

Nalco Holding CO
Form 424B3
December 28, 2005

Filed pursuant to Rule 424(b)(3)

A filing fee of \$2,424.34, calculated in accordance with Rule 457(r), has been transmitted to the SEC in connection with the offering of common stock pursuant to the registration statement (File No. 333-130715) by means of this prospectus supplement.

PROSPECTUS SUPPLEMENT NO. 1

To prospectus dated December 27, 2005

1,294,707 Shares

Nalco Holding Company

Common Stock

The selling stockholders are offering up to 1,294,707 shares of our common stock owned by them or which they have the right to acquire upon the exercise of warrants or put rights. The selling stockholders may sell their shares of common stock from time to time in public transactions or in privately negotiated transactions at market prices prevailing at the time of sale or at negotiated prices. The timing and amount of any sale are within the sole discretion of the selling stockholders. The selling stockholders will receive all of the net proceeds from the sales of the common stock.

We have agreed to bear expenses in connection with the preparation and filing of the registration statement of which this prospectus forms a part. However, the selling stockholders will bear any fees or expenses related to any applicable underwriting discounts or commissions, brokers' fees and similar selling expenses, and any other fees and expenses incurred by the selling stockholders.

The selling stockholders and any broker-dealers that participate in the distribution of the common stock offered hereby may be deemed to be "underwriters" within the meaning of the Securities Act of 1933. As a result, any commission or profit on the resale of shares received by such broker-dealers may be deemed to be underwriting commissions and discounts under the Securities Act of 1933.

Our common stock is listed on the New York Stock Exchange under the symbol "NLC". The last reported sale price of our shares of common stock on the New York Stock Exchange on December 27, 2005 was \$18.33 per share.

See "Risk Factors" on page S-3 to read about factors you should consider before buying shares of the common stock.

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

Prospectus Supplement dated December 28, 2005

You should rely only on information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained or incorporated by reference in this prospectus supplement and the accompanying prospectus is accurate as of any date other than the date of the respective documents.

TABLE OF CONTENTS

Prospectus Supplement

	Page
Prospectus Summary	S-1
Risk Factors	S-3
Special Note Regarding Forward-Looking Statements	S-5
Use of Proceeds	S-5
Price Range of Common Stock	S-5
Selling Stockholders	S-6
Plan of Distribution	S-7
Validity of the Shares	S-8
Experts	S-8
Available Information	S-8
Incorporation of Certain Documents by Reference	S-8

Prospectus

	Page
Prospectus Summary	1
Special Note Regarding Forward-Looking Statements	3
Use of Proceeds	3
Description of Capital Stock	4
Validity of the Shares	8
Experts	8
Available Information	8
Incorporation of Certain Documents by Reference	8

i

PROSPECTUS SUMMARY

This summary highlights selected information contained elsewhere in this prospectus supplement or the accompanying prospectus, but it may not contain all of the information that you should consider before deciding to invest in our common stock. You should read this entire prospectus supplement, including the “Risk Factors” section, the accompanying prospectus, the documents incorporated by reference and the other documents to which we refer for a more complete understanding of this offering.

All references in this prospectus to “we,” “our” and “us” refer collectively to Nalco Holding Company and its subsidiaries and affiliates on a consolidated basis.

Our Company

We are the leading global provider of integrated water treatment and process improvement services, chemicals and equipment programs for industrial and institutional applications. We are organized into three primary divisions which correspond to the end markets we serve: Industrial and Institutional Services, Energy Services and Paper Services. Our products and services are typically used in water treatment applications to prevent corrosion, contamination and the buildup of harmful deposits, or in production processes to enhance process efficiency and improve our customers’ end products.

Through our sales, research and marketing team of more than 6,500 technically trained professionals, we serve more than 60,000 customer locations. We focus on providing our customers with technologically advanced engineered solutions and services. These technologically advanced engineered solutions and services enable our customers to improve their business by increasing production yields, lowering manufacturing costs, extending asset lives and maintaining environmental standards. The cost of our technologically advanced engineering solutions and services represents a small share of our customers’ overall production expense. We offer more than 5,000 products and 3,100 unique formulations.

Industrial and Institutional Services

Our Industrial and Institutional Services division provides products and services that are principally utilized in water treatment applications such as raw water treatment, wastewater treatment, cooling programs and boiler treatment programs to control corrosion, the build up of scale and microbial fouling. Customers use our water treatment programs to extend the useful life of their assets, minimize downtime of their facilities and conserve water and energy. We serve companies across a broad spectrum of industries, including aerospace, chemical, pharmaceutical, steel, power, food and beverage, medium and light manufacturing, metalworking and institutions such as hospitals, universities and hotels.

Energy Services

Our Energy Services division provides on-site, technology driven solutions to the global natural gas, petroleum and petrochemical industries. In addition to recovery, production and process enhancements, we deliver a full range of water treatment offerings to refineries and petrochemical plants. Our upstream process applications improve oil and gas recovery and production, extend production equipment life and decrease operating costs through services that include scale, paraffin and corrosion control, oil and water separation and gas hydrate management solutions. Our downstream process applications increase refinery and petrochemical plant efficiency and the useful lives of customer assets, while improving refined and petrochemical product quality and yields.

