

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549



Form S-8
REGISTRATION STATEMENT
under
THE SECURITIES ACT OF 1933

THE DOW CHEMICAL COMPANY
(a Delaware corporation)
Executive Offices -- 2030 Dow Center
Midland, Michigan 48674
*(Name, state of incorporation and address of principal
executive office of issuer)*

I.R.S. Employer Identification No. 38-1285128

The Dow Chemical Company
2003-2013 Employees' Stock Purchase Plan
(Full title of the plan)

RICHARD L. MANETTA
Corporate Vice President and General Counsel
THE DOW CHEMICAL COMPANY
2030 Dow Center
Midland, Michigan 48674

(Name and address of agent for service)
Telephone: (989) 636-1000

CALCULATION OF REGISTRATION FEE

Title of securities to be registered	Amount to be registered	Proposed maximum offering price per share	Proposed maximum aggregate offering price	Amount of registration fee
--	-------------------------------	---	---	----------------------------------

Common Stock, par value \$2.50 per share, of The Dow Chemical Company	6,000,000 shares	\$33.95	\$203,700,000	\$25,808.79
---	------------------	---------	---------------	-------------

PART II

Item 3. INCORPORATION OF DOCUMENTS BY REFERENCE.

The following documents heretofore filed by The Dow Chemical Company ("Dow") with the Securities and Exchange Commission (the "Commission") are incorporated herein by this reference:

(a) Dow's Annual Report on Form 10-K for the year ended December 31, 2003. (The consolidated financial statements and the related financial statement schedule incorporated by reference from Dow's Annual Report on Form 10-K have been audited by Deloitte & Touche LLP, independent auditors, as stated in their reports, which are incorporated herein by reference.)

(b) Dow's Current Reports on Form 8-K dated January 29, 2004, February 13, 2004, April 12, 2004 and April 29, 2004; and Dow's Quarterly Report on Form 10-Q for the quarter ended March 31, 2004.

(c) The description of Dow's Common Stock, par value \$2.50 per share, contained in a registration statement filed pursuant to Section 12 of the Securities Exchange Act of 1934 (the "Act") and any amendments or reports filed for the purpose of updating that description.

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

Item 6. IDEMNIFICATION OF DIRECTORS AND OFFICERS.

Under Article VI of the Restated Certificate of Incorporation, as amended, Dow may indemnify its Directors, officers, employees and agents to such extent as is permitted by the laws of the State of Delaware and as Dow's Bylaws may from time to time provide. Section 145 of the General Corporation Law of the State of Delaware empowers Dow to indemnify, subject to the standards and limitations therein prescribed, any person in connection with any action, suit or proceeding brought or threatened by reason of the fact that such person is or was a Director, officer, employee or agent of Dow or is or was serving as such with respect to another corporation or other enterprise at the request of Dow. Under Section VI of the Bylaws of Dow, Dow is required to indemnify its Directors, officers and employees to the fullest extent permitted by Delaware law whenever such a person is a defendant in any legal proceeding. Section VI also gives the Company discretion to indemnify Directors, officers, employees and agents in other legal proceedings to which they are made a party. Any indemnification of a Director, officer, employee or agent of the Company must be approved by the Board of Directors. Dow maintains a Directors' and officers' liability insurance policy that indemnifies Dow's Directors and officers against certain losses in connection with claims made against them for certain wrongful acts.

Item 8. EXHIBITS.

Exhibit No.	Description of Exhibit
4 (a)	Restated Certificate of Incorporation of The Dow Chemical Company, filed as Exhibit 3(i) to Dow's Annual Report on Form 10-K for the year ended December 31, 2000, incorporated herein by this reference.
4 (b)	Bylaws of The Dow Chemical Company, filed as Exhibit 3(ii) to Dow's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003, incorporated herein by this reference.
23 (a)	Independent Auditors' Consent.
23 (b)	ARPC's Consent.
24	Power of Attorney.

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;

(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 Section 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

The Registrant. 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 City of Midland, State of Michigan, on May 5, 2004.

THE DOW CHEMICAL COMPANY
(Registrant)

By: /S/ FRANK H. BROD
Frank H. Brod
Vice President and
Controller

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed by the following persons in the capacities and on the date indicated.

