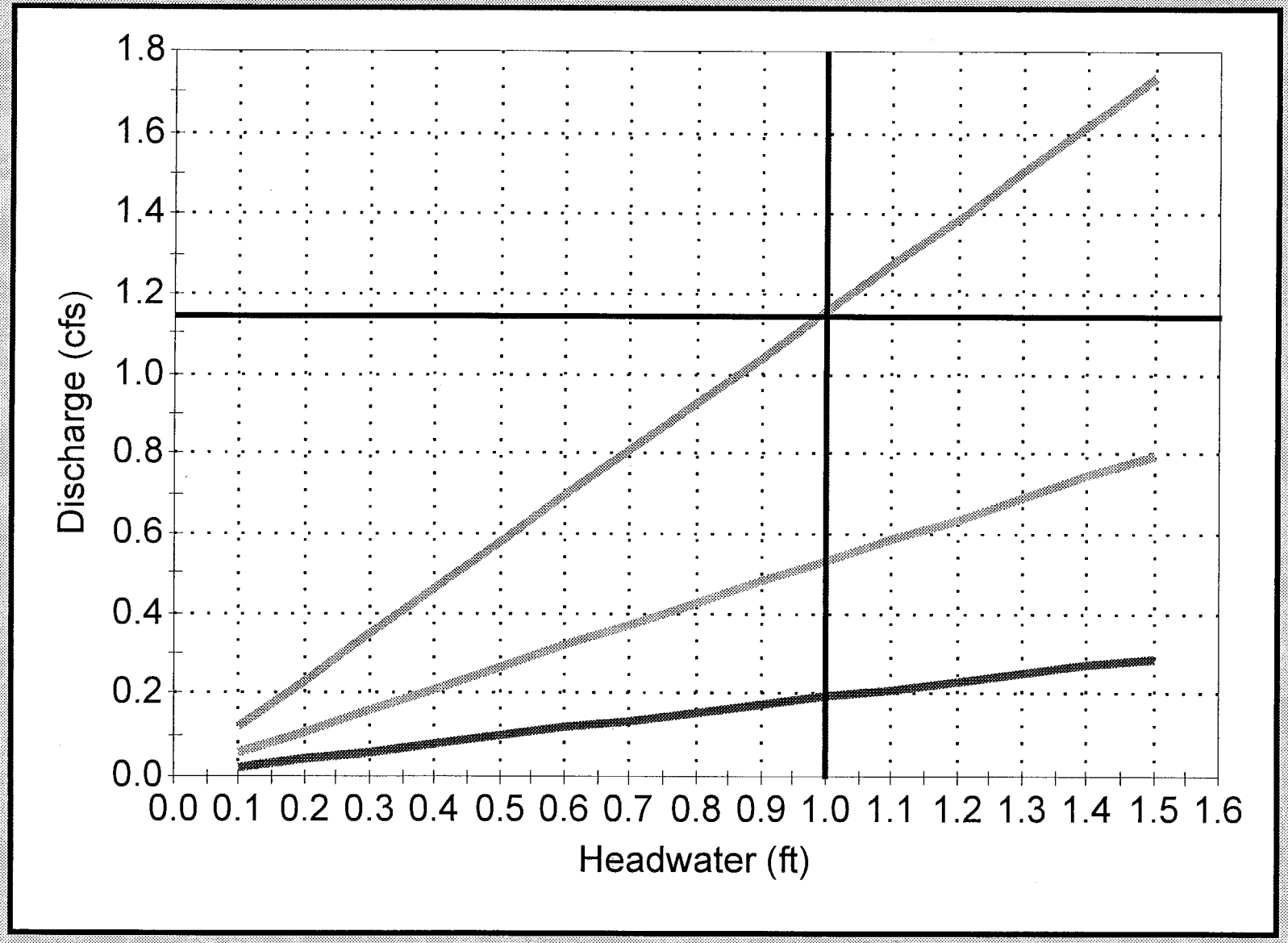
Culvert Performance Curves - Structure # 2



Contributing SWS Hydrograph(s) for Structure # 3 (does not include upstream flow)



Culvert Performance Curves - Structure # 3



APPENDICES

VII-1 TOPSOIL SUBSTITUTION PLAN - REVEGETATION DEMONSTRATION PLAN FOR AREAS AFFECTED PRIOR TO AUGUST 3, 1977

VII-2 TOPSOIL SUBSTITUTION PLAN - UNDERGROUND DEVELOPMENT WASTE DISPOSAL SITE

VII-3 SOIL RESOURCES AT THE 4th EAST PORTAL AREA- Mt. Nebo Scientific, Inc., April 2002

VII-4 LETTER FROM MT. NEBO CONSULTANTS - APPEND 1.5 AC. AREA TO 4th EAST PORTAL AREA-

PLATES

VII-1 SOIL MAP

APPENDICE VII-4

LETTER FROM MT. NEBO CONSULTANTS -
APPEND 1.5 AC. AREA to 4th EAST PORTAL AREA

MT NEBO SCIENTIFIC, INC.
research & consulting

March 26, 2003

Tim Kirschbaum, P.E.
Consolidation Coal Company
P.O. Box 566
Sesser, Illinois 62884

Dear Mr. Kirschbaum:

You requested from us additional vegetation and soils information within the proposed increased area of the 4th East Portal permit boundary.

Vegetation

I have revised the current plant community boundary lines within the 4th East Portal permit area. Although I did not visit the site specifically to revise the current vegetation map, I do have a collection of good color photographs of the area. Because the proposed new permit area extension was relatively small, I used my photographs to extend the existing plant community boundary lines. A revised vegetation map has been included with this letter.

The proposed new area, however, should be survey for threatened, endangered or rare plant species. Plans should be made to do this study in late April or early May 2003.

Soils

I asked Mr. James Nyenhuis, Certified Professional Soil Scientist, to respond to your request regarding soils. Mr. Nyenhuis visited the site. His response is shown below. A revised soils map based on Mr. Nyenhuis' visit has also been included in this letter.

From James Nyenhuis letter-report (March 2003):

At your request, I visited the Emery Deep 4th East Portal Area site on March 14, 2003 for the purpose of extending the previous detailed soil survey to include a small strip of land between the northeast border of the permit area and the closely adjacent northwest/southeast trending dirt road. The area to be surveyed was outlined (cross hatched) on a site map emailed to me on March 6. The intent of the new survey is to support the request to include the small strip in the Disturbance Area of the permit area. The small strip has been impacted by wind-blown coal fines from adjacent mining activities. Prior to the survey, I spoke by telephone with Mr. Tim Kirshbaum (Consol P.E.) and meet with Mr. Seth McCourt (Consol Project Manager) at the site.

330 East 400 South, Ste. 6, P.O. Box 337, Springville, Utah 84663
(801) 489-6937, (fax) 489-6779

The small strip had been traversed by foot during the previous soil survey of the 4th East Portal Area last year although no backhoe pits had been dug on the strip itself. This time, the strip was again traversed by foot and numerous shallow spade holes were dug to confirm and/or revise the previous mapping extension. Results indicate that the previous map unit lines can be extended along contour lines over to the dirt road. From north to south, three map units delineations were extended to the dirt road to the east: (1) map unit PCE2: Persayo-Chipeta complex, (2) map unit CeE2: Castle Valley extremely stony very fine sandy loam, and (3) map unit RY: Rock Land. Map Unit RY (Rock Land) is present along or just south of the south boundary of the small strip area. The attached soil map includes the new soil mapping, and it can be digitized for acreage determination. No soil samples were collected because no new soil series were identified.

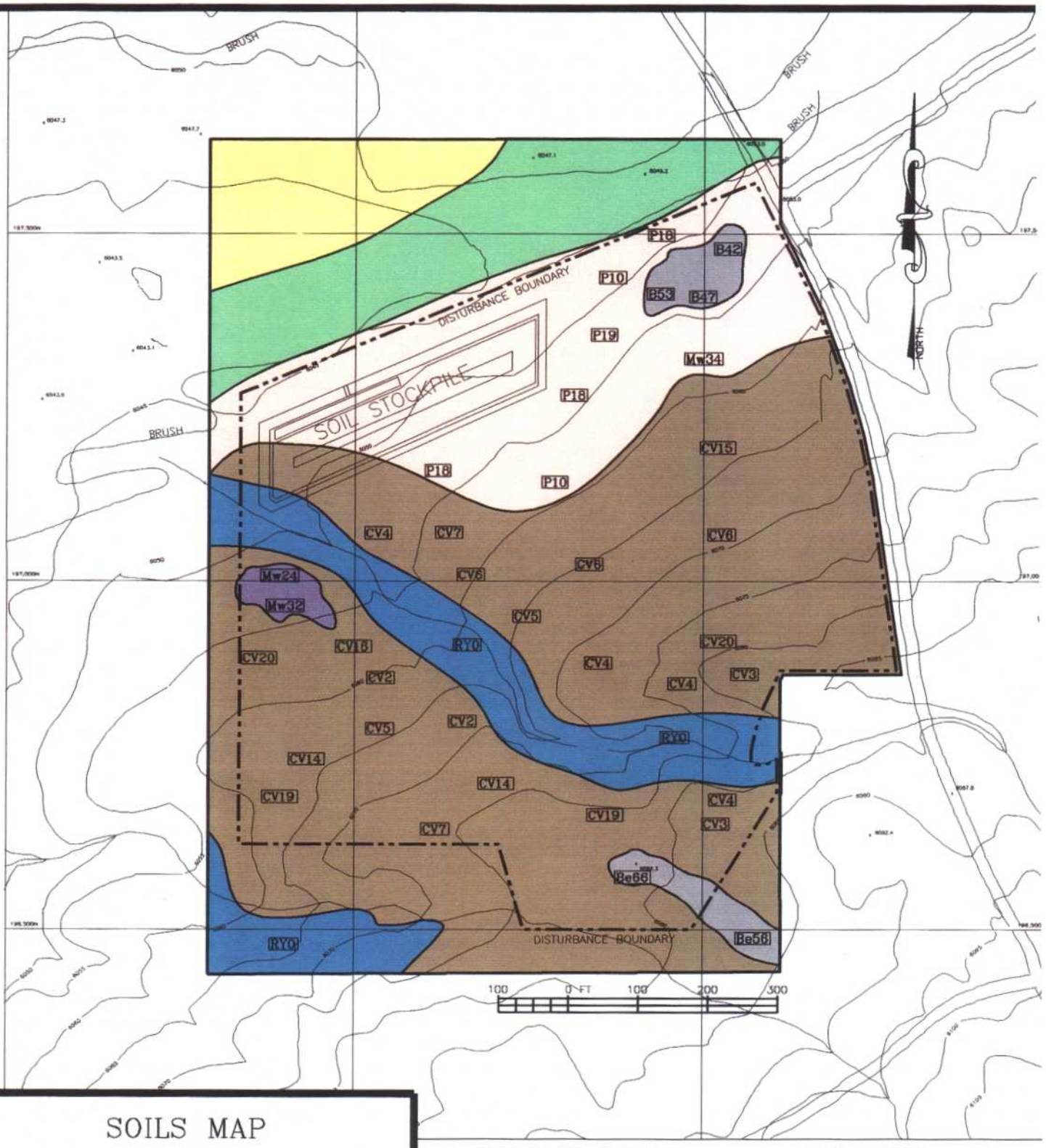
Please contact me if you have questions or comments. Also, let me know if you want me to conduct a sensitive plant survey in the new area at the appropriate time.

Sincerely,

Patrick D. Collins, Ph.D.

Enclosures

330 East 400 South, Ste. 6, P.O. Box 337, Springville, Utah 84663
(801) 489-6937, (fax) 489-6779



SOILS MAP

EMERY DEEP
4TH EAST PORTAL AREA

CONSOLIDATION COAL COMPANY

MT. NEBO SCIENTIFIC, INC.
RESEARCH & CONSULTING

		REVISIONS BY DATE
DRAWN	G. Barton	Rev.1 J. Kummer 9.12.02
CHECKED	P. Collins	Rev.2 G. Barton 3.26.03
DATE	May 10, 2002	Rev3 TDK 9-12-03
SCALE	1"=200'	

MAP UNIT SYMBOLS

- KLB
- Fe
- P
- Be
- RY
- CV
- Mw

SOIL SERIES

P = Persayo
CV = Castle Valley
RY = Rock Outcrop
Be = Begay
Mw = Montwell
Fe = Ferron

CV14 Backhoe pit locations. (numbers represent depth to bedrock in inches)

APPENDICE VIII-3

LETTER FROM MT. NEBO CONSULTANTS -
APPEND 1.5 AC. AREA to 4th EAST PORTAL AREA

MT NEBO SCIENTIFIC, INC.
research & consulting

March 26, 2003

Tim Kirschbaum, P.E.
Consolidation Coal Company
P.O. Box 566
Sesser, Illinois 62884

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330 East 400 South, Ste. 6, P.O. Box 337, Springville, Utah 84663
(801) 489-6937, (fax) 489-6779

The small strip had been traversed by foot during the previous soil survey of the 4th East Portal Area last year although no backhoe pits had been dug on the strip itself. This time, the strip was again traversed by foot and numerous shallow spade holes were dug to confirm and/or revise the previous mapping extension. Results indicate that the previous map unit lines can be extended along contour lines over to the dirt road. From north to south, three map units delineations were extended to the dirt road to the east: (1) map unit PCE2: Persayo-Chipeta complex, (2) map unit CeE2: Castle Valley extremely stony very fine sandy loam, and (3) map unit RY: Rock Land. Map Unit RY (Rock Land) is present along or just south of the south boundary of the small strip area. The attached soil map includes the new soil mapping, and it can be digitized for acreage determination. No soil samples were collected because no new soil series were identified.

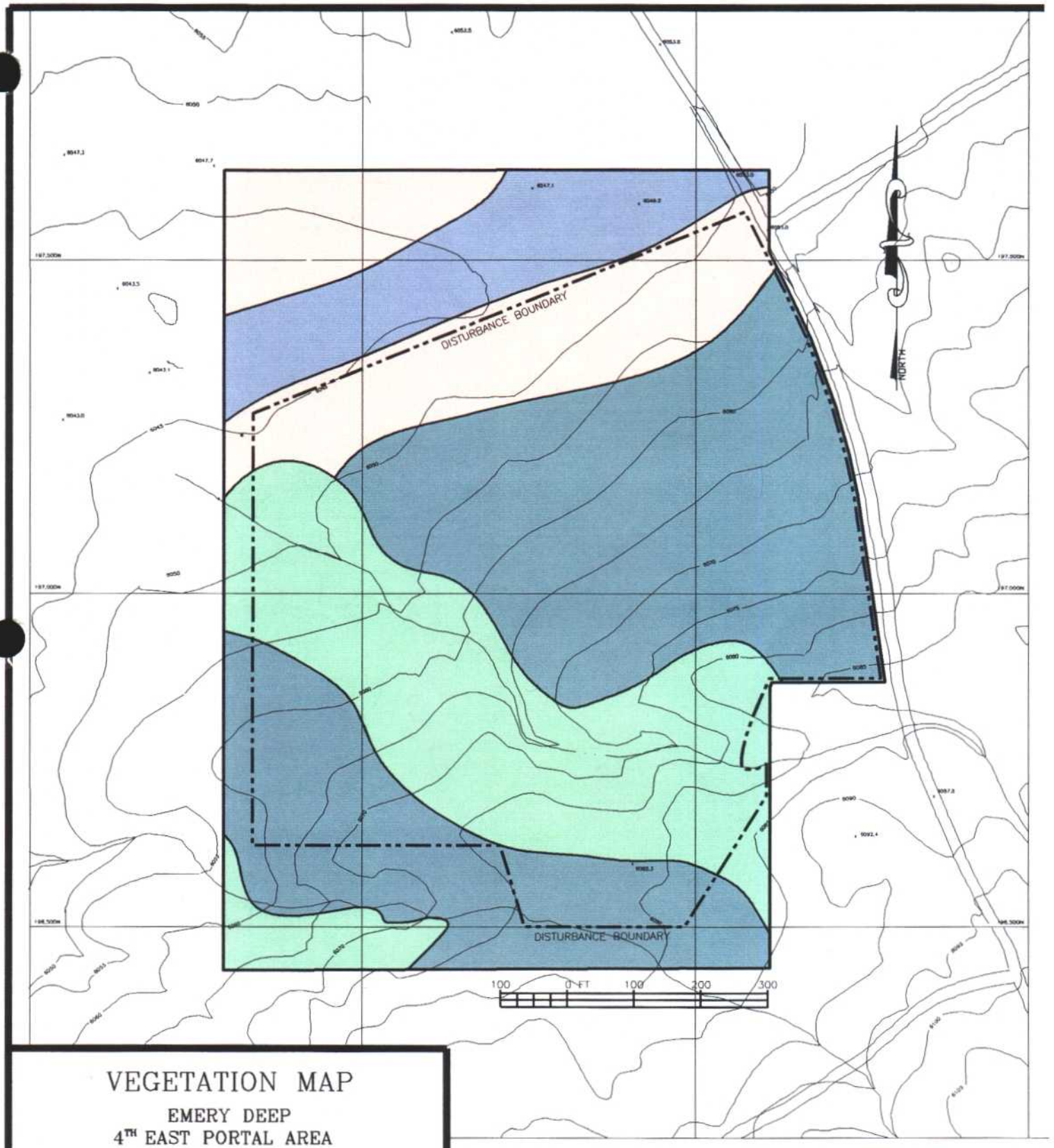
Please contact me if you have questions or comments. Also, let me know if you want me to conduct a sensitive plant survey in the new area at the appropriate time.

Sincerely,

Patrick D. Collins, Ph.D.

Enclosures

330 East 400 South, Ste. 6, P.O. Box 337, Springville, Utah 84663
(801) 489-6937, (fax) 489-6779



VEGETATION MAP

EMERY DEEP
4TH EAST PORTAL AREA

CONSOLIDATION COAL COMPANY

MT. NEBO SCIENTIFIC, INC.
RESEARCH & CONSULTING

DRAWN	G. Barton	REVISIONS BY DATE	
CHECKED	P. Collins	Rev.1 G. Barton 3.26.03	
DATE	May 10, 2002		
SCALE	1"=200'		

PLANT COMMUNITIES

- Greasewood
- Shadscale
- Saltgrass
- Juniper/ Sagebrush

CHAPTER X

PART A: CULTURAL RESOURCES

X.A CULTURAL RESOURCES

This part presents the archeological, historical, and paleontological information in and adjacent to the permit area. This information is contained i four (4) survey reports which are appended to this part.

The first, referred to herein as "Chapter 5.0", was prepared by AERC in October of 1980. The second, referred to herein as "Appendix 5-1", was prepare by AERC in July of 1981. The third, referred to herein as "Appendix 5-2", was prepared by Michael S. Berry, Utah Division of State History, in Marc of 1975. The fourth survey report, Appendix 5-3, was completed by AERC in October, 1988. The site forms are attached in a fifth section, referred to as "Appendix 5-4". The fifth survey report, Appendix 5-5, was completed by Montgomery Archaeological Consultants in May of 2002. This report covers 40 acres surrounding and including the 4th East Portal Site. The sixth referenced survey report, Appendix 5-6, covers the 4th East Powerline Corridor and was completed by Montgomery Archaeological Consultants in August of 2002. One site identified as historically significant was marked in the field and will be avoided as recommended by Montgomery. The seventh survey, referred to as "Appendix 5-7" was conducted by Montgomery Archaeological Consultants in March 2003. This survey was conducted to extend the inventoried areas of the 4th East Portal site. The survey covered an additional 40 acres to the east of "Appendix 5-5" original survey area. This extended area identified one new archaeological site "42Em2961". This new site will be avoided and a fence has been erected along the site boundary.

These survey reports have not been edited or revised for this repermit application; they were originally prepared for the March 23, 1981 permit application (approved as ACT/015/015 on January 7, 1986) and subsequent revisions and are included herein in their entirety.

UMC 783.12(b)

The attached investigations describe all of the known archeological sites in the permit area. No cultural and historic resources listed on the National Register of Historic Plates occur in the permit area. A compendium is included which consolidates information on all of the sites.

Revised 9/2003

UMC 783.24(i),(j),(k)

Each of the attached investigations contain maps showing the locations of known archeological sites. Plate X.A-1 combines all of these locations on a single map at a scale of 1"-500'. This plate also shows areas of surface disturbance according to the plan of operations. There are no Indian burial grounds in or within 100 feet of the permit area. There are no lands in the area which are within the boundaries of any units of the Wild and Scenic Rivers System.

Portions of the designated disturbance area under the Emery Mine permit was placed under the National Trails System in late 2002. The Act cited as the "Old Spanish Trail Recognition Act of 2002" was by the President on December 4, 2002. Notation as to the trails existence is located on the "Cultural Resource Map", Plate X-A-1.

UMC 784.17

There are no historic places which would be adversely affected by the operation, within or adjacent to the permit area.

Inserted 9/2003

CULTURAL RESOURCE INVENTORY OF CONSOLIDATION COAL COMPANY'S EMERY MINE 4th EAST PORTAL LOCATION IN EMERY COUNTY, UTAH

Sharyl Kinnear-Ferris

CULTURAL RESOURCE INVENTORY OF CONSOLIDATION COAL COMPANY'S EMERY MINE 4th EAST PORTAL LOCATION IN EMERY COUNTY, UTAH

By
Sharyl Kinnear-Ferris

Prepared For:

Division of State History
300 Rio Grande
Salt Lake City, UT 84101

Prepared Under Contract With:

Consolidation Coal Company
P.O. Box 566, Route 148 North
Sesser, IL 62959

Prepared By:

Montgomery Archaeological Consultants, Inc.
P.O. Box 147
Moab, Utah 84532

MOAC Report 03-49

March 26, 2003

United States Department of Interior (FLPMA)
Permit No. 02-UT-60122

State of Utah Antiquities Project (Survey)
Permit No. U-03-MQ-0129p

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LIST OF FIGURE

INTRODUCTION

A cultural resource inventory was conducted by Montgomery Archaeological Consultants (MOAC) in March 2003 for Consolidation Coal Company's Emery Mine 4th East Portal Location in Emery County, Utah. The inventory was implemented at the request of Mr. Timothy Kirschbaum of Consolidation Coal Company, Sesser, IL. The project area is located approximately 3 miles southeast of the town of Emery in Emery County, Utah. The survey area occurs on private property.

The objectives of the inventory were to locate, document, and evaluate any cultural resources within the project area in order to attain compliance with a number of federal and state mandates, including the National Historic Preservation Act of 1966 (as amended), the National Environmental Policy Act of 1969, the Archaeological and Historic Conservation Act of 1972, the Archaeological Resources Protection Act of 1979, the American Indian Religious Freedom Act of 1978, and the Utah State Antiquities Act of 1973 (amended 1992).

The fieldwork was performed by Sharyl Kinnear-Ferris, assisted by Eli Jones on March 25, 2003. Permits issued to MOAC entailed U.S.D.I. (FLPMA) Permit No. 02-UT-60122 and State of Utah Antiquities Project (Survey) No. U-03-MQ-0129p.

A file search for previous inventories and documented cultural resources was performed by Keith Montgomery on July 24, 2002 at the Bureau of Land Management, Price Field Office. In the immediate project area MOAC completed an inventory in T 22S, R 6E, Sec. 27 for Consolidation Coal Company's Emery mine portal (Elkins and Montgomery 2002). The survey resulted in the documentation four prehistoric isolated artifacts consisting of a biface and pieces of lithic debitage. Later in 2002, MOAC inventoried Consolidation Coal Company's power line route to the Emery Mine, finding two archaeological sites and one isolated find of artifact (Raney and Montgomery 2002). Site 42Em2821 consists of a historic trash scatter, evaluated as not eligible for inclusion to the NRHP. Site 42Em2822 is a multi-component (protohistoric/historic) site evaluated as eligible to the NRHP under Criterion D. The protohistoric component is comprised of lithic debitage, chipped stone tools, and groundstone tools. Historic items include pieces of ceramic and glass, and tin cans.

A number of other projects have been conducted near the project area. The Division of State History conducted an inventory for the Consolidated Coal and Kemmerer Coal Company in 1976 that resulted in the documentation of three prehistoric sites (42Em635, 42Em636 and 42Em637) (Berry 1975). In 1980, Archeological-Environmental Research Corporation performed a survey of the Emery Mine project area in T 22S, R 6E, Secs. 27, 28 and 33 (Hauck 1980). Documented cultural resources included the Browning Mine, a portion of the Spanish Trail as well as several rockshelters and lithic scatters. None of the cultural resources documented by AERC are in the survey area. The Bureau of Reclamation completed an inventory of eight irrigation canals for the Price-San Rafael Basin project (Wiens 1984). No cultural resources were found. Also in 1984, La Plata Archaeological Consultants performed a survey of 11 seismic lines in Emery and Carbon counties, finding no sites (Harden 1984). In 1995, SWCA Inc. completed an inventory of the SR-29, Straight Canyon to SR-10 project (Miller and Roberts 1995). In 1996, Montgomery Archaeological Consultants surveyed Texaco Exploration's Cottonwood Creek and Grimes Wash pipelines that resulted in the documentation of a segment of the historic Straight Canyon road (42Em2423.5) (Montgomery 1996). In 1997, MOAC completed the Cottonwood Creek water project (Montgomery and Montgomery 1997). Two cultural resources including a segment of the historic Straight Canyon road (42Em2423.6) and a portion of the Mammoth Canal (42Em2472.1) were documented. In 2002, MOAC inventoried a coal haul road for Consolidation Coal finding no cultural resources (Montgomery 2002).

DESCRIPTION OF THE PROJECT AREA

Environmental Setting

The proposed Consolidation Coal Company's Emery Mine 4th East Portal is located about 3 miles southeast of the town of Emery, Utah. The 40-acre parcel lies near Christiansen Wash, with Miller Canyon and the Coal Cliffs to the east and Quitchupah Creek to the west (Figure 1). The legal description is Township 22 South, Range 6 East, Section 27.

In general, the project area lies along the western margin of Castle Valley, along the boundary of the Mancos Shale Lowland and San Rafael Swell sections of the Colorado Plateau (Stokes 1986). Castle Valley is comprised of a series of broad, shallow canyons and flat-topped mesas. Sandstones and shales ranging in age from the Pennsylvanian through the Holocene predominate in this area. The primary formation is the Cretaceous Mancos Shale, which consists of a series of thick shale layers with thinner interbeds of sandstones. Many of the areas of higher relief are capped with Quarternary gravel sediments, while the lower areas such as valley bottoms are filled in with patches of Quaternary and recent alluvium.

Situated within the Upper Sonoran lifezone, the primary vegetation communities represented in the project area include low sagebrush and shadscale. Plant species include sagebrush, shadscale, yucca, prickly pear cactus, and various grasses. The elevation ranges from 6060 to 6120 feet a.s.l.. Numerous drainages occur in or near the project area, including Christiansen Wash, Muddy Creek, and Quitchupah Creek. Modern impacts to the project area include coal development, grazing, roads and isolated occurrences of modern trash dumping.

Cultural Overview

Prehistoric occupation of the region spans the last 10,000-12,000 years. Cultural remains representing the Paleoindian, Archaic, Formative, Late Prehistoric and Historic stages have been identified in the study area region. The earliest known archaeological remains in central Utah are attributable to the Paleoindian stage, which emphasized the exploitation of megafauna and floral resources during the period of transition from the Pleistocene to the Holocene. Based on projectile point typologies and subsistence strategies, the Paleoindian stage is commonly divided into three cultural complexes termed the Llano (ca. 11,500-11,000 B.P.), the Folsom (ca. 11,000-10,000 B.P.) and the Plano (ca. 10,000-7500 B.P.). The Llano complex is represented by Clovis fluted projectile points, a rare find in the area. Mammoths are thought to have been the primary prey of these early big game hunters, in contrast to an apparent preference for bison exhibited by the Folsom peoples. Folsom points, among the more common Paleoindian projectile points that occur throughout the Colorado Plateau, have been found in Emery country, sometimes associated with lithic debitage (Copeland and Fike 1988; Schroedl 1991). Megafauna, represented by mammoth and short-faced bear and dating to 9440 B.P., have also been found north of the project area in upper Huntington Canyon. The remains exhibit evidence of butchering, in the form of cut marks, and are associated with a Paleoindian projectile point (Gillette 1989; Madsen 2000). The Plano complex is characterized by large, lanceolate points and reliance on large game as well as plants. Projectile points found nearby that date to this complex include Lake Mohave points, Lovell Constricted points and a Medicine Lodge point style (Black and Metcalf 1986; Hauck 1977).