Paper Services

Our Paper Services division offers a comprehensive portfolio of programs that are used in all principal steps of the paper-making process and across all grades of paper, including printing and writing, board and packaging, tissue and towel and mechanical papers. Our customers include the 20 largest paper companies in the world.

S-1

The Offering

Shares of common stock offered by the selling stockholders	1,294,707 shares
Shares of common stock outstanding before and after this offering	142,737,451 shares
Use of proceeds	We will not receive any of the proceeds from the sale of shares of common stock by the selling stockholders. The selling stockholders will receive all proceeds from the sale of the shares of our common stock offered in this prospectus.
New York Stock Exchange symbol	NLC

Unless we specifically state otherwise, all information in this prospectus:

- excludes 6,191,854 shares of common stock reserved for issuance pursuant to the warrant that we issued to Nalco LLC in November 2004; and
- excludes 7,500,000 shares of common stock reserved for issuance under the Nalco Holding Company 2004 Stock Incentive Plan, none of which has been issued as of the date of this prospectus.

Risk Factors

Investing in our common stock involves substantial risk. You should carefully consider all the information in or incorporated by reference in this prospectus supplement and accompanying prospectus prior to investing in our common stock. In particular, we urge you to consider carefully the factors set forth under the heading “Risk Factors.”

Nalco Holding Company was incorporated in the State of Delaware in June 2004. Our principal executive offices are located at 1601 West Diehl Road, Naperville, Illinois 60563. Our main telephone number is (630) 305-1000. Our Internet address is www.nalco.com. Information contained on our website or that can be accessed through our website is not incorporated by reference in this prospectus supplement or the accompanying prospectus and you should not rely on that information.

S-2

RISK FACTORS

An investment in our common stock involves risks. You should carefully consider the risks described below, together with the other information in this prospectus supplement, the accompanying prospectus and incorporated herein by reference, before deciding to purchase any common stock.

Risks Related To This Offering

Future sales of our shares could depress the market price of our common stock.

The market price of our common stock could decline as a result of sales of a large number of shares of common stock in the market after the offering or the perception that such sales could occur. These sales, or the possibility that these sales may occur, also might make it more difficult for us to sell equity securities in the future at a time and at a price that we deem appropriate.

As of December 27, 2005, we had 142,737,451 shares of common stock outstanding. Of those shares, the 51,111,111 shares sold in our November 2004 initial public offering and the 33,350,000 shares sold in our August 2005 secondary offering are freely tradable and the 1,294,707 shares that will be sold in this offering will be freely tradable. Subject to the volume, manner of sale and other conditions of Rule 144 under the Securities Act, the 56,981,633 shares of our common stock that were not sold in our November 2004 initial public offering, our August 2005 secondary offering and will not be sold in this offering will be available for sale in the public market under exemptions from registration requirements. Funds affiliated with The Blackstone Group, Apollo Management, L.P. and GS Capital Partners, which collectively beneficially owned 53,124,191 of our shares as of December 27, 2005, have the ability to cause us to register the resale of their beneficially owned shares.

In addition, subject to certain conditions, certain members of our management who hold units of Nalco LLC will be able to sell back or “put” to Nalco LLC their class A units, along with those of their class B units, class C units and class D units that have vested, in exchange for our shares of common stock owned by Nalco LLC. In November 2004, we provided a warrant to Nalco LLC that entitled it to acquire up to 6,191,854 shares of our common stock for \$0.01 per share, which will allow Nalco LLC to deliver our shares in satisfaction of such “put” rights. 1,074,082 of the shares being offered hereby were delivered to Nalco LLC pursuant to the warrant. As a result, an additional 5,117,772 shares of our common stock may still be delivered pursuant to the warrant in the future.

The market price of our common stock may be volatile, which could cause the value of your investment to decline.

Securities markets worldwide experience significant price and volume fluctuations. This market volatility, as well as general economic, market or potential conditions, could reduce market price of our common stock in spite of our operating performance. In addition, our operating results could be below the expectations of securities analysts and investors, and in response, the market price of our common stock could decrease significantly.

Provisions in our amended and restated certificate of incorporation and bylaws and Delaware law may discourage a takeover attempt.

Provisions contained in our amended and restated certificate of incorporation and bylaws and Delaware law could make it more difficult for a third party to acquire us, even if doing so might be beneficial to our stockholders. Provisions of our amended and restated certificate of incorporation and bylaws impose various procedural and other requirements, which could make it more difficult for stockholders to effect certain corporate actions. For example, our amended and restated certificate of incorporation authorizes our board of directors to determine the rights, preferences, privileges and restrictions of unissued series of preferred stock, without any vote or action by our stockholders. Thus, our board of directors can authorize and issue shares of preferred stock with voting or conversion rights that could adversely affect the voting or other rights of holders of our common stock. These rights may have the effect of delaying or deterring a change of control of our company. In addition, a

change of control of our company may be delayed or deterred as a result of our having three classes of directors. Additionally, Section 203 of the Delaware General Corporation Law provides that, subject to specified exceptions, a Delaware corporation shall not engage in business combinations with any entity that acquires enough shares of our common stock without the consent of our board of directors to be considered an “interested stockholder” under Delaware law for a three-year period following the time that the stockholder became an interested stockholder. These provisions could limit the price that certain investors might be willing to pay in the future for shares of our common stock.

