NEOSE TECHNOLOGIES INC Form DEF 14A April 07, 2003

Neose Technologies, Inc.

[LOGO]

102 Witmer Road Horsham, Pennsylvania 19044

April 7, 2003

Dear Stockholder:

You are invited to attend the Annual Meeting of Stockholders of Neose Technologies, Inc. on May 13, 2003. You will have the opportunity to ask questions and make comments at the meeting. Enclosed with this letter are your Notice of Annual Meeting of Stockholders, Proxy Statement, Proxy voting card, and 2002 Annual Report to Stockholders.

At this year's meeting, you will be asked to elect nine directors to serve a term of one year each, to ratify the appointment of our independent auditors for fiscal 2003, to increase the number of shares issuable under our Amended and Restated 1995 Stock Option/Stock Issuance Plan, and to increase the number of shares issuable under our Employee Stock Purchase Plan.

I hope that you attend the meeting. Whether or not you plan to be with us, please sign, date, and return your voting card promptly in the enclosed envelope.

Sincerely,

C. Boyd Clarke
President and Chief Executive Officer

Neose Technologies, Inc.

[LOGO]

102 Witmer Road Horsham, Pennsylvania 19044

Notice of Annual Meeting of Stockholders to be held May 13, 2003

To the Stockholders of Neose Technologies, Inc.:

The 2003 Annual Meeting of Stockholders will be held at our offices at 102 Witmer Road, Horsham, Pennsylvania on Tuesday, May 13, 2003 at 9:00 a.m. During the Annual Meeting, stockholders will be asked to:

1. Elect nine directors to serve for a term of one year or until the

election and qualification of their successors;

- 2. Ratify the appointment of our independent auditors for fiscal 2003;
- 3. Approve an amendment to our Amended and Restated 1995 Stock Option/Stock Issuance Plan to increase the number of shares issuable under the plan by 825,000 (which represents 4.8% of the shares outstanding as of March 21, 2003);
- 4. Approve an amendment to our Employee Stock Purchase Plan to increase the number of shares issuable under the plan by 33,000; and
- 5. Transact any other business properly brought before the Annual Meeting.

If you are a stockholder as of March 21, 2003, you may vote at the meeting. The date of mailing this Notice of Meeting and Proxy Statement is on or about April 7, 2003.

By order of the Board of Directors

Debra J. Poul Secretary

#### Proxy Statement

This Proxy Statement and the accompanying proxy card are being mailed, beginning on or about April 7, 2003, to owners of shares of common stock of Neose Technologies, Inc. in connection with the solicitation of proxies by the Board of Directors for our Annual Meeting of Stockholders. This proxy procedure is necessary to permit all stockholders, many of whom are unable to attend the Annual Meeting, to vote. The Board of Directors encourages you to read this document thoroughly and to take this opportunity to vote on the matters to be decided at the Annual Meeting.

#### Contents

About the Meeting: Questions and Answers	2
Governance of the Company Independence of Directors Committees of the Board of Directors Compensation of Directors Continuing Education of Directors Code of Conduct Copies of Referenced Documents	5 5 7 7 8
Relationship with Independent Auditors  Audit Fees  All Other Fees	8
Report of the Audit Committee	10
Stock Ownership of our Directors, Executive Officers and 5% Beneficial Owners	11
Section 16(a) Beneficial Ownership Reporting Compliance	14
Proposal 1Election of Directors	14

Nominees for Election	14
Executive Compensation	17
Summary Compensation Table	17
Employment Agreements	18
Change of Control Agreements	19
Separation and Consulting Agreement	19
Option Grants During 2002	20
Option Exercises and Values for 2002	20
Report of the Compensation Committee	21
Certain Relationships and Related Transaction	23
Common Stock Performance Graph	24
Proposal 2 Ratification of Appointment of Independent Auditors	24
Proposal 3 Amendment to our Amended and Restated 1995 Stock Option/	
Stock Issuance Plan Equity Compensation Plan Information	25 31
Proposal 4 Amendment to our Employee Stock Purchase Plan	32
Requirements for Advance Notification of Nominees and Stockholder Proposals	36

#### About the Meeting: Questions and Answers

#### What am I voting on?

- The election of nine directors for a one-year term or until the election and qualification of their successors.
- The ratification of the appointment of KPMG LLP, certified public accountants, as independent auditors to audit and report on our financial statements for fiscal 2003.
- 3. An amendment to our Amended and Restated 1995 Stock Option/Stock Issuance Plan to increase by 825,000 shares the number of shares issuable under the plan (which represents 4.8% of the shares outstanding as of March 21, 2003).
- 4. An amendment to our Employee Stock Purchase Plan to increase by 33,000 shares the number of shares issuable under the plan.
- 5. Any other business that properly comes before the meeting for a vote.

Who is entitled to vote at the Annual Meeting, and how many votes do they have?

Common stockholders of record at the close of business on March 21, 2003 may vote at the Annual Meeting. Each share has one vote. There were 17,207,766 shares of common stock outstanding on March 21, 2003. From May 3, 2003 through May 13, 2003, you may inspect a list of stockholders eligible to vote. If you would like to inspect the list, please call Debra J. Poul, our Corporate Secretary, at (215) 315-9000 to arrange a visit to our offices.

#### How do I vote?

You must be present, or represented by proxy, at the Annual Meeting in order to vote your shares. Because many of our stockholders are unable to attend the Annual Meeting in person, we send proxy cards to all of our stockholders to enable them to be represented and to vote at the Annual Meeting.

### What is a proxy?

A proxy is a person you appoint to vote on your behalf. If you are unable to attend the Annual Meeting, we are seeking your appointment of proxies so that your shares of common stock may be voted. You must complete and return the

enclosed proxy card to have your shares voted by proxy.

By completing and returning this proxy card, who am I designating as my proxy?

You will be designating C. Boyd Clarke, our President and Chief Executive Officer, Robert I. Kriebel, our Senior Vice President and Chief Financial Officer, and A. Brian Davis, our Vice President, Finance, as your proxies. They may act together or individually on your behalf, and will have the authority to appoint a substitute to act as proxy.

How will my proxy vote my shares?

Your proxy will vote according to the instructions on your proxy card. If you complete and return your proxy card but do not indicate your vote, your proxy will vote "FOR" the election of the nominated slate of directors (see Proposal 1) and "FOR" Proposals 2, 3, and 4. We do not intend to bring any other matter for a vote at the Annual Meeting, and we do not know of anyone else who intends to do so. Your proxies are authorized to vote on your behalf, however, using their best judgment, on any other business that properly comes before the Annual Meeting.

2

How do I vote using my proxy card?

If you do not plan to vote in person at the Annual Meeting, you may vote by mail by returning the enclosed proxy card to us. To vote by mail, simply mark, sign, and date the enclosed proxy card, and return it in the enclosed postage-paid envelope. Alternatively, you may deliver your proxy card to us in person, by facsimile, or by a courier.

How do I revoke my proxy?

You may revoke your proxy at any time before your shares are voted at the Annual Meeting by:

- . Notifying our Corporate Secretary, Debra J. Poul, in writing at 102 Witmer Road, Horsham, PA 19044, that you are revoking your proxy;
- . Executing a new proxy card; or
- . Attending and voting by ballot at the Annual Meeting.

Is my vote confidential?

Yes, only certain employees will have access to your proxy card. All comments remain confidential, unless you ask that your name be disclosed.

Who will count the votes?

An officer of Neose Technologies, Inc. will act as the inspector of election and count the votes.

What constitutes a quorum?

A majority of the 17,207,766 shares outstanding as of the record date, either present or represented by proxy, constitutes a quorum. A quorum is necessary in order to conduct the Annual Meeting. If you choose to have your shares represented by proxy at the Annual Meeting, you will be considered part of the quorum. If a quorum is not present at the Annual Meeting, the stockholders present in person or by proxy may adjourn the meeting to a date when a quorum is present. If an adjournment is for more than 30 days or a new record date is

fixed for the adjourned meeting, we will provide notice of the adjourned meeting to each stockholder of record entitled to vote at the meeting.

What vote is required to approve each proposal?

Election of Directors. For Proposal 1, the election of directors, the nominees will be elected by plurality of the votes cast at the Annual Meeting. You may choose to vote, or withhold your vote, separately for each nominee. A properly executed proxy marked "WITHHOLD AUTHORITY" with respect to the election of one or more directors will not be voted with respect to the director or directors indicated, although it will be counted for the purposes of determining whether there is a quorum.

Other Proposals. For each other proposal, the affirmative vote of the holders of a majority of the shares present in person or by proxy and entitled to vote on the matter will be required for approval. A properly executed proxy marked "ABSTAIN" with respect to any such matter will not be voted, although it will be counted for purposes of determining whether there is a quorum. Therefore, an abstention will have the effect of a negative vote.

If you hold your shares in "street name" through a broker or other nominee, your broker or nominee may not be permitted to exercise voting discretion with respect to some of the matters to be acted on. Thus, if you do not give your broker specific instructions, your shares may not be voted on those matters (so-called "broker non votes") and will not be counted in determining the number of shares necessary for approval. As a result,

3

broker non-votes have no effect on the outcome of the vote on a matter, although the shares represented by "broker non-votes" will be counted in determining whether there is a quorum.

What percentage of our common shares do the directors and officers own?

As of March 14, 2003, our current directors and executive officers beneficially owned approximately 19.1% of our common shares. See the discussion under the heading "Stock Ownership of our Directors, Executive Officers, and 5% Beneficial Owners" on page 11 for more details.

Who is soliciting my proxy, how is it being solicited, and who pays the cost?