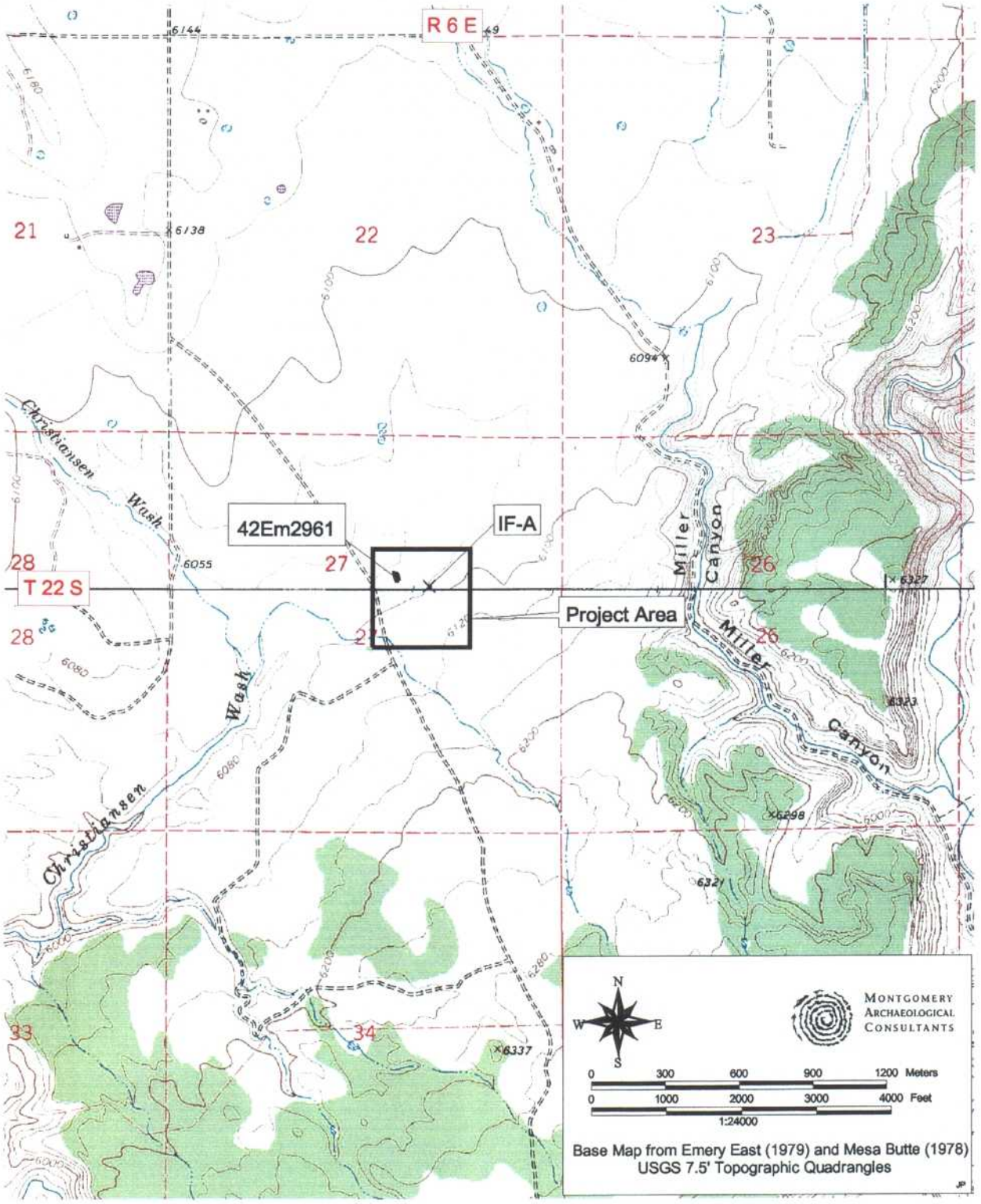

Figure 1. Inventory Area for Consolidation Coal Company's Emery Mine 4th East Portal Location in Emery County. USGS 7.5' Emery East, Utah and Mesa Butte, Utah. Scale 1:24000.

The termination of the Pleistocene enacted major changes in the environment of central Utah. Overall, the climate became warmer and drier, causing expansion of xeric vegetation zones and a retreat of plant communities requiring cool and moist conditions at higher elevations. The Archaic stage (7800 to 500 B.P.) is represented by subsistence patterns more labor-intensive than those practiced by Paleoindians. Large herd animals were less intensively exploited, replaced by a greater emphasis upon smaller, more dispersed fauna, in addition to plant resource processing. Archaic sites tend to cluster in areas which offer good viewsheds, proximity to outcrops of tool quality stone, as well as nearness to major topographic features (Black and Metcalf 1986; Howell 1992). Schroedl (1976) defined four phases for the Archaic stage based on technology, subsistence, and environmental change. The earliest is the Black Knoll phase (ca. 8300-6200 B.P.). Sites dating to this phase are characterized by Pinto projectile points and a contrast in subsistence between high and low elevations in which large artiodactyla are hunted in the uplands, while wild plant gathering is emphasized at lower elevations (Schroedl 1976:61-62). The Castle Valley phase (ca. 6200-4500 B.P.) is characterized by a lower aboriginal population on the Colorado Plateau, possibly attributed to a two-stage Altithermal drought (Black and Metcalf 1986:10). It was during this time period that a variety of projectile point styles were employed, including Rocker, Hawken, and Sudden Side-notched points, as well as Humboldt and McKean points. Slab-lined fire pits and an increasing reliance upon grasses and forbs as foodstuffs are also aspects of this phase (Schroedl 1976:63-64). The Green River phase (ca. 4500-3300 B.P.) is marked by the occurrence of Gypsum and San Rafael Side-notched projectile point types and split-twig figurines (Schroedl 1976). In this phase, hunting (especially for mountain sheep) becomes important and amaranths are a preferred plant resource (Black and Metcalf 1986:11). The Dirty Devil phase (ca.3000-1500 B.P.) marks the transition into the Formative stage and is characterized by increased sedentism, the introduction of corn and bow and arrow, and Gypsum projectile points (Schroedl 1976).

The Formative stage (A.D. 700-A.D. 1200) is characterized by reliance on domesticated plants (most notably corn), substantial habitation structures often organized into hamlets or villages, production of pottery, and the use of the bow and arrow. The study area is within the occupation zone of the San Rafael Fremont variant, as defined by Marwitt (1970). Sites in this area are characterized as small isolated hamlets or single dwelling units, usually found on small ridges overlooking perennial water sources and arable land (Schroedl and Hogan 1975). Three San Rafael Fremont phases have been proposed for the study area based on chronology, settlement patterns, subsistence strategies, and material culture (Black and Metcalf 1986; Greubel 1996). The earliest phase has been termed by Black and Metcalf (1986) the "Proto-Formative" phase (A.D.150 to 700), a transition stage from an Archaic to a Formative lifeway in which groups became more sedentary. During this phase corn horticulture increased in importance, although hunting and gathering continued to play a major role in the subsistence strategy. Common artifacts of this phase include Rose Springs Series arrow points and Emery Gray Ware (introduced between A.D. 650 and 700). More recently, investigations along Muddy Creek have better defined the earliest manifestations of the Fremont culture, termed as the Confluence Phase (Greubel 1996). The Confluence Phase is proposed to encompass preceramic, semi-sedentary, horticultural adaptations in the San Rafael Fremont area, beginning around A.D. 200 (Ibid: 516). Important aspects of this phase include the presence of a well-developed pattern of semi-sedentism, pithouse architecture, maize horticulture, large bell-shaped storage pits, use of the bow and arrow, and the presence of community or special function structures. During this preceramic Formative period, settlements occurred along the floodplain terraces above perennial streams. Recent excavations at the Confluence site (42Em1887), situated near the confluence of Muddy Creek and Ivie Creek, revealed five shallow pithouses and a variety of extramural features including bell-shaped pits and firehearths. Data from this site indicated that it is a horticulture-based community with the subsistence strategy based on the growing of maize dating from A.D. 540 to 630 (Ibid:348).

The Muddy Creek phase is marked by increased sedentism and greater reliance upon horticulture. In Castle Valley, the settlement strategy during this time is marked by small isolated hamlets or single dwelling units, usually found on small ridges overlooking perennial water sources and arable land. In the study area, the cultural material remains are dominated by Emery Gray Ware, some decorated by applique and incisions, and Rose Springs Series and Uinta Side-notched arrow points (Holmer and Weder 1980). The Bull Creek phase (A.D. 1000 to 1200) is distinguished by larger habitations composed of pit houses and surface masonry structures usually used for storage of cultigens. Diagnostic artifacts of this phase include Bull Creek and Nawthis Side-notched projectile points, decorated Fremont ceramics including Ivie Creek Black-on-white, and higher frequencies of Anasazi trade wares. Black and Metcalf (1986:157) suggest that Fremont populations aggregated during this phase most likely in response to the salubrious climatic conditions (post-A.D. 950). These favorable climatic conditions may have also enhanced the productivity of maize fields as evidenced by the increase of storage facilities in the area. Also during late Fremont times a linear settlement pattern is exhibited in areas where sites are clustered along drainage systems, such as Miller Creek. Sometime following A.D. 1200, the Fremont appear to have abandoned east-central Utah, attributed to both environmental and subsistence-related reasons (Lindsay 1986).

Following the Fremont abandonment of the area, a largely nomadic hunting and gathering lifeway resumed. This occupation is attributed to the Numic-speaking peoples, a diverse group that was present throughout much of Utah upon the arrival of Europeans in the 18th century. Historic records indicate that the Ute were the primary occupants of eastern Utah and western Colorado since the late eighteenth century. Numic expansion in the archaeological records appears at approximately A.D. 1100 based on the distribution of chronometric dates associated with brown ware sherds (Reed 1994:188). The archaeological evidence of the Numic-speaking peoples consists primarily of lithic scatters, low density ceramic scatters, and the occasional wickiup. Most of the artifact scatters are in open settings, although a small number are in rockshelters. Diagnostic artifacts include Desert Side-notched, tri-notched, and Cottonwood Triangular projectile points, a fairly crude micaceous tempered pottery and distinctive rock art (Jennings 1978). On the Colorado Plateau eighteenth and nineteenth century Ute sites may also contain varying quantities of Euroamerican artifacts, such as sheet metal cone tinklers, tin cans, weaponry, and equestrian tack (Horn 1988).

The earliest recorded visit by Europeans to Utah was the Dominguez-Escalante expedition, which moved through the areas north and west of Castle Valley in 1776-1777. Throughout the first half of the nineteenth century, explorers, surveyors and trappers moved in small parties through the valley, up and down the Old Spanish Trail. The main branch of the Spanish Trail veered northwest from Green River and wound through the San Rafael Swell via Cottonwood Creek and Buckhorn Flat, emerging into Castle Valley near the Red Seeps east of Castle Dale. Beginning in the 1870's, ranchers began to herd cattle in the area, using the higher mesas for summer grazing and the valley lowlands during the winter (Geary 1996). By the census of 1895, Emery County boasted 4,390 residents. Early engineers and surveyors noted the presence of coal deposits in Castle Valley. The agricultural and mining potential of the area boomed as Agustus Ferron's township survey in the area spawned an inpouring of people ready to extract and exploit the valley's natural resources (Geary 1996). While agriculture and ranching remain viable economic pursuits in Castle Valley today, the mining boom of the late 19th century and early 20th century ended just after WW I, with a slight increase in mining activities again just prior to WWII.

SURVEY METHODOLOGY

An intensive pedestrian survey was performed for this project which is considered 100% coverage. A 40-acre parcel was surveyed by the archaeologists walking parallel transects spaced no more than 10 meters (30 ft) apart. The project area occurs on private land. Ground visibility was considered good.

Cultural resources were recorded as either archaeological sites or isolated finds of artifacts. Archaeological sites were defined as spatially definable areas with features and/or ten or more artifacts. Sites were documented by the archaeologists walking across the site marking the locations of cultural materials with pinflags. This procedure allowed clear definition of site boundaries and artifact concentrations. Site maps were made using tape and compass, with artifact and feature proveniences being recorded accordingly. Archaeological sites were plotted on a 7.5' USGS quadrangle, photographed, with site data entered on an Intermountain Antiquities Computer System (IMACS, 1990 version) inventory form (Appendix A). Isolated finds are defined as individual artifacts or light scatter of items, which lack sufficient material culture to warrant IMACS forms, or to derive interpretation of human behavior in a cultural and temporal context. All isolated artifacts were plotted on a 7.5' USGS map and described in this report.

INVENTORY RESULTS

The inventory of the Consolidation Coal Company's Emery Mine 4th East Portal resulted in the documentation of one new archaeological site (42Em2961) and one isolated find of artifact (IF-A).

Archaeological Sites

Smithsonian Site No.: 42Em2961
Temporary Site No.: MOAC 03-49-1
Eligibility: Eligible
Description: This lithic scatter of unknown temporal affiliation lies on a gentle slope in a broad valley bounded by the Coal Cliffs to the east and Quitchupah Creek to the west. Sediments at the site are categorized as a silty sand and black carbonaceous sediment mixture. Vegetation includes low sagebrush, shadscale, yucca, prickly pear cactus, and grasses. The artifact assemblage is comprised of lithic debitage (n=102), chipped stone tools (n=3), and groundstone tools (n=2). Debitage is manufactured from a variety of chert, and all stages of reduction are represented. Tools include a light brown-beige mottled opaque chert utilized flake (Tool 1), one yellow-tan opaque chert test core (Tool 2), red sandstone groundstone (metate) fragments (Tools 3 and 4), and a brown chert Stage 4/5 biface fragment (Tool 5). No cultural features were found.

Isolated Finds of Artifact

Isolated Find A (IF-A) is located in the NE/SW/NE of Section 27, T 22S, R 6E; UTM 480075E/4302737N. It is a brown sandstone slab metate exhibiting unifacial heavy grinding in the center of the slab and toward a lateral margin (30% of total surface). It measures 32 x 32 x6 cm.

NATIONAL REGISTER OF HISTORIC PLACES EVALUATION

The National Register Criteria for Evaluation of Significance and procedures for nominating cultural resources to the National Register of Historic Places (NRHP) are outlined in 36 CFR 60.4 as follows:

> The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects of State and local importance that possess integrity of location, design, setting, material, workmanship, feeling, and association, and that they:
>
> a)...are associated with events that have made a significant contribution to the broad patterns of our history; or
>
> b)...are associated with the lives of persons significant to our past; or
>
> c)...embody the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
>
> d)...have yielded or may be likely to yield information important in prehistory or history.

The inventory of the proposed Consolidation Coal Company Emery Mine 4th East Portal resulted in the documentation of one archaeological site (42Em2961) and one isolated find of artifact (IF-A). Site 42Em2961 is a lithic scatter of unknown temporal affiliation that is recommended eligible for inclusion to the National Register of Historic Places (NRHP) under Criterion D. Additional investigations at this site could address such research domains as chronology, technology, and subsistence strategy.

MANAGEMENT RECOMMENDATIONS

The inventory of the Consolidation Coal Company's Emery Mine 4th East Portal resulted in the documentation of one archaeological site, 42Em2961, that is evaluated as eligible to the NRHP. MOAC, working in conjunction with Consolidation Coal Company, erected a fence along the site boundary to ensure avoidance during the proposed project.

Based on these findings, and action taken to avoid site 42Em2961, a determination of "No Historic Properties Affected" is proposed for this undertaking pursuant to Section 106, CFR 800.

REFERENCES CITED

Berry, M.S.
1975 Archaeological, Historical and Paleontological Survey for Consolidated Coal Company and Kemmerer Coal Company in Emery County, Utah. Division of State History, Salt Lake City. Report No. 75-2.

Black, K.D. and M.D. Metcalf
1986 The Castle Valley Archaeological Project: An Inventory and Predictive Model of Selected Tracts. *Cultural Resource Series* No. 19. Bureau of Land Management, Salt Lake City, Utah.

Copeland, J., M. and R. E. Fike
1988 Fluted Projectile Points of Utah. *Utah Archaeology 1988* 1(1): 5-28.

Elkins, M., and K.R. Montgomery
2002 Cultural Resource Inventory of Consolidation Coal Company's Mine Portal Area in T 22S, R 6E, S. 27, Emery County, Utah. Montgomery Archaeological Consultants, Moab, Utah (U-02-MQ-0231p).

Geary, E. A.
1996 *A History of Emery County*. Utah State Historical Society and Emery County Commission.

Gillette, D.
1989 The Huntington Mountain Mammoth: The Last Holdout? *Canyon Legacy* Vol. 1, No. 1. Dan O' Laurie Museum. Moab, Utah.

Greubel, R. A.
1996 Archaeological Investigations of 11 Sites Along Interstate 70: Castle Valley to Rattlesnake Bench. Alpine Archaeological Consultants, Inc., Montrose, Colorado.

Harden, P.L.
1984 An Archaeological Survey of Eleven Seismograph Lines for Seis-Port Explorations, Inc. in Emery and Carbon Counties, Utah. La Plata Archaeological Consultants, Dolores, CO. Report No. 83-557.

Hauck, F.R.
1977 Cultural Resource Evaluation in Central Utah 1977. Bureau of Land Management, Utah, *Culture Resource Series* No. 3, Salt Lake City.

1980 Archeological Evaluations in the Emery Mine Permit Area in Emery County, Utah. Archeological-Environmental Research Corporation, Bountiful, Utah.

Holmer, R. and D. Weder
1980 Common Post-Archaic Projectile Points of the Fremont Area. In *Fremont Perspectives*, David B. Madsen, Ed. Antiquities Section Selected Papers 16. Utah State Historical Society, Salt Lake City.

Horn, J. C.
1988 Euro-American Goods in the Material Culture of the Ute prior to 1882. In *Archaeology of the Eastern Ute: A Symposium*, Paul R. Nickens, Ed, pp. 54-61. Colorado Council of Professional Archaeologists Occasional Papers No. 1, Denver, Colorado.

Howell, W. K.
1992 Cultural Resource Inventory and Evaluative Testing Program Along Utah Department of Transportation's State Route 10, Emery and Sevier Counties, Utah.

Jennings, J. D.
1978 Prehistory of Utah and the Eastern Great Basin. *University of Utah Anthropological Papers* No. 98. Salt Lake City, Utah.

Lindsay, L.W.
1986 Fremont Fragmentation. In *Anthropology of the Desert West*, Carol J. Condie and Don D. Fowler, Eds. University of Utah Anthropological Papers No. 110. Salt Lake City.

Madsen, D. B.
2000 A High-Elevation Allerod-Younger Dryas Megafauna from the West-Central Rock Mountains. In *Intermountain Archaeology*, David B. Madsen and Michael C. Metcalf, Eds. Pp. 100-116. University of Utah Anthropological Papers, Number 122.

Marwitt, J. P.
1970 Median Village and Fremont Cultural Regional Variation. *University of Utah Anthropological Papers* No. 95, Salt Lake City, Utah.

Miller, F., and H. Roberts
1995 A Cultural Resources Inventory of SR-29, Straight Canyon to SR-10, Emery County, Utah. SWCA Inc., Environmental Consultants. Report No. 95-73.

Montgomery, K.R.
1996 Cultural Resource Inventories of Texaco Exploration's Cottonwood Creek and Grimes Wash Pipelines, Emery County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. 96-697.

2002 Cultural Resource Inventory of Consolidation Coal Company's Haul Road, Emery County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. U-02-MQ-0421p.

Montgomery, K.R., and J.A. Montgomery
1997 Cultural Resource Inventory of the Cottonwood Creek Water Project in Emery County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Report No. 97-407.

Raney, A. and K.R. Montgomery
2002 Cultural Resource Inventory of Consolidation Coal Company's Power Line for the Emery Mine, Emery County, Utah. Montgomery Archaeological Consultants, Moab, Utah. Project No. U-02-MQ-0487p. On file at the State Division of History.

Reed, A.D.
1994 The Numic Occupation of Western Colorado and Eastern Utah During the Prehistoric and Protohistoric Periods. In *Across the West: Human Population Movement and the Expansion of the Numa*, D.B. Madsen and D. Rhode, Eds. Pp. 188-199. University of Utah Press, Salt Lake City.

Schroedl, A. R.
1976 *The Archaic of the Northern Colorado Plateau.* Ph.D. dissertation, Department of Anthropology, University of Utah, Salt Lake City, Utah.

1991 Paleo-Indian Occupation in the Eastern Great Basin and Northern Colorado Plateau. *Utah Archaeology* 4(1).

Schroedl, A.R., and P. Hogan
1975 Innocent Ridge and the San Rafael Fremont. *Antiquities Section Selected Papers* 1(2). Salt Lake City.

Stokes, W. L.
1986 *Geology of Utah.* Utah Museum of Natural History, University of Utah, Salt Lake City.

Wiens, C.
1984 Cultural Resources Survey of Portions of Eight Price-San Rafael River Basins Irrigation Canal, Carbon and Emery Counties, Utah. Bureau of Reclamation, Upper Colorado Region, Provo, Utah. Report No. 84-928.

APPENDIX A:
INTERMOUNTAIN ANTIQUITIES SITE FORM
42Em2961

CHAPTER X

PART C: AIR QUALITY

APPENDICES

Revised 10/2002
Revised 9/2003

1a. 4th East Portal Site

Fugitive dust emission at the 4th East Portal will consist primarily from the coal handling and stockpiling of coal. The coal stockpile will be sprayed with water as it is discharged into the pile. In addition the stockpile will be protected to some degree by the rock stockpile located to along the west side of the boxcut. This rock stockpile will function as a wind break from the prevailing westerly winds. The rock stockpile consists primarily of cobble to boulder size sandstone.

The road to the coal loadout will be watered periodically throughout the day. Topsoil stockpile will be roughened, seeded and mulched to prevent wind and water erosion. Berms shall remain roughened and seeded. Rock or wood mulch as will as erosion control netting may be utilized as situation warrants to minimize effects of erosion.

On January 9, 2003, Notice of Violation was written for wind blown coal fines outside the permit area. To abate the violation the following Air Resource Protection shall be implemented to eliminate the generation of coal fines and provide measures to protect the surrounding environment from accumulation of coal fines should they occur.

Dust Control Program:

- Dust treatment program (coal yard and truck re-route areas)
- Water cannon
- Concrete (Jersey) barriers
- Wind fences
- Conveyor and transfer point enclosures
- Water sprays (conveyors)
- Water truck
- Vacuum truck
- Cattle guard
- Replacement of crusher
- Haul truck re-routng
- Maintenance plan

Details for each of these engineering controls and other measures are discussed in Appendix X.C-3.

Inserted 9/2003

NORWEST
CORPORATION

136 East South Temple, 12th Floor
Salt Lake City, Utah 84111 USA
Tel (801) 539-0044
USA (800) 266-6351
Fax (801) 539-0055

John B. Richardson
Senior Environmental Scientist

September 12, 2003

File No. 2893

John Gefferth
Consolidation Coal Company
P.O. Box 566
Route 148 North
Sesser, IL 62884-0566

Subject: Consolidation Coal Company – Emery Mine Amendment to Mine Reclamation Plan – 4th East Portal

Dear Mr. Gefferth:

Attached please find the amended Appendix X.C-3 for the 4th East Portal of CONSOL's Emery Mine in Emery County, Utah. The attachment describes the engineering controls and other measures to be implemented in the near future at the 4th East Portal area in order abate the NOV for coal fines outside of the permitted area. More specifically, the amended appendix initiates the implementation phase of the control program that CONSOL and Norwest presented to the Division on August 26, 2003. The Division approved the program as presented and directed that controls be installed and operating by October 15, 2003.

The engineering controls and other measures discussed in the amendment that will be installed or implemented are as follows:

- Dust treatment program (coal yard and truck re-route areas);
- Water cannon;
- Concrete (Jersey) barriers;
- Wind fences;
- Conveyor and transfer point enclosures;
- Water sprays (conveyors);
- Water truck;
- Vacuum truck;
- Cattle guard;
- Replacement of crusher;

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- Haul truck re-routing; and
- Maintenance plan.

At this time only preliminary drawings, specifications and engineering data are available on many of the controls. Once controls are installed, "as-built" drawings or specifications will be provided for submittal to the Division.

Sincerely,

NORWEST CORPORATION

John Richardson

John Richardson
Senior Environmental Scientist

VIA HAND DELIVERY

JR/ab

Enclosures

CONSOLIDATION COAL COMPANY

EMERY MINE

EMERY COUNTY, UTAH

AMENDMENT TO MINE RECLAMATION PLAN

APPENDIX X. C-3
4TH EAST PORTAL

SEPTEMBER 12, 2003

CONSOLENERGY

NORWEST CORPORATION

Amendment to Mine Reclamation Plan (MRP) – Emery Mine

Table of Contents

List of Figures

Amendment to Mine Reclamation Plan (MRP) – Emery Mine

Appendix X.C-3, 4th East Portal

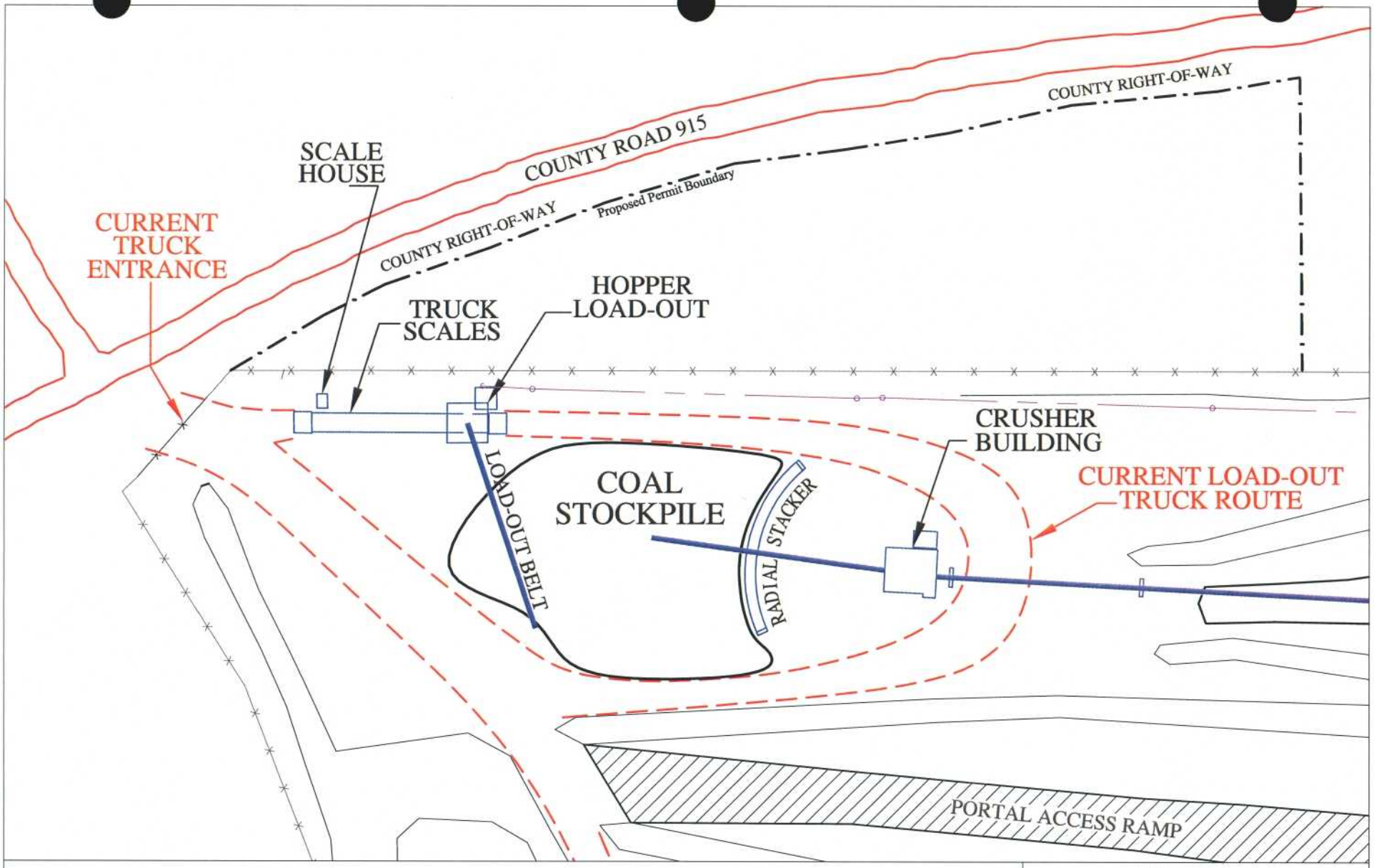
(Note: The Phase I controls discussed below include all those presented to and approved by DOGM on August 26, 2003. Phase II controls, to be activated only if Phase I equipment and measures do not adequately control coal fines, are not addressed here. Phase II controls, if necessary, will consist of a permanently installed and integrated dust suppression system, such as Benetech's program for dust control on conveyor systems and downstream stockpiles. If Phase II is warranted, details of the dust suppression system will be presented in the application to further amend the MRP.)

The general layout of the Emery Mine 4th East Portal is given in Figure 1.

DUST TREATMENT PROGRAM (COAL YARD AND TRUCK RE-ROUTE)
(Note: In order for this control to be fully implemented, the 1.5-acre parcel located between the east boundary and County Road 915 must be integrated into the current permitted area.)

The 1.5-acre parcel of land situated between the east fence line and County Road 915 will be used for the re-routing of haul trucks, as shown in Figure 2. The new route will completely by-pass the present circular path in the coal yard around the stockpile, which will greatly reduce onsite traffic and the attendant dusting. In addition, the new routing will reduce the tracking of material outside the plant. Haul trucks will continue to approach to the 4th East Portal area along the newly paved county road. The trucks will then enter CR 915 (presently an unpaved dirt road), proceed along the road about 500 feet, at which point the trucks will turn to the right off the county road, and will travel in an arc path to the new truck entrance to the plant just south of the load out hopper. The trucks will continue to be loaded as in the present manner, and then will exit the plant through the main gate.

The entrance road will be upgraded as shown in Figure 3A. The existing county road will be bladed to widen the road to accommodate two-way traffic for a distance of about 500 feet, beginning near the entrance to the 4th East Portal coal yard and continuing in a southeast direction. The road will be contoured as needed to afford proper drainage. The bladed and compacted road segment will then be armored with about 6 inches of gravel and conditioned with water prior to application of magnesium chloride dust suppressant as per vendor's recommended rate (e.g., 0.5 gallon of the prescribed mixture of magnesium chloride and water per square yard of surface area). A Material Safety Data Sheet (MSDS) provided by one of the vendors contacted (WRR Industries) and information on the uses and application rates for the chemical are found in Appendix A.



