

SCHEDULE 13G/A  
(12/31/2001)

ARCH COAL INC  
Cusip # 039380100  
Amendment

Cusip # 039380100

- Item 1: REPORTING PERSONS  
Dimensional Fund Advisors Inc. (Tax ID: 22-2370029)
- Item 4: CITIZENSHIP  
Delaware Corporation
- Item 5: SOLE VOTING POWER  
1268644 \*\* see Note 1 \*\*
- Item 6: SHARED VOTING POWER --  
None
- Item 7: SOLE DISPOSITIVE POWER --  
1268644 \*\* see Note 1 \*\*
- Item 8: SHARED DISPOSITIVE POWER --  
0
- Item 9: AGGREGATE AMOUNT BENEFICIALLY OWNED --  
1268644 \*\* see Note 1 \*\*
- Item 11: PERCENT OF CLASS REPRESENTED BY LINE 9 --  
2.423527614
- Item 12: TYPE OF REPORTING PERSON --  
IA

- ITEM 1(A). NAME OF ISSUER  
ARCH COAL INC
- ITEM 1(B). ADDRESS OF ISSUER  
CityPlace One Ste 300  
Saint Louis, MO 63141-7056
- ITEM 2(A). NAME OF PERSON FILING  
Dimensional Fund Advisors
- ITEM 2(B). ADDRESS OF PRINCIPAL BUSINESS OFFICE  
1299 Ocean Avenue, 11th Floor, Santa Monica, CA 90401
- ITEM 2(C). CITIZENSHIP  
A Delaware Corporation
- ITEM 2(D). TITLE OF CLASS OF SECURITIES  
Common Stock
- ITEM 2(E). CUSIP NUMBER  
039380100
- ITEM 3. This statement is filed pursuant to Rule 13d-1 (b), or 13d-2 (b) and the person filing is an investment advisor registered under section 203 of the Investment Advisors Act of 1940.

- ITEM 4. OWNERSHIP
- ITEM 4(a). AMOUNT BENEFICIALLY OWNED  
1268644 \*\* see Note 1 \*\*
- ITEM 4(b). PERCENT OF CLASS  
2.423527614
- ITEM 4(c). NUMBER OF SHARE AS TO WHICH SUCH PERSON HAS:
- (i). SOLE POWER TO VOTE OR DIRECT THE VOTE --  
1268644 \*\* see Note 1 \*\*
- (ii). SHARED POWER TO VOTE OR TO DIRECT THE VOTE --  
None
- (iii). SOLE POWER TO DISPOSE OR TO DIRECT DISPOSITION OF --  
1268644 \*\* see Note 1 \*\*
- (iv). SHARE POWER TO DISPOSE OR TO DIRECT DISPOSITION OF --  
None

\*\* Note 1 \*\*

Dimensional Fund Advisors Inc. ("Dimensional"), an investment advisor registered under Section 203 of the Investment Advisors Act of 1940, furnishes investment advice to four investment companies registered under the Investment Company Act of 1940, and serves as investment manager to certain other commingled group trusts and separate accounts. These investment companies, trusts and accounts are the "Funds". In its role as investment advisor or manager, Dimensional possesses voting and/or investment power over the securities of the Issuer described in this schedule that are owned by the Funds. All securities reported in this schedule are owned by the Funds. Dimensional disclaims beneficial ownership of such securities.

- ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS  
If this statement is being filed to report the fact that as of 12/31/2001 the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following: [X]
- ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON  
All Securities reported in this schedule are owned by advisory clients of Dimensional Fund Advisors Inc., no one of which to the knowledge of Dimensional Fund Advisors Inc. owns more than 5% of the class. Dimensional Fund Advisors Inc disclaims beneficial ownership of all such securities.
- ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY:  
Not Applicable
- ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP  
Not Applicable
- ITEM 9. NOTICE OF DISSOLUTION OF GROUP  
Not Applicable
- ITEM 10. CERTIFICATION  
By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purposes or effect.

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Signature

Wednesday, January 30, 2002

Michael T. Scardina  
Vice President and Chief Financial Officer