Neose Technologies, Inc., on behalf of the Board of Directors, through its directors, officers, and employees, is soliciting proxies primarily by mail. In addition, proxies may also be solicited in person, by telephone, or facsimile. Morrow & Co., Inc., a proxy solicitation firm, will be assisting us for a fee of approximately \$6,500, plus out-of-pocket expenses. We will pay the cost of soliciting proxies. We will also reimburse stockbrokers and other custodians, nominees, and fiduciaries for their reasonable out-of-pocket expenses for forwarding proxy and solicitation material to the owners of our common shares.

When are stockholder proposals for next year's Annual Meeting due?

To be included in the mailing of the Notice of Annual Meeting of Stockholders, Proxy Statement, and Proxy voting card for next year's annual meeting, proposed stockholder proposals must be received between November 10, 2003 and December 9, 2003 by our Corporate Secretary, at 102 Witmer Road, Horsham, PA 19044. You should submit any proposal by a method that permits you to prove the date of delivery to us. See the discussion under the heading "Requirements for Advance Notification of Nominations and Stockholder Proposals" beginning on page 36 for

information regarding certain procedures provided by our By-Laws with respect to stockholder proposals and nominations of directors.

Who are Neose's independent auditors, and will they be represented at the Annual Meeting?

KMPG LLP served as the independent accounting firm auditing our financial statements for 2002, and has been appointed to audit and report on our financial statements for 2003. We expect a representative of KPMG LLP to be present at the Annual Meeting. The representative will have an opportunity to make a statement, if he or she desires, and will be available to answer appropriate questions.

How may I obtain a copy of Neose's Form 10-K?

You may request a copy of our Annual Report on Form 10-K for the year ended December 31, 2002, by writing to our Corporate Secretary at 102 Witmer Road, Horsham, Pennsylvania, 19044 or via e-mail at info@neose.com.

4

#### Governance of the Company

Our business, property and affairs are managed by, or under the direction of, our Board of Directors, in accordance with the General Corporation Law of the State of Delaware and our By-laws. Members of the Board of Directors are kept informed of the Company's business through discussions with the President and Chief Executive Officer and key members of management, by reviewing materials provided to them by management, and by participating in meetings of the Board of Directors and its Committees.

Our founder, Dr. Roth has served as Chairman of the Board of Directors since 1994. Our President and Chief Executive Officer, Mr. Clarke, has been appointed to assume the responsibilities of Chairman of our Board of Directors, in addition to his other responsibilities, beginning on May 13, 2003. Prior to appointing Mr. Clarke as Chairman, the Corporate Governance Committee considered whether the positions of Chairman and Chief Executive Officer should be held by different people. The Committee concluded that it was appropriate at this stage of the Company's development to have Mr. Clarke hold both of these positions, while recognizing the need to reevaluate this decision over time. As noted below, the Chairman of the Corporate Governance Committee performs several important independent functions relating to the governance of the Company.

During 2002, the Board of Directors held nine meetings and the Committees held a total of 15 meetings. The average attendance of Board members at meetings of the Board of Directors and Committees on which they served was 93%.

We have been reviewing our corporate governance policies and practices by comparing our policies and practices with those suggested by various groups or authorities active in evaluating or setting best practices for corporate governance of public companies. Based on this review, we have adopted, and will continue to adopt, changes that the Board of Directors believes are the best corporate governance policies and practices for the Company. We have adopted changes and will continue to adopt changes, as appropriate, to comply with the Sarbanes-Oxley Act of 2002 and rule changes made by the Securities and Exchange Commission and NASDAO.

Independence of Directors

In December 2002, the Board of Directors adopted a set of Corporate Governance Principles, addressing, among other things, standards for evaluating

the independence of the Company's directors. The full text of these Principles can be found on our website at www.neose.com (under the section entitled "About Neose").

According to these Principles, no director is considered "independent" unless the Board has affirmatively determined that the director has no material relationship with the Company (either directly, or as a partner, stockholder or officer of an organization that has such a relationship with the Company). Pursuant to the Principles, the Board undertook its annual review of director independence in December 2002. After considering all relevant facts and circumstances, the Board affirmatively determined that all of the directors nominated for election at the Annual Meeting are independent of the Company under the standards set forth in the Corporate Governance Principles, with the exception of Mr. Clarke and Dr. Roth. The Board also determined that Mr. Neff, who is retiring from the Board, did not meet the standards of independence set forth in the Principles.

Committees of the Board of Directors

The Board of Directors has four Committees: the Audit Committee, the Compensation Committee, the Corporate Governance Committee, and the Scientific Review Committee. Lowell E. Sears (Chairman), William F. Hamilton, Ph.D. and Mark H. Rachesky, M.D. are the current members of the Audit Committee.

5

Douglas J. MacMaster, Jr. (Chairman), L. Patrick Gage, Ph.D., and Elizabeth H. S. Wyatt are the current members of the Compensation Committee. William F. Hamilton, Ph.D. (Chairman), Douglas J. MacMaster, Jr., Lowell E. Sears, and Elizabeth H. S. Wyatt are the current members of the Corporate Governance Committee. L. Patrick Gage, Ph.D. (Chairman) and Stephen A. Roth, Ph.D. are the current members of the Scientific Review Committee.

All members of the Audit, Compensation and Corporate Governance Committees are required to be "independent" as that term is defined in the Corporate Governance Principles adopted by the Board of Directors in December 2002.

Audit Committee

The Audit Committee consists of three directors, all of whom are "independent" as defined in our Corporate Governance Principles and under the rules of the Securities and Exchange Commission and NASDAQ. In addition, at least one member of the Audit Committee qualifies as an "audit committee financial expert" as defined in SEC Release No. 33-8177 (January 23, 2003). The Audit Committee operates pursuant to a charter, which is attached as Appendix A to this Proxy Statement and which can be viewed on our website at www.neose.com (under "About Neose"). The Report of the Audit Committee is set forth on page 10 of this Proxy Statement.

Compensation Committee

The Compensation Committee consists of three non-employee directors, all of whom are "independent," as defined in our Corporate Governance Principles, and are also "Non-Employee Directors" as defined in SEC Rule 16(b)-3 and "Outside Directors" as defined under the treasury regulations promulgated under Section 162(m) of the Internal Revenue Code. The Compensation Committee determines the compensation of the Chief Executive Officer, and reviews and takes action on the recommendation of the Chief Executive Officer as to the appropriate compensation of other officers. The Compensation Committee is primarily responsible for the administration of our Amended and Restated 1995 Stock Option/Stock Issuance

Plan, under which option grants and stock issuances may be made to all employees, including executive officers, as well as non-employee directors and consultants. There are no compensation committee interlocks between our Company and any other entity involving our Company's or such other entity's executive officers or board members. The Report of the Compensation Committee is set forth on page 21 of this Proxy Statement.

#### Corporate Governance Committee

The Corporate Governance Committee consists of four independent directors, as that term is defined in our Corporate Governance Principles. The Company's Corporate Governance Committee operates pursuant to a charter, which was filed with the SEC and can be viewed on our website at www.neose.com (under "About Neose" or "SEC Filings"). The purpose of the Corporate Governance Committee is to: (1) identify individuals qualified to become Board members and recommend to the Board the director nominees for each annual meeting of the stockholders; (2) recommend to the Board any changes in the Company's Corporate Governance Principles; (3) lead the Board in its annual review of the Board's performance, and make recommendations to the Board regarding Board organization, membership, function and effectiveness, as well as committee structure, membership, function and effectiveness; (4) recommend to the Board director nominees for each Board Committee; (5) review the Company's efforts to promote diversity among directors, officers, employees and contractors; (6) ensure an orientation for all directors; and (7) perform such other functions as are allocated to it under the Corporate Governance Principles. The Chairman of our Corporate Governance Committee, now Dr. Hamilton, chairs the executive sessions of the Board and otherwise functions as our lead independent director.

6

Under our By-laws, nominations for director may be made only by the Board of Directors or a Committee of the Board, or by a stockholder entitled to vote who delivers notice along with the additional information and materials required by the By-laws to our Corporate Secretary not less than 120 nor more than 150 days prior to the first anniversary of the date of the proxy statement mailed to stockholders in connection with the preceding year's annual meeting. For our annual meeting in the year 2004, we must receive this notice on or after November 10, 2003 and on or before December 9, 2003. You can obtain a copy of the By-law provision by writing to our Corporate Secretary, 102 Witmer Road, Horsham, PA 19044. A copy of our By-laws has been filed with the Securities and Exchange Commission as an exhibit to our Quarterly Report on Form 10-Q filed on November 13, 2002.

## Scientific Review Committee

The Scientific Review Committee consists of one independent director, as that term is defined in our Corporate Governance Principles, and our founder, Dr. Roth, who is not independent. The Scientific Review Committee reviews and evaluates the major research and development programs being conducted by the Company and determines whether these research and development activities prudently support our overall business objectives and strategies. The Scientific Review Committee also reviews major trends in the marketplace and assesses technologies that we may seek to acquire.

#### Compensation of Directors

Directors who are also Neose employees receive no additional compensation for serving as a director or as a member of any Committee of the Board. Under our standard arrangements, which are currently under review, each non-employee director other than Dr. Roth receives annually a retainer of \$14,000, which may

be applied, in whole or in part, toward the acquisition of an option to purchase shares of our common stock. Upon initial election or appointment to the Board of Directors, each non-employee director receives an option to purchase 30,000 shares of our common stock, and upon re-election to the Board, each non-employee director other than Dr. Roth receives an option to purchase 10,000 shares of our common stock. Each automatic option grant has an exercise price equal to the fair market value on the date of grant. Each automatic grant is immediately exercisable, and has a term of ten years, subject to earlier termination, following the director's cessation of service on the Board of Directors. Any shares purchased upon exercise of the option are subject to repurchase should the director's service as a non-employee director cease prior to vesting of the shares. The initial automatic option grant of 30,000 shares vests in successive equal, annual installments over the director's initial four-year period of Board service. Each annual automatic option grant vests upon the director's completion of one year of service on the Board of Directors, as measured from the grant date. Each outstanding option vests immediately, however, upon certain changes in the ownership or control of the Company.

