

SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

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POST-EFFECTIVE AMENDMENT NO. 1 to  
Form S-8  
REGISTRATION STATEMENT  
UNDER THE SECURITIES ACT OF 1933

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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 registrant)

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

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THE DOW CHEMICAL COMPANY  
2003-2013 EMPLOYEES' STOCK PURCHASE PLAN  
(Full title of the plan)

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Charles J. Kalil  
Executive Vice President, General Counsel  
and Corporate Secretary  
THE DOW CHEMICAL COMPANY  
2030 Dow Center  
Midland, Michigan 48674

(Name and address of agent for service)

Telephone: (989) 636-1000

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This Post-Effective Amendment No. 1 is being filed to amend Registration Statement No. 333-147074 on Form S-8 pursuant to which the Registrant registered 6,000,000 shares of its Common Stock, par value \$2.50 per share (the "Stock"), for sale through the 2008 tranche of The Dow Chemical Company 2003-2013 Employees' Stock Purchase Plan (the "Plan"). After the Registration Statement was filed and became effective, eligible employees purchased 1,080,611 shares of the Stock under the provisions of the Plan. Accordingly, the Registrant hereby deregisters the remaining 4,919,389 shares of the Stock.

#### **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 amendment to Registration Statement No. 333-147074 to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Midland, State of Michigan, on August 4, 2009.

THE DOW CHEMICAL COMPANY  
(Registrant)

By: /s/ William S. Weideman  
WILLIAM H. WEIDEMAN  
Vice President and Controller