KEY

- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt
- Proposed Permit Boundary

N

1" = 75'

50 25 0 50 100 Feet

Figure 1

Emery Mine 4th East Portal

Plant Layout

Date: 09/11/03 | Project: 2893 Consol

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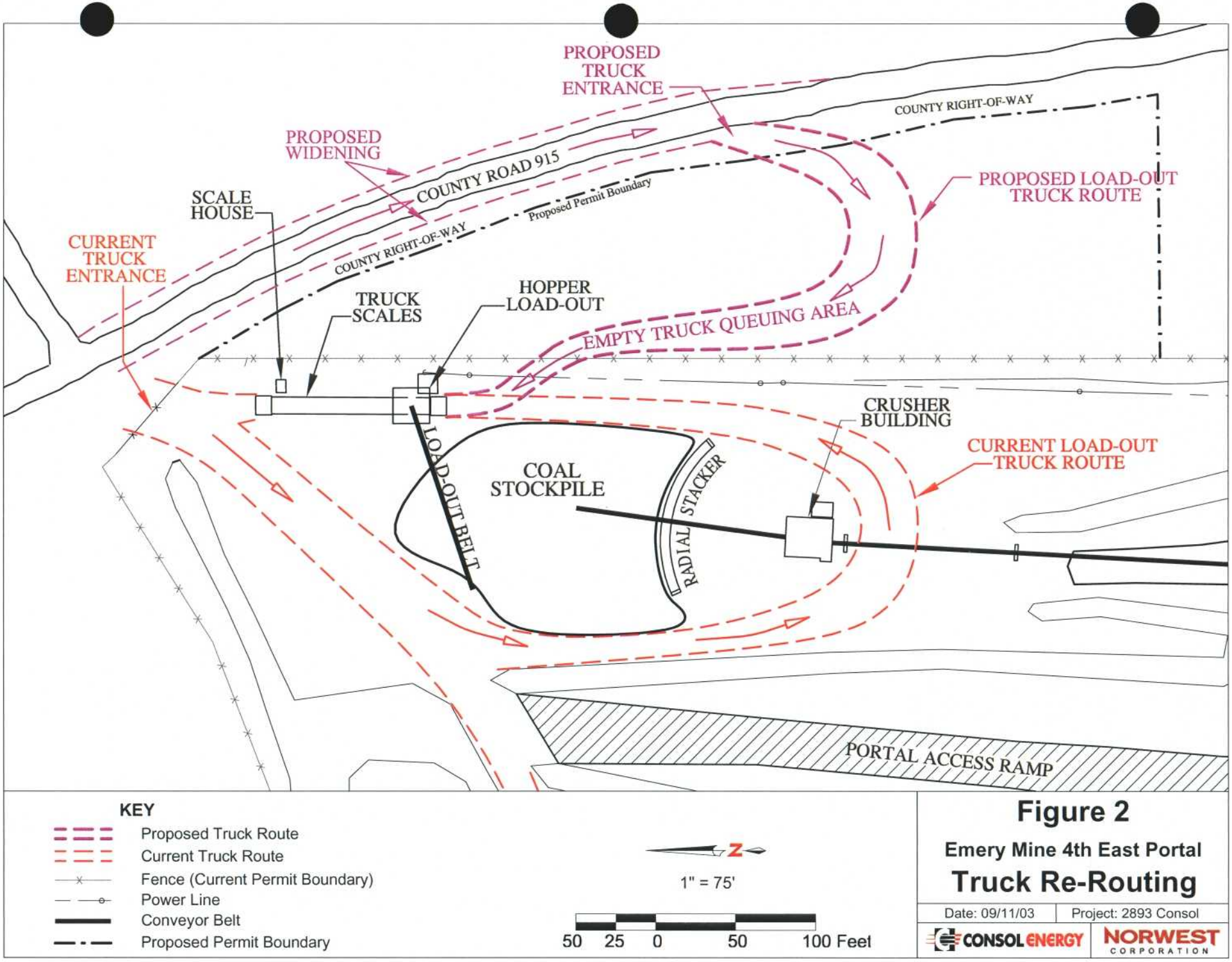
PROPOSED TRUCK ENTRANCE
COUNTY RIGHT-OF-WAY
PROPOSED WIDENING
COUNTY ROAD 915
Proposed Permit Boundary
SCALE HOUSE
PROPOSED LOAD-OUT TRUCK ROUTE
CURRENT TRUCK ENTRANCE
COUNTY RIGHT-OF-WAY
TRUCK SCALES
HOPPER LOAD-OUT
EMPTY TRUCK QUEUING AREA
CRUSHER BUILDING
CURRENT LOAD-OUT TRUCK ROUTE
LOAD-OUT BELT
COAL STOCKPILE
RADIAL STACKER
PORTAL ACCESS RAMP
KEY
Proposed Truck Route
Current Truck Route
Fence (Current Permit Boundary)
Power Line
Conveyor Belt
Proposed Permit Boundary
N
1" = 75'
50 25 0 50 100 Feet
Figure 2
Emery Mine 4th East Portal
Truck Re-Routing
Date: 09/11/03
Project: 2893 Consol
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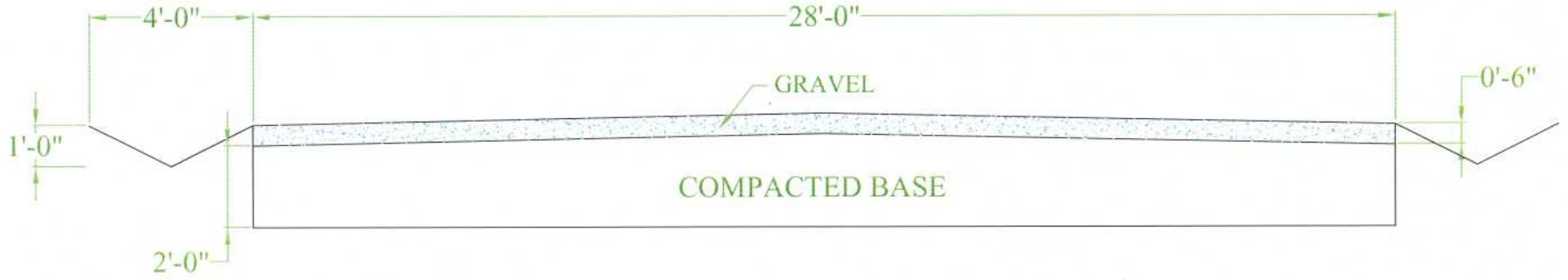

NOTE: Road designed with a 2% crown for proper water drainage (not dimensioned).

Figure 3A
Cross-Section of Road Construction Truck Re-Route on CR 915

Date: 09/11/03 | Project: 2893 Consol

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The upgrades described above for CR 915 will also be applied to the turn off to the plant, including the application of gravel. Figure 3B shows the general locations where gravel will be applied. The arc-shape will be sufficiently large (e.g., $\geq$ 60 foot radius) to safely route trucks onto the property. In order to further minimize potential dusting, the county road segment will be posted with a 10 MPH speed limit sign, effective along the 500-foot segment and the turn off to the plant.

Topsoil will be removed from a portion of the 1.5-acre parcel and stockpiled, and the area will be re-graded to allow drainage to flow to the approved and existing sediment pond to the north. See Figure 2. An 18" diameter culvert will be installed near the main gate, a natural low point, to convey runoff from the disturbed area to the pond.

The main traffic routes within the coal yard (e.g., the loop around the stockpile and the roadway west toward the spoils pile) will also be upgraded as described above for CR 915, except for the gravel cover. Figure 4A shows the coal yard and re-route areas where dust suppressant will be applied. In all cases the maintenance program (described in greater detail below) will monitor the ongoing effectiveness of the magnesium chloride at suppressing dust. When breakdown is noted, re-application of the chemical will occur. Two to four applications per year are standard practice.

The application of magnesium chloride in the re-route and the coal yard areas will be supplemented by the localized application of dust suppressant (e.g., portable spray device) in hard to access areas, such as the stockpile base and around the Jersey barriers, as discussed below. Benetech's Dust TARBT, e.g., is available in totes, and will be stored onsite, mixed with water to the proper mixture, then applied where and when needed. See Figure 4B for possible locations for localized application.

Traffic (truck) re-routing is applied in general industry to shorten the travel path, to avoid areas where dusting may occur, and thereby better control air emissions. This aptly describes the haul truck traffic situation at Emery, where travel path and duration in dusty areas can be reduced by re-routing truck traffic.

The Environmental Protection Agency's (EPA's) AP-42 document (see Appendix B), a comprehensive compendium of air emission factors and controls for a wide range of industry categories, endorses traffic re-routing as a means of reducing dust levels. In the Emery case, it will also allow for less re-entrainment of coal and other particulate matter.

Truck re-routing is considered Good Engineering Practice (GEP) and Best Management Practice (BMP), because the design of a shorter travel path results in fewer air emissions.

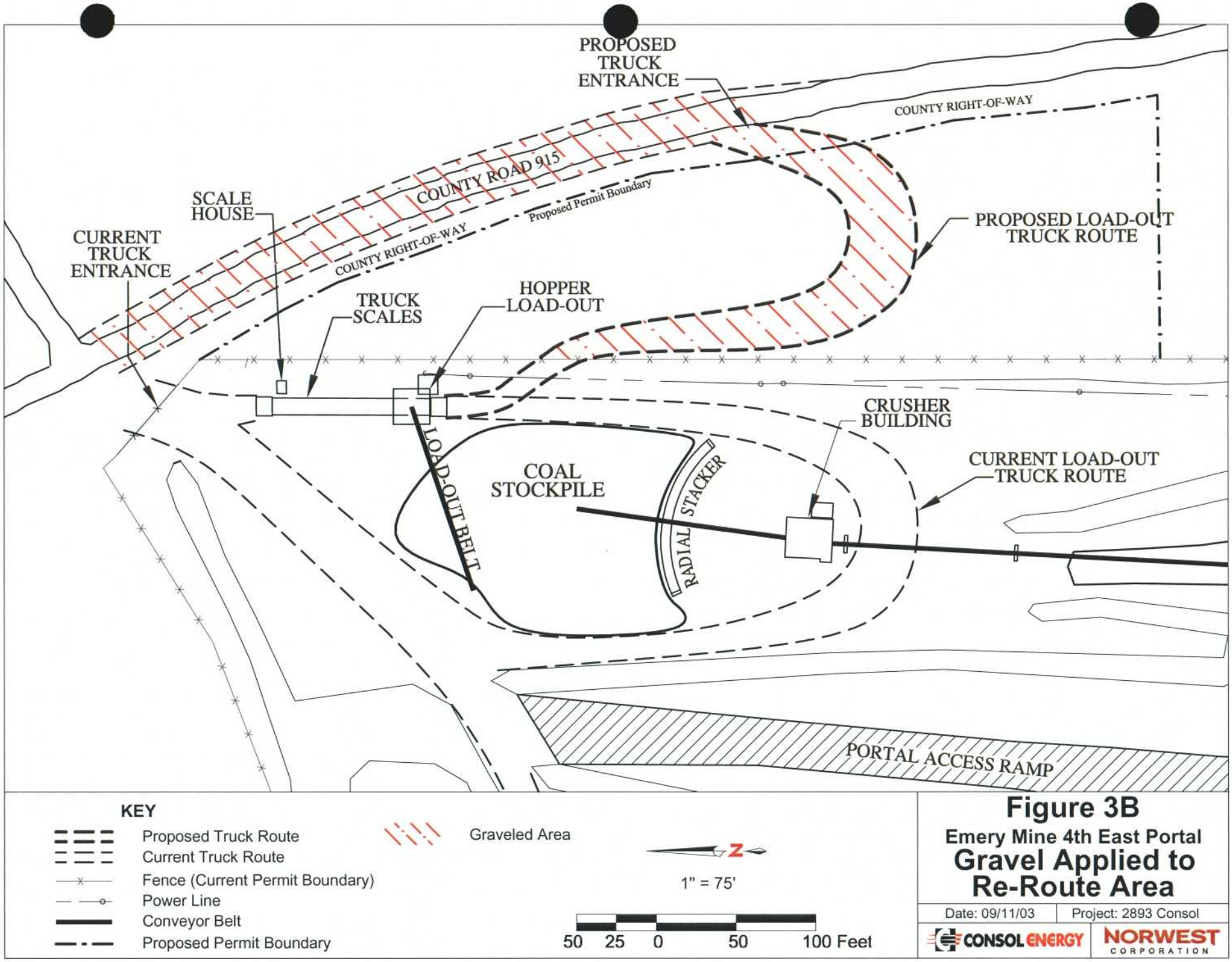

Figure 3B

Emery Mine 4th East Portal

Gravel Applied to Re-Route Area

Date: 09/11/03 | Project: 2893 Consol

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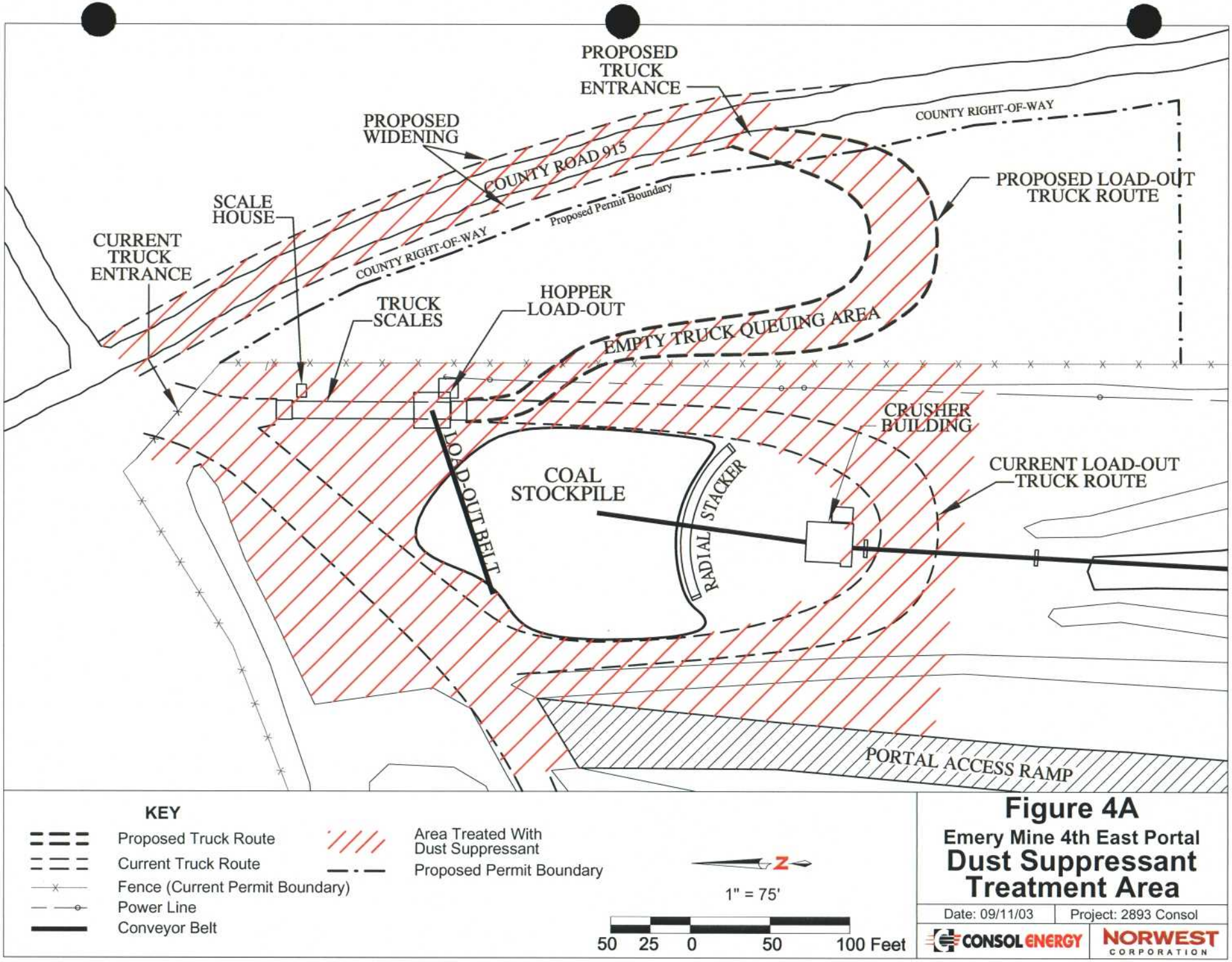

Figure 4A

Emery Mine 4th East Portal

Dust Suppressant Treatment Area

Date: 09/11/03 | Project: 2893 Consol

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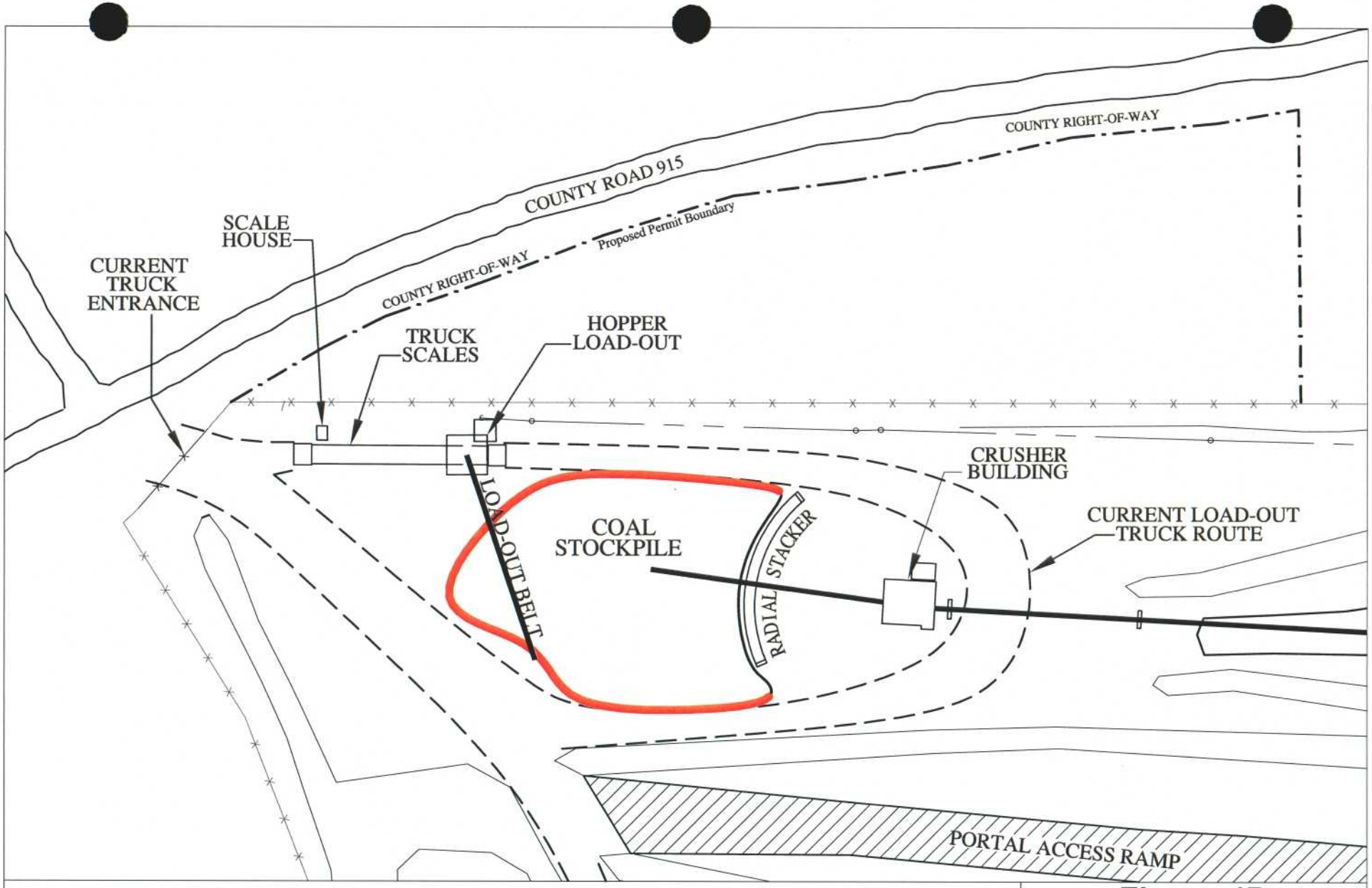

KEY

- Dust Suppressant Application Area
- Proposed Permit Boundary
- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt

N

1" = 75'

50 25 0 50 100 Feet

Figure 4B

Emery Mine 4th East Portal

Localized Application of Dust Suppressant

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WATER CANNON

One or more high volume (about 100-150 gallons per minute) water cannons will be installed near the stockpile as depicted in Figure 5. The water cannons' installed location will be determined during wind fence construction. During periods of elevated wind velocities, the cannons will be activated (e.g., 35 MPH for greater than 15 minutes). Water cannons designed for all-weather use will be installed. The basic manual system will be automated using a wind-speed indicator and water activation trigger device. Once activated, the system will blanket the stockpile area with water for a long enough period to adequately wet the pile without causing runoff. The system will shut off after several minutes so that over-wetting of the pile does not occur. If elevated wind velocities persist, the water cannons will continue to be activated until wind speed subsides below the threshold level for triggering the system.

One vendor's water cannon nozzle design being considered for installation at Emery is shown in the attached Appendix C.

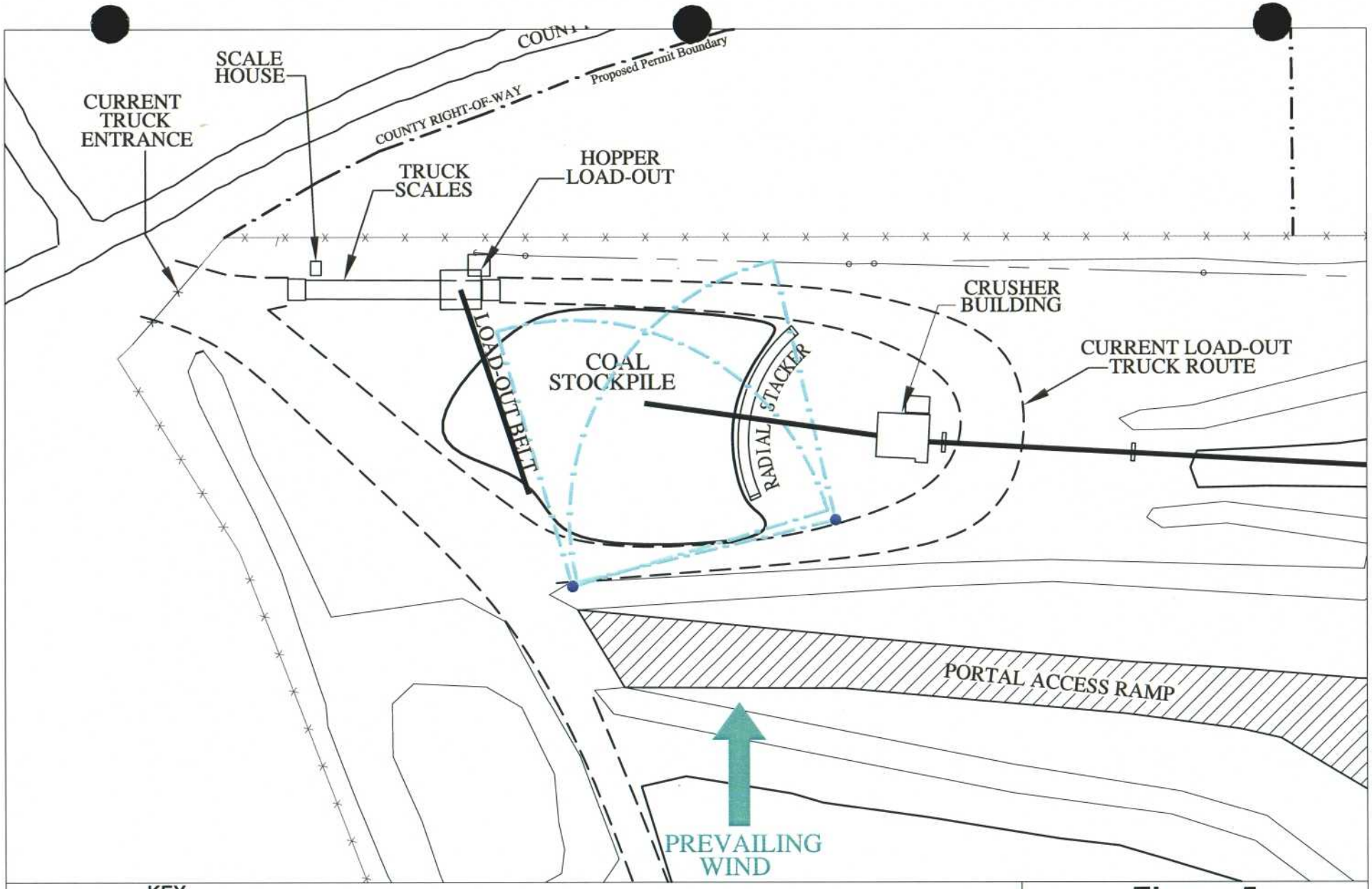
The use of water to control fugitive emissions in both paved and unpaved areas is widespread in general industry; water has been used effectively in applications similar to Emery Mine for years. EPA's AP-42 document (see Appendix B) recognizes the value of water as a dust suppressant for application on unstabilized (unpaved, disturbed) areas, such as the coal yard at the Emery Mine. Although a high evaporation rate as found at Emery may shorten the effective longevity of the control, this is offset by serial applications as needed.

The use of high pressure water sprays in this application is considered GEP and BMP, because water is effective at controlling dust if periodically re-applied, based on evaporation rate. Water for dust control is relevant to the situation at Emery, because water has a proven track record in similar applications in arid climates. Water cannons activated by high winds are very effective at controlling blowing dust from (coal) stockpiles by saturating the material.

A water cannon system has been effectively used to control coal dust emissions at the Sandusky Docks Corporation storage area in Sandusky, Ohio. See Appendix D for details.

JERSEY BARRIERS

In order to confine the stockpile base for improved dust control, Jersey (concrete) barriers will be used in tandem with an ongoing program to reshape the pile to minimize the surface area of the pile exposed to wind. The on-site front-end front end loader will be used as necessary to consolidate material onto the pile. The Jersey barriers will be strategically placed along the perimeter of the stockpile to prevent encroachment of coal fines into adjacent plant areas such as truck loading. A conceptual drawing showing placement of the barriers in the stockpile area is shown in Figure 6. A specification sheet for the barriers as provided by one vendor is shown in Appendix E.



KEY

- Water Cannon and Coverage Area
- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt
- Proposed Permit Boundary

N

1" = 75'

50 25 0 50 100 Feet

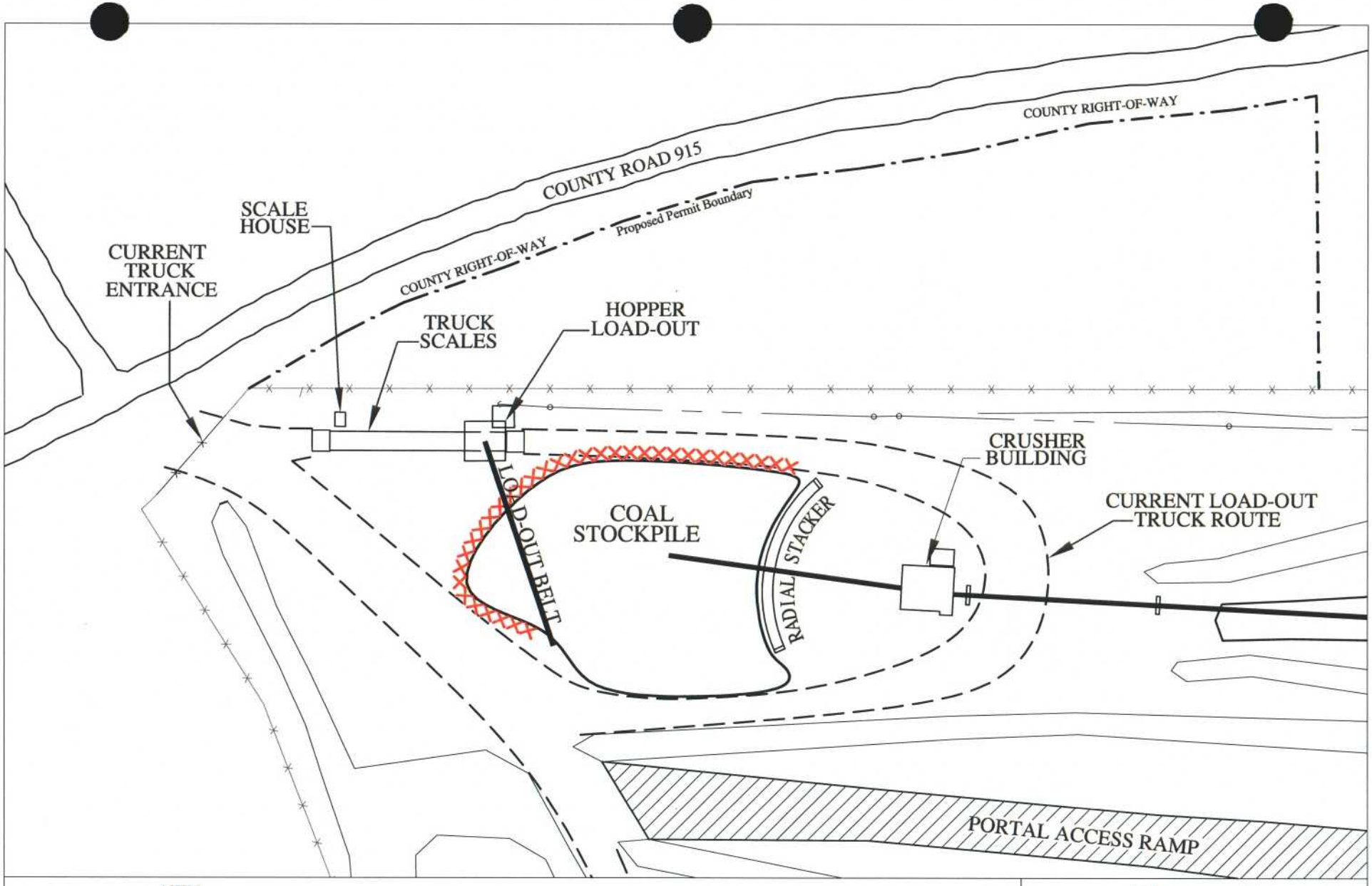
Figure 5

Emery Mine 4th East Portal

Water Cannons and Coverage Areas

Date: 09/11/03 | Project: 2893 Consol

CONSOL ENERGY | NORWEST CORPORATION



KEY

- XXX Concrete Barriers
- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt
- Proposed Permit Boundary

N

1" = 75'

50 25 0 50 100 Feet

Figure 6

Emery Mine 4th East Portal

Concrete Barriers

Date: 09/11/03 | Project: 2893 Consol

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Barriers are widely used in industry for stockpile segregation and also for containment. Concrete barriers may also double as stockpile erosion control in general industry; they are more durable than the typical silt fence, i.e., an improvement over the typical control. Confining the base of the stockpile with barriers will reduce encroachment of product into other areas of the plant, e.g., the load out and scale areas, where the material may otherwise become pulverized under tire pressure and dispersed by wind. The concrete structure also doubles as a safety barrier for the front-end loader operator; it defines the perimeter of the raised stockpile berm, and it segregates the loader from oncoming haul trucks in the loading area.