S-4

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein include “forward-looking statements.” These forward-looking statements include statements concerning our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs, plans or intentions relating to acquisitions, business trends and other information that is not historical information. When used in this prospectus supplement, prospectus and the documents incorporated by reference herein, the words “estimates,” “expects,” “anticipates,” “projects,” “plans,” “intends,” “believes,” “forecasts,” or future or conditional “should,” “could” or “may,” and variations of such words or similar expressions are intended to identify forward-looking statements. All forward-looking statements, including, without limitation, management’s examination of historical operating trends and data, are based upon our current expectations and various assumptions. Our expectations, beliefs and projections are expressed in good faith and we believe there is a reasonable basis for them. However, there can be no assurance that management’s expectations, beliefs and projections will be achieved.

There are a number of risks and uncertainties that could cause our actual results to differ materially from the forward-looking statements contained in this prospectus supplement, the accompanying prospectus and the documents incorporated by reference herein. Important factors that could cause our actual results to differ materially from the forward-looking statements we make in this prospectus supplement, accompanying prospectus or in documents incorporated by reference in this prospectus, including under the heading “Risk Factors.”

All forward-looking statements attributable to us or persons acting on our behalf apply only as of the date they were made and are expressly qualified in their entirety by the cautionary statements included in this prospectus supplement and the accompanying prospectus. We undertake no obligation to update or revise forward-looking statements which may be made to reflect events or circumstances that arise after the date made or to reflect the occurrence of unanticipated events.

USE OF PROCEEDS

We will not receive any of the proceeds from the sale of shares of our common stock by the selling stockholders. The selling stockholders will receive all net proceeds from the sale of the shares of our common stock in this offering.

PRICE RANGE OF COMMON STOCK

Our common stock has traded on the New York Stock Exchange under the symbol “NLC” since November 11, 2004. The following table sets forth the high and low intraday sales prices per share of our common stock, as reported by the

New York Stock Exchange, for the periods indicated.

	Price Range	
	High	Low
<u>2004</u>		
Quarter ended December 31, 2004 (from November 11, 2004)	\$20.24	\$ 15.00
<u>2005</u>		
Quarter ended March 31, 2005	\$20.94	\$ 18.10
Quarter ended June 30, 2005	\$19.87	\$ 16.84
Quarter ended September 30, 2005	\$22.03	\$ 15.49
Quarter ended December 31, 2005 (through December 27, 2005)	\$18.39	\$ 14.25

The closing sale price of our common stock, as reported by the New York Stock Exchange, on December 27, 2005 was \$18.33. As of July 13, 2005, there were 5,594 holders of record of our common stock.

S-5

SELLING STOCKHOLDERS

We are registering shares that were privately issued to management members who exchanged their Nalco LLC class A units, as well as their vested Nalco LLC class B, C and D units (pursuant to management members agreements), for our shares.

The following table sets forth information, as of December 27, 2005, with respect to the selling stockholders and the number of shares of common stock beneficially owned by each selling stockholder that may be offered under this prospectus. The information is based on information provided by or on behalf of the selling stockholders. Unless otherwise indicated, the address of each person named below is c/o Nalco Holding Company, 1601 West Diehl Road, Naperville, Illinois, 60563.

The selling stockholders may offer all, some or none of the common stock. Because the selling stockholders may offer all or some portion of the common stock, no estimate can be given as to the amount of the common stock that will be held by the selling stockholders upon termination of any sales.

Selling stockholders, including their transferees, pledgees or donees or their successors, may from time to time offer and sell pursuant to this prospectus any or all of the common stock. Identification of any additional selling stockholders, if any, will be made in the applicable prospectus supplement. Information about the selling stockholders may change over time. Any changed information will be set forth in prospectus supplements or post-effective amendments. From time to time, additional information concerning ownership of the stock may rest with holders of the common stock not named in the table below and of whom we are unaware.

Shares Beneficially Owned Prior to this Offering	Shares Being	Shares Beneficially Owned
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Name of Selling Stockholder	Number	Percent ⁽¹⁾	Offered	After this Offering ⁽²⁾ Number	Percent ⁽¹⁾
Louis L. Loosbrock	125,679	*	66,947	58,732	*
Other selling stockholders representing less than 1% owners of our common stock as a group	1,318,964	*	1,227,760	91,204	*

*Less than one percent.

(1)The percentage of common stock beneficially owned is based on 142,737,451 shares outstanding as of December 27, 2005.

(2)Assumes all shares being offered by this prospectus are sold.

S-6

PLAN OF DISTRIBUTION

The selling stockholders and their successors, including their transferees, pledgees or donees or their successors, may sell the common stock directly to purchasers or through underwriters, broker-dealers or agents, who may receive compensation in the form of discounts, concessions or commissions from the selling stockholders or the purchasers. These discounts, concessions or commissions as to any particular underwriter, broker-dealer or agent may be in excess of those customary in the types of transactions involved. The common stock may be sold in one or more transactions at fixed prices, at prevailing market prices at the time of sale, at prices related to the prevailing market prices, at varying prices determined at the time of sale, or at negotiated prices. These sales may be effected in transactions, which may involve crosses or block transactions:

- on any national securities exchange or U.S. inter-dealer system of a registered national securities association on which the common stock may be listed or quoted at the time of sale;
- in the over-the-counter market;
- in transactions otherwise than on these exchanges or systems or in the over-the-counter market;
- through the writing of options, whether the options are listed on an options exchange or otherwise; or
- through the settlement of short sales.

