

SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

FORM S-8
 REGISTRATION STATEMENT
 Under the
 SECURITIES ACT OF 1933

ARCH COAL, INC.
 (Exact name of registrant as specified in its charter)

DELAWARE
 (State or Other Jurisdiction of
 Incorporation or Organization)

43-0921172
 (I.R.S. Employer
 Identification No.)

City Place One, Suite 300
 St. Louis, Missouri 63141
 (314) 994-2700
 (Address, including zip code, and telephone number, including area
 code, of registrant's principal executive offices)

ARCH COAL, INC. DEFERRED COMPENSATION PLAN
 (Full Title of the Plan)

Jeffry N. Quinn, Esq.
 Senior Vice President -- Law and Human Resources, Secretary and General Counsel
 Arch Coal, Inc.
 City Place One, Suite 300
 St. Louis, Missouri 63141
 (314) 994-2700
 (Name, address, including zip code, and telephone number,
 including area code, of agent for service)

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered(1)	Amount to be Registered(2)	Proposed Maximum Offering Price Per Obligation(3)	Proposed Maximum Aggregate Offering Price(3)	Amount of Registration Fee
Deferred Compensation Obligations	\$10,000,000	100%	\$10,000,000	\$2,780

(1)The Deferred Compensation Obligations are unsecured obligations of Arch Coal, Inc. to pay deferred compensation in the future in accordance with the terms of the Arch Coal, Inc. Deferred Compensation Plan for a select group of eligible employees.

(2) The deferred compensation obligations being registered represent the amount of compensation deferrals that Arch Coal, Inc. estimates will be made by participants in the Plan during the five year period following the initial date of deferrals under this registration statement.

(3) Estimated solely for the purpose of determining the registration fee.

PART II

INFORMATION REQUIRED IN THE
 REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE.

The following documents filed by Arch Coal, Inc. (the "Registrant") with the Securities and Exchange Commission (the "Commission"), under File No.

1-13105, pursuant to the Securities and Exchange Act of 1934, as amended (the "Exchange Act"), are incorporated by reference into this Registration Statement and shall be deemed to be a part hereof:

- (a) Annual Report on Form 10-K for the year ended December 31, 1997.
- (b) Quarterly Reports on Form 10-Q for the quarters ended March 31, 1998, June 30, 1998 and September 30, 1998.
- (c) Current Reports on Form 8-K dated March 23, 1998 (filed March 23, 1998), June 1, 1998 (filed June 2, 1998), June 1, 1998 (filed June 15, 1998 as amended on Form 8-K/A filed on August 17, 1998), July 22, 1998 (filed July 22, 1998), and August 11, 1998 (filed August 12, 1998).

All documents subsequently filed by the Registrant pursuant to Sections 13(a), 13(c), 14 and 15(d) of the Exchange Act, prior to the filing of a post-effective amendment which indicates that all securities offered have been sold or which deregisters all securities then remaining unsold, shall be deemed to be incorporated by reference in this Registration Statement and to be a part hereof from the date of filing of such documents.

Any statement contained in a document incorporated or deemed to be incorporated herein by reference shall be deemed to be modified or superseded for purposes of this Registration Statement to the extent that a statement contained herein or in any other subsequently filed document which also is or is deemed to be incorporated by reference herein modifies or supersedes such statement.

ITEM 4. DESCRIPTION OF SECURITIES.

The following description of the securities offered hereby is qualified by reference to the Arch Coal, Inc. Deferred Compensation Plan (the "Plan"). The Plan is a nonqualified deferred compensation plan intended to be exempt from Parts 1, 2, 3 and 4 of Title I of the Employee Retirement Income Security Act of 1974, as amended ("ERISA"). The Plan, however, is subject to the Administration and Enforcement provision of Part 5 of Title I of ERISA.

Under the Plan, the Registrant will provide eligible employees the opportunity to enter into agreements for the deferral of a specified percentage of their compensation. The Personnel and Compensation Committee of the Board of Directors (the "Committee") may select from management and other highly compensated employees who may participate in the Plan (each a "Participant").

The Committee will administer the Plan and will establish rules and regulations governing the Plan and Participants.

The obligations of the Registrant (including, the amount deferred by the Participants and the amount matched by the Registrant) under the Plan (the "Obligations") will be unsecured general obligations of the Registrant to pay the benefits in the future in accordance with the terms of the Plan, and will rank equally with other unsecured and unsubordinated indebtedness of the Registrant from time to time outstanding.