ASARCO in East Helena, MT successfully used concrete barriers to contain open stockpiles as part of its EPA-approved State Implementation Plan (SIP) for lead.

The barriers are very durable and are considered GEP and BMP in this application.

WIND FENCES

A wind fence, as shown in Figure 7, will be installed upwind of the stockpile area at the 4th East Portal. The conceptual placement of the fence is illustrated in Figure 8. A wind fence disrupts the mechanism that causes dust particles to become airborne in the first place, i.e., moving air or wind. Wind fences are upstream devices intended to deflect air movement and reduce airspeed, and are acknowledged as a control device in EPA's AP-42 (see Appendix B). When properly installed and when the wind is in proper alignment to the wind fence, wind speed is reduced up to 60%. Final placement of the fence will be determined following consultation with the vendor. The attached wind rose for Ferron, Utah (about 18 miles north of the mine) and the attached topographical map of the coal yard area will be factored into the decision. See Figure 9 and plate III-1 in the permit.

The wind fence material will be either the Raring Corporation's WindTamer fabric mesh or Ultra Span's panel system, where panels are suspended from cables attached to upright wooden or steel poles. The WindTamer fabric is mounted directly to either steel or wooden poles using mounting brackets. The fabric is drawn tight during installation using a come along device so that the fabric does not flap in the wind. The taut fabric functions as a semi-permeable barrier and wind deflection device. Appendix F shows the basic design of the UltraSpan system that may be installed at Emery.

Emery has opted for wooden telephone poles as the fabric support structure. The poles will be installed in a perimeter line upwind of the stockpile at a spacing of about 15 feet. The fence length is estimated at 400 feet with a height of about 45 feet.

Although not widely used in industry, wind fences are nevertheless acknowledged in EPA's AP-42 document as a stockpile dust control mechanism, usually in tandem with one or more additional controls, such as pile wetting with water. See Appendix B.

Figure 7
Wind Fence

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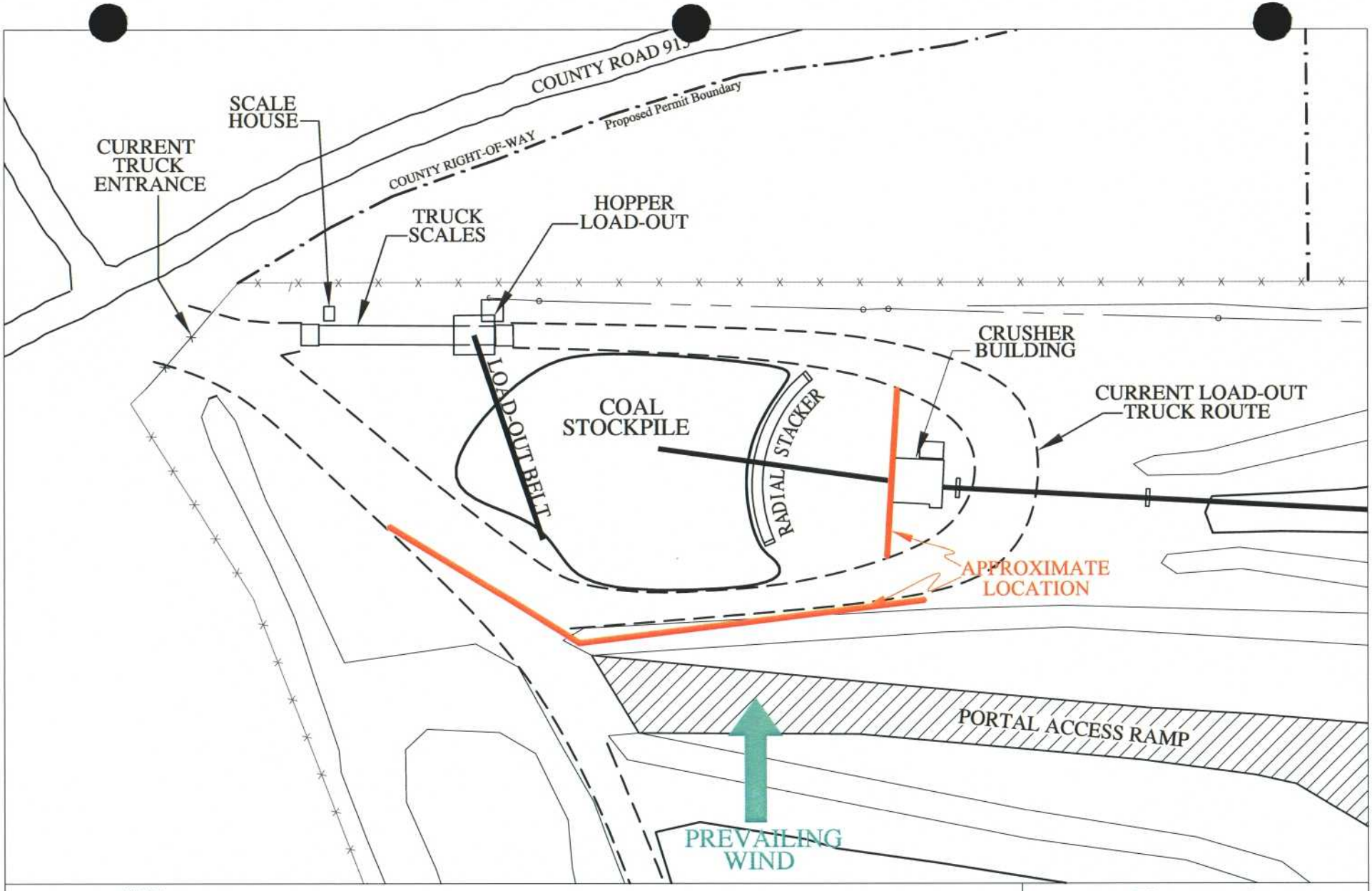

KEY

- Wind Fence (Approximate Location)
- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt
- Proposed Permit Boundary

N

1" = 75'

50 25 0 50 100 Feet

Figure 8

Emery Mine 4th East Portal

Wind Fence

Date: 09/11/03 | Project: 2893 Consol

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Utah Climate CENTER

Utah State UNIVERSITY
Logan, UT 84322-4825

FERRON
Wind Rose Report
Hourly average wind speed - Hourly unit vector mean wind direction

For data period

Mar 10 1992 00:00:00 to
Dec 31 1994 23:00:00

County: EMERY
Latitude: 39.069
Longitude: -111.150
Elevation: 6000 feet

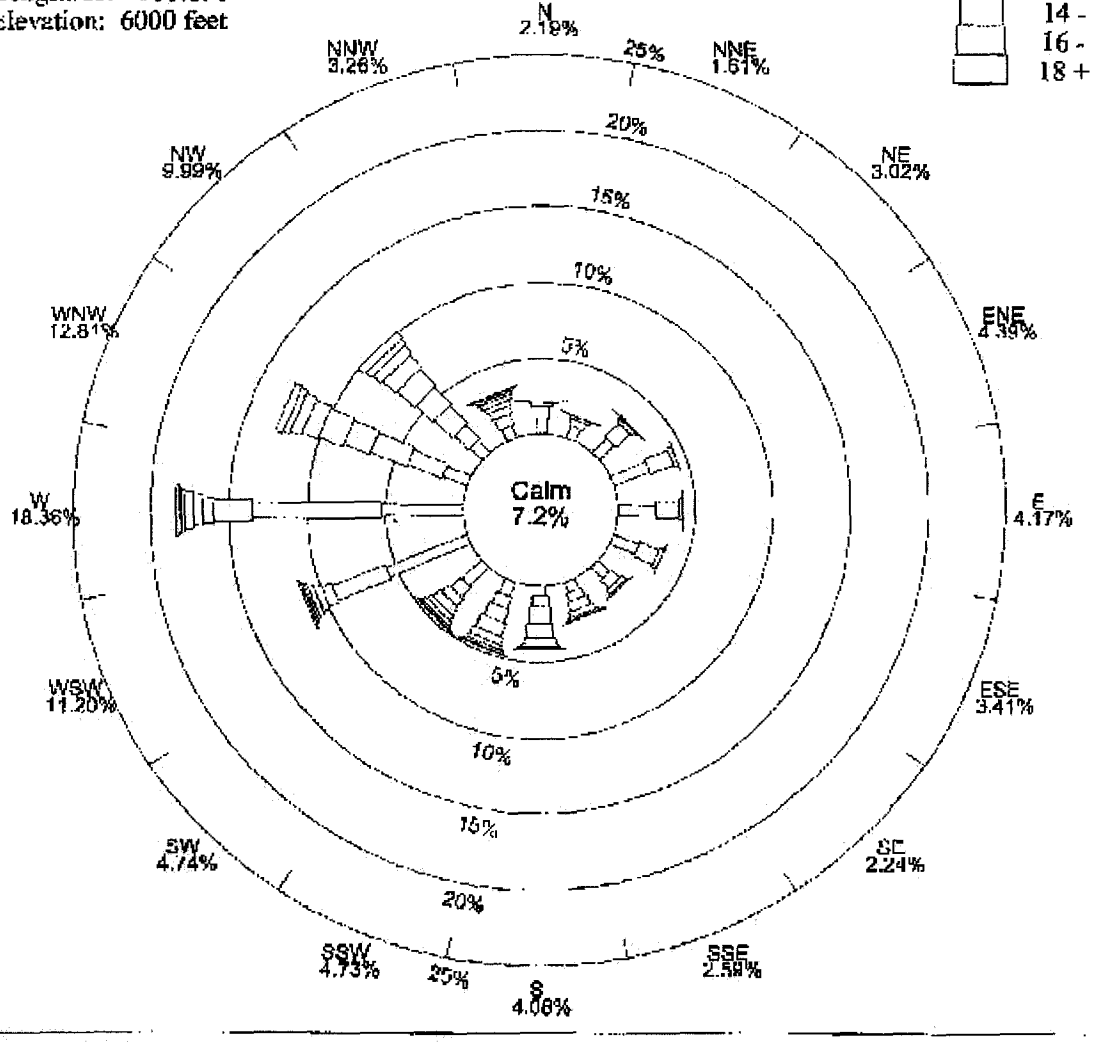


Figure 9
Wind Rose

The use of wind fences in this application is considered GEP and BMP, because wind velocity impacting the pile is reduced up to 60%, depending on alignment of the fence and mesh material. Wind that contacts the surface tangentially is either dampened or deflected.

Wind fences have been applied at Tri-Gen Bio Power in Louden, TN; at Cape Breton Development Corporation in Sydney, Nova Scotia; at Helvetia Coal Company's Lucerne 6E Mine near Indiana, PA; and at Graymont Western in Calgary, Alberta.

CONVEYOR AND TRANSFER POINT ENCLOSURES

Lightweight metal panels or sections of conveyor belt will be used to better enclose the conveyor belt system at the mine. The stacker conveyor, for example, has openings on the west side, and the prevailing wind is from the west. In addition, enclosure of transfer points will be improved by adding panels where feasible.

Enclosing material handling devices (conveyors and transfer points) is general industry practice to reduce fugitive dust emissions. EPA's AP-42 document (see Appendix B) frequently refers to enclosure as one of the preferred control options. At Emery, improved enclosure of the radial stacker on the windward side and the conveyor system transfer points will reduce dusting from these sources. The material handling system at Emery is already partially enclosed; more completely enclosing conveyors and transfer points is considered GEP and BMP.

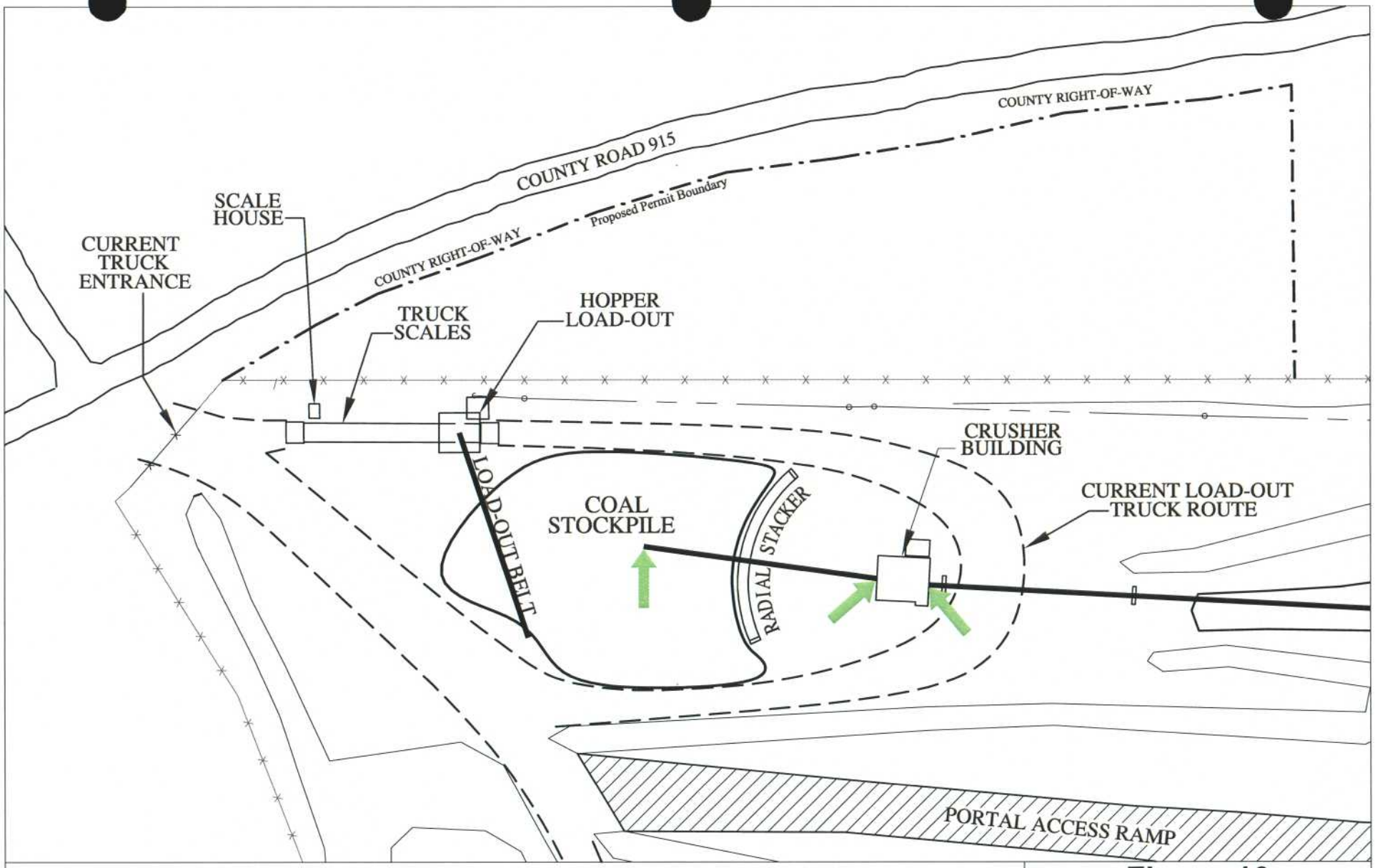
WATER SPRAYS (CONVEYORS)

Water sprays will continue to be operated at the three locations indicated in the attached Figure 10, namely the crusher inlet, the crusher outlet and the stacker discharge. The spray bars will be upgraded to accommodate the possible addition of a dust suppressant at a future date if required.

The use of water sprays to control fugitive emissions in both paved and unpaved areas is widespread in general industry; water has been used effectively in applications similar to Emery Mine for years. EPA's AP-42 document (see Appendix B) recognizes the value of applying water to haul roads and unstabilized (unpaved, disturbed) areas, such as the coal yard at the Emery Mine. Although a high evaporation rate as found at Emery may shorten the effective longevity of the control, this is offset by multiple applications along the conveyor system. The use of water sprays in this application is considered GEP and BMP, because water is effective at controlling dust if periodically re-applied, based on evaporation rate. Water sprays are relevant to the situation at Emery, because they have a proven track record in similar applications in arid climates.

WATER TRUCK

The current water truck has a gravity feed water distribution system. The water delivery feature will be upgraded to a multi-point spray bar, and the truck will be used to supplement the magnesium chloride dust treatment program in the coal yard and re-route areas by adding moisture to the areas treated with magnesium chloride and by wetting untreated areas as needed for dust control.



KEY

- Water Spray Locations
- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt
- Proposed Permit Boundary

N

1" = 75'

50 25 0 50 100 Feet

Figure 10

Emery Mine 4th East Portal

Water Spray Locations

Date: 09/11/03 | Project: 2893 Consol

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VACUUM TRUCK

The vacuum truck will continue to be used at the mine on a contract and as-needed basis. Vacuuming is anticipated for the sump underlying the cattle guard at the plant entrance and for cleanup of spills in other relatively inaccessible areas, such as below conveyors and around the crusher.

Vacuum trucks are widely used in general industry for cleanup of spills of solid and slurry materials, especially from inaccessible areas. A contract vacuum truck well suited to cleanup coal yard spills at Emery, e.g., from conveyors, and to remove solids from beneath the cattle guard once installed. Regulatory agencies (EPA, OSHA, MSHA) concerned with in-plant and ambient air quality champion the use of vacuum methods in general industry to control materials that may otherwise cause dusting. Vacuuming is considered GEP and BMP, because this control method removes the source of potential dusting.

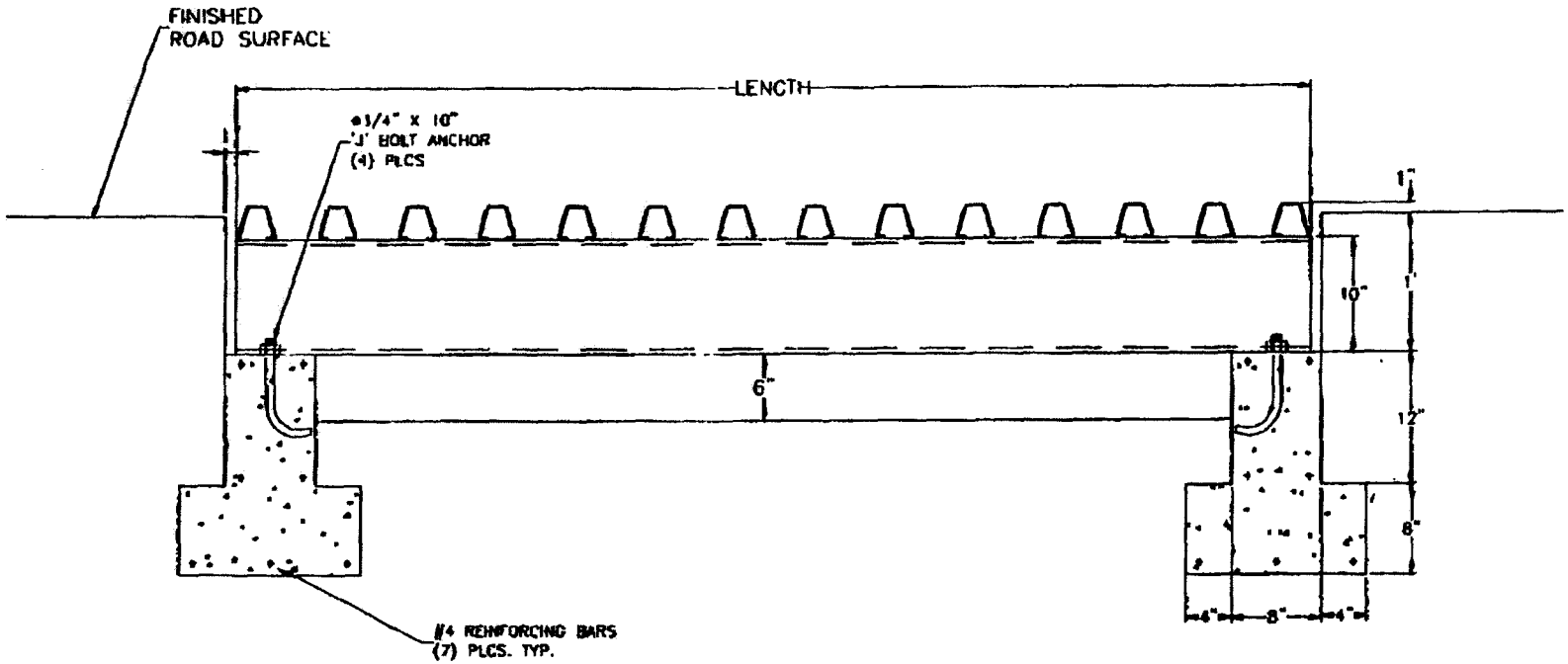
CATTLE GUARD

Figures 11 and 12 respectively show the specification and the location for the cattle guard to be installed at the entrance of the coal yard for the 4th East Portal. The selected design, U-54 from Powder River in Provo, UT, is the same as that specified by Emery County for the recently paved county road used for haul truck traffic to and from the mine. The design is rated at 25 tons per axle, where the maximum weight per axle for the tandem haul trucks in use at Emery is about 9 tons per axle. See Appendix G for additional specification and installation instructions for U-54 cattle guard.

The installed cattle guard will accommodate the haul truck tire width (outside tire to outside tire) of 100 inches, and the length will be sufficient for at least one tire rotation, where the tire diameter is 42 inches (circumference is 132 inches).

The underlying concrete sump will also provide support for the cattle guard. Its "as built" design will be able to withstand the loaded weight of a haul truck on a per axle basis, i.e., about 9 tons (Note: The U-54 design from Powder River is rated at 25 tons axle weight.).

Cattle guards aren't usually thought of as a dust control; however, this application is well suited for the conditions at Emery, where solids may adhere to truck tires under both overly wet and dry conditions. Cattle guards in tandem with the collection sump are considered GEP and BMP, because solids are dislodged from tires and collected in a containment structure where they are less likely to be re-entrained.



CATTLEGUARD	
)WDER RIVER, INC.	DRAWING #: .
	SCALE: .
386 EAST 900 SOUTH PROVO, UTAH 84605 PHONE: (801)374-2983 FAX: (801)377-6927	DRAW BY: HGM
	DATE: 7/6/98
	CHECKED BY: .
	APPROVED BY: .

CATLE GUARD INSTALLATION
U-54 & U-80

Figure 11
Cattle Guard Specification

CONSOL ENERGY

NORWEST CORPORATION

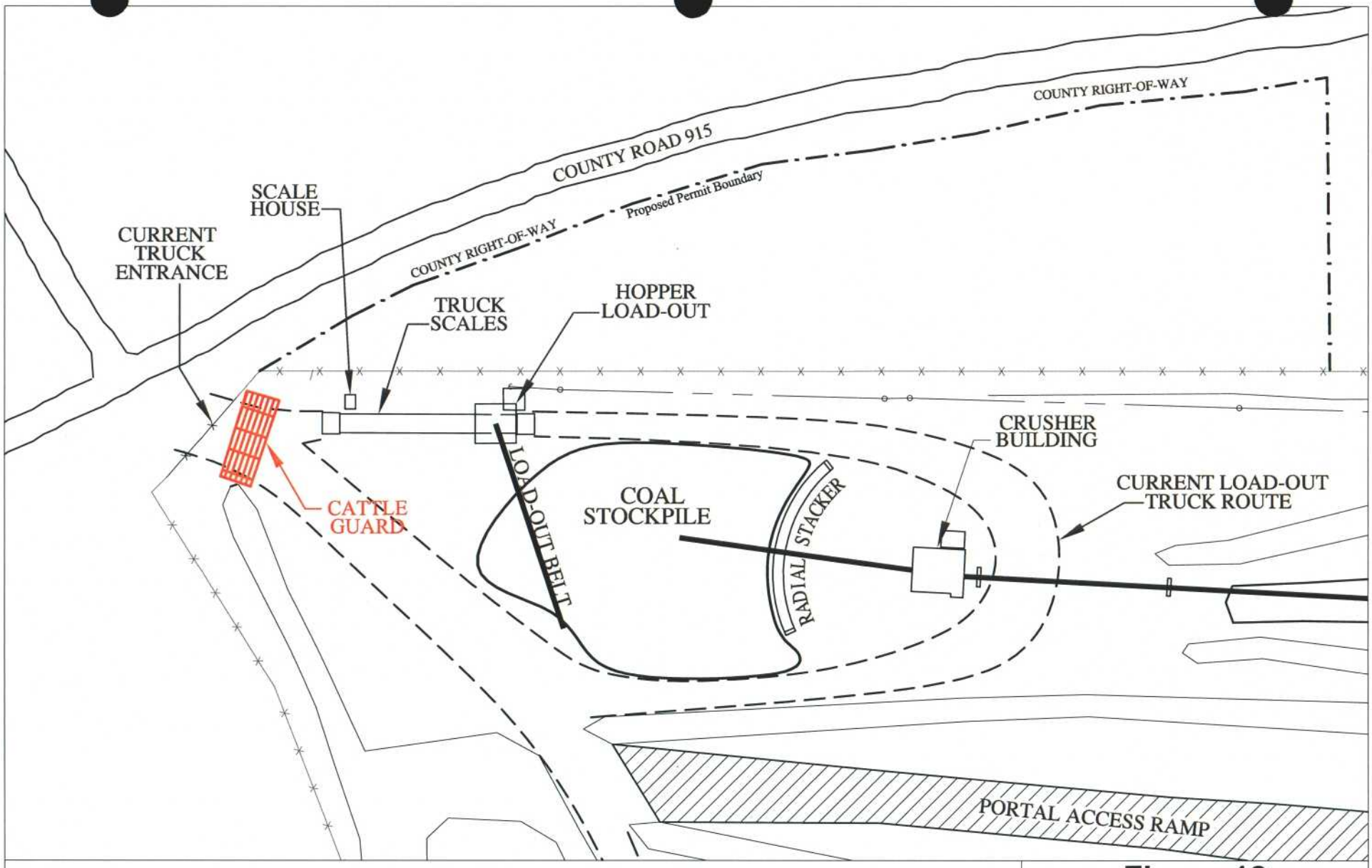


Figure 12

Emery Mine 4th East Portal

Cattle Guard and Sump

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REPLACEMENT OF CRUSHER

The current hammer mill crusher is rated at 500 TPH. See Figure 13 for location. It will be replaced with a 500 TPH double-roll crusher or other type of non-pulverizing device. Regulatory agencies (EPA, OSHA, MSHA) consider substitution or modification of process equipment known to generate less air emissions a valid engineering control (GEP and BMP). Replacing the crusher at Emery, e.g., is an ideal application of this engineering principle, where a double-roll crusher or other type of non-pulverizing crusher would produce a larger size product, on average, than the present hammer mill crusher. Substitution of equipment for the purpose of emissions reduction is widely observed in general industry. See Appendix H for specifications on candidate replacement crushers located to date.

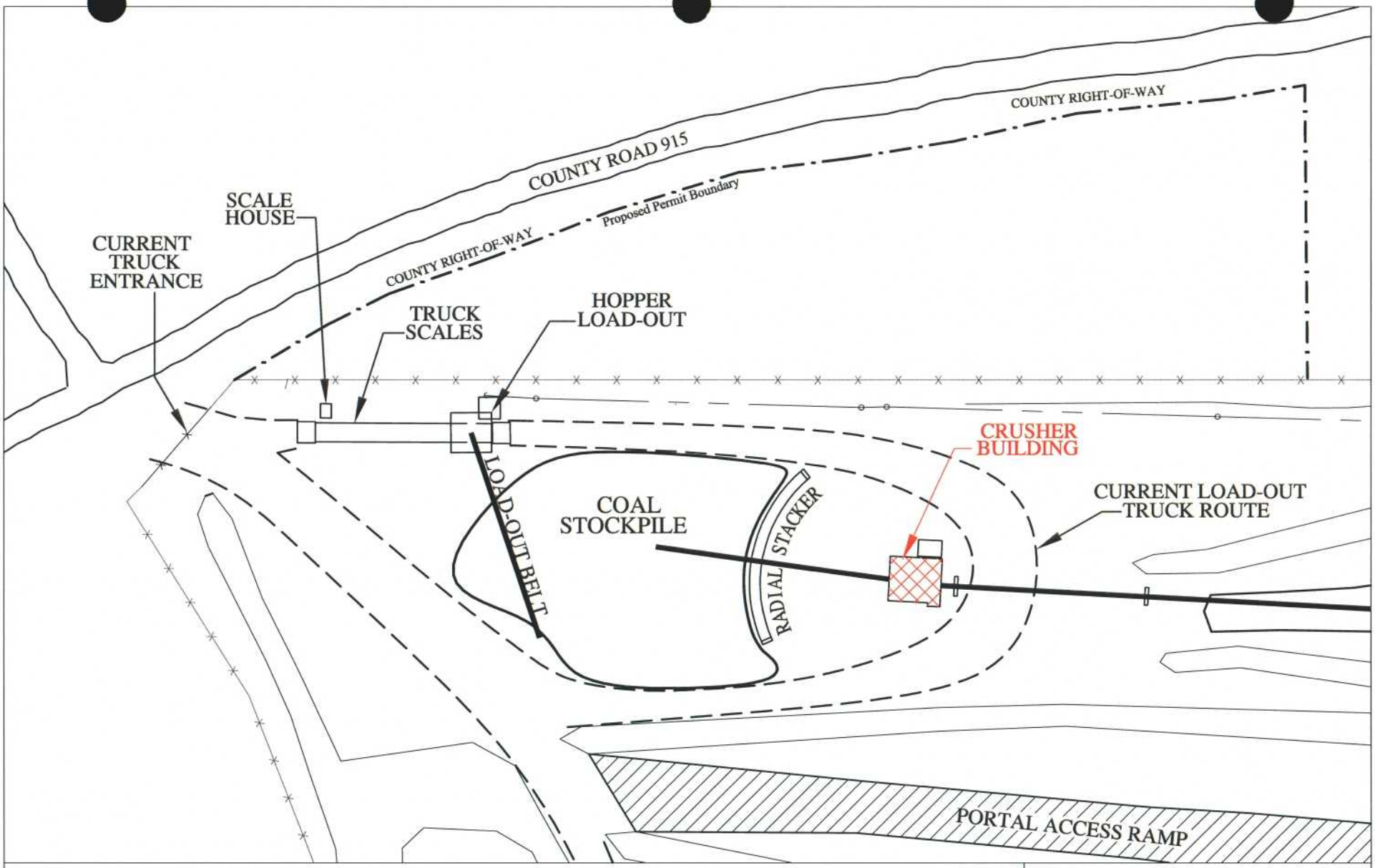
Prior to crusher replacement, a Notice of Intent (NOI) will be timely filed with Utah's Division of Air Quality. A courtesy copy of the NOI will be sent to DOGM.