In connection with the sale of the common stock, the selling stockholders may enter into hedging transactions with the broker-dealers or other financial institutions, which may in turn engage in short sales of the common stock in the course of hedging the positions they assume. The selling stockholders may also sell the common stock short and deliver these securities to close out their short positions, or loans or pledge the common stock to broker-dealers that in turn may sell these securities.

The selling stockholders will act independently of us in making decisions with respect to the timing, manner and size of each sale. The aggregate proceeds to the selling stockholders from the sale of the common stock offered by them will be the purchase price of the common stock less discounts and commissions, if any. Each of the selling stockholders reserves the right to accept and, together with their agents from time to time, to reject, in whole or in part, any proposed purchase of common stock to be made directly or through agents. We will not receive any of the proceeds from the sale by the selling stockholders of the common stock.

Our outstanding common stock is listed for trading on the New York Stock Exchange. In order to comply with the securities laws of some states, if applicable, the common stock may be sold in these jurisdictions only through registered or licensed brokers or dealers. In addition, in some states the common stock may not be sold unless they have been registered or qualified for sale or an exemption from registration or qualification requirements is available and is complied with.

The selling stockholders and any underwriters, broker-dealers or agents that participate in the sale of the common stock may be deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act. As a result, any profits on the sale of the common stock by selling stockholders who are, or are deemed to be, underwriters and any discounts, commissions or concessions received by any such broker-dealers or agents who are, or are deemed to be, underwriters may be deemed to be underwriting discounts or commissions under the Securities Act. Selling stockholders who are deemed to be “underwriters” within the meaning of Section 2(11) of the Securities Act will be subject to the prospectus delivery requirements of the Securities Act. The selling stockholders have acknowledged that they understand their obligations to comply with the provisions of the Exchange Act and the rules thereunder relating to stock manipulation, particularly Regulation M.

In addition, any securities covered by this prospectus that qualify for sale pursuant to Rule 144 or Rule 144A of the Securities Act may be sold under Rule 144 or Rule 144A rather than pursuant to this prospectus. A selling stockholder may not sell, transfer, devise or gift these securities by other means not described in this prospectus.

S-7

VALIDITY OF THE SHARES

The validity of the issuance of the shares of common stock to be sold in this offering will be passed upon for us by Simpson Thacher & Bartlett LLP, New York, New York. An investment vehicle comprised of selected partners of Simpson Thacher & Bartlett LLP, members of their families, related parties and others owns an interest representing less than 1% of the capital commitments of funds controlled by one of our large shareholders, The Blackstone Group.

EXPERTS

The consolidated financial statements of Nalco Holding Company at December 31, 2004 and December 31, 2003 and for the year ended December 31, 2004 and for the period from November 4, 2003 through December 31, 2003 (Successor) and the combined financial statements of Ondeo Nalco Group for the year ended December 31, 2002 and for the period from January 1, 2003 through November 3, 2003 (Predecessor), incorporated by reference in this prospectus, have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon appearing therein, and are incorporated by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

AVAILABLE INFORMATION

We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any documents filed by us at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. Our filings with the SEC are also available to the public through the SEC's Internet site at <http://www.sec.gov> and through the New York Stock Exchange, 20 Broad Street, New York, New York 10005, on which our common stock is listed.

We have filed with the SEC a registration statement on Form S-3 relating to the securities covered by this prospectus. This prospectus is a part of the registration statement and does not contain all the information in the registration statement. Whenever a reference is made in this prospectus to a contract or other document of the Company, the reference is only a summary and you should refer to the exhibits that are a part of the registration statement for a copy of the contract or other document. You may review a copy of the registration statement at the SEC's public reference room in Washington, D.C., as well as through the SEC's Internet site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to “incorporate by reference” the information contained in documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this prospectus, while information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934.

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2004;
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2005, June 30, 2005 and September 30, 2005; and
- Our Current Reports on Form 8-K filed on January 11, 2005, February 22, 2005, March 1, 2005, May 5, 2005, May 10, 2005, May 11, 2005, May 27, 2005, June 10, 2005, June 30, 2005, August 12, 2005, August 23, 2005, September 1, 2005, September 21, 2005, September 22, 2005, September 27, 2005, October 4, 2005, October 27, 2005, November 15, 2005 and December 8, 2005; and
- All documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 on or after the date of this prospectus and before the termination of this offering.

S-8

You can request a copy of these filings at no cost, by writing or calling us at the following address:

Nalco Holding Company
1601 West Diehl Road
Naperville, IL 60563
(630) 305-1000
Attention: Corporate Secretary

S-9

PROSPECTUS

Nalco Holding Company

Common Stock

We and/or selling stockholders to be named in a prospectus supplement may offer and sell shares of our common stock from time to time in amounts, at prices and on terms that will be determined at the time of the offering. Each time common stock is offered, we will provide a prospectus supplement and attach it to this prospectus. The prospectus supplement will contain more specific information about the offering. The supplements may also add, update or change information contained in this prospectus. This prospectus may not be used to offer or sell securities without a prospectus supplement describing the method and terms of the offering.

