UNITED STATES

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

FORM 8-A/A

(Amendment No. 1)

FOR REGISTRATION OF CERTAIN CLASSES OF SECURITIES

PURSUANT TO SECTION 12(b) OR (g) OF THE

SECURITIES EXCHANGE ACT OF 1934

NATCO GROUP INC.

(Exact name of registrant as specified in its charter)

DELAWARE (State of incorporation

22-2906892 (I.R.S. Employer

or organization)

Identification No.)

2950 N. LOOP WEST, 7th FLOOR

HOUSTON, TEXAS 77092

(Address of principal executive offices) (Zip Code)

Securities to be registered pursuant to Section 12(b) of the Act:

Title of each class

Name of each exchange on

to be so registered Common Stock, par value \$.01 per share, together with associated Series A Preferred Stock purchase rights which each class is to be registered New York Stock Exchange

ITEM 1. DESCRIPTION OF REGISTRANT S SECURITIES TO BE REGISTERED.

Reference is hereby made to the Registration Statement on Form 8-A filed by NATCO Group, Inc. (the Company) on January 5, 2000. Such Form 8-A and the description of the Company s securities included therein is incorporated by reference into this Registration Statement.

On May 5, 1998, the Company s board declared a dividend of one preferred share purchase right (each, a Right) for each outstanding share of Common Stock held of record on May 15, 1998, and also approved the further issuance of such Rights with respect to shares of Common Stock issued after that date and prior to the Rights becoming exercisable. The Rights were issued under a Rights Agreement (Rights Agreement) between the Company and ChaseMellon Shareholder Services, L.L.C. (now Mellon Investor Services, LLC) (Mellon), as rights agent. A summary description of the Company s Rights is set forth under the caption Description of Capital Stock Rights to Purchase Preferred Stock in the Company s prospectus filed pursuant to Rule 424(b) under the Securities Act of 1933, as amended, which prospectus constitutes a part of the Company s Registration Statement on Form S-1, as amended (File No. 333-48851), initially filed with the Securities and Exchange Commission on March 30, 1998. Such prospectus and the description of the Rights included in such registration Statement is incorporated by reference into this Registration Statement.

Effective January 1, 2002, pursuant to the terms of the Company s Restated Certificate of Incorporation, as amended, the Company s outstanding shares of Class B Common Stock, par value \$.01 per share, automatically and without any action on the part of the holders thereof, converted into shares of Class A Common Stock, par value \$.01 per share, eliminating the need for Company s Common Stock to be divided into classes. Since such conversion, the Common Stock of the Company consists solely of 50,000,000 authorized shares, designated only as Common Stock.

On March 25, 2003, the Company and Mellon entered into the First Amendment to the Rights Agreement (Amendment), which increased to 20% the percentage beneficial ownership interest in the Company s voting securities that would cause a purchaser to become an acquiring person , as defined in the Rights Agreement. A copy of the Amendment is incorporated by reference herein. The foregoing description of the Amendment is not complete and is qualified in its entirety by reference to the Amendment.

ITEM 2. EXHIBITS.

- 3.1 Restated Certificate of Incorporation of the Company, as amended by Certificate of Amendment dated November 18, 1998 and Certificate of Amendment dated November 29, 1999 (incorporated by reference to Exhibit 3.1 to the Company s Registration Statement on Form S-1 (File No. 333-48851)).
- 3.2 Composite Amended and Restated Bylaws of the Company, as amended (incorporated by reference to Exhibit 3.3 of the Company s Quarterly Report on Form 10-Q for the period ended March 31, 2003).
- 4.1 Specimen Common Stock Certificate (incorporated by reference to Exhibit 4.1 to the Company s Registration Statement on Form S-1 (File No. 333-48851)).
- 4.2 Rights Agreement dated May 15, 1998 by and among the Company and Mellon (incorporated by reference to Exhibit 4.2 to the Company s Registration Statement on Form S-1 (File No. 333-48851)).
- 4.3 First Amendment to Rights Agreement dated March 25, 2003 between the Company and Mellon (incorporated by reference to Exhibit 4.2 of the Company s Current Report on Form 8-K filed on March 27, 2003).

SIGNATURE

Pursuant to the requirements of Section 12 of the Securities and Exchange Act of 1934, the registrant has duly caused this registration statement to be signed on its behalf by the undersigned, thereto duly authorized.

NATCO GROUP INC.

By: /s/ John U. Clarke John U. Clarke Chairman & Chief Executive Officer

Date: March 15, 2006

EXHIBIT INDEX

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