TRUCK RE-ROUTING (SEE ABOVE SECTION ON DUST TREATMENT PROGRAM FOR DETAILS ON TRUCK RE-ROUTING)

Figure 14 shows the location of the combined Phase I controls at the Emery Mine 4th East Portal area.

MAINTENANCE PROGRAM

See Appendix I for the outline of the maintenance program for the Phase I controls at the Emery Mine 4th East Portal area.



KEY

- Current Truck Route
- Fence (Current Permit Boundary)
- Power Line
- Conveyor Belt
- Proposed Permit Boundary

N

1" = 75'

50 25 0 50 100 Feet

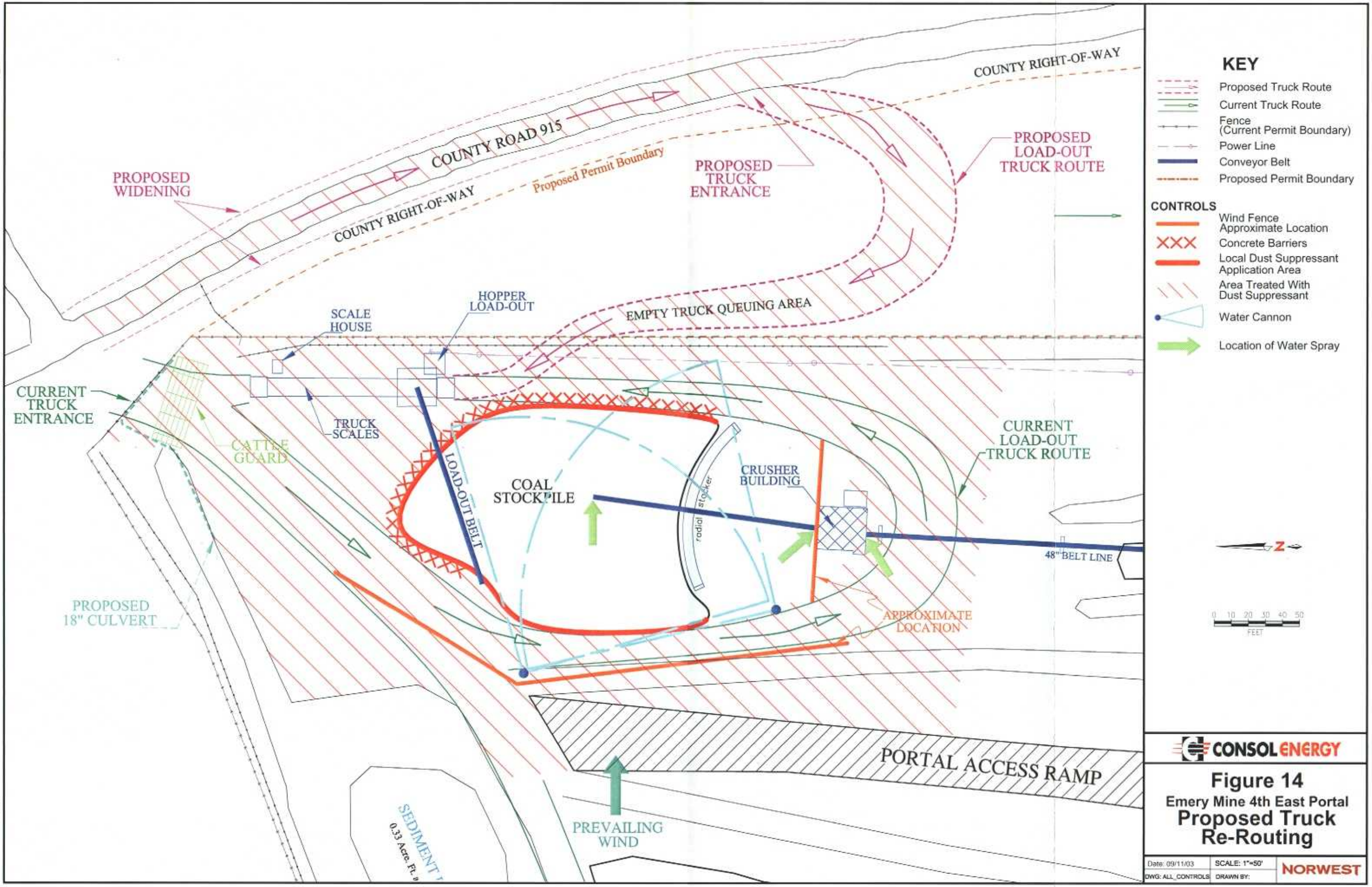
Figure 13

Emery Mine 4th East Portal

Location of Crusher

Date: 09/11/03 | Project: 2893 Consol

CONSOL ENERGY | NORWEST CORPORATION



CONSOL ENERGY

Figure 14

Emery Mine 4th East Portal

Proposed Truck Re-Routing

Date: 09/11/03	SCALE: 1"=50'	NORWEST
DWG: ALL_CONTROLS	DRAWN BY:	

APPENDIX A

MAGNESIUM CHLORIDE – PRODUCT INFORMATION

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: Negative in bacterial DNA repair assay in Bacillus subtilis. [See *Mutat. Res.* 87:211-297, 1981]

Additional Toxicity Information: Magnesium chloride is listed by the US Food and Drug Administration as a chemical "generally recognized as safe" as a direct human food ingredient. [See 21 CFR 184.1426]

SECTION 12: ECOLOGICAL INFORMATION

Ecotoxicity: No data available.

Environmental Fate: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

US EPA Waste Number: not applicable

Classification of Waste as Manufactured: (per federal regulations) Non Hazardous
NOTE: Generator is responsible for proper waste characterization. State hazardous waste regulations may differ substantially from federal regulations.

Waste Disposal: Dispose of this material in accordance with standard practice for disposal of potentially hazardous materials as required by applicable federal, state or local laws. Note that disposal regulations may also apply to empty containers and equipment rinsates.

SECTION 14: TRANSPORT INFORMATION

DOT Proper Shipping Name: DUS-TOP™ Dust Control Agent, Non-Hazardous.

IATA Proper Shipping Name: DUS-TOP ™ Dust Control Agent, Non-Hazardous.

IMDG Proper Shipping Name: DUS-TOP ™ Dust Control Agent, Non-Hazardous.

Emergency Guidebook Numbers: **NAERG:** not applicable **EMS:** not applicable **MFAG:** not applicable

SECTION 15: REGULATORY INFORMATION

OSHA Hazards: Irritant.

Chemical Inventory Status:

TSCA:	Yes	**EINECS:**	Yes	**Canada:**	Yes - DSL
Japan:	Yes	**Korea:**	Yes	**Australia:**	Yes
China:	Yes	**Philippines:**	Yes		

SARA 313: Not applicable

Other Regulatory Listings: Class D: Division 2: Subdivision B: Irritant

Reportable Quantities: Not applicable

State Regulations: Not applicable

SECTION 16: OTHER INFORMATION

Precautionary Statement: Please note that the information contained herein is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use and disposal of these materials and the safety and health of employees and customers.

Reilly Industries Hazard Rating System: H: 1 F: 0 R: 0

Ventilation:	All operations should be conducted in well-ventilated conditions. Local exhaust ventilation should be provided. For outdoor operations generating airborne mist, workers should position themselves upwind of the operation to avoid exposure.
Other Engineering Controls:	All available engineering controls to minimize risk should be used.
Thermal Hazards:	Not applicable
Additive or Synergistic Effects:	None known

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Molecular Formula:	$MgCl_2 \cdot 6\ H_2O$
Molecular Weight:	203.31
Appearance, State & Odor (ambient temperature):	clear, odorless liquid
pH:	7
Vapor Pressure:	not available
Vapor Density (air = 1):	not available
Boiling Point:	244.6°F
Freezing Point:	- 13°F
Melting Point:	not applicable
Solubility in Water:	miscible
Specific Gravity or Density:	1.30 @ 68°F
VOC Content:	not available
Softening Point:	not applicable
Bulk Density:	not applicable
Octanol / Water Partition Coefficient:	not available
Odor Threshold:	not available

SECTION 10: STABILITY AND REACTIVITY

Chemical Stability:	Stable
Conditions to Avoid:	Not applicable
Incompatibilities:	Avoid contact with strong acids.
Hazardous Decomposition Products:	Hydrogen chloride gas may be released if product is evaporated to dryness and heated to > 500°C.
Hazardous Polymerization:	Will not occur

SECTION 11: TOXICOLOGICAL INFORMATION

Acute Oral LD_{50}:	2800 mg/kg	**Species:**	Rat		
Acute Dermal LD_{50}:	not available	**Species:**	not available		
Acute Inhalation LC_{50}:	not available	**Duration:**	not available	**Species:**	not available
Skin / Eye Irritation:	Mild skin irritant / Mild eye irritant				
Target Organs:	Multiple oral doses of magnesium chloride administered intermittently to mice over 13 weeks at 114 mg/kg resulted in changes in liver and spleen weights in exposed animals. [RTECS]				
Carcinogenicity:	Negative in 96 week oral B6C3F1 mouse study, ranging up to 2% of diet. [See *Food Chem. Toxicol.* 27(9):559-63, 1989]				
Teratogenicity:	No data available.				

of the patient.

SECTION 5: FIRE FIGHTING MEASURES

Flash Point: non-combustible (aqueous solution) **Method:** not available **Autoignition Temperature:** not available

Flammable Limits: **UFL:** not available **LFL:** not available

Flammability Classification (OSHA): Not applicable.

Hazardous Products of Combustion: Toxic fumes of hydrogen chloride may be evolved when magnesium chloride is thermally decomposed.

Potential for Dust Explosion: Not applicable

Special Flammability Hazards: Not applicable

Appropriate Extinguishing Media: Water spray, carbon dioxide, dry chemical.

Basic Fire Fighting Guidance: This material consists of 65 - 75% water, and is not combustible. In the event of a surrounding fire, wear self-contained breathing apparatus and full protective clothing. Skin and eye contact should be avoided. Normal fire fighting procedures may be used.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Containment Techniques: For small spills, use suitable absorbent material and collect for later disposal. For larger spills, diking may be required to contain the release.

Clean-up Procedures & Equipment: Wear protective equipment during clean up. Remove all ignition sources. Ventilate area of spill or leak. Collect material for later disposal. After collection of material, flush area with water.

Evacuation Procedures: Isolate the hazard area and deny entry to unnecessary and unprotected personnel.

Special Instructions: Remove all contaminated clothing to prevent further absorption. Decontaminate affected personnel using the first aid procedures in Section 4. Leather shoes that have been saturated must be discarded.

Special Reporting Requirements: Notify appropriate authorities if required by regulation.

SECTION 7: HANDLING AND STORAGE

Storage Precautions: Protect containers from physical damage.

Storage Recommendations: Maintain dry, ventilated conditions for storage. Keep away from strong acids to prevent release of hydrogen chloride gas.

Precautions for Unique Hazards: Not applicable.

Practices to Minimize Risk: Wear protective equipment when performing maintenance on contaminated equipment.

Special Handling Equipment: Not applicable.

Dangerous Incompatibility Reactions: Avoid contact with furan-2-peroxycarboxylic acid; explosion could result.

Incompatibilities with Materials of Construction: Mildly corrosive to metals over time (< 0.05 inches/year in carbon steel). DUS-TOP™ Cl contains a proprietary corrosion inhibitor to reduce corrosion to metals.

SECTION 8: EXPOSURE CONTROLS AND PERSONAL PROTECTION

Exposure Limits: **OSHA PEL:** not established **ACGIH TLV:** not established

Personal Protective Equipment: Where overexposures are a concern, use NIOSH-approved dust/mist respirator as necessary. Chemical goggles, and impervious clothing, gloves and boots should be considered if extensive splashing is likely. Contact lenses should not be worn when handling this material. Do not smoke or eat in areas where this material is handled. Wash hands thoroughly before eating or smoking.

Respirator Caution: Observe OSHA regulations for respirator use (29 CFR 1910.134). Air-purifying respirators must not be used in oxygen-deficient atmospheres.

MATERIAL SAFETY DATA SHEET
REILLY INDUSTRIES, INC.

SECTION 1: CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **DUS-TOP™ Dust Control Agent**
DUS-TOP™ CI Dust Control Agent

Chemical Name: Magnesium chloride, aqueous solution
Synonyms: Magnesium Chloride Hexahydrate Brine
CAS Number: mixture (see Section 2)
Product Use: dust control agent

Manufacturer Information:
Reilly Industries, Inc.
300 North Meridian Street
Suite 1500
Indianapolis, Indiana 46204
USA

Emergency Phone Number (24 hr.): (317) 247-8141
CHEMTREC Phone Number (24 hr.): (800) 424-9300
(collect calls are accepted)
Non-Emergency Phone Number: (317) 247-8141
Non-Emergency Fax Number: (317) 248-6413

SECTION 2: COMPOSITION AND INFORMATION ON INGREDIENTS

Ingredient	CAS Number	Concentration (%)	Exposure Limits OSHA PEL	Exposure Limits ACGIH TLV
Magnesium Chloride Hexahydrate	7791-18-6	25 - 35 %	not established	not established
Water	7732-18-5	65 - 75 %	not established	not established
Corrosion Inhibitor (in ICE-STOP™ CI)	proprietary	2500 - 3000 ppm	not established	5 mg/m³ as 8-hr time-weighted average

SECTION 3: HAZARDS IDENTIFICATION

Emergency Overview:

Colorless liquid with essentially no odor. Mild irritant to skin and eyes. May be irritating to respiratory tract if inhaled.

Signs and Symptoms of Potential Overexposure: May be mildly irritating to skin and eyes on contact, similar to the irritation observed due to exposure to common salt water (sodium chloride). If inhaled as a mist, this material may be irritating to the respiratory tract. See Section 11 for further toxicological information. Although it is expected that the health effects related to this solution are minimal, as with any chemical, use appropriate precautions during handling.

Primary Route(s) of Entry: Skin contact, eye contact. Ingestion is not likely to be a primary route of exposure.

Medical Conditions Aggravated by Exposure: Persons with pre-existing skin and respiratory disorders may be at increased risk from overexposure to this material. This is not likely to be a problem when appropriate procedures are used to minimize exposure.

SECTION 4: FIRST AID MEASURES

Skin Contact: Wash exposed area twice with soap and water. The exposed area should be examined by medical personnel if irritation or pain persists after the area has been washed.

Eye Contact: Rinse eyes immediately with large amounts of water for at least 15 minutes, occasionally lifting the eyelids. GET MEDICAL ATTENTION.

Inhalation: In the unlikely event that a person would be exposed to an airborne mist of such magnitude as to be overcome, remove from exposure to fresh air immediately. If breathing has stopped, give artificial respiration. Keep affected person warm and at rest. GET MEDICAL ATTENTION.

Ingestion: If swallowed, induce vomiting to prevent further absorption. Give oxygen if respiration is shallow. GET MEDICAL ATTENTION. Do not give anything by mouth to an unconscious person.

Thermal Exposure: not applicable

Delayed Effects: none known

Note to Physician: Overexposures may lead to mild, transient irritation of skin, eyes or respiratory system. Taken internally, magnesium salts are absorbed very slowly; oral administration of magnesium salts generally causes nothing more than purging. Treatment should be based on the judgment of the physician in response to the reactions

DUS-TOP®

As long as cars and trucks travel along dirt roads, around construction sites, mines, quarries, or move in and out of unpaved parking lots, they're going to kick up dust *and problems.*

Granted, you can kick back with short-term solutions — like water or oil. But water is a temporary solution for permanent road dust problems. And constantly applying waste oils to your dirt roads can produce environmental problems. In addition, there may be legal considerations if your waste oil contains heavy metals. So for long-term dust control there's only one solution — Dus-Top,® Kaiser Chemicals' highly-concentrated magnesium chloride brine.

This car is traveling at 30 mph on a Dus-Top treated road at the Pinson Gold Mine, Nevada.

One application of Dus-Top created a hard-packed driving surface on this Nevada casino parking lot.

Dus-Top continuously absorbs moisture from the air and literally traps and locks it into dirt surfaces. That unique reaction stabilizes dirt surfaces, and, in turn, supresses dust. The result is a hard-packed, dust-free dirt road.

Use it once a year.

Heavily-traveled dirt road surfaces require repeated watering. But this process is time-consuming, expensive, and in the long run, ineffective. Dus-Top can eliminate these problems.

Numerous field applications have proven the effectiveness of Dus-Top in controlling road dust — *with only one application per year.*

With Dus-Top, you'll soon realize a significant savings on labor and maintenance costs. And by keeping your dirt roads free of excessive dust, Dus-Top also helps reduce road equipment operating costs. Clean-running engines require less service, which saves on equipment — and money.

How does it compare with calcium-based products?

Extensive comparisons under extreme weather conditions such as those found in British Columbia, Canada and the southwest desert

IT WORKS.

regions of the U.S. have shown that Dus-Top is far more versatile than calcium lignosulfonate or calcium chloride.

Time and again its resistance to erosion in these hot, dry, cold and wet climates clearly demonstrates the superiority of Dus-Top over any calcium-based product.

Dus-Top treatment on this road in British Columbia, Canada lasted a full year.

DUS-TOP Customers are our best salesmen.

"That $MgCl_2$ is the best thing that ever happened to our roads. It's saved on a lot of grading and watering."

Bob Pittman, *Mining Superintendent Pinson Gold Mine, Golconda, Nevada*

"Since the application of $MgCl_2$, we have quit watering altogether."

Construction Manager, Davey McKee, Inc., Getty Gold Mine, Mercur, Utah

"The $MgCl_2$ rated consistently higher in every test section than comparable rates of calcium lignosulfonate. And, although all sections suffered from heavy rains in July, the $MgCl_2$ recovered and the calcium lignosulfonate did not."

Regional Engineer, Geotechnical and Materials Group, British Columbia, Canada

"The stuff is just great. We used it last year and are using it even more this year. Everyone seems real happy with it."

Jack Gredig, *Road Inspector Pitkin City, Colorado*

"It's amazing, I can't believe it works so well."

Harry Colborn, *Independent trucker*

"We use it here in our yard...it sure keeps the dust down."

Dick Stephenson, *Owner, Roaring Ford Sand & Gravel*

"This is the first year we have tried it. We're real happy with it so far."

Puppy Smith, *Public Works Director, Aspen, Colorado*

DUS-TOP

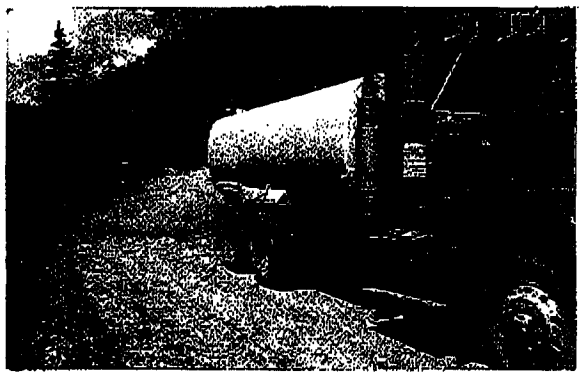
Dus-Top is easy to apply.

Remove furrows, washboarding and potholes. Allow for water drainage by blading to a modified "A" crown or necessary slope. Check appropriate drainage codes.

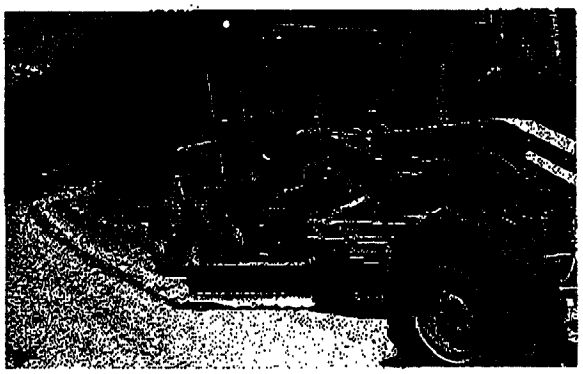
Pre-wet the surface with water prior to Dus-Top application.

Apply Dus-Top with a pressurized spray bar at a rate of ½ gallon per square yard to be treated.

Curing generally takes 24 hours. Therefore no traffic should be permitted to pass over the treated surface during this period of time. If it is impractical to keep traffic off the newly-treated surface, speed should be held to a minimum.



Pre-wetting the surface to assure deep Dus-Top penetration.



Shaping a road with conventional maintenance equipment.

A pressurized spray assures a more uniform Dus-Top application.

APPLICATION GUIDE			
Width of Spread	Gallons per Sq. Yard	Gallons per Mile	Miles per 4550 Gallons (1 Truck Load)
4 ft.	.50	1173	3.87
8 ft.	.50	2346	1.93
12 ft.	.50	3520	1.29
16 ft.	.50	4693	.967
18 ft.	.50	5280	.861
20 ft.	.50	5866	.775
22 ft.	.50	6453	.705
24 ft.	.50	7040	.646
26 ft.	.50	7626	.596
28 ft.	.50	8213	.553
30 ft.	.50	8800	.517

The information contained herein is intended as a general description of the characteristics and typical applications of the product and is not a warranty or recommendation for any specific use or purpose. It is offered solely for your consideration and further inquiry.

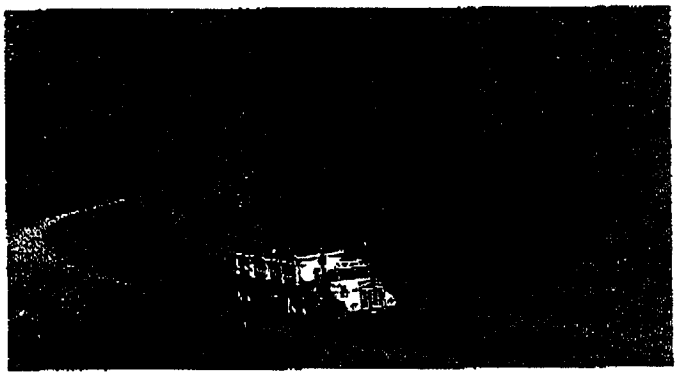
The surface should be compacted as soon as nothing sticks to the roller. (*Do not* use a vibrator). We recommend that two to three days after the application, the surface be watered down to ensure Dus-Top's penetration.

For more information, contact WRR INDUSTRIES, an authorized distributor of Dus-Top.

WRR INDUSTRIES, INC.
P.O. Box 1220, Carbondale, CO 81623-1220
Telephone: (303) 963-3516 or (800) 523-1359
P.O. Box 27597, Salt Lake City, UT 84127-0597
Telephone: (801) 355-2279 or (800) 672-6025

KAISER CHEMICALS
30100 Chagrin Boulevard • Cleveland, Ohio 44124

DUSTOP®



KAISER CHEMICALS

APPENDIX B

EPA DOCUMENT – AP-42 EXCERPT

Technology Transfer Network
Clearinghouse for Inventories & Emission Factors

Emission Factor & Inventory Information

Conferences

Publications

Emission Inventory Improvement Program

AirDATA

Related Sites

Site Index

Compilation of Air Pollutant Emission Factors, AP-42, Fifth Edition, Volume I: *Stationary Point and Area Sources*

For information about emission factors from highway vehicles and nonroad mobile sources, visit the ***Office of Transportation and Air Quality web site.***

Please call the Info CHIEF help desk at 919-541-1000 if you have any questions about the information in AP-42, Volume I. Ordering information for hard copy of the 5th edition and the supplements is available on the CHIEF Publications site.

AP-42, Volume I, Fifth Edition

AP-42 FAQs	Answers to frequently asked questions about AP-42
Drafts	Draft Sections Under Review
Supplements	AP-42 historical listing of supplements
Older Editions of AP-42, Vol. I	**This information is available for historical purposes only**. For the most recent emission factors, supported by the EPA, please see the table of contents below.
Procedures	*Procedures for Preparing Emission Factor Documents* -- Describes procedures for developing and reporting emission factors in EPA publications -- November 1997 (PDF 477K)
Contents	Detailed Table of Contents, Publications in Series, Insertion Instructions, and Key Word Index -- May 1998 (PDF 128K)

Select the appropriate chapter below to display a directory of available source categories which can be downloaded.

Introduction	Introduction to AP-42, Volume I, Fifth Edition -- January 1995 (PDF 40K)
Chapter 1	**External Combustion Sources**
Chapter 2	**Solid Waste Disposal**

11.19.1 Sand And Gravel Processing

11.19.1.1 Process Description[1-6]

Deposits of sand and gravel, the unconsolidated granular materials resulting from the natural disintegration of rock or stone, are generally found in near-surface alluvial deposits and in subterranean and subaqueous beds. Sand and gravel are siliceous and calcareous products of the weathering of rocks and unconsolidated or poorly consolidated materials. Such deposits are common throughout the country. The six-digit Source Classification Code (SCC) for construction sand and gravel processing is 3-05-025, and the six-digit SCC for industrial sand and gravel is 3-05-027.

Construction Sand And Gravel -

Sand and gravel typically are mined in a moist or wet condition by open pit excavation or by dredging. Open pit excavation is carried out with power shovels, draglines, front end loaders, and bucket wheel excavators. In rare situations, light charge blasting is done to loosen the deposit. Mining by dredging involves mounting the equipment on boats or barges and removing the sand and gravel from the bottom of the body of water by suction or bucket-type dredges. After mining, the materials are transported to the processing plant by suction pump, earth mover, barge, truck, belt conveyors, or other means.

Although significant amounts of sand and gravel are used for fill, bedding, subbase, and basecourse without processing, most domestic sand and gravel are processed prior to use. The processing of sand and gravel for a specific market involves the use of different combinations of washers, screens, and classifiers to segregate particle sizes; crushers to reduce oversized material; and storage and loading facilities. A process flow diagram for construction sand and gravel processing is presented in Figure 11.19.1-1. The following paragraphs describe the process in more detail.

After being transported to the processing plant, the wet sand and gravel raw feed is stockpiled or emptied directly into a hopper, which typically is covered with a "grizzly" of parallel bars to screen out large cobbles and boulders. From the hopper, the material is transported to fixed or vibrating scalping screens by gravity, belt conveyors, hydraulic pump, or bucket elevators. The scalping screens separate the oversize material from the smaller, marketable sizes. Oversize material may be used for erosion control, reclamation, or other uses, or it may be directed to a crusher for size reduction, to produce crushed aggregate, or to produce manufactured sands. Crushing generally is carried out in one or two stages, although three-stage crushing may also be performed. Following crushing, the material is returned to the screening operation for sizing.

The material that passes through the scalping screen is fed into a battery of sizing screens, which generally consists of either horizontal or sloped, and either single or multideck, vibrating screens. Rotating trommel screens with water sprays are also used to process and wash wet sand and gravel. Screening separates the sand and gravel into different size ranges. Water is sprayed onto the material throughout the screening process. After screening, the sized gravel is transported to stockpiles, storage bins, or, in some cases, to crushers by belt conveyors, bucket elevators, or screw conveyors.