Non-employee directors are also compensated for their services at each meeting of the Board or Committees on which they serve, at the following rates: \$2,500 for Board meetings attended in person; \$2,000 (\$2,500 for the Chairman) for Committee meetings attended in person; and \$1,000 for telephonic meetings of the Board or a Committee lasting longer than 30 minutes.

All Board members are reimbursed for their reasonable travel expenses incurred to attend meetings of the Board or Committees of the Board on which they serve.

Continuing Education of Directors

The Company is committed to supporting the continuing education of our directors on relevant matters. During 2002, our new director, Ms. Wyatt, attended the Directors' Summit presented by the State of Wisconsin Investment Board at our expense. This annual conference, which is sponsored by institutional

7

investors, focuses on current corporate governance issues. We plan to support the attendance of our other new director, Dr. Gage, at this, or a similar, conference in 2003.

Code of Conduct

We have a Code of Business Conduct and Ethics, which can be viewed on our website at www.neose.com (under "About Neose"). We require all employees to adhere to this Code in addressing the legal and ethical issues encountered in conducting their work. The Code of Business Conduct and Ethics requires that our employees avoid conflicts of interest, comply with all laws and other legal requirements, conduct business in an honest and ethical manner, and otherwise act with integrity and in the Company's best interest. During 2002, all of our employees were required to certify that they reviewed and understood this Code.

The Code of Business Conduct and Ethics includes procedures for reporting violations of the Code, which are applicable to all employees. The Sarbanes-Oxley Act of 2002 requires companies to have procedures to receive, retain and treat complaints received regarding accounting, internal accounting controls or auditing matters and to allow for the confidential and anonymous submission by employees of concerns regarding questionable accounting or auditing matters. The Code of Business Conduct and Ethics also includes these

required procedures.

Copies of Referenced Documents.

Copies of the documents referred to above that appear on our website are also available upon request by any stockholder addressed to our Corporate Secretary, 102 Witmer Road, Horsham, PA 19044.

Relationship with Independent Auditors

The Audit Committee has reappointed KMPG LLP, certified public accountants, to audit and report on our financial statements for 2003.

In making its recommendation to ratify the appointment of KPMG LLP as the Company's independent auditors for the fiscal year beginning January 1, 2003, the Audit Committee considered whether KPMG LLP's provision of services other than audit services are compatible with maintaining independence of our public accountants and auditors. The Audit Committee reviewed the fees described below for non-audit services and believes such fees are compatible with the independence of KPMG LLP.

Audit Fees

The Company has agreed to pay KPMG LLP a total of \$65,660 for professional services for the audit of our annual financial statements for 2002 and for the review of our interim financial statements, which are included in our Quarterly Reports on Form 10-Q for 2002.

All Other Fees

In addition to its audit fees, KPMG LLP has billed the Company a total of \$19,850 for professional services rendered for all services other than Audit Fees. These other services include (1) \$16,350 for other accounting, audit and tax services related to 2002, and (2) \$3,500 for completion of our 2001 tax returns. We did not engage KPMG LLP during 2002 to provide professional services with respect to financial information systems design and implementation as described in Paragraph (c) (4) (ii) of Rule 2-01 of Regulation S-X.

8

KPMG Representatives at Annual Meeting

We expect that representatives of KPMG LLP will be present at the Annual Meeting. They will be given the opportunity to make a statement if they desire to do so, and they will be available to respond to appropriate questions after the meeting.

Information Relating to Arthur Andersen LLP

On April 29, 2002, the Board of Directors decided to no longer engage Arthur Andersen LLP as our independent auditors and engaged KPMG LLP to serve as our independent auditors to audit our financial statements for the fiscal year 2002.

Arthur Andersen's reports on the Company's consolidated financial statements for each of the years ended 2001 and 2000 did not contain an adverse opinion or disclaimer of opinion, nor were they qualified or modified as to uncertainty, audit scope or accounting principles.

During the years ended December 31, 2001 and 2000 and through the date of

this proxy statement, there were no disagreements with Arthur Andersen on any matter of accounting principle or practice, financial statement disclosure, or auditing scope or procedure which, if not resolved to Arthur Andersen's satisfaction, would have caused them to make reference to the subject matter in connection with their report on our consolidated financial statements for such years; and there were no reportable events as defined in Item 304(a)(l)(v) of Regulation S-K.

During the years ended December 31, 2001 and 2000 and through the date of the Board's decision, we did not consult KPMG LLP with respect to the application of accounting principles to a specified transaction, either completed or proposed, or the type of audit opinion that might be rendered on our consolidated financial statements, or any other matters or reportable events as set forth in Items 304(a)(2)(i) and (ii) of Regulation S-K.

The following additional information is provided as required by the Securities and Exchange Commission.

- . Audit Fees. The aggregate fees billed by Arthur Andersen LLP for professional services for the 2001 audit and for review of the Company's financial statements included in our Quarterly Reports on Form 10-Q for 2001 totaled \$45,000.
- . Financial Information Systems Design and Implementation Fees. We did not engage Arthur Andersen LLP during 2001 to provide professional services with respect to financial information systems design and implementation as described in Paragraph (c)(4)(ii) of Rule 2-01 of Regulation S-X.
- . All Other Fees. The aggregate fees billed by Arthur Andersen LLP for all other services with respect to 2001, including tax related services, totaled \$18,000.

After consideration, the Audit Committee determined that the provision by Arthur Andersen LLP of professional services not related to the audit of the financial statements referred to above and not related to the reviews of the interim financial statements referred to above was compatible with maintaining the independence of Arthur Andersen LLP.

9

### Report of the Audit Committee

The following Report of the Audit Committee, the Report of the Compensation Committee, and the Stock Performance Graph shall not be deemed incorporated by reference into any other Company filing under the Securities Act of 1933 or the Securities Exchange Act of 1934, except to the extent specifically incorporated by reference therein by the Company.

The Audit Committee of the Board of Directors is comprised of directors who meet the existing NASDAQ independence standards as well as the heightened standards for independence included in the NASDAQ corporate governance proposals and the Company's Corporate Governance Principles. The Chairman of the Audit Committee qualifies as an "audit committee financial expert" as defined in SEC Release No. 33-8177 (January 23, 2003). The Audit Committee operates under a written charter adopted by the Board of Directors, which was reviewed and revised in September 2002 and which is attached as Appendix A to this Proxy Statement.

The Audit Committee met with management during the year to consider the adequacy of the Company's internal controls and the objectivity of its financial reporting. The Audit Committee discussed these matters with the Company's

independent auditors and with appropriate Company financial personnel. The Audit Committee also discussed with the Company's senior management and independent auditors the process used for certifications by the Company's Chief Executive Officer and Chief Financial Officer, which is required by the Securities and Exchange Commission ("SEC") and the Sarbanes-Oxley Act of 2002 for certain of the Company's filings with the SEC.

The Audit Committee met eight times during 2002. The Committee schedules its meetings with a view to ensuring that it devotes appropriate attention to all of its responsibilities. The Committee's meetings include, whenever appropriate, executive sessions with the Company's independent auditors without the presence of the Company's management.

Management is responsible for the financial reporting process, including the system of internal controls, and for the preparation of financial statements in accordance with generally accepted accounting principles. KPMG LLP, the Company's independent auditors, audited the annual financial statements prepared by management, expressed an opinion as to whether those financial statements fairly present the financial position, results of operations and cash flows of the Company in conformity with generally accepted accounting principles, and discussed with the Audit Committee any issues they believe should be raised with the Audit Committee. Our responsibility is to monitor and review these processes. We are not professionally engaged in the practice of accounting or auditing. We rely, without independent verification, on the information provided to us and on the representations made by management and the independent auditors.

As part of its oversight of the Company's financial statements, the Committee reviewed and discussed the Company's audited financial statements with its independent auditors for the relevant periods with and without management present. During fiscal 2002, management advised the Committee that each set of financial statements reviewed had been prepared in accordance with generally accepted accounting principles, and reviewed significant accounting and disclosure issues with the Committee. These reviews included discussion with the outside auditors of matters required to be discussed by Statement on Auditing Standards No. 61, Communication with Audit Committees, as amended, by the Auditing Standards Board of the American Institute of Certified Public Auditors. The Audit Committee has also received the written disclosures and letter from KPMG LLP required by Independence Standards Board No. 1, Independence discussions with Audit Committees, and has discussed with KPMG LLP matters relating to its independence.

10

Based on the reviews and discussions referred to above, we recommended to the Board that the financial statements referred to above be included in our Annual Report on Form 10-K for the year ended December 31, 2002.

Audit Committee of the Board of Directors

Lowell E. Sears, Chairman William F. Hamilton, Ph.D. Mark H. Rachesky, M.D.

Stock Ownership of our Directors, Executive Officers, and 5% Beneficial Owners

The following table shows information known to us about beneficial ownership (as defined under the regulations of the Securities and Exchange

Commission) of our common stock by:

- Each person we know to be the beneficial owner of at least five percent of our common stock;
- Each current director (eight of whom are nominees for re-election and one of whom is not);
- . Our new director nominee;
- . Each executive officer named in our Summary Compensation Table; and
- . All directors and executive officers as a group.