Participants may elect to participate in the Plan by submitting a form to the Registrant's Corporate Human Resources Department. The amount of compensation to be deferred by each Participant will be determined in accordance with the Plan based on elections by each Participant. The Registrant will establish on behalf of each participant a bookkeeping account to which the Registrant will credit any deferred compensation, matching amounts and income (or loss) based upon the hypothetical investment options elected by the Participant pursuant to the options available under the Plan. All account balances will remain in the Plan until distributable according to the terms of the Plan. The amount of compensation distributed upon the Participant's death, termination or retirement will be based on the Participant's account balance as of such date. A Participant may choose to receive a distribution prior to an elected or prescribed distribution date or to accelerate distribution under certain circumstances, subject to certain restrictions and penalties.

A Participant's interest in a deferred compensation account, and thus the Participant's right to the Obligations, generally cannot be transferred, alienated or assigned, nor are they subject to attachment, execution, garnishment or other such equitable or legal process.

The Committee may amend, alter or terminate the Plan at any time without the prior approval of the Board; except that without the Board's approval no amendment, modification or termination may materially modify the requirements as to eligibility for participation in the Plan, or otherwise materially increase the benefits accruing to Participants under the Plan.

ITEM 5. INTEREST OF NAMED EXPERTS AND COUNSEL.

Not applicable.

ITEM 6. INDEMNIFICATION OF DIRECTORS AND OFFICERS.

Pursuant to Delaware law, Article Ninth of the Registrant's Restated Certificate of Incorporation, as amended, contains provisions that result in the elimination of the personal liability of directors to the Registrant and its stockholders for monetary damages for breaches of their fiduciary duties as a director, except for (i) breach of a director's duty of loyalty to the company or to the stockholders, (ii) acts of omissions not in good faith or that involve intentional misconduct or a knowing violation of law, (iii) dividend or stock repurchases or redemptions that are illegal under Delaware law, and (iv) any transaction for which a director receives an improper personal benefit. These provisions pertain only to breaches of duty by directors as directors and not in

any other capacity, such as officers. As a result of the inclusion of such provisions, stockholders may be unable to recover monetary damages against directors for actions taken by them that constitute negligence or gross negligence or that are in violation of their fiduciary duties, although it may be possible to obtain injunctive or other equitable relief with respect to such actions. If equitable remedies are found not to be available to stockholders in any particular case, stockholders may not have any effective remedy against the challenged conduct.

Under Section 145 of the Delaware General Corporation law, a corporation has the power to indemnify directors and officers under certain prescribed circumstances and subject to certain limitations against certain costs and expenses, including attorneys' fees actually and reasonably incurred in connection with any action, suit or proceeding, whether civil, criminal, administrative or investigative, to which any of them is a party by reason of this being a director or officer of the corporation if it is determined that he acted in accordance with the applicable standard of conduct set forth in such statutory provision. Article V of the Registrant's Bylaws provides that the Registrant will indemnify any person who may be involved, as a party or otherwise, in a claim, action, suit or proceeding (other than any claim, action, suit or proceeding brought by or in the right of the Registrant) by reason of the fact that such person is or was a director or officer of the Registrant, or is or was serving at the request of the Registrant as a director or officer of any other corporation or entity, against certain liabilities, costs and expenses. The Registrant is also authorized to and does maintain insurance on behalf of any person who is or was a director or officer of the Registrant, or is or was serving at the request of the Registrant as a director or officer of any other corporation or entity, against any liability asserted against such person and incurred by such person in any such capacity or arising out of his status as such, whether or not the Registrant would have the power to indemnify such person against such liability under the Delaware General Corporation law.

The Registrant has entered into indemnity agreements with persons who are or were or shall be directors and/or officers of the Registrant, Ashland Coal, Inc. and/or AMC Merger Corporation; and other persons who are or were serving, shall serve, or shall have served at the request of the Registrant as a director, officer, partner, trustee, fiduciary, employee or agent of another foreign or domestic corporation or non-profit corporation, cooperative, partnership, joint venture, trust, employee benefit plan or other incorporated or unincorporated enterprise.

Directors of the Registrant who are officers of certain shareholders of the Registrant also may be entitled to indemnification under the provisions of that shareholders' Bylaws providing for the indemnity of officers who serve, at the request of such shareholders, as a director of another corporation.