You should carefully read this prospectus and any accompanying prospectus supplement, together with the documents we incorporate by reference, before you invest in our common stock.

Investing in our common stock involves risks. You should consider the risk factors described in any accompanying prospectus supplement or any of the documents we incorporate by reference.

Our common stock is listed on the New York Stock Exchange under the symbol "NLC."

Neither the Securities and Exchange Commission nor any other regulatory body has approved or disapproved of these securities or passed upon the accuracy or adequacy of this prospectus. Any representation to the contrary is a criminal offense.

Prospectus dated December 27, 2005

You should rely only on information contained or incorporated by reference in this prospectus and any prospectus supplement. We have not authorized anyone to provide you with different information. We are not making an offer of these securities in any state where the offer is not permitted. You should not assume that the information contained or incorporated by reference in this prospectus or any prospectus supplement is accurate as of any date other than the date of the document containing the information.

TABLE OF CONTENTS

	Page
Prospectus Summary	1
Special Note Regarding Forward-Looking Statements	3
Use of Proceeds	3
Description of Capital Stock	4
Validity of the Shares	8
Experts	8
Available Information	8
Incorporation of Certain Documents by Reference	8

PROSPECTUS SUMMARY

This prospectus is part of a registration statement on Form S-3 that we filed with the Securities and Exchange Commission using a "shelf" registration process. Under this shelf registration process, we and/or selling stockholders to be named in a prospectus supplement may, over time, offer and sell our common stock in one or more offerings. Each time common stock is offered, we will provide a prospectus supplement and attach it to this prospectus. The prospectus supplement will contain specific information about the terms of the offering at that time. A prospectus supplement may also add, update or change information contained in this prospectus. Any statement that we make in this prospectus will be modified or superseded by any inconsistent statement made by us in a prospectus supplement. You should read both this prospectus and any accompanying prospectus supplement together with the additional information described under the heading "Incorporation of Certain Documents by Reference."

All references in this prospectus to "we," "our" and "us" refer collectively to Nalco Holding Company and its subsidiaries and affiliates on a consolidated basis.

Our Company

We are the leading global provider of integrated water treatment and process improvement services, chemicals and equipment programs for industrial and institutional applications. We are organized into three primary divisions which correspond to the end markets we serve: Industrial and Institutional Services, Energy Services and Paper Services. Our products and services are typically used in water treatment applications to prevent corrosion, contamination and the buildup of harmful deposits, or in production processes to enhance process efficiency and improve our customers' end products.

Through our sales, research and marketing team of more than 6,500 technically trained professionals, we serve more than 60,000 customer locations. We focus on providing our customers with technologically advanced engineered solutions and services. These technologically advanced engineered solutions and services enable our customers to improve their business by increasing production yields, lowering manufacturing costs, extending asset lives and maintaining environmental standards. The cost of our technologically advanced engineering solutions and services represents a small share of our customers' overall production expense. We offer more than 5,000 products and 3,100 unique formulations.

Industrial and Institutional Services

Our Industrial and Institutional Services division provides products and services that are principally utilized in water treatment applications such as raw water treatment, wastewater treatment, cooling programs and boiler treatment programs to control corrosion, the build up of scale and microbial fouling. Customers use our water treatment programs to extend the useful life of their assets, minimize downtime of their facilities and conserve water and energy. We serve companies across a broad spectrum of industries, including aerospace, chemical, pharmaceutical, steel, power, food and beverage, medium and light manufacturing, metalworking and institutions such as hospitals, universities and hotels.

Energy Services

Our Energy Services division provides on-site, technology driven solutions to the global natural gas, petroleum and petrochemical industries. In addition to recovery, production and process enhancements, we deliver a full range of water treatment offerings to refineries and petrochemical plants. Our upstream process applications improve oil and gas recovery and production, extend production equipment life and decrease operating costs through services that include scale, paraffin and corrosion control, oil and water separation and gas hydrate management solutions. Our downstream process applications increase refinery and petrochemical plant efficiency and the useful lives of customer assets, while improving refined and petrochemical product quality and yields.

1

Paper Services

Our Paper Services division offers a comprehensive portfolio of programs that are used in all principal steps of the paper-making process and across all grades of paper, including printing and writing, board and packaging, tissue and towel and mechanical papers. Our customers include the 20 largest paper companies in the world.

Risk Factors

Investing in our common stock involves substantial risk. You should carefully consider all the information in or incorporated by reference in this prospectus and any accompanying prospectus supplement prior to investing in our common stock. In particular, we urge you to consider carefully the factors set forth under the heading "Risk Factors."

Nalco Holding Company was incorporated in the State of Delaware in June 2004. Our principal executive offices are located at 1601 West Diehl Road, Naperville, Illinois 60563. Our main telephone number is (630) 305-1000. Our Internet address is www.nalco.com. Information contained on our website or that can be accessed through our website is not incorporated by reference in this prospectus and you should not rely on that information.