The sand is freed from clay and organic impurities by log washers or rotary scrubbers. After scrubbing, the sand typically is sized by water classification. Wet and dry screening is rarely used to size the sand. After classification, the sand is dewatered using screws, separatory cones, or

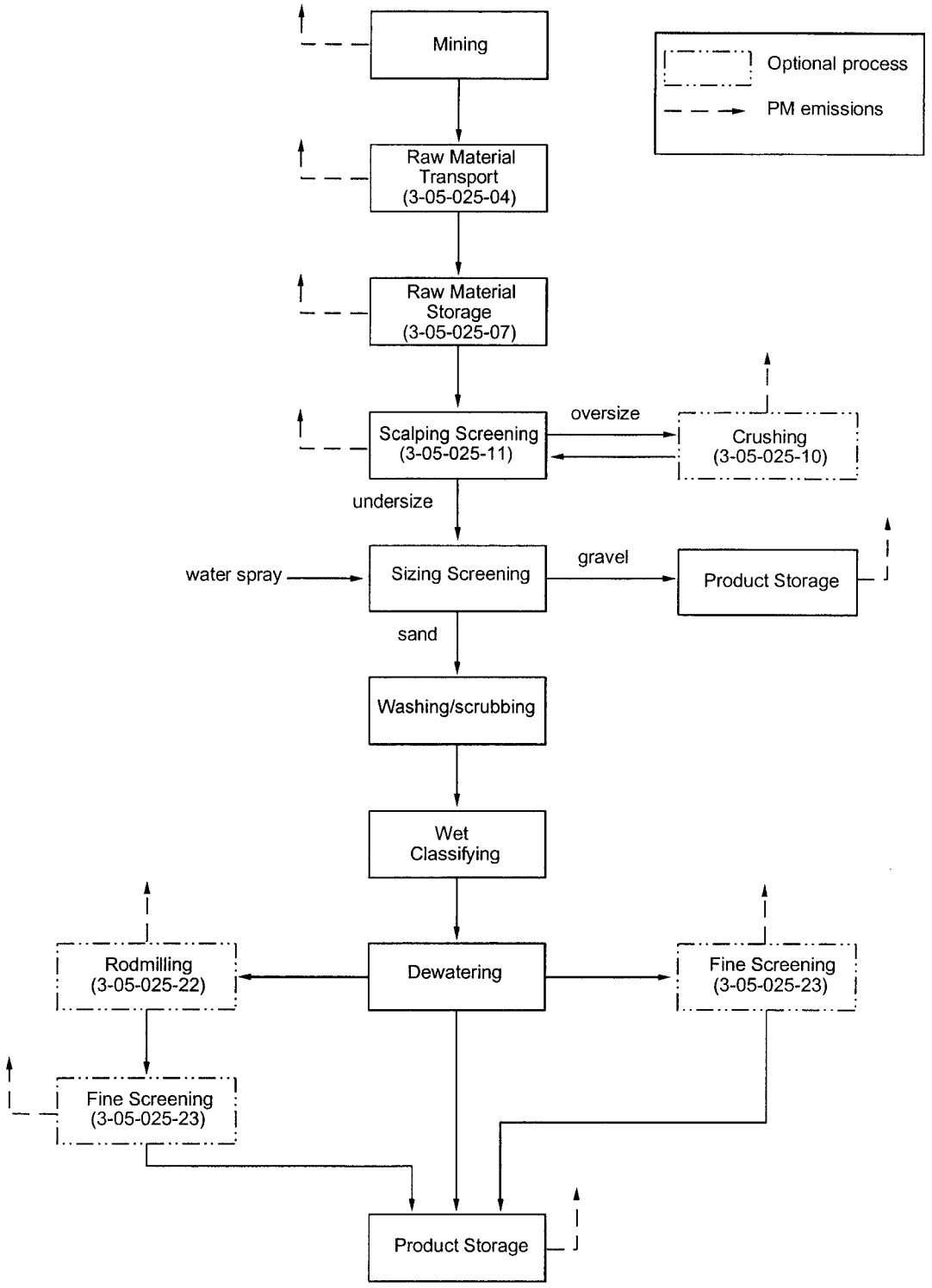


Figure 11.19.1-1. Process flow diagram for construction sand and gravel processing. (Source Classification Codes in parentheses.)

hydroseparators. Material may also be rodmilled to produce smaller sized fractions, although this practice is not common in the industry. After processing, the sand is transported to storage bins or stockpiles by belt conveyors, bucket elevators, or screw conveyors.

Industrial Sand And Gravel -

Industrial sand and gravel typically are mined from open pits of naturally occurring quartz-rich sand and sandstone. Mining methods depend primarily on the degree of cementation of the rock. In some deposits, blasting is required to loosen the material prior to processing. The material may undergo primary crushing at the mine site before being transported to the processing plant. Figure 11.19.1-2 is a flow diagram for industrial sand and gravel processing.

The mined rock is transported to the processing site and stockpiled. The material then is crushed. Depending on the degree of cementation, several stages of crushing may be required to achieve the desired size reduction. Gyratory crushers, jaw crushers, roll crushers, and impact mills are used for primary and secondary crushing. After crushing, the size of the material is further reduced to 50 micrometers (μm) or smaller by grinding, using smooth rolls, media mills, autogenous mills, hammer mills, or jet mills. The ground material then is classified by wet screening, dry screening, or air classification. At some plants, after initial crushing and screening, a portion of the sand may be diverted to construction sand use.

After initial crushing and screening, industrial sand and gravel are washed to remove unwanted dust and debris and are then screened and classified again. The sand (now containing 25 to 30 percent moisture) or gravel then goes to an attrition scrubbing system that removes surface stains from the material by rubbing in an agitated, high-density pulp. The scrubbed sand or gravel is diluted with water to 25 to 30 percent solids and is pumped to a set of cyclones for further desliming. If the deslimed sand or gravel contains mica, feldspar, and iron bearing minerals, it enters a froth flotation process to which sodium silicate and sulfuric acid are added. The mixture then enters a series of spiral classifiers where the impurities are floated in a froth and diverted to waste. The purified sand, which has a moisture content of 15 to 25 percent, is conveyed to drainage bins where the moisture content is reduced to about 6 percent. The material is then dried in rotary or fluidized bed dryers to a moisture content of less than 0.5 percent. The dryers generally are fired with natural gas or oil, although other fuels such as propane or diesel also may be used. After drying, the material is cooled and then undergoes final screening and classification prior to being stored and packaged for shipment.

11.19.1.2 Emissions And Controls[6-14]

Emissions from the production of sand and gravel consist primarily of particulate matter (PM) and particulate matter less than 10 micrometers (PM-10) in aerodynamic diameter, which are emitted by many operations at sand and gravel processing plants, such as conveying, screening, crushing, and storing operations. Generally, these materials are wet or moist when handled, and process emissions are often negligible. A substantial portion of these emissions may consist of heavy particles that settle out within the plant. Other potentially significant sources of PM and PM-10 emissions are haul roads. Emissions from dryers include PM and PM-10, as well as typical combustion products including CO, CO_2, and NO_x. In addition, dryers may be sources of volatile organic compounds (VOC) or sulfur oxides (SO_x) emissions, depending on the type of fuel used to fire the dryer.

With the exception of drying, emissions from sand and gravel operations primarily are in the form of fugitive dust, and control techniques applicable to fugitive dust sources are appropriate. Some successful control techniques used for haul roads are dust suppressant application, paving, route

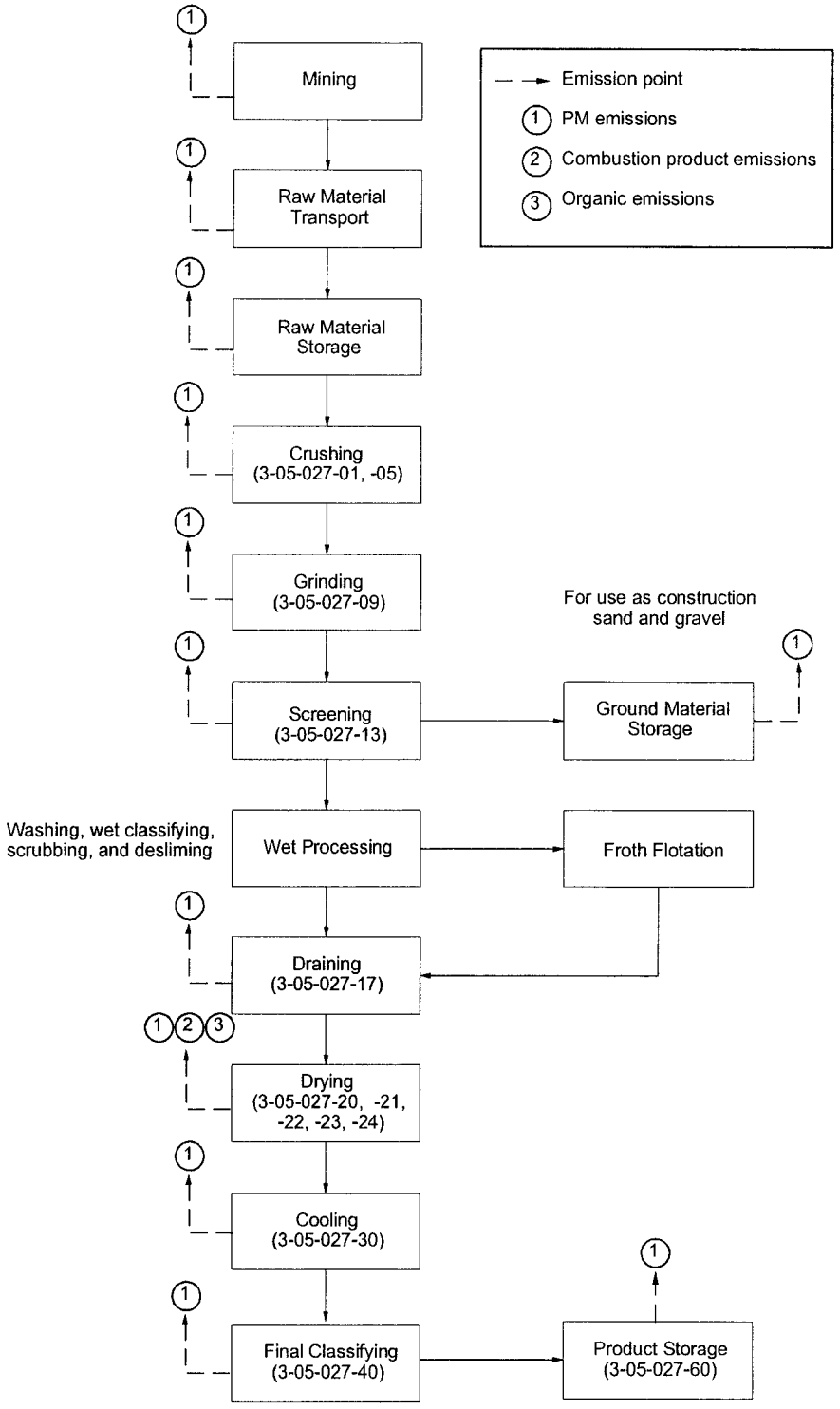


Figure 11.19.1-2. Process flow diagram for industrial sand and gravel processing. (Source Classification Codes in parentheses.)

modifications, and soil stabilization; for conveyors, covering and wet suppression; for storage piles, wet suppression, windbreaks, enclosure, and soil stabilizers; for conveyor and batch transfer points, wet suppression and various methods to reduce freefall distances (e. g., telescopic chutes, stone ladders, and hinged boom stacker conveyors); and for screening and other size classification, covering and wet suppression.

Wet suppression techniques include application of water, chemicals and/or foam, usually at crusher or conveyor feed and/or discharge points. Such spray systems at transfer points and on material handling operations have been estimated to reduce emissions 70 to 95 percent. Spray systems can also reduce loading and wind erosion emissions from storage piles of various materials 80 to 90 percent. Control efficiencies depend upon local climatic conditions, source properties and duration of control effectiveness. Wet suppression has a carryover effect downstream of the point of application of water or other wetting agents, as long as the surface moisture content is high enough to cause the fines to adhere to the larger rock particles.

In addition to fugitive dust control techniques, some facilities use add-on control devices to reduce emissions of PM and PM-10 from sand and gravel processing operations. Controls in use include cyclones, wet scrubbers, venturi scrubbers, and fabric filters. These types of controls are rarely used at construction sand and gravel plants, but are more common at industrial sand and gravel processing facilities.

Emission factors for criteria pollutant emissions from industrial sand and gravel processing are presented in Table 11.19.1-1 (metric and English units), and emission factors for organic pollutant emissions from industrial sand and gravel processing are presented in Table 11.19.1-2 (metric and English units). Although no emission factors are presented for construction sand and gravel processing, emission factors for the crushing, screening, and handling and transfer operations associated with stone crushing can be found in Section 11.19.2, "Crushed Stone Processing." In the absence of other data, the emission factors presented in Section 11.19.2 can be used to estimate emissions from corresponding sand and gravel processing sources. The background report for this AP-42 section also presents factors for the combined emissions of total suspended particulate from construction gravel storage pile wind erosion, material handling, and vehicle traffic. However, because the applicability of those emission factors to other storage piles is questionable, they are not presented here. To estimate emissions from fugitive sources, refer to AP-42 Chapter 13, "Miscellaneous Sources". The emission factors for industrial sand storage and screening presented in Table 11.19.1-1 are not recommended as surrogates for construction sand and gravel processing, because they are based on emissions from dried sand and may result in overestimates of emissions from those sources. Construction sand and gravel are processed at much higher moisture contents.

Table 11.19.1-1 (Metric And English Units).
EMISSION FACTORS FOR INDUSTRIAL SAND AND GRAVEL PROCESSING[a]

EMISSION FACTOR RATING: D

Source	Total PM		NO_x		CO_2	
	kg/Mg	lb/ton	kg/Mg	lb/ton	kg/Mg	lb/ton
Sand dryer (SCC 3-05-027-20)	0.98[b,c]	2.0[b,c]	0.016[d]	0.031[d]	14[e]	27[e]
Sand dryer with wet scrubber (SCC 3-05-027-20)	0.019[b,f]	0.039[b,f]	[g]	[g]	[g]	[g]
Sand dryer with fabric filter (SCC 3-05-027-20)	0.0053[b,h]	0.010[b,h]	[g]	[g]	[g]	[g]
Sand handling, transfer, and storage with wet scrubber (SCC 3-05-027-60)	0.00064[j]	0.0013[j]	ND	ND	ND	ND
Sand screening with venturi scrubber (SCC 3-05-027-13)	0.0042[k]	0.0083[k]	ND	ND	ND	ND

[a] Factors represent uncontrolled emissions unless noted. Dryer emission factors in units of kg/Mg and lb/ton of dried material produced; other factors in units of kg/Mg and lb/ton of material stored or screened. SCC = Source Classification Code.

[b] Factors are for filterable PM only. Filterable PM is that PM collected on or prior to the filter of an EPA Method 5 (or equivalent) sampling train. Condensible organic and inorganic PM emission factors are not available. Factors presented can be considered a conservative underestimate of total PM.

[c] Reference 12. EMISSION FACTOR RATING: E.

[d] Reference 10.

[e] References 10,13.

[f] References 5,13. EMISSION FACTOR RATING: C.

[g] Control device has no effect on emissions. See factor for uncontrolled emissions.

[h] References 7,11.

[j] Reference 9. For dried sand.

[k] Reference 14. Screening of dried sand.

Table 11.19.1-2 (Metric And English Units).
EMISSION FACTORS FOR INDUSTRIAL SAND AND GRAVEL PROCESSING--
ORGANIC POLLUTANTS[a]

EMISSION FACTOR RATING: D

Source	Pollutant		Emission factor	
	CASRN[b]	Name	kg/Mg	lb/ton
Diesel-fired rotary sand dryer with fabric filter (SCC 3-05-027-22)	50-00-0	Formaldehyde	0.0021	0.0043
	206-44-0	Fluoranthene	3.0×10^{-6}	6.0×10^{-6}
	91-20-3	Naphthalene	2.9×10^{-5}	5.9×10^{-5}
	85-01-8	Phenanthrene	7.5×10^{-6}	1.5×10^{-5}

[a] Reference 8. Factors represent uncontrolled emissions unless noted. Dryer emission factors in units of kg/Mg and lb/ton of material dried. SCC = Source Classification Code.
[b] Chemical Abstract Service Registry Number.

References For Section 11.19.1

1. *Air Pollution Control Techniques For Nonmetallic Minerals Industry*, EPA-450/3-82-014, U. S. Environmental Protection Agency, Research Triangle Park, NC, August 1982.

2. S. Walker, "Production Of Sand And Gravel", Circular Number 57, National Sand And Gravel Association, Washington, DC, 1954.

3. "Construction Sand And Gravel", *U. S. Minerals Yearbook 1989, Volume I: Metals And Minerals*, Bureau Of Mines, U. S. Department Of The Interior, Washington, DC.

4. "Industrial Sand And Gravel", *U. S. Minerals Yearbook 1989, Volume I: Metals And Minerals*, Bureau Of Mines, U. S. Department Of The Interior, Washington, DC.

5. *Calciners And Dryers In Mineral Industries - Background Information For Proposed Standards*, EPA-450/3-85-025a, U. S. Environmental Protection Agency, Research Triangle Park, NC, October 1985.

6. Written communication from R. Morris, National Aggregates Association, Silver Spring, MD, to R. Myers, U. S. Environmental Protection Agency, Research Triangle Park, NC, December 30, 1994.

7. *Stack Test Report For Redi-Crete Corporation*, Trace Technologies, Inc. Bridgewater, NJ, December 19, 1988.

8. *P. W. Gillebrand Company, Toxic Emissions Testing, Specialty Sand Dryer*, BTC Environmental, Inc., Ventura, CA, November 8, 1991.

9. *U. S. Silica Company, Newport, New Jersey, Emission Compliance Test Program*, AirNova, Inc., Collingswood, NJ, April 1990.

10. *The Morie Company, Inc., Mauricetown Plant, Emission Compliance Test Program*, AirNova, Inc., Collingswood, NJ, November 1989.

11. *Source Emissions Compliance Test Report, Number Two Sand Dryer, Jesse S. Morie & Son, Inc., Mauricetown, New Jersey*, Roy F. Weston, Inc., West Chester, PA, August 1987.

12. *Source Emissions Compliance Test Report, Sand Dryer System, New Jersey Pulverizing Company, Bayville, New Jersey*, Roy F. Weston, Inc., West Chester, PA, January 1988.

13. *Compliance Stack Sampling Report For Richard Ricci Company, Port Norris, NJ*, Recon Systems, Inc., Three Bridges, NJ, July 31, 1987.

14. *Report To Badger Mining Corporation, Fairwater, Wisconsin, For Stack Emission Test, Particulate Matter, Sand Rescreening System, St. Marie Plant, April 7, 1987*, Environmental Technology & Engineering Corporation, Elm Grove, WI, June 17, 1987.

APPENDIX C

WATER CANNON VENDOR INFORMATION

innovation in irrigation™ NELSON

BIG GUN® NOZZLES

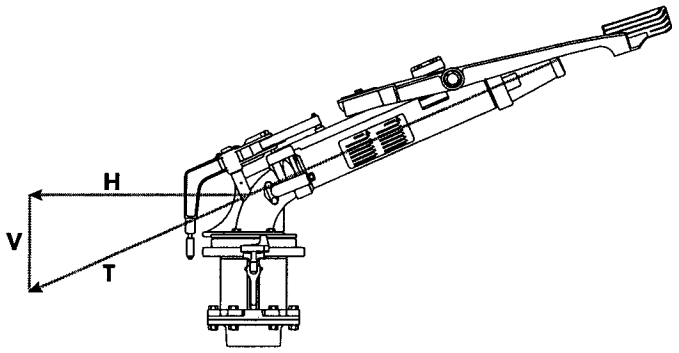
THRUST FORCE OF NELSON BIG GUN® NOZZLES

The thrust force for the Big Gun can be calculated by knowing the flow rate through the gun and the nozzle pressure of the gun. The following equation shows the relationship.

$$T = 2P\frac{Q}{38\sqrt{P}} \qquad (1)$$

where,

T = thrust force of the nozzle (lb.)
P = nozzle pressure (psi)
Q = flow rate (gpm)



As seen in the diagram above, the thrust force is directly opposite the nozzle exit. Since the thrust force (T) is now know, the horizontal (H) and vertical (V) thrust force can be calculated using trigonometry.

H = T cos (gun angle from horizontal) (2)
V = T sin (gun angle from horizontal) (3)

The tables below show values of thrust force (T) and horizontal thrust force (H) for the 150 and 200 Big Guns of varying pressures and nozzles sizes.

T — THRUST FORCE OF 150 BIG GUN NOZZLES (LB.)

Pressure PSI	Nozzle 0.7"	Nozzle 0.8"	Nozzle 0.9"	Nozzle 1.0"	Nozzle 1.1"	Nozzle 1.2"	Nozzle 1.3"
50	37	48	62	76	95	112	130
60	45	58	74	92	112	135	157
70	53	68	87	108	130	156	183
80	60	78	99	123	148	179	210
90	68	87	111	137	167	202	237
100	75	97	124	153	187	224	263
110	83	108	136	168	204	246	290
120	91	118	149	185	222	268	314

Innovation in Irrigation™ NELSON

THRUST FORCE OF BIG GUN® NOZZLES

11/00

H — HORIZONTAL THRUST FORCE OF 150 BIG GUN® NOZZLES WITH 24° TRAJECTORY (LB.)

Pressure PSI	Nozzle 0.7"	Nozzle 0.8"	Nozzle 0.9"	Nozzle 1.0"	Nozzle 1.1"	Nozzle 1.2"	Nozzle 1.3"
50	34	44	56	70	87	102	119
60	41	53	68	84	103	123	143
70	48	62	79	99	119	143	167
80	55	71	90	112	136	164	191
90	62	80	102	126	153	185	217
100	69	89	113	140	171	204	241
110	76	98	125	154	187	224	265
120	83	108	136	169	203	245	287

T — THRUST FORCE OF 200 BIG GUN® NOZZLES (LB.)

Pressure PSI	Nozzle 1.05	Nozzle 1.2"	Nozzle 1.3"	Nozzle 1.4"	Nozzle 1.5"	Nozzle 1.6"	Nozzle 1.75"	Nozzle 1.9"	Nozzle 2.0"
50	93	112	130	153	175	199	238		
60	102	135	157	182	210	239	283	336	369
70	119	156	183	212	245	277	333	392	432
80	137	179	210	243	278	318	379	447	494
90	155	202	237	272	312	357	427	502	554
100	171	225	263	303	348	398	474	558	616
110	188	246	290	334	384	436	522	613	679
120	205	268	314	363	418	476	568	669	741
130	222	291	339	393	453	516	615	726	801

H — HORIZONTAL THRUST FORCE OF 200 BIG GUN® NOZZLES WITH 24° TRAJECTORY (LB.)

Pressure PSI	Nozzle 1.05	Nozzle 1.2"	Nozzle 1.3"	Nozzle 1.4"	Nozzle 1.5"	Nozzle 1.6"	Nozzle 1.75"	Nozzle 1.9"	Nozzle 2.0"
50	85	102	119	140	160	182	218		
60	93	123	143	166	192	218	259	307	337
70	109	143	167	193	223	253	304	358	394
80	125	164	191	222	254	290	346	409	452
90	142	185	217	249	285	326	390	459	506
100	156	204	241	277	317	363	433	510	563
110	172	225	265	305	351	398	477	560	620
120	187	245	287	332	382	435	519	611	677
130	203	266	310	359	414	472	562	664	732

Nelson Irrigation Corp. 848 Airport Rd. Walla Walla, WA 99362-2271 USA Tel: 509.525.7660 Fax: 509.525.7907 E-mail: info@nelsonirrigation.com Web site: www.nelsonirrigation.com

PRODUCT COMPARISON

Series	Full-Circle	Part-Circle	Trajectory	Nozzle Type	Nozzle Size	Connections	Special Options
75	F75 (21°, 24°, 27°)	SR75	12°, 18°, 21°, 24°, 27°, 43°	Taper/Ring	0.4" - 0.8" (10,2mm - 20,3mm)	1 1/2" FNPT or FBSP 2" FNPT or FBSP 2 1/2" FNPT ANSI/DIN Flange (bolt-on) Nelson Flange Metric Flange	Valve/Gun Combo
100	F100	SR100 SRNV100	43°, 24°, 21°, 18°	Ring Taper Taper/Ring	0.5" - 1.0" (12,7mm - 25,4 mm)	2" FNPT or FBSP 2 1/2" FNPT or FBSP Standard Flange International Flange	Valve/Gun Combo Anodized Anodized & Powder Coated
150	F150	SR150	43°, 24°, 21°	Ring Taper Taper/Ring	0.7" - 1.3" (17,8mm - 33,0mm)	3" FNPT or FBSP 3 1/2" FNPT or FBSP 4" FNPT Standard Flange International Flange	Valve/Gun Combo Anodized Anodized & Powder Coated Stainless Steel
200	F200	SR200	27°, 24°, 21°	Ring Taper Taper/Ring	1.05" - 1.9" (26,7mm - 48,3mm)	3 1/2" FNPT or FBSP 4" FNPT Standard Flange Metric Flange UFI Flange	Valve/Gun Combo Anodized Anodized & Powder Coated

APPENDIX D

WATER CANNON USE

Water Cannons Dust Control

ROBERTS & SCHAEFER
ENGINEERING & CONSTRUCTION SERVICES Company

SEARCH

WHO WE ARE
INDUSTRIES SERVED
SERVICES PROVIDED
LITERATURE REQUEST
PROJECT LIST
– by Industry Served
– by Service Provided
FTP
PARENT COMPANY
CONTACT US

Sandusky Docks Corporation

Dust Suppression and Stormwater Management
Sandusky Bay, Ohio

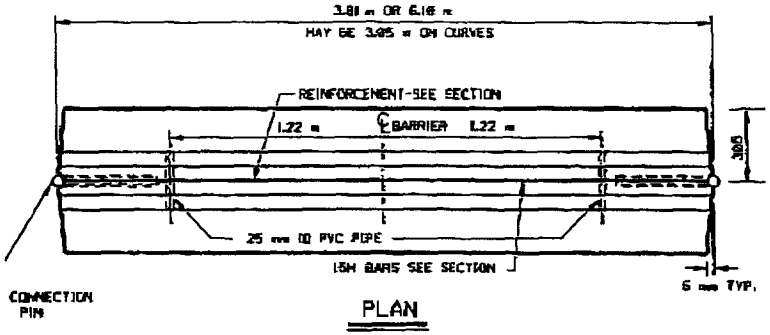
Roberts & Schaefer designed and built an automatic dust suppression and stormwater management system to resolve three growing environmental concerns. First, open piles of coal in Sandusky Docks' 300-foot wide by 2,500-foot long ground-level storage area produced significant fugitive dust. Second, stormwater runoff created ponds in the storage area, obstructing operations. Third, Sandusky Docks was concerned that runoff entering the bay might be contaminated by coal.

R&S installed an automatic spray system, consisting of 250 foot radius water cannons mounted on 10 to 20 foot high towers along both sides of the coal storage pad. To supply the water cannons, R&S installed an intake structure on the pier, with two 1,850 GPM vertical turbine pumps. A programmable logic controller (PLC), with semiautomatic and manual overrides, runs the cannons. In its automatic mode, the PLC can accept control data from proprietary software that monitors meteorological conditions (temperature, precipitation, wind, and humidity) to determine whether the piles should be sprayed. This feature both conserves water and minimizes moisture in the coal.

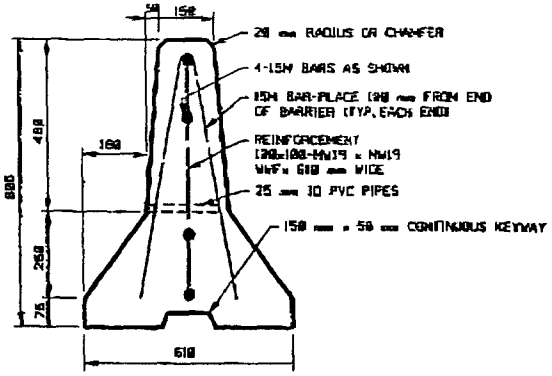
Stormwater runoff from the piles collects in a concrete collection ditch built along the length of the coal storage yard. At its south end, a pumping station with two 3,000 GPM pumps transfers runoff to two sedimentation ponds. Two separate pumping and sedimentation circuits permit pond cleaning and provide protection against equipment failure. Both pumping lines pass through a treatment building, where polymer is added to aid settling and caustic is added to reduce pH. Stormwater's variable pH is monitored and corrected by automatically adjusting the rate at which caustic is added.

APPENDIX E

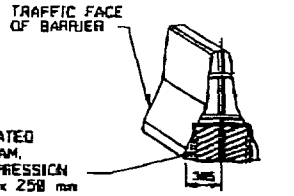
JERSEY BARRIER SPECIFICATIONS



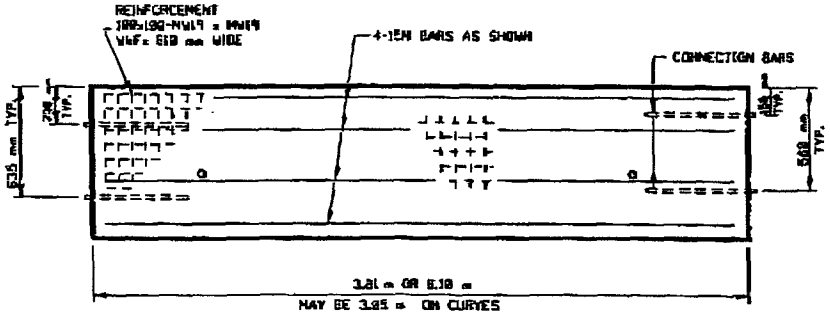
PLAN



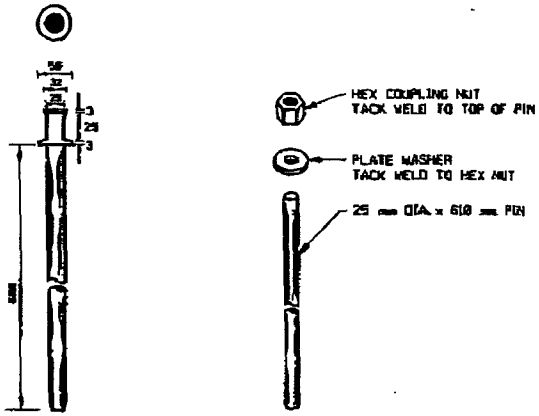
SECTION



BARRIER SEAL



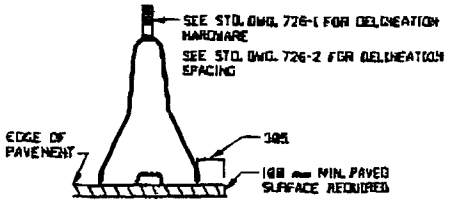
ELEVATION



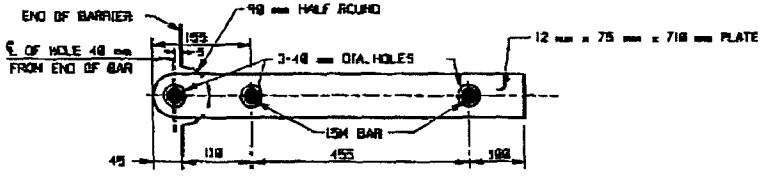
CONNECTION PINS

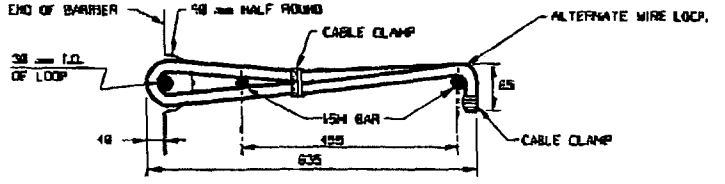
NOTES

1. COVER TO REINFORCING STEEL SHALL BE 40 mm MIN. EXCEPT WHERE NOTED OTHERWISE.
2. EXPOSED CONCRETE CORNERS SHALL BE CHAMFERED 20 mm
3. PLACE AN ADEQUATE AMOUNT OF SILICONE ADHESIVE ON BOTTOM OF WASHER BEFORE INSERTING PIN TO HOLD IN PLACE AND PREVENT EASY HAND REMOVAL. FILL NUT WITH GREASE TO EXCLUDE ICE OR OTHER CONTAMINANTS.
4. 3 mm TAPER ON ALL NOTCHES TO FACILITATE FORM REMOVAL.