The directors and officers of the Registrant are insured under a policy of directors' and officers' liability insurance.

ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED.

Not applicable.

ITEM 8. EXHIBITS.

Reference is made to the Exhibit Index filed herewith.

ITEM 9. UNDERTAKINGS.

(a) The undersigned registrant hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this registration statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the registration statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the registration statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate, the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement; and

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the registration statement or any material change to such information in the registration statement;

provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) do not apply if the registration statement is on Form S-3 or Form S-8, and the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed by the registrant pursuant to Section 13 or Section 15(d) of the Securities Exchange Act of 1934 that are incorporated by reference in the registration statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering.

(b) The undersigned registrant hereby undertakes that, for purposes of determining any liability under the Securities Act of 1933, each filing of the registrant's annual report pursuant to Section 13(a) or 15(d) of the Securities Exchange Act of 1934 (and, where applicable, each filing of an employee benefit plan's annual report pursuant to Section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the registration statement shall be deemed to be a new registration statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

(c) Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers, and controlling persons of the registrant pursuant to the foregoing provisions, or otherwise, the registrant has been advised that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the registrant of expenses incurred or paid by a director, officer or controlling person of the registrant in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the registrant will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the registrant certifies that it has reasonable grounds to believe that it meets all of the requirements for filing on Form S-8 and has duly caused this registration statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the County of St. Louis, State of Missouri on November 25, 1998.

ARCH COAL, INC.

By:/s/ Jeffry N. Quinn

Jeffry N. Quinn
Senior Vice President - Law and Human
Resources, General Counsel and Secretary

POWER OF ATTORNEY

Each person whose signature appears below hereby constitutes and appoints Steven F. Leer, Patrick A. Kriegshauser and Jeffry N. Quinn, and each of them (with full power to each of them to act alone) his true and lawful attorneys-in-fact and agents, for him and on his behalf and in his name, place and stead, in any and all capacities, to sign any and all amendments (including post-effective amendments) to this Registration Statement on Form S-8, and to file the same, with exhibits thereto and other documents in connection therewith, with the Securities and Exchange Commission, granting unto said attorney-in-fact and agent full power and authority to do and perform each and every act and thing requisite and necessary to be done, as fully to all intents and purposes as he might or could do in person, hereby ratifying and confirming all that said attorney-in-fact and agent or his substitute may lawfully do or cause to be done by virtue hereof.

Pursuant to the requirements of the Securities Act of 1933, this Registration Statement has been signed below by the following persons in the capacities and on the dates indicated.

Signatures	Title	Date
/s/ Steven F. Leer ----- Steven F. Leer	President, Chief Executive Officer and Director	November 23, 1998
/s/ Patrick A. Kriegshauser ----- Patrick A. Kriegshauser	Senior Vice President, Chief Financial Officer and Treasurer (Principal Financial Officer)	November 25, 1998
/s/ John R. Hall ----- John R. Hall	Chairman of the Board of Directors	November 24, 1998
/s/ James R. Boyd ----- James R. Boyd	Director	November 24, 1998
/s/ Juan Antonio Ferrando ----- Juan Antonio Ferrando	Director	November 24, 1998
/s/ Paul W. Chellgren ----- Paul W. Chellgren	Director	November 24, 1998
/s/ Thomas L. Feazell ----- Thomas L. Feazell	Director	November 24, 1998
/s/ Robert L. Hintz ----- Robert L. Hintz	Director	November 24, 1998
/s/ Douglas H. Hunt ----- Douglas H. Hunt	Director	November 24, 1998
/s/ James L. Parker ----- James L. Parker	Director	November 24, 1998
/s/ A. Michael Perry ----- A. Michael Perry	Director	November 24, 1998
/s/ J. Marvin Quin ----- J. Marvin Quin	Director	November 24, 1998

EXHIBIT INDEX

Exhibit Number	Description of Exhibits
4.1	Arch Coal, Inc. Deferred Compensation Plan.
5.1	Opinion of Bryan Cave LLP.
23.1	Consent of Arthur Andersen LLP.
23.2	Consent of Ernst & Young LLP.
23.3	Consent of Pricewaterhouse Coopers LLP.
23.4	Consent of Bryan Cave LLP (included in Exhibit 5.1).
24.1	Powers of Attorney authorizing signature (included in Signature Page).