Unless otherwise indicated, the information is as of March 14, 2003.

On March 14, 2003, there were 17,207,766 shares of our common stock outstanding. To calculate a stockholder's percentage of beneficial ownership, we must include in the numerator and denominator those shares underlying options that a person has the right to acquire upon the exercise of stock options within 60 days after March 14, 2003. Options held by other stockholders are disregarded in this calculation. Therefore, the denominator used in calculating beneficial ownership among our stockholders may differ. Unless we have indicated otherwise, each person named in the table below has sole voting power and investment power for the shares listed opposite such person's name.

		Number of Shares of Common Stock Beneficially
Name of Beneficial Owner		Owned
Eastbourne Capital Management, LLC(1) 1101 Fifth Avenue Suite 160		
San Rafael, CA 94901	•	2,933,166
Kopp Investment Advisors, Inc.(2) 7701 France Avenue South Suite 500		
Edina, MN 55455	•	2,284,384
George W. Haywood(3) c/o Cronin & Vris, LLP 380 Madison Avenue, 24/th/ Floor		
New York, NY 10017	•	1,588,866
11		
Domain Partners V, L.P.(4) DP V Associates, L.P. One Palmer Square		
Princeton, NJ 08542	949,766	5.5%
Lindsay A. Rosenwald, M.D.(5) c/o Paramount Capital, Inc. 787 7/th/ Avenue		
New York, NY 10019	917,280	5.3%

Directors, New Director Nominee and Named Executive Officers

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Mark H. Rachesky, M.D.(6)(7) c/o MHR Fund Management LLC 40 West 57/th/ Street, 33/rd/ Floor New York, NY 10019	791 <b>,</b> 648	4.6%
Stephen A. Roth, Ph.D.(6)(8)	612,224	3.5%
P. Sherrill Neff(6)(9)	499,396	2.8%
C. Boyd Clarke(6)	170,617	1.0%
Douglas J. MacMaster, Jr.(6)	100,990	*
William F. Hamilton, Ph.D.(6)(10)	85,152	*
David A. Zopf, M.D.(6)	83 <b>,</b> 097	*
Lowell E. Sears(6)(11)	65 <b>,</b> 956	*
Marjorie A. Hurley, Pharm.D.(6)	60,885	*
George J. Vergis, Ph.D.(6)	44,360	*
Debra J. Poul(6)	14,980	*
Elizabeth Wyatt(6)	9,505	*
Patrick L. Gage, Ph.D	3,500	*
Brian H. Dovey(12)	0	*
All current directors, the new director nominee, and		
executive officers as a group (17 persons)(6)	3,546,155	19.1%

<sup>\*</sup> Less than one percent.

- (1) According to a Schedule 13G/A filed February 13, 2003: (i) Eastbourne Capital Management, LLC ("Eastbourne"), is a registered investment advisor whose clients (including Black Bear Offshore Master Fund Limited ("BB Offshore") and Black Bear Fund I ("BB"), have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the reported shares; (ii) Eastbourne filed the Schedule 13G/A jointly with Richard Jon Barry ("Mr. Barry"), who is the controlling member of Eastbourne, BB Offshore and BB; (iii) Eastbourne and Mr. Barry comprise a group, but they disclaim membership in a group with any other person or persons; (iv) BB Offshore and BB filed the Schedule 13G/A jointly with the other filers but not as a group, and each expressly disclaims membership in a group; (v) each of Eastbourne, Mr. Barry, BB Offshore and BB disclaimed beneficial ownership of the reported shares except to the extent of their pecuniary interest therein. The foregoing table also includes the following shares purchased on February 13, 2003: 301,308 shares purchased by BB Offshore, 98,928 shares purchased by BB, and 16,430 purchased by Black Bear Fund II, L.L.C.
- (2) According to a Schedule 13G filed January 16, 2003: (i) Kopp Investment Advisors, Inc. ("KIA") is an investment adviser registered under the Investment Advisers Act of 1940, KIA is wholly owned by Kopp Holding Company ("KHC"), and KHC is wholly owned by Mr. Leroy C. Kopp ("Mr. Kopp"); (ii) KIA reported sole voting power over 923,000 shares, sole dispositive power over 725,000 shares and shared dispositive power over 1,951,051; (iii) KHC reported beneficial ownership of 1,951,051 shares; (iv) Mr. Kopp reported beneficial

12

ownership of 2,088,551 shares, of which Mr. Kopp reported sole voting and dispositive power over 137,500 shares; (v) of the shares beneficially owned by KIA, KHC, and Mr. Kopp, 1,926,051 are held in a fiduciary or representative capacity. The foregoing table also includes 333,333 shares

purchased by Kopp Emerging Growth Fund on February 13, 2003.

- (3) In a Schedule 13G filed on January 8, 2003, Mr. Haywood reported sole voting and dispositive power over 1,398,000 shares and shared voting and dispositive power over 24,200 shares, including 8,200 shares owned by his spouse and 16,000 shares owned jointly with his mother. The foregoing table also includes 166,666 shares purchased by Mr. Haywood on February 13, 2003.
- (4) According to a Schedule 13D filed on February 24, 2003: (i) each of Domain Partners V, L.P., a Delaware limited partnership ("DP V"), and DP V Associates, a Delaware limited partnership ("DP V A"), are limited partnerships whose principal business is that of a private investment partnership; (ii) the sole general partner of DP V and DP V A is One Palmer Square Associates V, L.L.C., a Delaware limited liability company ("OPSA V"), whose principal business is that of acting as the general partner of DP V and DP V A; (iii) James C. Blair, Brian H. Dovey, Jesse I. Treu, Kathleen K. Schoemaker, Arthur J. Klausner and Robert J. More are the managing members of OPSA V (the "Managing Members"); (iv) the Managing Members may be deemed to share the power to vote or direct the voting of and to dispose or to direct the disposition of the shares owned by DP V and DP V A; (v) the Managing Members disclaim beneficial ownership of the shares owned by DP V and DP V A other than the shares he or she may own directly, if any, or by virtue of his or her indirect pro rata interest, as a Managing Member of OPSA V, in the shares owned by DP V and/or DP V A; (vi) DP V reported sole voting and dispositive power over 927,848 shares; (vii) DP V A reported sole voting and dispositive power over 21,918 shares; and (viii) DP V and DP V A may constitute a "group" within the meaning of Section 13(d)(3) of the Securities Act of 1934, as amended.
- (5) According to a Schedule 13G/A filed on February 19, 2003: (i) Dr. Rosenwald is an investment banker, venture capitalist, fund manager and sole stockholder and chairman of Paramount Capital Asset Management, Inc., a Delaware corporation; (ii) Dr. Rosenwald reported sole voting and dispositive power over 396,111 shares and shared voting and dispositive power over 521,169 shares; and (iii) the reported shares include: (a) 521,169 shares of which Paramount Capital may be deemed the owner; (b) 152,157 shares of which Aries Domestic may be deemed the beneficial owner; (c) 32,534 shares of which Aries II may be deemed the beneficial owner; (d) 336,478 shares of which Aries Fund may be deemed the beneficial owner; and (e) 31,785 shares which Dr. Rosenwald has the right to purchase under options exercisable within 60 days.
- (6) Includes the following shares of common stock issuable under stock options that are exercisable within 60 days after March 14, 2003: Rachesky 36,258 shares; Roth 398,333 shares; Neff 403,040 shares; Clarke 135,417 shares; MacMaster 71,139 shares; Hamilton 26,402 shares; Zopf 79,791 shares; Sears 44,632 shares; Hurley 54,958 shares; Vergis 42,917 shares; Poul 8,125 shares; Wyatt 9,505 shares; and all current directors, the new director nominee, and executive officers as a group 1,380,491 shares.
- (7) Includes (i) 210,526 shares of common stock held by MHR Capital Partners LP, (ii) 502,759 shares of common stock held by MRL Partners LP, and (iii) 42,105 shares of common stock held by OTT LLC. Dr. Rachesky is the managing member of MHR Advisors LLC, which is the General Partner of MHR Capital Partners and MRL Partners. Dr. Rachesky is the managing member of OTT LLC. Dr. Rachesky may be deemed to have voting and investment control over the shares held by MHR Capital Partners, MRL Partners, and OTT LLC. Dr. Rachesky disclaims beneficial ownership of the shares held by MHR Capital Partners, MRL Partners, and OTT LLC, except to the extent of his pecuniary interest in the funds.

- (8) Includes 100,000 shares of common stock owned by Dr. Roth's wife and 15,758 shares of common stock owned by Dr. Roth's daughter. Dr. Roth disclaims beneficial ownership of the shares held by his wife and daughter.
- (9) Includes 1,000 shares of common stock owned by Mr. Neff's wife. Mr. Neff disclaims beneficial ownership of the shares held by his wife.
- (10) Excludes 43,070 shares of common stock which are exercisable within 60 days under options that were transferred by Dr. Hamilton in December 2002 pursuant to a domestic relations order. Dr. Hamilton disclaims beneficial interest in these transferred options.

13

- (11) Includes 21,324 shares of common stock owned by the Sears Family Living Trust, of which Mr. Sears is trustee.
- (12) Mr. Dovey is a Managing Member of One Palmer Square Associates V, L.L.C., which is the general partner of Domain Partners V, L.P. ("DP V") and DP V Associates, L.P. ("DP V A"), and is nominated for election as a director of the Company. Mr. Dovey disclaims beneficial ownership of the shares held by DP V and DP V A, except to the extent of his pecuniary interest in such shares. See note (4) above for additional information about the beneficial ownership of shares held by DP V and DP V A.

