

FORM 5

ANNUAL STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934,
Section 17(a) of the Public Utility Holding Company Act of 1935 or
Section 30(f) of the Investment Company Act of 1940

Check box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

Form 3 Holdings Reported

Form 4 Transactions Reported

1. Name and Address of Reporting Person*

Leer Steven F.

(Last) (First) (Middle)
CityPlace One, Suite 300

(Street)
St. Louis MO 63141

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol

Arch Coal, Inc. (ACI)

3. IRS Identification Number of Reporting Person, if an Entity (Voluntary)

4. Statement for Month/Year

December 31, 2001

5. If Amendment, Date of Original (Month/Year)

6. Relationship of Reporting Person to Issuer
(Check all applicable)

Director 10% Owner
 Officer (give title below) Other (specify below)
President and Chief Executive Officer

7. Individual or Joint/Group Filing
(Check applicable line)

Form filed by one Reporting Person
 Form filed by more than one Reporting Person

Table I -- Non-Derivative Securities Acquired, Disposed of,
or Beneficially Owned

1. Title of Security (Instr. 3)	2. Transaction Date (mm/dd/yy)	3. Transaction Code (Instr. 8)	4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5)			5. Amount of Securities Beneficially Owned at End of Issuer's Fiscal Year (Instr. 3 and 4)	6. Owner- ship Form: Direct (D) or Indirect (I) (Instr.4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
			Amount	(A) or (D)	Price			
Common Stock					1,010	D		
Common Stock-401(k)plan	(1)	I	5,390	A	(1)	23,567	I By 401k Savings Plan	

Table II -- Derivative Securities Acquired, Disposed of, or Beneficially Owned
(e.g., puts, calls, warrants, options, convertible securities)

1. Title of Derivative Security (Instr. 3)	2. Conver- sion or Exer- cise Price of Deriv- ative Secur- ity	3. Trans- action Date (Month/ Day/ Year)	4. Trans- action Code (Instr. 8)	5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) ----- (A) (D)	6. Date Exercisable and Expiration Date (Month/Day/Year) ----- Date Expira- tion Date		7. Title and Amount of Underlying Securities (Instr. 3 and 4) ----- Amount or Number of Shares	8. Price of Deriv- ative Secur- ity (Instr. 5)	9. Number of Deriv- ative Secur- ities Bene- ficially Owned at End Year (Instr. 4)	10. Owner- ship of Deriv- ative Secur- ity: Direct (D) or In- direct (I) (Instr. 4)	11. Nature of In- direct Bene- ficial Owner- ship (Instr. 4)
Employee Stock Option	\$21.95	2/22/01	A	31,700	(1)	2/22/11	Common Stock 31,700	31,700	31,700	D	
Employee Stock Option	\$22.90	6/27/01	A	145,700	1/1/04	6/30/06	Common Stock 145,700	145,700	145,700	D	

(1) Vests in three equal annual installments commencing on 2/22/02.

Explanation of Responses:

/s/ Janet L. Horgan
 By: Janet L. Horgan, as Attorney-in-Fact
 **Signature of Reporting Person
 ** Intentional misstatements or omissions of facts constitute Federal Criminal
 Violations.

February 14, 2002
 Date

See 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this form, one of which must be manually signed.
 If space provided is insufficient, see Instruction 6 for procedure.