EXHIBIT 4.1

ARCH COAL, INC.
DEFERRED COMPENSATION PLAN
Effective January 1, 1999

1. PURPOSE

The purpose of this Arch Coal, Inc. Deferred Compensation Plan (the "Plan") is to provide eligible key employees of the Company with an opportunity to defer compensation to be earned by them from the Company as a means of saving for retirement or other future purposes.

2. DEFINITIONS

The following definitions shall be applicable throughout the Plan:

(a) "Accounting Date" means each Business Day on which a calculation concerning a Participant's Compensation Account is performed, or as otherwise defined by the Committee.

(b) "Beneficiary" means the person(s) designated by the Participant in accordance with Section 11, or if no person(s) is/are so designated, the estate of a deceased Participant.

(c) "Board" means the Board of Directors of Arch Coal, Inc. or its designee.

(d) "Business Day" means a day on which the New York Stock Exchange is open for trading activity.

(e) "Committee" means the Personnel and Compensation Committee of the Board or its designee.

(f) "Common Stock" means the common stock, \$.01 par value, of Arch Coal, Inc.

(g) "Common Stock Fund" means that investment option, approved by the Committee, in which a Participant's Compensation Account may be deemed to be invested and may earn income based on a hypothetical investment in Common Stock.

(h) "Company" means Arch Coal, Inc., its divisions, subsidiaries and affiliates.

(i) "Compensation" means any employee compensation determined by the Committee to be properly deferrable under the Plan.

(j) "Compensation Account(s)" means the Retirement Account and/or the In-Service Account(s).

(k) "Corporate Human Resources" means the Corporate Human Resources Department of the Company.

(l) "Credit Date" means the date on which Compensation would otherwise have been paid to the Participant or, in the case of the Participant's designation of investment option changes, any date within three Business Days after the Participant's designation is received by Corporate Human Resources, or as otherwise designated by the Committee.

(m) "Deferred Compensation" means the Compensation elected by the Participant to be deferred pursuant to the Plan.

(n) "Election" means a Participant's delivery of a written notice of election to Corporate Human Resources electing to defer payment of all or a portion of his or her Compensation either until Retirement, Termination, death or such other time as further provided by the Committee or the Company.

(o) "Employee" means an individual classified by the Committee as a full-time, regular salaried employee (which term shall be deemed to include officers) of the Company, its present and future subsidiary corporations as defined in Section 424 of the Internal Revenue Code of 1986, as amended, or its affiliates.

(p) "Exchange Act" means the Securities Exchange Act of 1934, as amended.

(q) "Fair Market Value" means the price of a share of Common Stock, as

reported on the Composite Tape for New York Stock Exchange issues on the date and at the time designated by the Company.

(r) "Fiscal Year" means the fiscal year of the Company, which is currently the annual period commencing January 1 and ending the following December 31.

(s) "In-Service Account" means the account(s) to which the Participant's Deferred Compensation is credited and from which, pursuant to Section 10(b), distributions are made.

(t) "Participant" means an Employee selected by the Committee to participate in the Plan and who has elected to defer payment of all or a portion of his or her Compensation under the Plan.

(u) "Plan" means this Arch Coal, Inc. Deferred Compensation Plan as it now exists or as it may hereafter be amended.

(v) "Retirement" means a Participant's termination of employment after age 55.

(w) "Retirement Account" means the account(s) to which the Participant's Deferred Compensation is credited and from which, pursuant to Section 10(a), distributions are made.

(x) "Service Year" means, as designated by the Committee, such year or portion thereof during which the services have been rendered for which Compensation is payable.

(y) "Stock Unit(s)" means the share equivalents credited to the Common Stock Fund of a Participant's Compensation Account pursuant to Section 6.

(z) "Termination" means termination of services as an Employee for any reason other than Retirement.

3. SHARES; ADJUSTMENTS IN EVENT OF CHANGES IN CAPITALIZATION

In the event of any change in the outstanding Common Stock of the Company by reason of any stock split, share dividend, recapitalization, merger, consolidation, reorganization, combination, or exchange or reclassification of shares, split-up, split-off, spin-off, liquidation or other similar change in capitalization, or any distribution to common shareholders other than cash dividends, the number or kind of shares or Stock Units that may be credited under the Plan shall be automatically adjusted so that the proportionate interest of the Participants shall be maintained as before the occurrence of such event. Such adjustment shall be conclusive and binding for all purposes of the Plan.