2

SPECIAL NOTE REGARDING FORWARD-LOOKING STATEMENTS

This prospectus, any prospectus supplement and the documents incorporated by reference herein include "forward-looking statements." These forward-looking statements include statements concerning our plans, objectives, goals, strategies, future events, future revenue or performance, capital expenditures, financing needs, plans or intentions relating to acquisitions, business trends and other information that is not historical information. When used in this prospectus and the documents incorporated by reference herein, the words "estimates," "expects," "anticipates," "projects," "plans," "intends," "believes," "forecasts," or future or conditional verbs, such as "will," "should," "could" or "may," and variations of such words or similar expressions are intended to identify forward-looking statements. All forward-looking statements, including, without limitation, management's examination of historical operating trends and data, are based upon our current expectations and various assumptions. Our expectations, beliefs and projections are expressed in good faith and we believe there is a reasonable basis for them. However, there can be no assurance

that management's expectations, beliefs and projections will be achieved.

There are a number of risks and uncertainties that could cause our actual results to differ materially from the forward-looking statements contained in this prospectus, any prospectus supplement and the documents incorporated by reference herein. Important factors that could cause our actual results to differ materially from the forward-looking statements we make in this prospectus or any prospectus supplement are set forth or incorporated by reference in this prospectus.

All forward-looking statements attributable to us or persons acting on our behalf apply only as of the date such statements are made and are expressly qualified in their entirety by the cautionary statements included in this prospectus. We undertake no obligation to update or revise forward-looking statements which may be made to reflect events or circumstances that arise after the date made or to reflect the occurrence of unanticipated events.

USE OF PROCEEDS

We intend to use the net proceeds from the sales of our common stock as set forth in the applicable prospectus supplement. We will not receive any proceeds from the sale of any shares of common stock offered by selling stockholders.

3

DESCRIPTION OF CAPITAL STOCK

The following is a description of the material terms of our amended and restated certificate of incorporation and bylaws. We refer you to our amended and restated certificate of incorporation and bylaws, copies of which are incorporated by reference into this registration statement of which this prospectus forms a part.

Authorized Capitalization

As of December 1, 2005, our authorized capital stock consisted of (i) 500,000,000 shares of common stock, par value \$0.01 per share, and (ii) 100,000,000 shares of preferred stock, par value \$0.01 per share.

Common Stock

Voting Rights. Holders of common stock are entitled to one vote per share on all matters to be voted upon by the stockholders. The holders of common stock do not have cumulative voting rights in the election of directors.

Dividend Rights. Holders of common stock are entitled to receive ratably dividends if, as and when dividends are declared from time to time by our board of directors out of funds legally available for that purpose, after payment of dividends required to be paid on outstanding preferred stock, as described below, if any. Our senior credit facilities and indentures impose restrictions on our ability to declare dividends with respect to our common stock.

Liquidation Rights. Upon liquidation, dissolution or winding up, the holders of common stock are entitled to receive ratably the assets available for distribution to the stockholders after payment of liabilities and accrued but unpaid dividends and liquidation preferences on any outstanding preferred stock.

Other Matters. The common stock has no preemptive or conversion rights and, if fully paid, is not subject to further calls or assessment by us. There are no redemption or sinking fund provisions applicable to the common stock. All outstanding shares of our common stock are fully paid and non-assessable, and the shares of our common stock offered in this offering, upon payment and delivery in accordance with the underwriting agreement, will be fully paid and non-assessable.

Preferred Stock

Our amended and restated certificate of incorporation authorizes our board of directors to establish one or more series of preferred stock and to determine, with respect to any series of preferred stock, the terms and rights of that series, including:

- the designation of the series;
- the number of shares of the series;
- the preferences and relative, participating, option or other special rights, if any, and any qualifications, limitations or restrictions of such series; and
- the voting rights, if any, of the holders of the series.

Anti-Takeover Effects of Certain Provisions of Delaware Law and Our Amended and Restated Certificate of Incorporation and Bylaws

Certain provisions of our amended and restated certificate of incorporation and bylaws, which are summarized in the following paragraphs, may have an anti-takeover effect and may delay, defer or prevent a tender offer or takeover attempt that a stockholder might consider in its best interest, including those attempts that might result in a premium over the market price for the shares held by stockholders.

The Delaware General Corporation Law

Our company is a Delaware corporation subject to Section 203 of the Delaware General Corporation Law. Section 203 provides that, subject to exceptions specified in the law, a Delaware

4

corporation shall not engage in "business combinations" with any "interested stockholder" for a three-year period following the time that the stockholder became an interested stockholder unless:

- the corporation has elected in its certificate of incorporation not to be governed by Section 203, which we have not done;
- prior to that time, the board of directors of the corporation approved either the business combination or the transaction which resulted in the stockholder becoming an interested stockholder;
- upon consummation of the transaction which resulted in the stockholder becoming an interested stockholder, the interested stockholder owned at least 85% of the voting stock of the corporation outstanding at the time the transaction commenced, excluding specified shares; or
- at or subsequent to that time, the business combination is approved by the board of directors of the corporation and by the affirmative vote of at least 66 2/3% of the outstanding voting stock which is not owned by the interested stockholder.

The three-year prohibition also does not apply to business combinations proposed by an interested stockholder following the announcement or notification of extraordinary transactions involving the corporation and a person who had not been an interested stockholder during the previous three years or who became an interested stockholder with the approval of a majority of the corporation's directors. The term "business combination" is defined generally to include mergers or consolidations between a Delaware corporation and an "interested stockholder," transactions with an "interested stockholder" involving the assets or stock of the corporation or its majority-owned subsidiaries and transactions which increase an interested stockholder's percentage ownership of stock.