ELEVATION





CONNECTION BAR

ALL DIMENSIONS ARE SHOWN IN MILLIMETERS (mm) UNLESS OTHERWISE NOTED.

GENEVA ROCK PRODUCTS, INC.
1565 West 400 North • P.O. Box 538 • Orem, Utah 84059 • (801) 225-1012 • Fax (801) 225-7186

CONCRETE MIX DESIGN

MIX ID : 6501 [20] 4000 PSI 07/15/96

CONTRACTOR : DURACRETE
PROJECT : *
SOURCE OF CONCRETE : GENEVA ROCK PRODUCTS
CONSTRUCTION TYPE : 6.5 BAG W/AIR 4000 PSI
PLACEMENT : PRECAST

WEIGHTS PER CUBIC YARD (SATURATED, SURFACE-DRY)		YIELD, CU FT
CEMENT, ASTM C-150, LB	611	3.11
POINT C-33 SAND, LB	1109	6.84
POINT #67 ROCK, LB	1775	11.16
WATER, LB (GAL-US)	267 (32.0)	4.28
TOTAL AIR, %	6.0 +/- 1.0	1.62
	TOTAL	27.00
WATER REDUCER/ WRDA 64, OZ	36.66	
WATER/CEMENT RATIO, LBS/LB	0.44	
SLUMP, IN	4.00	
CONCRETE UNIT WEIGHT, PCF	139.3	

SAND TO AGG RATIO .38
POINT ROCK SP GR 2.55
POINT SAND SP GR 2.60

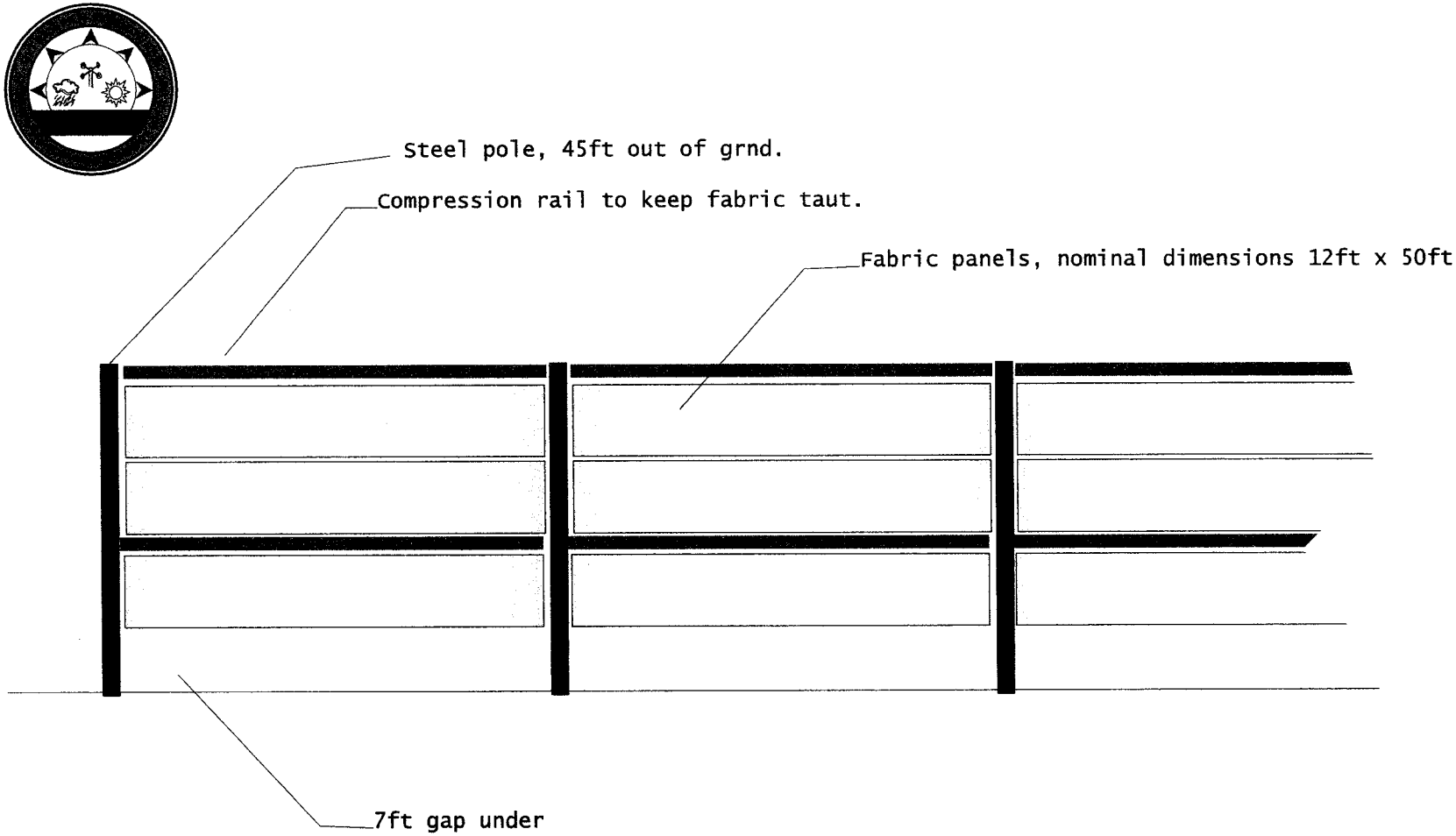
PREPARED BY :

Jerry G Hall

JERRY G. HALL, TECHNICAL ENGINEER

APPENDIX F

ULTRASPAN WIND FENCE DESIGN



Consol: Suggested Windfence elevation.

Total length is 8 bays = 400ft

Design windload: 80mph. Fabric aerodynamic porosity = 36%

Drawn: 9 Sept 2003

APPENDIX G

CATTLE GUARD SPECIFICATIONS

EMERY COUNTY ROAD DEPARTMENT

P. O. BOX 889 120 West Hwy 29

CASTLE DALE, UTAH 84513

(435) 381-5450 OR FAX (435) 381-5239

FAX COVER SHEET

DATE: 9/9/03

TO: John Richardson

AGENCY/FIRM: NORWEST

FROM: REX FUNK

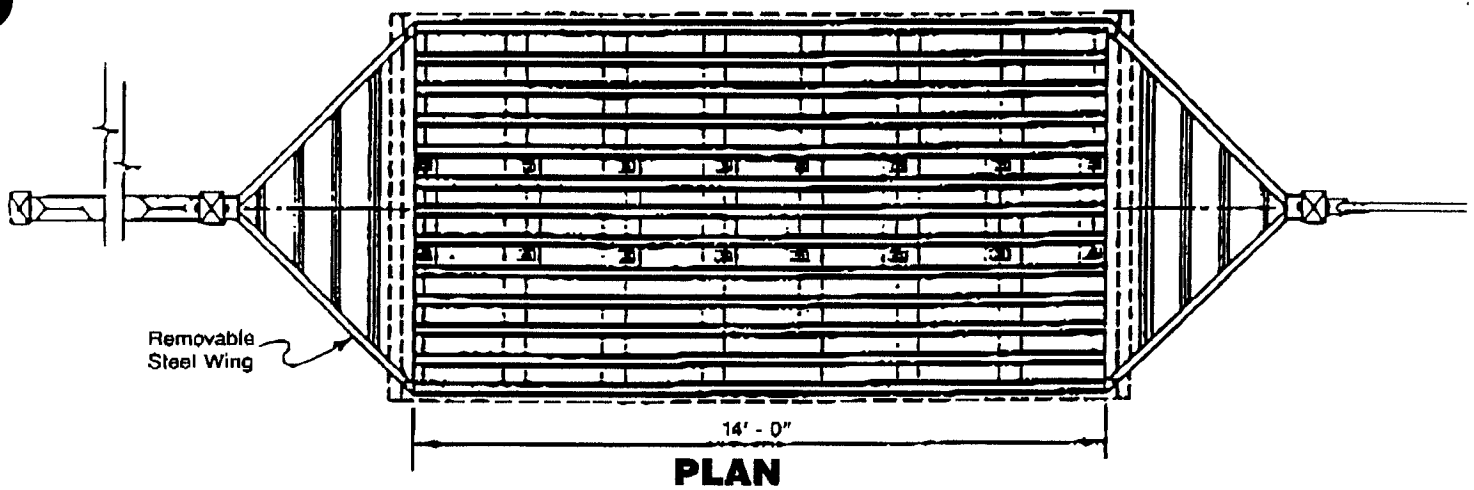
PAGES TO FOLLOW: 2

COMMENTS Here is the info you Asked For. The Powder River grills have an optional Cleanout feature if desired We use their U54 Spec. unit

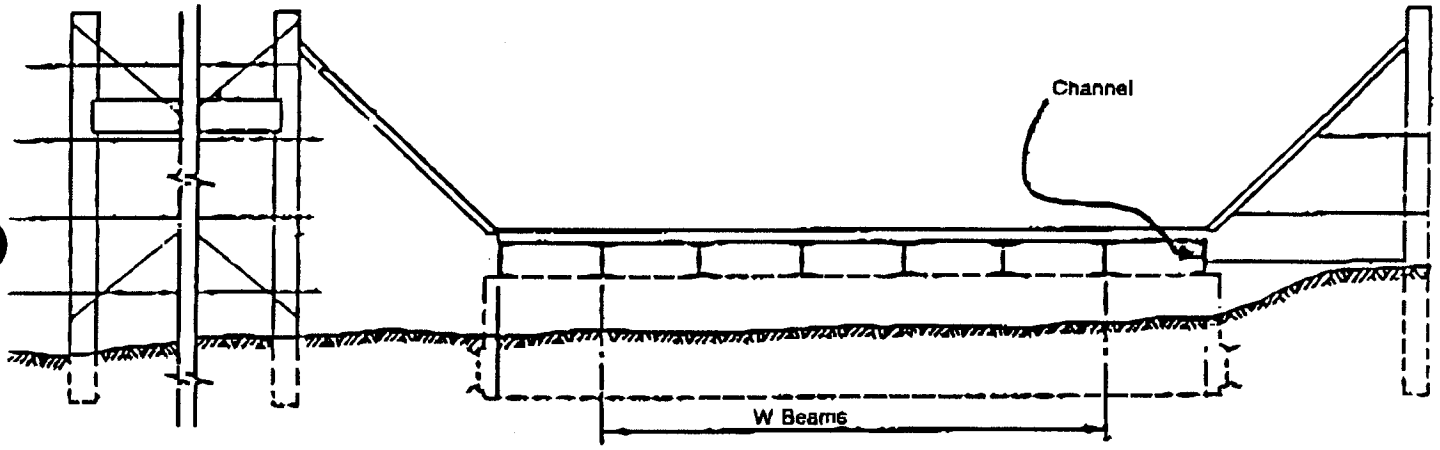
REPLY REQUESTED _____

INFORMATION ONLY ✓

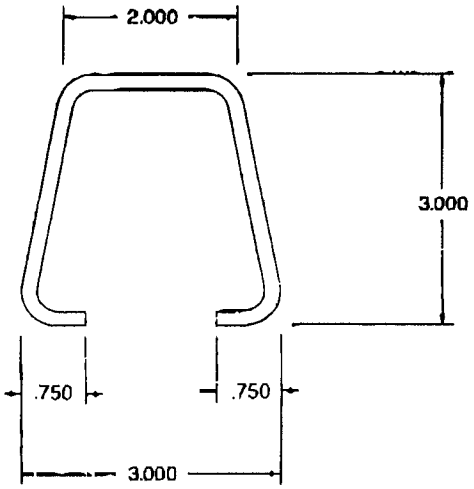
14' CATTLEGUARD
GENERAL LAYOUT
HS-20



PLAN

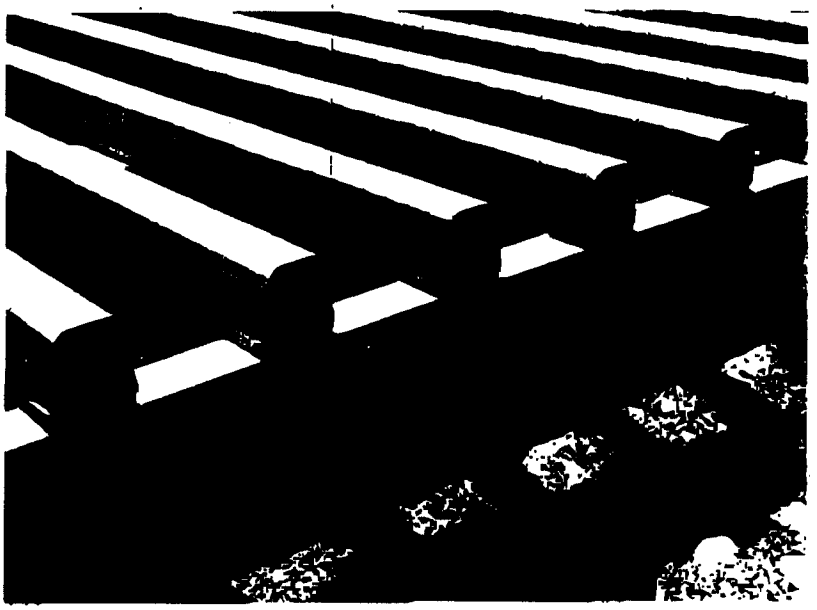


Stringers 10" ⌀
Rail 3" ⌀
13" Total Grill height
} Powder River / Spec USA



MATERIAL: 7GA. A572 GRADE 50 STEEL

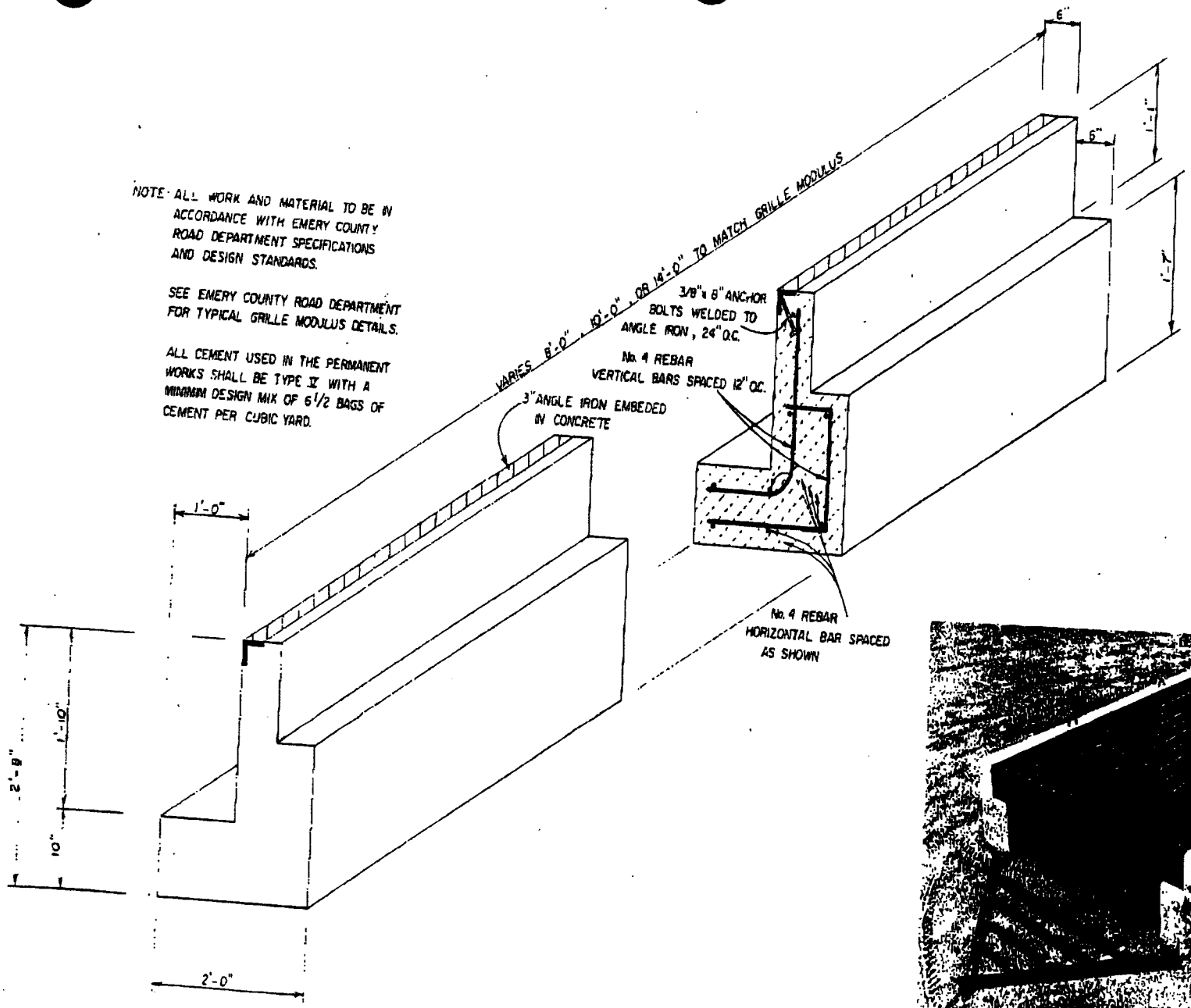
ROLL FORMED RAIL SECTION

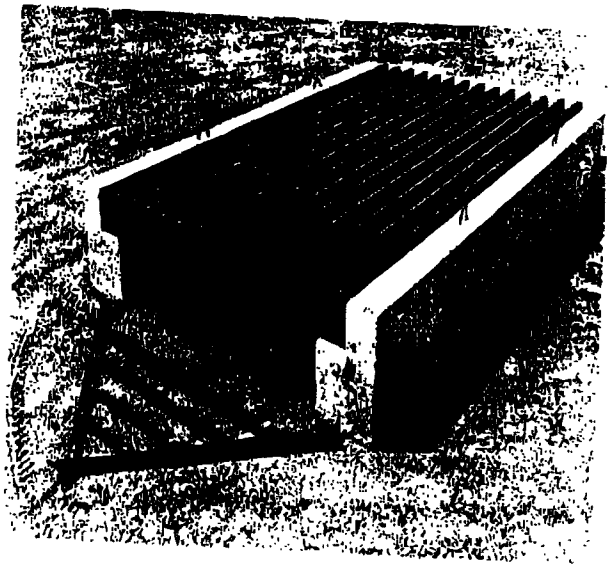


NOTE - ALL WORK AND MATERIAL TO BE IN ACCORDANCE WITH EMERY COUNTY ROAD DEPARTMENT SPECIFICATIONS AND DESIGN STANDARDS.

SEE EMERY COUNTY ROAD DEPARTMENT FOR TYPICAL GRILLE MODULUS DETAILS.

ALL CEMENT USED IN THE PERMANENT WORKS SHALL BE TYPE II WITH A MINIMUM DESIGN MIX OF 6 1/2 BAGS OF CEMENT PER CUBIC YARD.

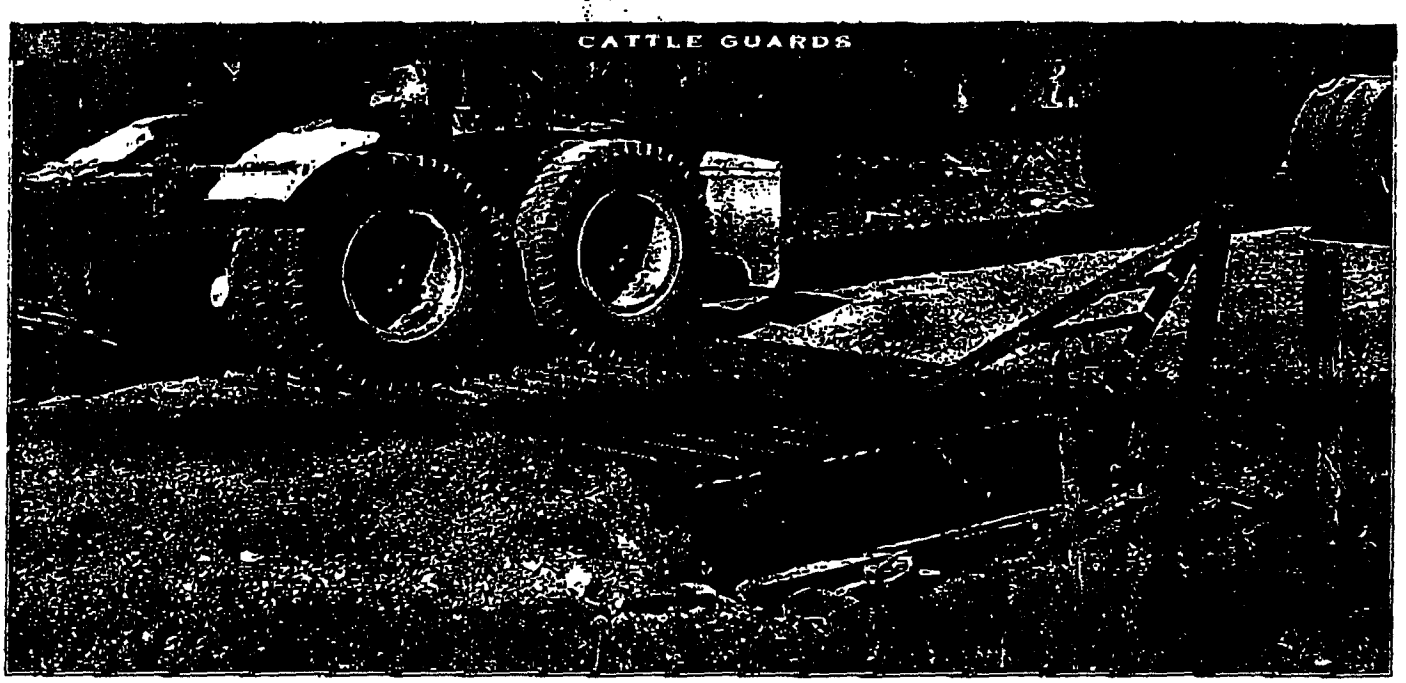




ACCEPTABLE ALTERNATIVE

POWDER RIVER EST. 1938

CATTLE GUARDS



Designed to meet H-15, H-20, U-54, and U-80 specifications, these cattle guards are used and recommended by state and federal agencies. These guards are available in lengths of 8 ft., 10 ft, 12 ft, and 14 ft. They can be installed end-to-end to meet your road width requirements. All four weight classes are available in 8 ft. road lengths. The H-15 and H-20 are also available in a 7 ft. 5in. road length. Other options include a three rail clean out section (except on the U-80), end wings and steel posts.

• SPECIFICATIONS •

Model H-15

036-15708 . . . . . 7 ft. 5 in. x 8 ft.
036-15710 . . . . . 7 ft. 5 in. x 10 ft.
036-15712 . . . . . 7 ft. 5 in. x 12 ft.
036-15714 . . . . . 7 ft. 5 in. x 14 ft.
036-15808 . . . . . 8 ft. x 8 ft.
036-15810 . . . . . 8 ft. x 10 ft.
036-15812 . . . . . 8 ft. x 12 ft.
036-15814 . . . . . 8 ft. x 14 ft.

Model H-15 (with clean out)

037-15708 . . . . . 7 ft. 5 in. x 8 ft.
037-15710 . . . . . 7 ft. 5 in. x 10 ft.
037-15712 . . . . . 7 ft. 5 in. x 12 ft.
037-15714 . . . . . 7 ft. 5 in. x 14 ft.
037-15808 . . . . . 8 ft. x 8 ft.
037-15810 . . . . . 8 ft. x 10 ft.
037-15812 . . . . . 8 ft. x 12 ft.
037-15814 . . . . . 8 ft. x 14 ft.

Model H-20

036-20708 . . . . . 7 ft. 5 in. x 8 ft.
036-20710 . . . . . 7 ft. 5 in. x 10 ft.
036-20712 . . . . . 7 ft. 5 in. x 12 ft.
036-20714 . . . . . 7 ft. 5 in. x 14 ft.
036-20808 . . . . . 8 ft. x 8 ft.
036-20810 . . . . . 8 ft. x 10 ft.
036-20812 . . . . . 8 ft. x 12 ft.
036-20814 . . . . . 8 ft. x 14 ft.

Model H-20 (with clean out)

037-20708 . . . . . 7 ft. 5 in. x 8 ft.
037-20710 . . . . . 7 ft. 5 in. x 10 ft.
037-20712 . . . . . 7 ft. 5 in. x 12 ft.
037-20714 . . . . . 7 ft. 5 in. x 14 ft.
037-20808 . . . . . 8 ft. x 8 ft.
037-20810 . . . . . 8 ft. x 10 ft.
037-20812 . . . . . 8 ft. x 12 ft.
037-20814 . . . . . 8 ft. x 14 ft.

Model U-54

036-54808 . . . . . 8 ft. x 8 ft.
036-54810 . . . . . 8 ft. x 10 ft.
036-54812 . . . . . 8 ft. x 12 ft.
036-54814 . . . . . 8 ft. x 14 ft.

Model U-54 (with clean out)

037-54808 . . . . . 8 ft. x 8 ft.
037-54810 . . . . . 8 ft. x 10 ft.
037-54812 . . . . . 8 ft. x 12 ft.
037-54814 . . . . . 8 ft. x 14 ft.

Model U-80

036-80808 . . . . . 8 ft. x 8 ft.
036-80810 . . . . . 8 ft. x 10 ft.
036-80812 . . . . . 8 ft. x 12 ft.
036-80814 . . . . . 8 ft. x 14 ft.

Cattle Guard Accessories

036-00050 . . . . Cattleguard end wing set
036-00090 . Cattleguard end wing post set
036-00220 . . . Cattleguard tornado lock set

Load Information

H-15 . . . . . 12 tons per axle
H-20 . . . . . 16 tons per axle
U-54 . . . . . 25 tons per axle
U-80 . . . . . 30 tons per axle
(Includes a 30% safety factor for impact)

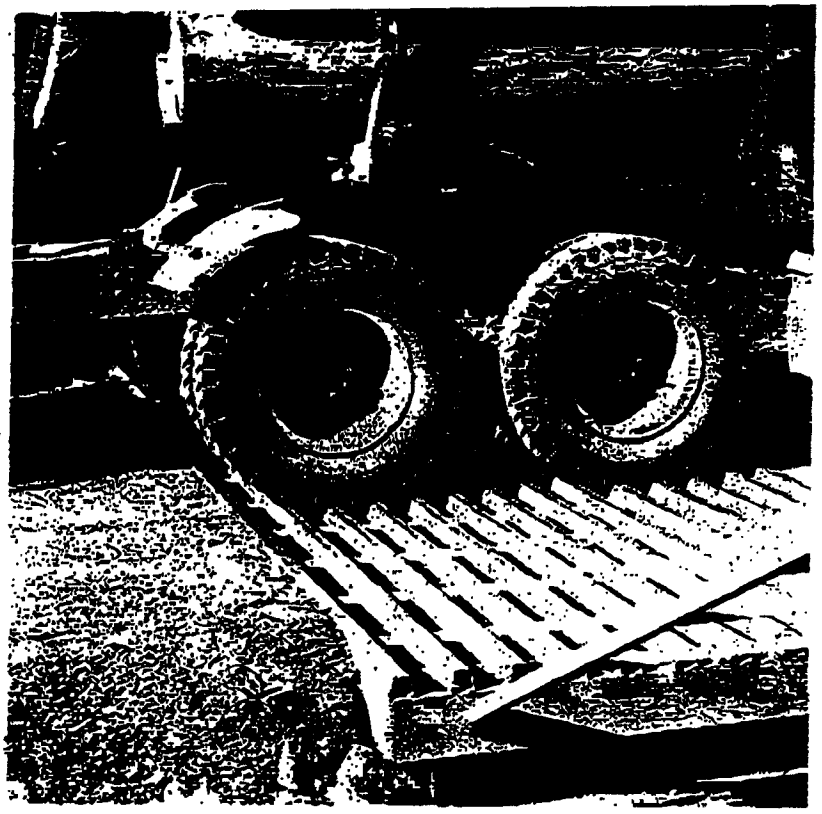
Standard Cattleguards are painted green. Yellow painted cattleguards are available by special order.

SPECIFICATIONS

Powder River has been fabricating Cattle Guards to the same standard specifications since 1958. Our guards were originally designed and engineered to meet load rating requirements in four weight classes: H-15, H-20, U-54 and U-80. These guards are all available in lengths of 8 ft., 10 ft., 12 ft. and 14 ft., and may be installed end to end to meet your road width requirements. All four weight classes are available in 8-ft. road lengths. The H-15 and H-20 are also available in a 7-ft. 5-in. road length.

Other options include a Three-Rail Clean-Out Section (except on, the U-80), End Wings and Steel Posts.