4. ELIGIBILITY

The Committee shall have the authority to select from management and/or highly compensated Employees those Employees who shall be eligible to participate in the Plan.

5. ADMINISTRATION

Full power and authority to construe, interpret and administer the Plan shall be vested in the Company and the Committee. This power and authority includes, but is not limited to, selecting Compensation eligible for deferral, selecting investment indices, establishing deferral cycles for purposes of Section 10(b), establishing deferral terms and conditions, and adopting modifications, amendments and procedures as may be deemed necessary, appropriate or convenient by the Committee. Decisions of the Company and the Committee shall be final, conclusive and binding upon all parties. Day-to-day administration of the Plan shall be the responsibility of Corporate Human Resources.

6. PARTICIPANT ACCOUNTS

Upon election to participate in the Plan, there shall be established a Retirement Account and/or In-Service Account, as designated by the Participant, to which there shall be credited any Deferred Compensation, as of each Credit Date. In addition, matching credits shall be allocated to a Participant's Retirement Account in accordance with rules prescribed by the Committee. Each

such Compensation Account shall be credited (or debited) on each Accounting Date with income (or loss) based upon a hypothetical investment in any one or more of the investment options available under the Plan, as prescribed by the Committee for the particular compensation credited, which may include a Common Stock Fund, as elected by the Participant under the terms of Section 9.

7. FINANCIAL HARDSHIP

Upon the written request of a Participant or a Participant's legal representative and a finding that continued deferral will result in an unforeseeable financial emergency to the Participant, the Committee or the Company (each in its sole discretion) may authorize (a) the payment of all or a part of a Participant's Compensation Account in a single installment prior to his or her ceasing to be a Participant, or (b) the acceleration of payment of any multiple installments thereof. It is intended that the Committee's determinations as to whether the Participant has suffered an "unforeseeable financial emergency" shall be made consistent with the requirements under Section 457(d) of the Internal Revenue Code of 1986, as amended.

8. ACCELERATED DISTRIBUTION

(a) Availability of Withdrawal Prior to Retirement. The Participant or the Participant's Beneficiary who is receiving installment payments under the Plan may elect, in writing, to withdraw all or a portion of a Participant's Compensation Account at any time prior to the time such Compensation Account otherwise becomes payable under the Plan, provided the conditions specified in Section 8(c), 8(d) and 8(e) hereof are satisfied.

(b) Acceleration of Periodic Distributions. Upon the written election of the Participant or the Participant's Beneficiary who is receiving installment payments under the Plan, the Participant or Participant's Beneficiary may elect to have all or a portion of the remaining installments distributed in the form of an immediately payable lump sum, provided the conditions specified in Section 8(c) and 8(e) hereof are satisfied.

(c) Forfeiture Penalty. In the event of a withdrawal pursuant to Section 8(a), or an accelerated distribution pursuant to Section 8(b), the Participant shall forfeit from such Compensation Account an amount equal to 10% of the amount of the withdrawal or accelerated distribution, as the case may be. The forfeited amount shall be deducted from the Compensation Account prior to giving effect to the requested withdrawal or acceleration. Neither the Participant nor the Participant's Beneficiary shall have any right or claim to the forfeited amount, and the Company shall have no obligation whatsoever to the Participant, the Participant's Beneficiary or any other person with regard to the forfeited amount.

(d) Minimum Withdrawal. In no event shall the amount withdrawn in accordance with Section 8(a) be less than 25% of the amount credited to such Participant's Compensation Account immediately prior to the withdrawal.

(e) Suspension from Deferrals. In the event of a withdrawal pursuant to Section 8(a) or 8(b), a Participant who is otherwise eligible to make deferrals of Compensation under this Plan shall be prohibited from making such deferrals with respect to the remainder of the current Fiscal Year and the Fiscal Year of the Plan immediately following the Fiscal Year of the Plan during which the withdrawal was made, and any election previously made by the Participant with respect to deferrals of Compensation for such Fiscal Years of the Plan shall be void and of no effect.

9. MANNER OF ELECTION

(a) General. Any Employee selected by the Committee to participate in the Plan may elect to do so by delivering to Corporate Human Resources an Election on a form prescribed by Corporate Human Resources, designating the Compensation account to which the Deferred Compensation is to be credited, electing the timing and form of distribution, and setting forth the manner in which such Deferred Compensation shall be invested in accordance with Section 6 hereof. The timing of the filing of the appropriate form with Corporate Human Resources shall be determined by the Company or the Committee. An effective election to defer Compensation may not be revoked or modified except as otherwise determined by the Company or the Committee or as stated herein.