The term "interested stockholder" is defined to include any person, other than the corporation and any direct or indirect majority-owned subsidiary of the corporation, that is the owner of 15% or more of the outstanding voting stock of the corporation, or is an affiliate or associate of the corporation and was the owner of 15% or more of the outstanding voting stock of the corporation, at any time within three years immediately prior to the relevant date, or the affiliates and associates of any such person.

Section 203 makes it more difficult for a person who would be an "interested stockholder" to effect various business combinations with a corporation for a three-year period. The provisions of Section 203 may encourage companies interested in acquiring our company to negotiate in advance with our board of directors, because the stockholder approval requirement would be avoided if our board of directors approves either the business combination or the transaction which results in the stockholder becoming an interested stockholder. These provisions also may have the effect of preventing changes in our board of directors and may make it more difficult to accomplish transactions which stockholders may otherwise deem to be in their best interests.

Classified Board

Our amended and restated certificate of incorporation provides that our board of directors will be divided into three classes of directors, with the classes to be as nearly equal in number as possible. As a result, approximately one-third of our board of directors will be elected each year. The classification of directors will have the effect of making it more difficult for stockholders to change the composition of our board. Our amended and restated certificate of incorporation and the bylaws provide that the number of directors will be fixed from time to time exclusively pursuant to a resolution adopted by the board, but must consist of not less than three or more than fifteen directors. Our board of directors is currently fixed at nine members.

Removal of Directors; Vacancies

Under the Delaware General Corporation Law ("DGCL"), unless otherwise provided in our amended and restated certificate of incorporation, directors serving on a classified board may be removed by the stockholders only for cause. Our amended and restated certificate of incorporation and bylaws provide that unless otherwise provided in our stockholders agreement, directors may be

5

removed only for cause and only upon the affirmative vote of holders of at least 80% of the voting power of all the then outstanding shares of stock entitled to vote generally in the election of directors, voting together as a single class. In addition, our amended and restated certificate of incorporation and bylaws also provide that unless otherwise provided in the stockholders agreement, any vacancies on our board of directors will be filled only by the affirmative vote of a majority of the remaining directors, although less than a quorum.

No Cumulative Voting

The DGCL provides that stockholders are not entitled to the right to cumulate votes in the election of directors unless our amended and restated certificate of incorporation provides otherwise. Our amended and restated certificate of incorporation does not expressly provide for cumulative voting.

No Stockholder Action by Written Consent; Calling of Special Meetings of Stockholders

Our amended and restated certificate of incorporation prohibits stockholder action by written consent. It also provides that special meetings of our stockholders may be called only by the chairman of our board, the chief executive officer or secretary at the direction of the board of directors.

Advance Notice Requirements for Stockholder Proposals and Director Nominations

Our bylaws provide that stockholders seeking to nominate candidates for election as directors or to bring business before an annual meeting of stockholders must provide timely notice of their proposal in writing to the corporate secretary.

Generally, to be timely, a stockholder's notice must be received at our principal executive offices not less than 90 days nor more than 120 days prior to the first anniversary date of the previous year's annual meeting. Our bylaws also specify requirements as to the form and content of a stockholder's notice. These provisions may impede stockholders' ability to bring matters before an annual meeting of stockholders or make nominations for directors at an annual meeting of stockholders.

Supermajority Provisions

The DGCL provides generally that the affirmative vote of a majority of the outstanding shares entitled to vote is required to amend a corporation's certificate of incorporation or bylaws, unless the certificate of incorporation requires a greater percentage. Our amended and restated certificate of incorporation provides that the following provisions in the amended and restated certificate of incorporation and bylaws may be amended only by a vote of at least 80% of the voting power of all of the outstanding shares of our stock entitled to vote:

- classified board (the election and term of our directors);
- the removal of directors;
- limited liability of directors;
- indemnification and advancement of expenses by us to our directors, officers, employees or agents;
- the prohibition on stockholder action by written consent;
- the ability to call a special meeting of stockholders being vested solely in our board of directors and the chairman of our board;
- the advance notice requirements for stockholder proposals and director nominations; and
- the amendment provision requiring that the above provisions be amended only with an 80% supermajority vote.

In addition, our amended and restated certificate of incorporation grants our board of directors the authority to amend and repeal our bylaws without a stockholder vote in any manner not inconsistent with the laws of the State of Delaware or our amended and restated certificate of incorporation.

Limitations on Liability and Indemnification of Officers and Directors

The DGCL authorizes corporations to limit or eliminate the personal liability of directors to corporations and their stockholders for monetary damages for breaches of directors' fiduciary duties. Our amended and restated certificate of incorporation includes a provision that eliminates the personal liability of directors for monetary damages for actions taken as a director, except for liability:

- for breach of duty of loyalty;
- for acts or omissions not in good faith or involving intentional misconduct or knowing violation of law;
- under Section 174 of the DGCL (unlawful dividends); or
- for transactions from which the director derived improper personal benefit.

Our amended and restated certificate of incorporation and bylaws provide that we must indemnify our directors and officers to the fullest extent authorized by the DGCL. We are also expressly authorized to advance certain expenses (including attorneys fees and disbursements and court costs) to our directors and officers and carry directors' and officers' insurance providing insurance for our directors, officers and certain employees for some liabilities. We believe that these indemnification provisions and insurance are useful to attract and retain qualified directors and executive officers.