Section 16(a) Beneficial Ownership Reporting Compliance

Based solely upon a review of reports of stock ownership (and changes in stock ownership) and written representations received by us, we believe that our directors and executive officers met all of their filing requirements under Section 16(a) of the Securities and Exchange Act of 1934 during the year ended December 31, 2002.

Proposal 1 -- Election of Directors

Nominees for Election

The Board of Directors currently has nine members. P. Sherrill Neff, a director since 1994 and a former officer of the Company, will retire from the Board on May 13, 2003. We thank him for his years of valued service. The Board of Directors has determined that the Board will remain fixed at nine directors at the Annual Meeting on May 13, 2003. Each member, other than Mr. Neff, has been nominated for re-election, and has agreed, if elected, to serve a one-year term or until the election and qualification of his or her successor. Upon the recommendation of the Corporate Governance Committee, the Board has also nominated Brian H. Dovey for election to the Board. If any nominee is unable to stand for election, which circumstance we do not anticipate, the Board may provide for a lesser number of directors or designate a substitute. In the latter event, shares represented by proxies may be voted for a substitute nominee.

If a quorum is present at the Annual Meeting, then a plurality of all votes cast at the meeting will be sufficient to elect a director. There is no cumulative voting in the election of directors.

The Board of Directors recommends a vote "FOR" each of the nominees.

C. Boyd Clarke, 54, has served on our Board, and as President and Chief Executive Officer, since March 2002. From December 1999 through March 2002, Mr. Clarke was President and Chief Executive Officer of Aviron, a biotechnology

company developing vaccines, which was acquired by MedImmune, and was also Chairman from January 2001 through March 2002. From 1998 through 1999, Mr. Clarke was Chief Executive Officer and President of U.S. Bioscience, Inc., a biotechnology company focused on products to treat cancer, which also was acquired by MedImmune. Mr. Clarke served as President and Chief Operating Officer of U.S. Bioscience, Inc. from 1996 to 1998. From 1977 to 1996, Mr. Clarke held a number of positions at Merck & Co., Inc., including being the first President of Pasteur-Merieux MSD, and most recently as Vice President of Merck Vaccines. Mr. Clarke has a B.S. in biochemistry, and an M.A. in history from the University of Calgary. Mr. Clarke also serves on the Board of Trustees of the Textile Museum in Washington, D.C.

Brian H. Dovey, 61, is nominated to serve on our Board for the first time this year. He is a managing member of Domain Associates, L.L.C., a private venture capital management firm focused on life sciences, and has served in this or similar capacities with the firm since 1988. He has served as Chairman of

14

three companies and on the Board of Directors of some 20 additional companies, including Align Technology, Inc. and Cardiac Science, Inc. Prior to joining Domain, Mr. Dovey spent six years at Rorer Group, Inc. (now Aventis) and as President (1986 to 1988) was the primary architect of this Fortune 500 company's strategic shift to pharmaceuticals resulting in a doubling of annual sales to approximately \$1 billion. Previously, he was President of Survival Technology, Inc., a start-up medical products company whose sales growth placed it in the top ten of the Inc 100. He also held management positions with Howmedica, Inc., Howmet Corporation, and New York Telephone. Mr. Dovey has served as both President and Chairman of the National Venture Capital Association and is on the Board of Trustees for the Coriell Institute, the Wistar Institute and the Burnham Institute. Mr. Dovey received his B.A. from Colgate University and an M.B.A. degree from the Harvard Business School.

L. Patrick Gage, Ph.D., 60, has served on our Board since October 2002. Dr. Gage is Chairman of Compound Therapeutics, a private biotechnology company, and Chairman of the Dublin (IE) Molecular Medicine Centre. He is also an advisor to the Life Sciences Research Foundation, Perkin Elmer, Inc. and Warburg Pincus LLC. Dr. Gage served as Senior Vice President, Science and Technology, at Wyeth from 2001 to 2002, and as President of Wyeth Research from 1998 to 2002. Prior to Wyeth, Dr. Gage held positions of increasing responsibility at Genetics Institute, Inc. from 1989 to 1998, culminating with his service as President after the company was acquired by Wyeth. He also spent 18 years at Hoffmann-La Roche, Inc. in various scientific and management positions. Dr. Gage serves as a director of the Biotechnology Institute and the Philadelphia Orchestra Association. Dr. Gage has a B.S. in physics from Massachusetts Institute of Technology and a Ph.D. from the University of Chicago.

William F. Hamilton, Ph.D., 63, has served on our Board since 1991. Dr. Hamilton has served on the University of Pennsylvania faculty since 1967, and is the Landau Professor of Management and Technology, and Director of the Jerome Fisher Program in Management and Technology at The Wharton School and the School of Engineering and Applied Science. He serves as a director of Digital Lightwave, Inc., a publicly-held manufacturer of telecommunications test equipment. Dr. Hamilton received his B.S. and M.S. in chemical engineering and his M.B.A. from the University of Pennsylvania, and his Ph.D. in applied economics from the London School of Economics.

Douglas J. MacMaster, Jr., 72, has served on our Board since 1993. Mr. MacMaster served as Senior Vice President of Merck & Co., Inc. from 1988 to 1992, where he was responsible for worldwide chemical and pharmaceutical

manufacturing, the Agvet Division, and the Specialty Chemicals Group. From 1985 to 1988, Mr. MacMaster was President of the Merck Sharp Dohme Division of Merck. Mr. MacMaster serves as a director of the following publicly-held companies: Stratton Mutual Funds, and Martek Biosciences Corp., a biological products manufacturing company. He received his B.A. from St. Francis Xavier University, and his J.D. from Boston College Law School.

Mark H. Rachesky, M.D., 44, has served on our Board since 1999. Dr. Rachesky is the founder and President of MHR Fund Management LLC and affiliates, investment managers of various private investment funds that invest in inefficient market sectors, including special situation equities and distressed investments. From 1990 through June 1996, Dr. Rachesky was employed by Carl C. Icahn, initially as a senior investment officer and for the last three years as sole Managing Director of Icahn Holding Corporation, and acting chief investment advisor. Dr. Rachesky is currently on the Board of Directors of Samsonite Corporation and Keryx Biopharmaceuticals, Inc. Dr. Rachesky is a graduate of Stanford University School of Medicine, and Stanford University School of Business. Dr. Rachesky graduated from the University of Pennsylvania with a major in Molecular Aspects of Cancer.

Stephen A. Roth, Ph.D., 60, has served on our Board since 1989, and as Chairman from 1994. Dr. Roth is President and Chief Executive Officer of Immune Control, Inc. He co-founded Neose, served as Chief Executive Officer from August 1994 until March 2002, and now serves as a consultant. From 1992 until August 1994, he served as Senior Vice President, Research and Development and Chief Scientific

15

Officer. Dr. Roth was on the faculty of the University of Pennsylvania from 1980 to 1994, and was Chairman of Biology from 1982 to 1987. Dr. Roth received his A.B. in biology from The Johns Hopkins University, and his Ph.D. in developmental biology from the Case Western Reserve University. He completed his post-doctorate training in carbohydrate chemistry at The Johns Hopkins University.

Lowell E. Sears, 52, has served on our Board since 1994. He has been a private investor involved in portfolio management and life sciences venture capital since April 1994. From 1988 until April 1994, Mr. Sears was Chief Financial Officer of Amgen Inc., a pharmaceutical company, and from 1992 until 1994, he also served as Senior Vice President responsible for the Asia-Pacific region. Mr. Sears is a director of Techne Corp., which is a publicly-held biotechnology company. Mr. Sears received his B.A. in economics from Claremont McKenna College, and his M.B.A. from Stanford University.

Elizabeth H.S. Wyatt, 55, has served on our Board since May 2002. From 1980 through December 2000, Ms. Wyatt held a variety of positions at Merck & Co., Inc., most recently as Merck's Vice President, Corporate Licensing, heading Merck's worldwide product and technology acquisition activities. Prior to joining Merck in 1980, Ms. Wyatt was a consultant and an academic administrator, responsible for the Harvard Business School's first formal marketing of its executive education programs. She currently serves on the Boards of Directors of MedImmune, Inc. and ARIAD Pharmaceuticals, and on the Board of Trustees of Randolph-Macon College. Ms. Wyatt received her B.A., magna cum laude, from Sweet Briar College, an M. Ed. in counseling psychology from Boston University, and an M.B.A. with honors from Harvard University.

How are directors nominated?

The Board of Directors has nominated each current director to stand for

re-election based upon the recommendations of the Corporate Governance Committee. One of our directors, Dr. Rachesky, was nominated in accordance with an agreement by the Company to use its best efforts to cause the Board to nominate the nominee of MHR Capital Partners for election as a Board member, as long as MHR Capital Partners or its affiliates own at least 200,000 shares of Neose common stock. See the discussions under the headings "Corporate Governance Committee" and "Requirements for Advance Notification of Nominations and Stockholder Proposals" beginning on pages 6 and 36, respectively, for information about procedures for stockholder nomination of directors.

How many Board and Committee Meetings were held during 2002?

During 2002, the Board of Directors held nine meetings, the Audit Committee held eight meetings, the Compensation Committee held five meetings, and the Corporate Governance Committee held two meetings. Each director attended at least 75 percent of the total number of meetings of the Board and Committees on which he or she served, except Dr. Rachesky.

16

#### Executive Compensation

Summary Compensation Table

The following table provides information about all compensation earned in 2002, 2001, and 2000 by the individuals who served as Chief Executive Officer during 2002, and the four other most highly compensated executive officers during 2002.