(b) Investment Alternatives -- Existing Balances. A Participant may elect to change an existing selection as to the investment alternatives in effect with respect to an existing Compensation Account (in increments prescribed by the Committee or the Company) as often, and with such restrictions, as determined by the Committee or by the Company.

(c) Change of Beneficiary. A Participant may, at any time, elect to change the designation of a Beneficiary in accordance with Section 11 hereof.

10. DISTRIBUTION

(a) Retirement Account. A Participant's Retirement Account shall be distributed in cash at the time and in the manner elected by the Participant in his Election. If no Election is made by a Participant as to the distribution or form of payment of his or her Retirement Account, upon the Participant's death, Termination, or Retirement such account shall be paid in cash in a lump sum. The entire Retirement Account must be paid out within forty years following the date of the earliest of the Participant's death, Termination, or Retirement.

(b) In-Service Account. Deferred Compensation credited to a Participant's In-Service Account shall be distributed in cash at the time and in the manner elected by the Participant in his Election. A Participant may make different Elections with respect to the applicable distribution periods for different deferral cycles in the In-Service Accounts.

(c) Termination. Notwithstanding the foregoing, in the event of a Participant's Termination, the Company reserves the right to distribute the Participant's Compensation Account at such time and in such manner as deemed appropriate.

(d) Change of Distribution of Compensation Account. A Participant will be allowed to change the Election as to the distribution of his or her Retirement Account, subject to approval by the Committee or the Company. Such change must be made by the earlier of:

(1) the date six months prior to the first day of the month following such Participant's Retirement; or

(2) the December 31 immediately preceding the first day of the month following such Participant's Retirement.

A Participant may not change the Election as to the distribution of Deferred Compensation in his or her In-Service Account(s) except as otherwise set forth in Sections 7 and 8.

11. BENEFICIARY DESIGNATION

A Participant may designate one or more persons (including a trust) to whom or to which payments are to be made if the Participant dies before receiving distribution of all amounts due hereunder. A designation of Beneficiary will be effective only after the signed Election is filed with Corporate Human Resources while the Participant is alive and will cancel all designations of Beneficiary signed and filed earlier. If the Participant fails to designate a Beneficiary as provided above or if all of a Participant's Beneficiaries predecease him or her and he or she fails to designate a new Beneficiary, the remaining unpaid amounts shall be paid in one lump sum to the estate of such Participant. If all Beneficiaries of the Participant die after the Participant but before complete payment of all amounts due hereunder, the remaining unpaid amounts shall be paid in one lump sum to the estate of the last to die of such Beneficiaries.

12. UNSECURED GENERAL CREDITOR STATUS OF EMPLOYEE

The payments to Participants and their Beneficiaries hereunder shall be made from the general corporate assets of the Company. No person shall have any interest in any such assets by virtue of the provisions of this Plan. The Company's obligation hereunder shall be an unfunded and unsecured promise to pay money in the future. To the extent that any person acquires a right to receive payments from the Company under the provisions hereof, such right shall be no greater than the right of any unsecured general creditor of the Company; no such person shall have nor acquire any legal or equitable right, interest or claim in or to any property or assets of the Company. Any accounts maintained under this Plan shall be hypothetical in nature and shall be maintained for bookkeeping purposes only. Neither the Plan nor any account shall hold any actual funds or assets.

13. INALIENABILITY OF BENEFITS

The interests of the Participants and their Beneficiaries under the Plan may not in any way be voluntarily or involuntarily transferred, alienated or assigned, nor subject to attachment, execution, garnishment or other such equitable or legal process. A Participant or Beneficiary cannot waive the provisions of this Section 13.

14. GOVERNING LAW

The provisions of this plan shall be interpreted and construed in accordance with the laws of the State of Missouri, except to the extent preempted by Federal law.

15. AMENDMENTS

The Committee may amend, alter or terminate this Plan at any time without the prior approval of the Board; provided, however, that the Committee may not, without approval by the Board, materially increase the benefits accruing to Participants under the Plan.

IN WITNESS WHEREOF, the Arch Coal, Inc. Deferred Compensation Plan is effective as January 1, 1999.

ARCH COAL, INC.