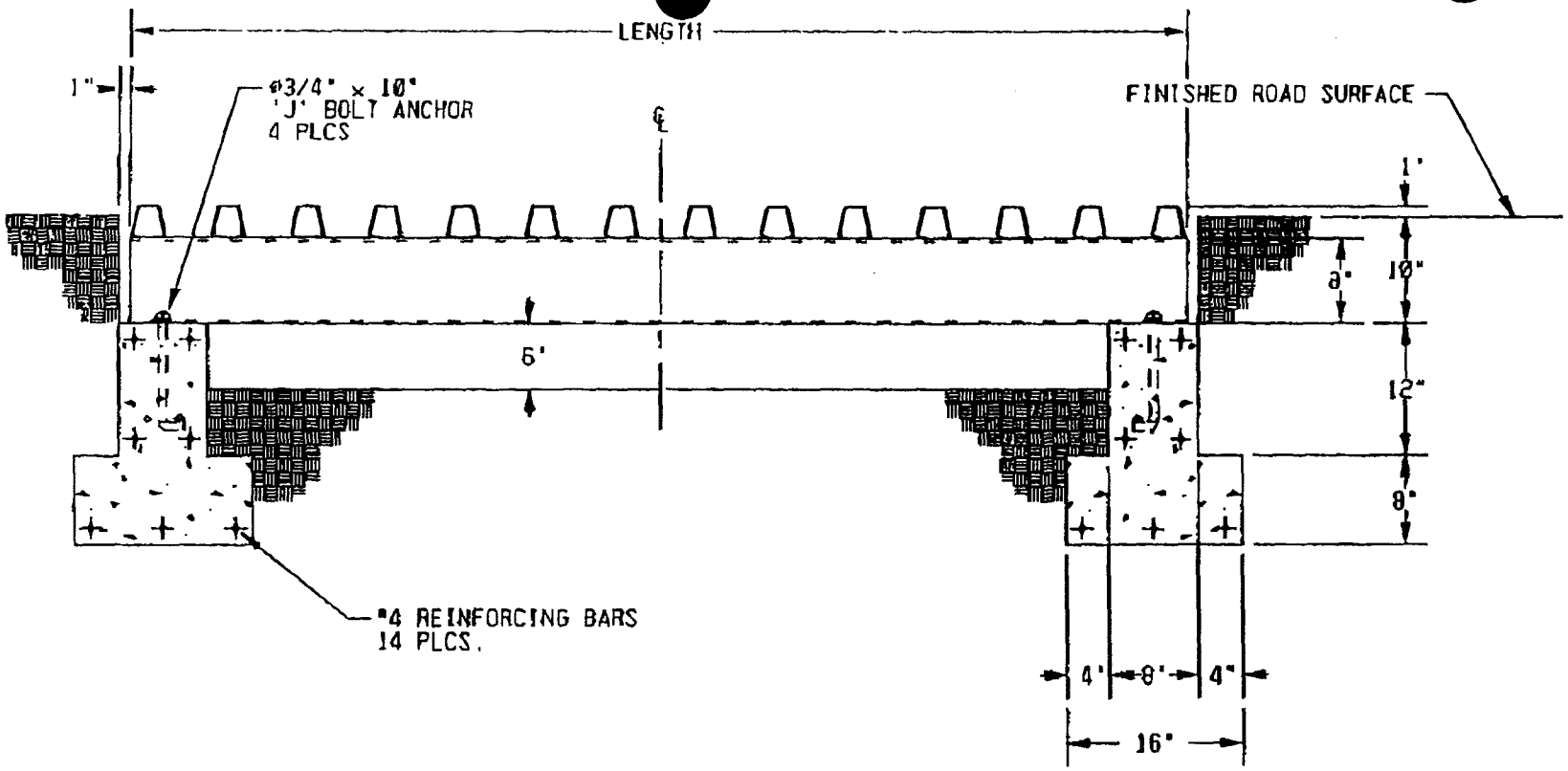
For additional information or detail drawings, call toll free 1-800-453-5318.



CATTLE GUARD SPECIFICATIONS

	GUARD SIZES	UNDERSTRUCTURE NUMBER & SIZES		UNDERSTRUCTURE SPACING	RAILS PER GUARD	WEIGHT lbs. (No Cleanout)
		8 in. C-11.5 lbs.				
H-15	7 ft. 5 in. x 8 ft.	6		Equal	13	1167
	7 ft. 5 in. x 10 ft.	7		Equal	13	1416
	7 ft. 5 in. x 12 ft.	8		Equal	13	1665
	7 ft. 5 in. x 14 ft.	10		Equal	13	1999
	8 ft. 0 in. x 8 ft.	6		Equal	14	1252
	8 ft. 0 in. x 10 ft.	7		Equal	14	1519
	8 ft. 0 in. x 12 ft.	8		Equal	14	1786
	8 ft. 0 in. x 14 ft.	10		Equal	14	2145
		8 in. WF-18.0 lbs.	8 in. C-11.5 lbs.			
H-20	7 ft. 5 in. x 8 ft.	3	2	Equal	13	1243
	7 ft. 5 in. x 10 ft.	4	2	Equal	13	1546
	7 ft. 5 in. x 12 ft.	5	2	Equal	13	1849
	7 ft. 5 in. x 14 ft.	6	2	Equal	13	2151
	8 ft. 0 in. x 8 ft.	3	2	Equal	14	1334
	8 ft. 0 in. x 10 ft.	4	2	Equal	14	1659
	8 ft. 0 in. x 12 ft.	5	2	Equal	14	1986
	8 ft. 0 in. x 14 ft.	6	2	Equal	14	2309
		10 in. C-15.3 lbs.				
U-54	8 ft. 0 in. x 8 ft.	6		Equal	14	1434
	8 ft. 0 in. x 10 ft.	8		Equal	14	1854
	8 ft. 0 in. x 12 ft.	9		Equal	14	2152
	8 ft. 0 in. x 14 ft.	10		Equal	14	2449
		10 in. C-15.3 lbs.				
U-80	8 ft. 0 in. x 8 ft.	7		Equal	14	1557
	8 ft. 0 in. x 10 ft.	9		Equal	14	1977
	8 ft. 0 in. x 12 ft.	10		Equal	14	2274
	8 ft. 0 in. x 14 ft.	12		Equal	14	2694

Cattle Guard End Wings (pair) 78-in. base width	107
Cattle Guard End Wings Posts (pair) 72-in. long	71



FOOTING & FOUNDATION PLAN

RECOMMENDED FOR CATTLE GUARDS WITH LOADING UP TO AND INCLUDING H-20.

NOTES:

1- WHEN CONSTRUCTION IS COMPLETED, CATTLE GUARD MUST BE HIGHER THAN ROAD SURFACE.

2- EXTEND FOUNDATION BASE 1" ON EACH SIDE BEYOND THE CATTLE GUARD'S FRAME LENGTH.

POWDER RIVER

DATE: 02-OCT-1989	PROJECT NAME:
DRAWING NO : CG89001	CATTLE GUARD INSTALLATION
DRAWN BY: A.ERICKSON	
REVISED:	

022-05045	2" Post 70" panel w/6 Clevises	$48.00
022-05225	2" Post 64" panel w/4 Clevises & 2 Pins	$44.00
022-05230	2" Post 64" panel w/6 Clevises & 4 Pins	$48.00
022-05240	2" Post 70" panel w/4 Clevises & 2 Pins	$44.00
022-05245	2" Post 70" panel w/6 Clevises & 4 Pins	$48.00

Cattle Guards (page 26)

H - 15 (without cleanout) 12 tons/axle

036-15708	7 ft. 5 in. x 8 ft.	$1,297.00
036-15710	7 ft. 5 in. x 10 ft.	$1,566.00
036-15712	7 ft. 5 in. x 12 ft.	$1,789.00
036-15714	7 ft. 5 in. x 14 ft.	$2,197.00
036-15808	8 ft. x 8 ft.	$1,342.00
036-15810	8 ft. x 10 ft.	$1,627.00
036-15812	8 ft. x 12 ft.	$1,845.00
036-15814	8 ft. x 14 ft.	$2,276.00

H - 15 (with cleanout) 12 tons/axle

037-15708	7 ft. 5 in. x 8 ft.	$1,386.00
037-15710	7 ft. 5 in. x 10 ft.	$1,655.00
037-15712	7 ft. 5 in. x 12 ft.	$1,878.00
037-15714	7 ft. 5 in. x 14 ft.	$2,286.00
037-15808	8 ft. x 8 ft.	$1,431.00
037-15810	8 ft. x 10 ft.	$1,716.00
037-15812	8 ft. x 12 ft.	$1,935.00
037-15814	8 ft. x 14 ft.	$2,365.00

H-20 (without cleanout) 16 tons/axle

036-20708	7 ft. 5 in. x 8 ft.	$1,342.00
036-20710	7 ft. 5 in. x 10 ft.	$1,661.00
036-20712	7 ft. 5 in. x 12 ft.	$1,912.00
036-20714	7 ft. 5 in. x 14 ft.	$2,271.00
036-20808	8 ft. x 8 ft.	$1,420.00
036-20810	8 ft. x 10 ft.	$1,762.00
036-20812	8 ft. x 12 ft.	$2,025.00
036-20814	8 ft. x 14 ft.	$2,443.00

H -20 (with cleanout) 16 tons/axle

037-20708	7 ft. 5 in. x 8 ft.	$1,431.00
037-20710	7 ft. 5 in. x 10 ft.	$1,750.00
037-20712	7 ft. 5 in. x 12 ft.	$2,001.00
037-20714	7 ft. 5 in. x 14 ft.	$2,360.00
037-20808	8 ft. x 8 ft.	$1,509.00
037-20810	8 ft. x 10 ft.	$1,851.00
037-20812	8 ft. x 12 ft.	$2,114.00
037-20814	8 ft. x 14 ft.	$2,533.00

U - 54 (without cleanout) 25 tons/axle

036-54808	8 ft. x 8 ft.	$1,683.00
036-54810	8 ft. x 10 ft.	$1,985.00
036-54812	8 ft. x 12 ft.	$2,242.00
036-54814	8 ft. x 14 ft.	$2,622.00

U - 54 (with cleanout) 25 tons/axle

037-54808	8 ft. x 8 ft.	$1,772.00
037-54810	8 ft. x 10 ft.	$2,074.00
037-54812	8 ft. x 12 ft.	$2,332.00
037-54814	8 ft. x 14 ft.	$2,711.00

U - 80 30 tons/axle

036-80808	8 ft. x 8 ft.	$1,772.00
036-80810	8 ft. x 10 ft.	$2,091.00
036-80812	8 ft. x 12 ft.	$2,349.00
036-80814	8 ft. x 14 ft.	$2,846.00

Cattle Guard Accessories

036-00050	End Wing Set	$143.00
036-00090	End Wing Post Set	$73.00
036-00220	Tornado Lock Set (Set of 4 each)	$73.00

Weighing Systems (page 27)

002-00365	32 In. Loadbar Set (MP 800)	$1,524.00
002-00370	39 in. Loadbar Set (MP 1010)	$1,656.00
002-00382	34 in. Loadbar Set (HD 850)	$1,759.00
002-00375	39 In. Loadbar Set (HD 1010)	$1,884.00
002-00362	Ezi-Weigh I	$781.00
002-00363	Ezi-Weigh 2	$909.00
	Adapter Cable no longer required for Ezi-Weigh 1 or 2	
002-00436	EC 2000 Indicator	$951.00
002-00437	JR 2000 Indicator	$1,542.00
002-00438	SR 2000 Indicator	$1,880.00
002-00465	GP-1 System Ezi-Weigh (GP-23in)	$1,779.00
002-00415	A/C Converter	$77.00
002-00448	Win Weigh Software	$254.00
002-00305	Adapter Set. Scale to Chute	$65.00
002-00470	Aluminum Scale Platform	$646.00

Powder River Dog Kennel (w/ Connectors) (page 29)

009-01000	10' x 10' Dog Kennel Complete	$499.00
009-01005	10' x 5' Dog Kennel Complete	$412.00
009-00005	Dog Kennel Front 10' x 6' 5"	$163.00
009-00010	Dog Kennel Panel 10' x 6' 5"	$109.00
009-00020	Dog Kennel Front 5' x 6' 5"	$113.00
009-00030	Dog Kennel Panel 5' x 6' 5"	$69.00
009-00035	Dog Kennel Connector	$5.00
009-00050	Dog Kennel 3 Way Connector	$6.00

Powder River Dog Kennels (w/ Butterfly Clamps) (pg 29)

009-01010	10' x 10' Dog Kennel Complete	$499.00
009-01015	10' x 5' Dog Kennel Complete	$412.00
009-00060	Dog Kennel Front 10' x 6' 5"	$163.00
009-00065	Dog Kennel Panel 10' x 6' 5"	$109.00
009-00075	Dog Kennel Front 5' x 6' 5"	$113.00
009-00080	Dog Kennel Panel 5' x 6' 5"	$69.00
022-00610	Butterfly Clamp	$4.25

Accessories (page 30)

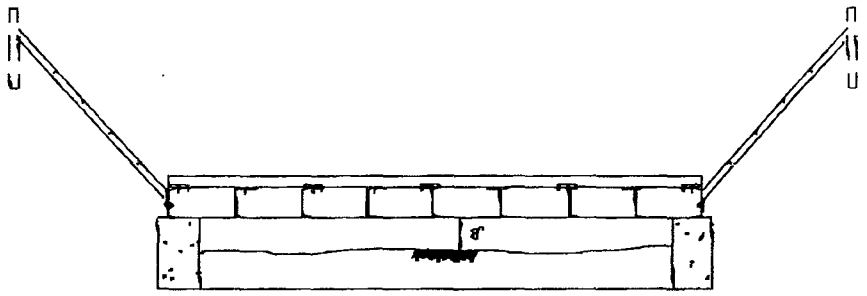
022-00515	Single Panel Clevis	$3.15
022-00516	Double Panel Clevis	$5.25
022-00521	3-In-Line Clevis Connector	$8.50
022-00522	Wood to Panel Adapter	$6.25
032-03210	270 Gate Hinge (pair)	$24.00
032-03211	Gate Leveling Adapter 3/4 in. x 12 in(each)	$15.00
032-03212	Gate Lever Latch Assembly	$44.00
022-00535	HD Pipe Clamp w/Clevis	$8.50
022-00523	Panel Pin & Chain 5/8 in. x 12 in.	$5.25
022-00525	Panel Pin 5/8 in. x12"	$4.25
022-02260	Straight " T"	$23.00
022-02258	Corner "T"	$26.00
022-02264	3-Way "T"	$28.00
032-32040	Latch Plate	$1.00
022-00529	Panel Clip (Large)	$1.00
022-00526	2 & 3/8 in. O.D. Pipe to Panel Connector	$14.00
022-00528	1 & 5/8 in. O.D. Pipe to Panel Connector	$14.00
004-00042	Pregnancy Gate to Chute Adapter	$15.00
004-00044	Pregnancy Gate to Alley Adapter	$38.00
005-00054	Pin 5/8" X 50"	$10.00
005-00316	Portable Sweep Deflector Panel	$28.00
005-00318	Portable Alley to Chute Adapter	$28.00
022-00600	Butterfly Clamps Green ea.	$4.25
022-00610	Butterfly Clamps Bronze ea.	$4.25

Paint

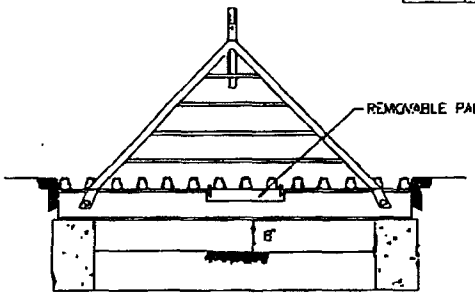
060-00110	Green Spray Paint-12 oz	$7.00
060-00119	Mineral Bronze Spray-12 oz.	$7.00
060-00120	Green Paint-Gallon	$30.00

U-54 CATTLEGAURD 8' x 12'

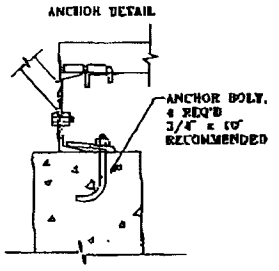
FRAME SIZE		UNDERSTRUCTURE			RAILS
LENGTH	WIDTH	NO.	SIZE	SPACING	NO.
8'-0"	8'-0"	3	6" WF-15	24"	14
8'-0"	10'-0"	4	6" WF-15	24"	14
8'-0"	12'-0"	5	6" WF-15	24"	14
8'-0"	14'-0"	6	8" WF-18	24"	14

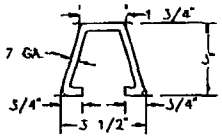


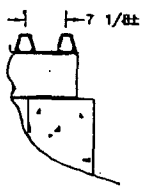
SECTION B-B

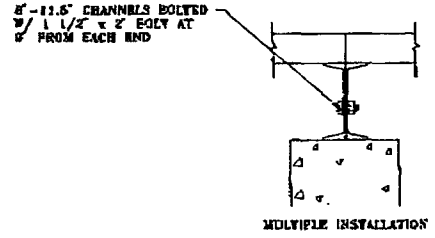


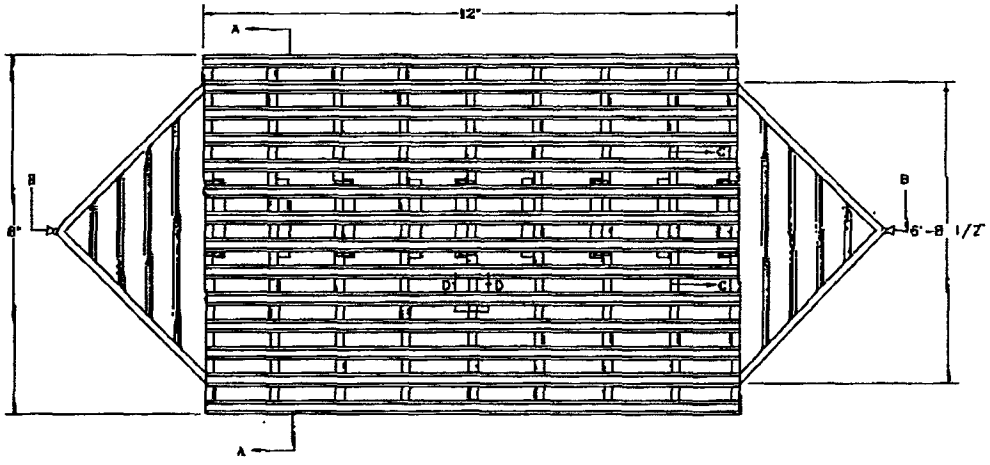
SECTION A-A

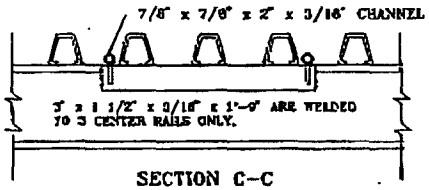






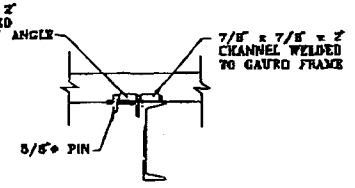






SECTION C-C

CLEAN-OUT PANEL DETAIL



SECTION D-D

TOLERANCE U.O.N.
FRACTIONAL = ±1/16"
ANGULAR = ±1°

U-54 CATTLEGAURD

POWDER RIVER, INC.
388 EAST 900 SOUTH
PROVO, UTAH 84605
PHONE: (801)374-2983
FAX: (801)377-6927

DRAWING #: 037-20812
SCALE: N/A
DRAW BY: PRJ
DATE: 4/30/98
CHECKED BY:
APPROVED BY:

MK	QTY	PART #	DESCRIPTION	MK	QTY	PART #	DESCRIPTION
A				J			
B				K			
C				L			
D				M			
E				N			
F				O			
G				P			
H				Q			
I				R			

APPENDIX H

CANDIDATE REPLACEMENT CRUSHERS

M E M O R A N D U M

Norwest Corporation
12th Floor 136 East South Temple
Salt Lake City, Utah 84111
e-mail: chawe@norwestmines.com

Tel: (801) 539-0044
Fax: (801) 539-0055

DATE: September 9, 2003 **JOB NUMBER:** 03-2893

FROM: Craig Hawe

TO: John Richards

SUBJECT: Available Crushers – for the Emery Mine

John,

As you requested, I have spent some time looking at used and available crushers suitable for this installation. I have found the follow units that may meet our time frame if the client will approve.

1) In Syracuse, New York; A McLanahan 24" x 60" single stage 2-roll crusher. It is $40,000. New cost for this unit is about $124,500. No motors are included, so guards probably will have to be field built. It is configured for dual drives with 2 flywheels and requires (2) 60 HP motors and is rated for 600 TPH.

The teeth need to be rebuilt but they are usable as is. New replacement rolls would cost ~ $40,000 + labor & shipping, but they could be hard-faced with some weld to extend their life. The rest of the unit is in good condition. The contact will be forwarding me photos soon.

If you want, I can review the application with McLanahan to make sure it is a reasonable selection and price the rolls. I believe freight would be less than $5,000, considering it would be a rush delivery.

Recommendation: this unit is suited for the installation, if selected it should be check out and looked at to verify condition and that it will fit.

2) Gundlach responded with a new crusher quote of $134,000 and 8-weeks. This was for a 500 TPH unit.

Recommendation: Suitable crusher, too expensive and delivery to long. Size needs to be looked at.

3) Gundlach also has a used crusher, which they are offering at $48,000 FOB Belleville, IL. It comes with a 6-month warrantee and is rated at 750 TPH. It uses (2) 75 HP motors. The crusher has no tramp iron protection, but I understand that the installation already has a magnet to protect

NORWEST CORPORATION

the crusher. It will produce 95% passing -2" (square hole) and would be available in 4 – 6 weeks. We might be able to get a slightly better delivery. This crusher is a current model but was originally built in the mid 80's. It is quoted as "Like New Condition with New Teeth". They are also offering a service man to check the installation at $2,000.

Recommendation: This is the crusher we should suggest, but before we cut the order we need to double check installation clearances and electrical requirements.

The following two quotations came from AM King, in California

4) **Description:**1 - MC NALLEY-PITTSBURG 30" x 60" Roll Crusher, S/N 62K15, Size 60. Two stage (four rolls, two on top of each other). Rolls: Top primary stage has 2" grab teeth and is driven by 75 HP motor; bottom stage corrogated rolls for finish grinding, driven by 40 HP motor . Unit has roller type split bearings; new in 1962. Last used as primary/secondary crusher in coal crushing plant, reduction 8" down to 1" at 250 TPH. In good condition. Spare top roller

PRICE.....$17,500
F.O.B.....OROVILLE, CA

Recommendation: This unit is too small and too old.

5) **Description:**1 - GUNDLACH Model 80-DA-1633 Roll Crusher, two-stage, four roll unit; 80" face, 150 RPM at upper rolls and 300 RPM lower. Rolls are standard one piece steel, nitrogen oil adjust system, with central manual lubrication system. Mounted on skid; offered less motor. In good condition.
ORIGINAL CONFIGURATION: for unwashed sub-bituminous strip coal, 7X0 feed x 1-1/2"X0 product at 400 short tons per hour.
Dimensions; 12'7" Long X 6'6" Wide X 5' High.
Weight; 16,000 lbs.

PRICE.....$30,000
AS IS, WHERE IS.....OROVILLE, CA

Recommendation: This unit might be suitable for our needs. However, it is a two-stage unit and would require more head room than our recommended unit. If the client disagrees with our suggested unit, I will look carefully at this one.

6) Pennsylvania recommended a salvage company who did not respond to our request.

None of these units were offered with motors, motor mounts, or, etc. They are just bear-bones units.

GUNDLACH

ONE FREEDOM DRIVE P.O. BOX 385 BELLEVILLE, IL USA 62222
Toll-Free (USA): 877-486-3522 Telephone: 618-233-7208 Fax: 618-233-6154
E-Mail: BetterCrushers@TJGundlach.com

9 September 2003

Mr. Craig Hawe
NORWEST CORPORATION
136 East South Temple
Salt Lake City, UT 84111

FAX:

TEL: 801-539-0044
Email: **chawe@norwestcorp.com**

RE: Project – Price, UT upgrade reconditioned unit
GUNDLACH QUOTATION # Q03090501 Rev. A

Dear Craig:

We at Gundlach wish to thank you for selecting our crusher for your bid requirements. The unit we are quoting is a 4060S-type unit. When it was originally manufactured the designation was known as 60SNA (Single Non-Adjustable while running). The unit was designed for ROM coal to be crushed to 2" or larger product size. 60SNA103R is the serial number.

APPLICATION:

MATERIAL: Utah Coal, direct ship, 50 HGI Emery formation, 12% ash
FEED: 8" x 0, 12% +2" with maximum 10" slab
PRODUCT: 95% -2" square hole screen
CAPACITY: 750 STPH

The crusher selection is normally verified by testing the actual material when possible.
We guarantee the application and the crusher.

One (1) remanufactured Gundlach model 60SNA103R single-stage, right hand two-motor drive, 26" diameter 20 Chisel Tooth Hardfaced rolls, coupling mounted rolls, Non-running adjustment system, Zerk lubrication system, two (2) 52 ½" Flywheels.
Two (2) 75 HP, 1200 RPM Motors, V-belt drives, and guards furnished by others.

SCOPE OF REBUILD: rebuild, test run and painted.

Reference drawings: K0-0016-00 General assembly
J0-0182-00 Inlet and discharge bolt pattern

The crusher carries a six (6) month warranty on parts and workmanship.

One (1) 60SNA103R Roll Crusher, FOB Belleville, IL.....	**US$**	**48,000.00**
One (1) Day visit by a Field Service Engineer at time of startup train your people and set up your Gundlach crusher properly.....	**US$**	**2,000.00**

PRICES are FIRM for 60 DAYS from date of quote.

SHIPMENT: 4 – 6 weeks from our plant after receipt and acceptance of written Purchase Order dependent on Manufacturer's schedule.

9 September 2003
NORWEST CORPORATION
RE: Project – Price, UT upgrade reconditioned unit
GUNDLACH QUOTATION # Q03090501 Rev. A

PAYMENT TERMS: 25% of purchase price due with order
25% due on submittal of certified drawings
25% due on shipment of unit
Balance net 30 days from shipment of unit

If after the crusher is disassembled we should come across a component that is questionable we will bring it to your attention for disposition.

Please note that this unit is a rebuilt or used unit. Imperfections in paint and pitted metal due to previous environmental exposure, previous repairs and cut marks are common in such units industry wide. TJG will make every effort to repair these items during the rebuilding or repairing process as time permits or as the customer desires (at additional cost) however, they have no bearing on the performance or reliability of the unit and will not affect the warranty terms in any way.

The above price includes (1) parts/service manual.

If you have any questions feel free to call this office.

Best regards,

James H. (Jim) Korte
Regional Sales Manager

JHK/kah

CC: Phil Schaefer, Service Manager

APPENDIX I

MAINTENANCE PLAN

Appendix I – Maintenance Plan for Emery Mine 4th East Portal

Once the engineering controls and other measures are implemented at the 4th East Portal area, they will be inspected on a set schedule under the facility's maintenance plan so that the effectiveness of the controls is maintained. An integral part of the maintenance plan will be the provision for training and education, whereby plant personnel will be made aware of the controls in operation at the mine. They will be trained to know when the controls are not operating properly and how and to whom to report malfunctions.

The engineering controls and other measures included in the inspection and maintenance program are as follows:

- Dust treatment program (coal yard and truck re-route areas)
- Water cannon
- Concrete (Jersey) barriers
- Wind fences
- Conveyor and transfer point enclosures
- Water sprays (conveyors)
- Water truck
- Vacuum truck
- Cattle guard
- Replacement crusher
- Truck re-route

The inspection forms will likely contain the following elements:

<u>Dust Treatment Program</u>

- Weekly inspection of the truck re-route and coal yard area for determination of effectiveness of dust suppressant and condition of gravel cover
- Indicate whether re-application of dust suppressant or repair of gravel surface is indicated
- Maintain log of when dust suppressant applied
- Indicate whether localized application of dust suppressant is needed, e.g., along the stockpile berm

<u>Water Cannon</u>

- Weekly test of water cannon to assure adequate pressure and proper coverage of stockpile area
- Indicate whether repairs or adjustments to the system are needed
- Weekly check on condition of wind activation system
- Record of when water cannon system is activated by wind

<u>Jersey Barriers</u>

- Daily inspection for optimum placement of barriers to contain the stockpile base
- Assure that barriers separate the stockpile area from the truck loading area

- Indicate condition of the barriers and whether gaps exist between barriers that allow material outside the containment area
- Assure that material is consolidated onto the pile to decrease exposed surface area of material that may produce dust

Wind Fences

- Daily check on the condition of the mesh material – Any rips or tears?
- Over a period of time, determine if the fence is optimally positioned to prevent wind erosion from the stockpile area

Conveyor and Transfer Point Enclosures

- Daily check when operating on whether conveyor enclosure panels are in place and in good condition
- Daily check when operating on enclosures for transfer points
- Maintain repair log

Water Sprays (Conveyors)

- Inspect each operating shift for proper operation of water sprays, e.g., adequate pressure, no clogged spray nozzles
- Maintain repair log

Water Truck

- Prior to use, determine if spray coverage is adequate, e.g., pressure is acceptable and nozzles are clear
- Maintain log book showing date and times of water application and areas where applied

Vacuum Truck

- Maintain log of when and where vacuum truck is used

Cattle Guard

- Daily inspection of condition of grate and underlying concrete sump
- Indicate whether the sump needs to have solids removed (vacuum truck)
- Log book showing date and description of repairs

Crusher

- Perform routine operations and maintenance checks when operating to assure proper performance
- Maintain log showing date of all repairs

Truck Re-route

See Dust Treatment Program (coal yard and truck re-route areas) for checklist items applicable to the truck re-route area.

Log books and inspection and maintenance records applicable to the above engineering controls and other control measures will be available for review at the Emery Mine.

A training and education outline to be used for employee awareness sessions will be developed, and a copy of the training program will be kept on file at the facility. Training records will also be maintained.