				Compensation
		Annual Comp	Shares Underlying	
Name and Principal Position	Year		Bonus	Options (#)
C. Boyd Clarke(1) President and Chief Executive Officer	2002	\$ 339,231	\$ 254,423	750,000
Stephen A. Roth(3) Chairman and Former Chief Executive Officer		79,245 294,866 274,294		 50,000 50,000
David A. Zopf Executive Vice President	2002 2001 2000	240,413 200,136 180,303	45,021	•
Debra J. Poul(6) Senior Vice President and General Counsel		213,333 144,933 102,462	20,925	85,000 7,500 10,000
George J. Vergis(7) Senior Vice President, Business and Commercial Development		220,500 93,154	•	35,000 180,000

Long-term

Marjorie A. Hurley	2002	153,086	39,468	15 <b>,</b> 000
Vice President, Regulatory	2001	137,998	21,114	12,000
Affairs and Project Management	2000	125,453	16,936	10,000

- (1) Mr. Clarke joined Neose in March 2002.
- (2) Includes \$397,094 during 2002 of reimbursement of relocation expenses to Mr. Clarke, and \$252 in premiums paid by us for group term life insurance.
- (3) Dr. Roth was employed by Neose, and served as chief executive officer, until March 2002.
- (4) Includes \$356,603 paid to Dr. Roth for consulting fees pursuant to his Separation and Consulting Agreement; \$10,000 paid to Dr. Roth's attorney for services rendered to Dr. Roth for negotiating that agreement; and \$1,540, \$5,250, and \$5,040 of matching contributions in 2002, 2001, and 2000, respectively, to Dr. Roth's account in our 401(k) plan. Also includes \$84, \$432, and \$432 in 2002, 2001, and 2000, respectively in premiums paid by us for group term life insurance.
- (5) Includes \$5,500, \$5,214, and \$4,530 of matching contributions in 2002, 2001, and 2000, respectively, to Dr. Zopf's account in our 401(k) Plan. Also includes \$336, \$432, and \$432 in 2002, 2001, and 2000, respectively in premiums paid by us for group term life insurance.
- (6) Ms. Poul joined Neose in January 2000 and served on a part-time basis until May 2002. Includes \$5,500, \$4,028, and \$1,500 of matching contributions in 2002, 2001, and 2000, respectively, to Ms. Poul's account in our 401(k) Plan. Also includes \$336, \$432, and \$288 in 2002, 2001, and 2000, respectively in premiums paid by us for group term life insurance.
- (7) Dr. Vergis joined Neose in July 2001.
- (8) Includes \$5,500 of matching contributions in 2002 to Dr. Vergis' account in our 401(k) plan. Also includes \$336 and \$180 in 2002 and 2001, respectively, in premiums paid by us for group term life insurance.
- (9) Includes \$5,500, \$3,660, and \$3,346 of matching contributions in 2002, 2001, and 2000, respectively, to Dr. Hurley's account in our 401(k) Plan. Also includes \$336, \$432, and \$432 in 2002, 2001, and 2000, respectively in premiums paid by us for group term life insurance.

17

#### Employment Agreements

In March 2002, we entered into an employment agreement with C. Boyd Clarke when he joined the Company as our President and Chief Executive Officer. Under this agreement, which includes non-competition and confidentiality covenants:

- The Company agreed that Mr. Clarke would receive a minimum base salary of \$450,000 per year, and an annual performance incentive bonus, with a target amount of 75% of base salary based upon the achievement of annual goals established by the Board of Directors and Mr. Clarke, which were established soon after his arrival at the Company with respect to 2002;
- The Board of Directors granted Mr. Clarke options to purchase 500,000 shares of common stock at an exercise price of \$32.05 per share, the fair market value on the date of grant, as follows:

an incentive stock option to purchase 12,480 shares, which option vests totally in four years from the date of grant, with 3,120 shares vesting on March 29, 2003, 260 shares vesting on the last day of each of the 24 months in 2004 and 2005, and an additional 1,040 shares vesting on the last day of each of the first three

months of 2006; and

a non-qualified stock option to purchase 487,520 shares, which option vests totally in four years from the date of grant, with 121,880 shares vesting on March 29, 2003, and shares vesting on a monthly basis thereafter such that an aggregate of 93,750, 121,880, 121,880 and 28,130 options vest in each of the remainder of 2003, 2004, 2005, and the first three months of 2006, respectively.

- The Company agreed to reimburse Mr. Clarke for job-related expenses and reasonable costs related to the relocation of his residence to Pennsylvania, including travel expenses, temporary housing costs, realtor fees not to exceed \$180,000, moving costs, closing costs in connection with the purchase of a new home, and \$25,000 to defray additional miscellaneous expenses. Each of these payments is subject to partial repayment by Mr. Clarke in the event he resigns from Neose other than for good reason, as defined in the agreement.
- In the event that Mr. Clarke is involuntarily terminated without cause or resigns for good reason (each as defined in the agreement), provided that Mr. Clarke and Neose enter into a mutual release of claims, Mr. Clarke would receive on the date of such termination a cash payment equal to one year of base salary, target annual bonus for the year in which the termination occurs, and any unpaid bonus amounts from prior years. Additionally, all outstanding options that would have vested in the 12 months following termination would immediately vest and remain exercisable for 12 months following termination.
- In the event that Mr. Clarke is involuntarily terminated without cause or resigns for good reason (each as defined in the agreement) within 18 months following certain changes of control of Neose or a sale of all or substantially all of our assets in a complete liquidation or dissolution, provided that Mr. Clarke and Neose enter into a mutual release of claims, Mr. Clarke would receive on the date of such termination a cash payment equal to two years of base salary, two times the target annual bonus for the year in which termination occurs, and any unpaid bonus amounts from prior years. Additionally, all outstanding options would immediately vest and remain exercisable for 12 months following termination.
- In the even that payments to Mr. Clarke under the employment agreement would result in the imposition of a parachute excise tax under Internal Revenue Code Section 4999, Mr. Clarke

18

would be entitled to receive an additional "gross-up" payment to insulate him from the effect of that tax.

#### Change of Control Agreements

During the third quarter of 2002, we entered into change of control agreements with Drs. Zopf, Vergis, and Hurley and Ms. Poul. In the event any of these executive officers is involuntarily terminated without cause (as defined in the agreement), the executive would receive on the date of termination a cash payment equal to six months base salary. The Company also would arrange for outplacement services for the employee and provide medical benefits to the employee (and his or her spouse and dependents, if they were covered immediately prior to such termination) for six months, at a monthly cost to the employee

equal to the monthly cost of such coverage, if any, to the employee immediately prior to such termination.

In the event that any of these executive officers is involuntarily terminated without cause or resigns for good reason within 12 months following a change of control (each as defined in the agreement), the executive would receive on the date of termination a cash payment equal to one year of base salary and the employee's target annual bonus for the year in which the termination occurs. Additionally, all outstanding options that would have vested in the 12 months following termination would immediately vest and remain exercisable for 12 months following termination. The Company also would arrange for outplacement services for the employee and provide medical benefits to the employee (and his or her spouse and dependents, if they were covered immediately prior to such termination) for 12 months, at a monthly cost to the employee equal to the monthly cost of such coverage, if any, to the employee immediately prior to such termination. In the event payments to any executive under the change of control agreement would result in the imposition of a parachute excise tax under Section 280(G) of the Internal Revenue Code, the executive would be entitled to receive an additional "gross-up" payment to insulate the executive from the effect of that tax.

The change of control agreements require these executives to release the Company from certain claims and to comply with certain restrictive covenants.

#### Separation and Consulting Agreement

In March 2002, we entered into a Separation and Consulting Agreement with Stephen A. Roth, Ph.D., who was our Chief Executive Officer. Under this agreement, Dr. Roth agreed to provide consulting services to the Chief Executive Officer and the Board of Directors for a period of 12 months, and the Company agreed to provide health insurance benefits to Dr. Roth and pay him \$39,622 per month for 12 months. In March 2003, Dr. Roth extended his non-competition and non-solicitation commitments, and his consulting obligations, for two additional years under a separate non-competition agreement with the Company. As a result, we will extend the \$39,622 monthly payments for 24 additional months and, for purposes of stock option vesting and exercisability, treat Dr. Roth as remaining in service to Neose until the third anniversary of his resignation as Chief Executive Officer (or until the end of his service as a director, if later). Dr. Roth also released us from any obligations we may have incurred in connection with his employment with us.

Dr. Roth is no longer an employee of the Company, but continues to serve as a director and consultant. Under the Company's Principles of Corporate Governance, he is not an "independent" director.

19

#### Option Grants During 2002

The following table provides information about grants of stock options made during 2002 to each of the executive officers named in our Summary Compensation Table.

Individual Grants

Number of Shares Percentage of

Potenti at Assu Stock Pr

Name	Underlying Options Granted	Total Options Granted to Employees (1)	Exercise Price	Expiration Date	 5%
C. Boyd Clarke	500,000(3) 250,000(4)	33.9% 17.0	\$32.05 8.75	03/29/12 12/24/12	\$ 10,078,0 1,375,7
Stephen A. Roth					
David A. Zopf	30,000(4)	2.0	10.62	12/12/12	200,3
Debra J. Poul	50,000(4)	3.4	11.61	05/27/12	365 <b>,</b> 0
	35,000(4)	2.4	10.62	12/12/12	233,7
George J. Vergis	35,000(4)	2.4	10.62	12/12/12	233,7
Marjorie A. Hurley	15,000(4)	1.0	11.61	05/27/12	109,5

#### Option Exercises and Values for 2002

The following table provides information about the exercise of stock options during 2002 and the value of stock options unexercised at the end of 2002 for the executive officers named in our Summary Compensation Table. The value of unexercised stock options is calculated by multiplying the number of option shares by the differences between the option exercise price and the year-end stock price.