A. A. ALLEMANG* Director and Executive
A. A. Allemang Vice President

J. K. BARTON* Director
J. K. Barton

F. H. BROD* Vice President and
F. H. Brod Controller (Principal
Accounting Officer)

A. J. CARBONE* Director and Vice
A. J. Carbone Chairman of the Board

J. M. COOK* Director
J. M. Cook

J. C. DANFORTH* Director
J. C. Danforth

W. D. DAVIS* Director
W. D. Davis

EXHIBIT INDEX

Exhibit No.	Description of Exhibit	Page Number
4(a)	Restated Certificate of Incorporation of The Dow Chemical Company, filed as Exhibit 3(i) to Dow's Annual Report on Form 10-K for the year ended December 31, 2000, incorporated herein by this reference.	
4(b)	Bylaws of The Dow Chemical Company, filed as Exhibit 3(ii) to Dow's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003, incorporated herein by this reference.	
23(a)	Independent Auditors' Consent.	10
23(b)	ARPC's Consent.	11
24	Power of Attorney.	12-13

EXHIBIT 23(a)
INDEPENDENT AUDITORS' CONSENT

The Dow Chemical Company:

We consent to the incorporation by reference in this Registration Statement of The Dow Chemical Company on Form S-8 of our reports dated January 29, 2004 (which report on the consolidated financial statements expresses an unqualified opinion and includes explanatory paragraphs relating to a change in the method of accounting for derivative instruments and hedging activities to conform to Statement of Financial Accounting Standards ("SFAS") No. 133, an explanatory paragraph relating to a change in the method of accounting for goodwill to conform with SFAS Nos. 141 and 142 and an explanatory paragraph relating to a change in the method of accounting for stock-based compensation to conform to SFAS No. 123) appearing in the Annual Report on Form 10-K of The Dow Chemical Company for the year ended December 31, 2003 and to the reference to us under the heading "Item 3. Incorporation of Documents by Reference" in this Registration Statement.

/S/ DELOITTE & TOUCHE LLP

Deloitte & Touche LLP

Midland, Michigan

May 4, 2004

Exhibit 23(b)
Analysis, Research & Planning Corporation's Consent

Regarding the Registration Statement on Form S-8 for The Dow Chemical Company 2003-2013 Employees' Stock Purchase Plan (the "Registration Statement"), Analysis, Research & Planning Corporation ("ARPC") hereby consents to the incorporation by reference in the Registration Statement of the use of ARPC's name and the reference to ARPC's reports dated January 9, 2003 and January 26, 2004 appearing in the Annual Report on Form 10-K of The Dow Chemical Company for the year ended December 31, 2003 and the Quarterly Report on Form 10-Q for The Dow Chemical Company for the quarter ended March 31, 2004.

/S/ B. THOMAS FLORENCE

B. Thomas Florence

President

Analysis, Research & Planning Corporation

May 3, 2004

Exhibit 24
Power of Attorney

Each person whose signature appears below constitutes and appoints J. Pedro Reinhard, Richard L. Manetta and Frank H. Brod, acting severally, as his or her attorney-in-fact and agent, to sign one or more registration statements on Form S-8 and any or all amendments (including post-effective amendments) to such registration statements in connection with the registration under the Securities Act of 1933 of shares of the common stock of The Dow Chemical Company in connection with the **2003-2013 Employees' Stock Purchase Plan** of The Dow Chemical Company, and to file the same, with all exhibits thereto, and other documents in connection therewith, with the Securities and Exchange Commission, granting to said attorney-in-fact and agent full power and authority to perform any act in connection with any of the foregoing as fully to all intents and purposes as he or she might do in person, hereby ratifying and confirming all that said attorney-in-fact and agent may lawfully do or cause to be done by virtue hereof. Each attorney-in-fact and agent is hereby granted full power of substitution and revocation with respect hereto.

SIGNATURE	TITLE	DATE
<u>/S/ A.A. Allemang</u> A.A. Allemang	Director and Executive Vice President	July 25, 2003
<u>/S/ J.J. Barton</u> J.K. Barton	Director	July 25, 2003
<u>/S/ F.H. Brod</u> F.H. Brod	Vice President and Controller (Principal Accounting Officer)	July 24, 2003
<u>/S/ A.J. Carbone</u> A.J. Carbone	Director and Vice Chairman of the Board	July 25, 2003
<u>/S/ J.M. Cook</u> J.M. Cook	Director	July 25, 2003
<u>/S/ J.C. Danforth</u> J.C. Danforth	Director	July 25, 2003

<u>/S/ W.D. Davis</u> W.D. Davis	Director	July 28, 2003
<u>/S/ B.H. Franklin</u> B.H. Franklin	Director	July 28, 2003
<u>/S/ K.R. McKENNON</u> K.R. McKennon	Director	July 29, 2003
<u>/S/ J.P. Reinhard</u> J.P. Reinhard	Director, Executive Vice president and Chief Financial Officer	July 25, 2003
<u>/S/ H.T. Shapiro</u> H.T. Shapiro	Presiding Director	July 29, 2003
<u>/S/W.S.Stavropoulo</u> <u>s</u> W.S. Stavropoulos	Director, Chairman of the Board, President and Chief Executive Officer	July 24, 2003
<u>/S/ P.G. Stern</u> P.G. Stern	Director	July 25, 2003
<u>/S/J.M. Ringler</u> J.M. Ringler	Director	July 25, 2003