By:_____

Title:_____

EXHIBIT 5.1

November 25, 1998

Arch Coal, Inc.
City Place One, Suite 300
St. Louis, Missouri 63141

Re: Deferred Compensation Plan -- Registration Statement on Form S-8

Ladies and Gentlemen:

We are acting as special counsel for Arch Coal, Inc., a Delaware corporation (the "Company"), in connection with various legal matters relating to the filing with the Securities and Exchange Commission of a Registration Statement on Form S-8 (the "Registration Statement") under the Securities Act of 1933, as amended (the "Securities Act"), covering the registration of \$10,000,000 in deferred compensation obligations (the "Obligations") of the Company under the Arch Coal, Inc. Deferred Compensation Plan (the "Plan").

We are familiar with the proceedings undertaken in connection with the authorization of the Plan and the Obligations. Additionally, we have examined such questions of law and fact as we have considered necessary or appropriate for purposes of this opinion.

In our examination, we have assumed the genuineness of all signatures, the authenticity of all documents submitted to us as originals, and the conformity to authentic original documents of all documents submitted to us as copies.

We are opining herein as to the effect on the subject transaction only of the federal securities law of the United States and the General Corporation Laws of the State of Delaware, and we express no opinion with respect to the applicability thereto, or the effect thereon, of any other laws.

We express no opinion as to the applicability or effect of (i) any bankruptcy, insolvency, reorganization, moratorium and other similar laws relating to or affecting creditors' rights generally, or (ii) general principles of equity, including, without limitation, concepts of reasonableness, materiality, good faith and fair dealing and the possible unavailability of specific performance, injunctive relief or other equitable remedies, regardless of whether enforceability is considered in a proceeding in equity or at law.

Based on the foregoing and in reliance thereon and subject to the qualifications and limitations stated herein, we are of the opinion that:

- (1) The Company is a corporation validly existing in good standing under the laws of the State of Delaware;
- (2) The Obligations have been duly authorized, and upon the issuance of the Obligations under the terms of the Plan, such Obligations will be legally valid and binding obligations of the Company, except as may be limited by the effect of bankruptcy, insolvency, reorganization, moratorium or other similar laws now or hereafter in effect relating to or affecting the rights or remedies of creditors.

We hereby consent to the filing of this opinion as an exhibit to the Registration Statement. We also consent to your filing copies of this opinion as an exhibit to the Registration Statement with agencies of such states as you deem necessary in the course of complying with the laws of such states regarding the Obligations' offering. In giving this consent, we do not admit that we are in the category of persons whose consent is required under Section 7 of the Securities Act or the rules and regulations of the Securities and Exchange Commission thereunder.

Very truly yours,

/s/ Bryan Cave LLP

Bryan Cave LLP

EXHIBIT 23.1

CONSENT OF INDEPENDENT PUBLIC ACCOUNTANTS

As independent public accountants, we hereby consent to the incorporation by reference in this Registration Statement pertaining to the Arch Coal, Inc. Deferred Compensation Plan of our report dated January 16, 1997 (except with respect to the matter discussed in Note 11 as to which the date is April 4, 1997), with respect to the consolidated financial statements and schedules of Arch Coal, Inc. and subsidiaries included in the Annual Report (Form 10-K) for the year ended December 31, 1997, filed with the Securities and Exchange Commission.

/s/ ARTHUR ANDERSEN LLP

St. Louis, Missouri
November 30, 1998

EXHIBIT 23.2

CONSENT OF INDEPENDENT AUDITORS

We consent to the incorporation by reference in this Registration Statement (Form S-8 No. 333-XXXX) pertaining to Arch Coal, Inc. Deferred Compensation Plan of our report dated January 29, 1998, with respect to the consolidated financial statements and schedule of Arch Coal, Inc. included in its Annual Report (Form 10-K) for the year ended December 31, 1997, filed with the Securities and Exchange Commission.

/s/ ERNST & YOUNG LLP

Louisville, Kentucky
November 25, 1998

CONSENT OF INDEPENDENT ACCOUNTANTS

We consent to the incorporation by reference in the registration statement of Arch Coal, Inc. on Form S-8 (File No. 333-_____) of our report dated April 7, 1998, on our audits of the consolidated financial statements of ARCO Coal and Subsidiaries as of December 31, 1997 and 1996, and for the years ended December 31, 1997, 1996 and 1995.

/s/ Pricewaterhouse Coopers LLP
Denver, Colorado
November 30, 1998