	Number of Shares		Underlying U	of Shares Jnexercised Lions	Val In
Name	Acquired On Exercise	Value Realized 	Exercisable	Unexercisable	Exerci
C. Boyd Clarke		\$		750 <b>,</b> 000	\$
Stephen A. Roth			398 <b>,</b> 333	70,000	60,1
David A. Zopf	20,899	629,060	79 <b>,</b> 791	64,375	
Debra J. Poul			6 <b>,</b> 875	95 <b>,</b> 625	

<sup>(1)</sup> Based on a total of 1,473,800 options granted during 2002 to employees to purchase common stock.

<sup>(2)</sup> The potential realizable value of each grant is calculated assuming that the market price per share of common stock appreciates at annualized rates of 5% and 10% over the ten-year option term. The results of these calculations are based on rates set forth by the Securities and Exchange Commission and are not intended to forecast possible future appreciation of the price of our common stock.

<sup>(3)</sup> Includes (i) an incentive stock option to purchase 12,480 shares, which option vests totally in four years from the date of grant, with 3,120 vesting on March 29, 2003, 260 shares vesting on the last day of each of the 24 months in 2004 and 2005, and an additional 1,040 shares vesting on the last day of each of the first three months of 2006; and (ii) a non-qualified stock option to purchase 487,520 shares, which option vests totally in four years from the date of grant, with 122,880 shares vesting on March 29, 2003, and shares vesting on a monthly basis thereafter such that an aggregate of 93,750, 121,880, 121,880 and 28,130 options vest in each of the remainder of 2003, 2004, 2005, and the first three months of 2006, respectively.

<sup>(4)</sup> Each option has a term of ten years from the date of grant and vests ratably over a four-year period, beginning on the first anniversary of the date of grant.

George J. Vergis ...... -- -- 42,917 172,083 Marjorie A. Hurley ..... 3,481 29,623 54,958 30,875

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#### Report of the Compensation Committee

What is our compensation philosophy?

The goal of our compensation program is to attract, motivate and retain the highly talented individuals the Company needs to develop proprietary products and provide services to our customers. Our philosophy is to provide competitive compensation levels, but to tie compensation to individual and company performance. We have established both corporate objectives, and individual objectives, against which we can measure performance and determine appropriate compensation levels. We believe in leveraging compensation by increasing the variable component, particularly for senior executives, so that they will be rewarded based on the achievement of corporate and individual goals. We also believe that all employees should participate in some equity-based compensation program.

What are the components of our executive compensation?

The elements of our executive compensation are:

- . Base salary;
- . Variable compensation, consisting of annual cash bonuses based on performance to objectives; and
- Equity compensation, consisting of annual grants of long-term stock options.

We have included these three components to attract and retain senior management, to encourage senior management to achieve our corporate objectives, and to align their interests with the interests of our stockholders.

How do we determine base salaries?

We determine base salaries by each individual's experience and personal performance, and by comparisons to similar positions within the biotechnology industry. In general, base salaries are reviewed annually based on these criteria. This year, as we focus our resources on the achievement of our corporate objectives, consistent with our philosophy of emphasizing variable compensation, we have frozen for one year the salary of our chief executive officer, and have frozen for at least six months the salaries of our vice presidents.

How do we determine annual bonuses?

We believe that our senior executives have the greatest impact on the achievement of our corporate objectives and their compensation should therefore be heavily dependent on individual and corporate performance. We have instituted a management by objectives program designed to establish clear objectives, for both the company and each individual, as a way to communicate our expectations to our employees and to measure their performance. We set target bonus percentages for different levels of employees, to be applied depending on the performance to individual and corporate objectives. For 2002, our chief executive officer's bonus was based on the achievement of the corporate objectives agreed to by the Board and Mr. Clarke, and for our other senior executives, bonuses were based 50% on each senior executive's performance to

18,6

objectives, and 50% on the company's performance. The Compensation Committee approved bonuses payable to our executive officers based on performance in 2002 totaling \$606,796, which were paid in 2003. The Compensation Committee approved bonuses payable to our executive officers based on performance in 2001 totaling \$509,996, which were paid in 2002.

2.1

How is equity compensation used to ensure senior management is focused on long-term results?

We use stock options to provide long-term incentives to our executive officers. In this way, we seek to align their interests with those of our stockholders, and to retain our senior management.

We have adopted guidelines for stock option grants based on job level. In addition, when determining the number of options to grant, we look at the individual's and the company's performance to objectives, as well as comparable information of other biotechnology companies. Options granted to our executive officers were based on our guidelines, as well as performance.

The Compensation Committee approves all grants of stock options to executive officers. Generally, each option is exercisable over a ten-year period at the market price on the date of grant and vests in annual installments over a four-year period. In connection with the recruitment of key executives, we have made exceptions to the vesting schedules of certain grants. This was the case for the options granted to Mr. Clarke when he was hired (which are described in note 3 to the table of Option Grants During 2002 on page 20), and for options that vest based on performance criteria which were granted in 2002 to our new Senior Vice President, Pharmaceutical Development and Operations, and in 2001 to our new Vice President, Business and Commercial Development.

Our stock options will provide a benefit to the executive officer only if he or she remains employed (or is deemed employed) by Neose during the vesting period, and then only if the market price of our common stock increases. During 2002, the Compensation Committee approved grants to purchase 1,285,000 shares of common stock to our executive officers, of which 750,000 were granted to Mr. Clarke, 355,000 were granted in connection with the hiring of two new executive officers, 150,000 were granted in connection with promotions of four of our executive officers, and 30,000 were granted as a special award to one executive officer. No regular annual performance grants were made in 2002, because annual grants based on performance during 2001 were granted in 2001 and annual grants based on performance in 2002 were granted in 2003. However, the number of options granted in 2001, primarily because of grants made to recruit new members of senior management.

How do we determine the compensation of our Chief Executive Officer?

We hired Mr. Clarke in March 2002. His compensation was designed to attract him to Neose, to be competitive with the compensation packages offered by comparable companies, and to make a significant percentage contingent on his and our performance. We agreed to pay him a minimum base salary of \$450,000 per year and a performance incentive bonus, with a target amount of 75% of base salary, based upon the achievement of goals established by the Board of Directors and Mr. Clarke. Mr. Clarke was paid a bonus of \$254,423 for 2002, which was 75% of his base salary, consistent with his employment agreement. We awarded his bonus based upon our analysis of the Company's performance to specific objectives under his leadership.

Mr. Clarke was provided a hiring inducement that included options to purchase 500,000 shares of common stock at an exercise price of \$32.05 per share. Later in the year, in response to concerns raised by some of our investors and recognizing Mr. Clarke's importance to the Company, the Compensation Committee decided that it was in the best interest of the Company and its stockholders to grant Mr. Clarke additional options. Implementing this decision in December 2002, the Committee granted Mr. Clarke options to purchase 250,000 shares of common stock at an exercise price of \$8.75 per share (the closing price on the date of grant), which vest in four equal annual installments beginning on the first anniversary of the grant date.

22

What is the impact of Internal Revenue Code Section 162(m)?

Under Section 162(m) of the Internal Revenue Code, we will not be allowed a federal income tax deduction for compensation paid to certain executive officers, to the extent that compensation exceeds \$1 million per executive officer in any one year. Compensation that qualifies as performance-based compensation is not taken into account for purposes of the limitation. The definition of performance-based compensation includes compensation deemed paid in connection with the exercise of certain stock options. The exercised stock options must have an exercise price equal to the fair market value of the option shares on the grant date to qualify as performance-based compensation. Our Amended and Restated 1995 Stock Option/Stock Issuance Plan is intended to assure that the exercise of such stock options will qualify as performance-based compensation. The non-qualified option granted to Mr. Clarke upon commencement of his employment was not granted under the 1995 Stock Option/Stock Issuance Plan and is not intended to qualify for the performance-based exemption under Section 162(m).

The Compensation Committee has not taken any action to limit or restructure the elements of cash compensation payable to our executive officers. The Compensation Committee will reconsider this decision should the individual compensation of any executive officer approach the \$1 million level.

Compensation Committee of the Board of Directors

Douglas J. MacMaster, Jr., Chairman L. Patrick Gage, Ph.D. Elizabeth H.S. Wyatt

#### Certain Relationships and Related Transaction

In May 2001, we entered into a tuition reimbursement agreement with A. Brian Davis, who serves as our Vice President, Finance. Under the agreement, we agreed to lend Mr. Davis the amounts necessary to pay for tuition payments and related costs and fees for an MBA degree. Interest accrues on the loan at 4.71% per year, and is payable annually beginning in May 2002. We have agreed to forgive repayment of the principal amount outstanding in four equal, annual installments commencing in May 2004 if he remains employed by us on each forgiveness date. We will forgive the accrued interest as it becomes due and, if Mr. Davis is terminated without cause, we will forgive all outstanding principal and interest. As of December 31, 2002, the amount outstanding under the agreement, including accrued interest, was approximately \$121,000.

Common Stock Performance Graph

The following graph assumes that \$100 was invested on December 31, 1997, in our common stock. The graph compares the cumulative return, which includes the reinvestment of dividends, of this investment with an equivalent investment on that date in the Nasdaq Stock Market - U.S. Index (the "Nasdaq Composite") and the Nasdaq Stock Market Biotech Index (the "Nasdaq Biotech Index").