The limitation of liability and indemnification provisions in our amended and restated certificate of incorporation and bylaws may discourage stockholders from bringing a lawsuit against directors for breach of their fiduciary duty. These provisions may also have the effect of reducing the likelihood of derivative litigation against directors and officers, even though such an action, if successful, might otherwise benefit us and our stockholders. In addition, your investment may be adversely affected to the extent we pay the costs of settlement and damage awards against directors and officers pursuant to these indemnification provisions.

There is currently no pending material litigation or proceeding involving any of our directors, officers or employees for which indemnification is sought.

Transfer Agent and Registrar

EquiServe Trust Company, N.A. is the transfer agent and registrar for our common stock.

Listing

Our common stock is listed on the New York Stock Exchange under the symbol "NLC."

Authorized but Unissued Capital Stock

The DGCL does not require stockholder approval for any issuance of authorized shares. However, the listing requirements of the New York Stock Exchange, which would apply so long as our common stock is listed on the New York Stock Exchange, require stockholder approval of certain issuances equal to or exceeding 20% of the then-outstanding voting power or then outstanding number of shares of common stock. These additional shares may be used for a variety of corporate purposes, including future public offerings, to raise additional capital or to facilitate acquisitions.

One of the effects of the existence of unissued and unreserved common stock may be to enable our board of directors to issue shares to persons friendly to current management, which issuance could render more difficult or discourage an attempt to obtain control of our company by means of a merger, tender offer, proxy contest or otherwise, and thereby protect the continuity of our management and possibly deprive the stockholders of opportunities to sell their shares of common stock at prices higher than prevailing market prices.

7

VALIDITY OF THE SHARES

The validity of the issuance of the shares of common stock will be passed upon for us by Simpson Thacher & Bartlett LLP, New York, New York. An investment vehicle comprised of selected partners of Simpson Thacher & Bartlett LLP, members of their families, related parties and others owns an interest representing less than 1% of the capital commitments of funds controlled by one of our large shareholders, The Blackstone Group.

EXPERTS

The consolidated financial statements of Nalco Holding Company at December 31, 2004 and December 31, 2003 and for the year ended December 31, 2004 and for the period from November 4, 2003 through December 31, 2003 (Successor) and the combined financial statements of Ondeo Nalco Group for the year ended December 31, 2002 and for the period from January 1, 2003 through November 3, 2003 (Predecessor), incorporated by reference in this prospectus and registration statement have been audited by Ernst & Young LLP, independent registered public accounting firm, as set forth in their reports thereon, and are incorporated by reference in reliance upon such reports given on the authority of such firm as experts in accounting and auditing.

AVAILABLE INFORMATION

We are required to file annual, quarterly and current reports, proxy statements and other information with the SEC. You may read and copy any documents filed by us at the SEC's public reference room at 100 F Street, N.E., Washington, D.C. 20549. Please call the SEC at 1-800-SEC-0330 for further information on the public reference room. Our filings with the SEC are also available to the public through the SEC's Internet site at <http://www.sec.gov> and through the New York Stock Exchange, 20 Broad Street, New York, New York 10005, on which our common stock is listed.

We have filed with the SEC a registration statement on Form S-3 relating to the securities covered by this prospectus. This prospectus is a part of the registration statement and does not contain all the information in the registration statement. Whenever a reference is made in this prospectus to a contract or other document of the Company, the reference is only a summary and you should refer to the exhibits that are a part of the registration statement for a copy of the contract or other document. You may review a copy of the registration statement at the SEC's public reference room in Washington, D.C., as well as through the SEC's Internet site.

INCORPORATION OF CERTAIN DOCUMENTS BY REFERENCE

The SEC allows us to "incorporate by reference" the information contained in documents that we file with them, which means that we can disclose important information to you by referring you to those documents. The information incorporated by reference is considered to be part of this prospectus and any prospectus supplement. Information in this prospectus supersedes information incorporated by reference that we filed with the SEC prior to the date of this

prospectus, while information that we file later with the SEC will automatically update and supersede this information. We incorporate by reference the documents listed below and any future filings we will make with the SEC under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934.

- Our Annual Report on Form 10-K for the fiscal year ended December 31, 2004;
- Our Quarterly Reports on Form 10-Q for the quarters ended March 31, 2005, June 30, 2005 and September 30, 2005;
- Our Current Reports on Form 8-K filed on January 11, 2005, February 22, 2005, March 1, 2005, May 5, 2005, May 10, 2005, May 11, 2005, May 27, 2005, June 10, 2005, June 30, 2005, August 12, 2005, August 23, 2005, September 1, 2005, September 21, 2005, September 22, 2005, September 27, 2005, October 4, 2005, October 27, 2005, November 15, 2005 and December 8, 2005; and
- All documents filed by us under Sections 13(a), 13(c), 14 or 15(d) of the Securities Exchange Act of 1934 on or after the date of this prospectus and before the termination of this offering.

8

You can request a copy of these filings at no cost, by writing or calling us at the following address:

Nalco Holding Company
1601 West Diehl Road
Naperville, IL 60563
(630) 305-1000
Attention: Corporate Secretary

9

Nalco Holding Company

Common Stock