[GRAPH]

	Ntec	Nasdaq	Biotech
12/31/1997	100	100	100
12/31/1998	81.18	140.99	144.28
12/31/1999	94.29	262.44	290.92
12/31/2000	216.39	157.42	357.80
12/31/2001	240.13	124.89	299.83
12/31/2002	56.65	86.33	163.92

Proposal 2 -- Ratification of Appointment of Independent Auditors

The Audit Committee of the Board of Directors has appointed KPMG LLP as the Company's independent auditors to audit its financial statements for the year ending December 31, 2003. KPMG LLP has served as the Company's auditors since April 2002. Services provided to the Company by KPMG LLP during 2002 are described under "Relationship with Independent Auditors" on page 8.

Representatives of KPMG LLP are expected to be present at the Annual Meeting to respond to appropriate questions and to make such statements as they may desire.

The Board of Directors recommends that stockholders vote "FOR" ratification of the appointment of KPMG LLP as the Company's auditors for fiscal 2003.

In the event that the stockholders do not ratify the appointment, the appointment will be reconsidered by the Audit Committee.

24

Proposal 3 -- Amendment to our Amended and Restated 1995 Stock Option/Stock Issuance Plan

## Proposed Amendment

At the Annual Meeting, a proposal will be presented to the stockholders to approve and adopt an amendment to our Amended and Restated 1995 Stock Option/Stock Issuance Plan to increase by 825,000 shares the number of shares of common stock authorized under the stock option plan. As of the record date for the Annual Meeting, March 21, 2003, 825,000 shares represented 4.8% of the outstanding shares of our common stock. Of the 5,051,666 shares currently authorized under the stock option plan, 727,441 shares have been issued pursuant to option exercises and are no longer available for grant. Of the remaining 4,324,225 shares available for grant under the stock option plan, options to purchase 4,172,065 shares of common stock were outstanding as of March 21, 2003, and options to purchase 152,160 shares remained available for future grants.

In February 2003, the Board adopted the amendment, subject to approval by

our stockholders. We believe that our ability to grant options under the stock option plan is a valuable and necessary compensation tool that aligns the long-term financial interests of employees and directors with the financial interests of our stockholders. In addition, we believe that the stock option plan helps us to attract, retain, and motivate qualified employees, and encourages them to devote their best efforts to our business and financial success. An increase in the number of shares available for issuance under the stock option plan is necessary to meet these objectives. The Board of Directors believes that approval of Proposal 3 is in the best interests of Neose and its stockholders.

The material features of the stock option plan are described below. Approval of the proposal to amend the Amended and Restated 1995 Stock Option/Stock Issuance Plan requires the affirmative vote of the holders of a majority of shares present in person or represented by proxy at the Annual Meeting.

The Board of Directors recommends a vote "FOR" the proposal to amend the stock option plan.

Description of the Stock Option Plan

We adopted the stock option plan in 1995, and most recently amended the stock option plan on February 12, 2003. We amended the stock option plan to increase by 825,000 shares the number of shares of common stock authorized under the plan, the approval of which is the subject of Proposal 3.

The stock option plan, which provides for a committee of two or more non-employee directors to act as the plan administrator, is currently administered by our Compensation Committee. The plan incorporates our two predecessor stock option plans, the 1991 Stock Option Plan and the 1992 Stock Option Plan. The stock option plan is divided into four separate components:

- . The Discretionary Option Grant Program, under which employees, non-employee directors (other than the members of the Compensation Committee), and consultants may be granted options to purchase shares of common stock;
- . The Stock Issuance Program, under which employees, non-employee directors (other than the members of the Compensation Committee), and consultants may be issued shares of common stock either through the purchase of shares or as a bonus tied to the performance of services;
- . The Automatic Option Grant Program, under which option grants will automatically be made annually to eligible non-employee directors to purchase shares of common stock; and
- The Director Fee Option Grant Program, under which non-employee directors may elect to receive all, or part, of their annual retainer fees in the form of a special option grant instead of cash.

25

As of March 21, 2003, options to purchase 4,172,065 shares of common stock were outstanding under the stock option plan, and options to purchase 152,160 shares remained available for future grants. Shares of common stock issued or currently issuable under the stock option plan are covered by registration statements on Form S-8, which were filed with the Securities and Exchange Commission on February 15, 1996, September 10, 1997, October 13, 1999, October 11, 2000, November 14, 2001 and August 2, 2002.

Eligibility

All employees, non-employee directors, and consultants are eligible to receive grants under the stock option plan. Non-employee directors are eligible to receive grants pursuant to the Automatic Option Grant Program and the Director Fee Option Grant Program, and non-employee directors who do not serve on the Compensation Committee are eligible to participate in the Discretionary Option Grant Program and the Stock Issuance Program. As of March 21, 2003, there were approximately 125 employees and 8 non-employee directors eligible to participate in the stock option plan. No person may be granted, in any given year, more than 50% of the total number of shares for which stock options, stock appreciation rights, and direct stock issuances may be granted over the term of the stock option plan.

Discretionary Option Grant Program

Under the Discretionary Option Grant Program, the Compensation Committee has complete discretion to determine:

- . Which eligible individuals are to receive option grants or stock appreciation rights;
- . The time or times when option grants are to be made;
- . The number of shares subject to, and the vesting schedule for, each option grant;
- . The designation of each stock option as either an incentive or a non-qualified stock option;
- . The maximum term for which each option grant is to remain outstanding, which term, for an incentive stock option, may not exceed ten years, and for an incentive stock option granted to a person who owns more than 10% of the voting power of Neose may not exceed five years; and
- The option exercise price, which for a non-qualified stock option may not be less than 85% of the fair market value of the stock on the date of grant. The exercise price of an incentive stock option must have an exercise price of at least 100% of the fair market value on the date of grant, provided that the recipient of the option grant does not own more than 10% of the voting power of Neose. If the recipient of an incentive stock option owns more than 10% of the voting power of Neose, the exercise price must be at least 110% of the fair market value on the date of grant. The Internal Revenue Code allows an optionee to receive incentive stock options only to the extent that the aggregate amount of incentive stock options exercisable for the first time by an optionee during any calendar year does not exceed \$100,000. Any stock option that fails to meet the criteria for an incentive stock option will be treated as a non-qualified stock option.

The fair market value of the common stock is the closing sale price per share on the grant date as such price is reported on The Nasdaq Stock Market. If there is no reported closing sale price on such date, the fair market value is the closing sale price on the last preceding date for which a quotation exists. The closing sale price per share of common stock on March 14, 2003 was \$6.90.

The Compensation Committee also has the authority to cancel outstanding options under the Discretionary Option Grant Program (including options incorporated from our two predecessor stock option plans) in return for the grant of new options for the same or different number of option shares, with an exercise price per share based upon the fair market value of the common stock on the new grant date. However, under the Company's By-laws, stockholder approval is required for any such repricing.

Stock appreciation rights may be issued under the Discretionary Option Grant Program. These stock appreciation rights will allow the holders to surrender their outstanding options for an appreciation distribution from Neose equal to the fair market value of the vested shares of common stock subject to the surrendered option less the aggregate exercise price payable for such shares. The appreciation distribution may be made in cash or in shares of common stock.

#### Stock Issuance Program

Under the Stock Issuance Program, the Compensation Committee has complete discretion to determine:

- . Which eligible individuals are to receive stock issuances;
- . The time or times when stock issuances are to be made; and
- . The number of shares subject to, and the vesting schedule for, each stock issuance.

The Compensation Committee may issue shares of common stock for cash, a promissory note, or past services rendered. The consideration must be equal in value to at least 85% of the fair market value of the common stock issued. The issued shares may be fully and immediately vested, vest in one or more installments over a period of service, or vest upon the attainment of certain performance milestones determined by the Compensation Committee.

#### Automatic Option Grant Program

Under the Automatic Option Grant Program, each non-employee director, on the date first elected or appointed to the Board of Directors, will automatically be granted an option to purchase 30,000 shares of common stock, provided such individual has not been previously employed by us. In addition, upon each annual re-election to the Board, each non-employee director with at least six months of Board service will automatically be granted an option to purchase 10,000 shares of common stock.

All grants under the Automatic Option Grant Program will be made in strict compliance with the provisions of such programs. Accordingly, the Compensation Committee does not exercise any administrative discretion with respect to these automatic options. Each automatic option has a term of ten years, subject to earlier termination following the director's cessation of service on the Board. Each automatic option is immediately exercisable. Any shares purchased upon exercise of the option, however, are subject to repurchase if the director's service as a non-employee director ceases prior to vesting of the shares. The 30,000 shares subject to each initial automatic option grant will vest in successive equal, annual installments over the director's initial four-year period of Board service. The shares subject to each additional automatic option grant vest upon the director's completion of one year of service on the Board of Directors, as measured from the grant date. In addition, shares subject to each outstanding option will vest immediately upon certain changes in the ownership or control of Neose.

### Director Fee Option Grant Program

Under the Director Fee Option Grant Program, each non-employee director may elect to receive all, or part, of his or her annual retainer fee otherwise payable in cash in the form of a special option grant under the Director Fee Option Grant Program. An election to receive an option grant in lieu of annual retainer fees must be filed with us prior to the annual meeting of stockholders. If an election is filed, the option grant is automatically made on the date of the annual meeting, and has an exercise price per share equal to one-third of the fair market value of the common stock on the grant date. The number of option shares is determined by dividing the amount of the retainer fee applied

to the program by two-thirds of the fair market value of common stock on the grant date. As a result, the total spread on the option (the fair market value of the

27

option shares on the grant date less the aggregate exercise price payable for those shares) is equal to the portion of the retainer fee subject to the director's election.

All grants under the Director Fee Option Grant Program will be made in strict compliance with the provisions of such programs. Accordingly, the Compensation Committee does not exercise any administrative discretion with respect to these options. The option becomes exercisable on the date of grant. The option remains exercisable for such shares until the earlier of the expiration of the ten-year option term or the end of the three-year period measured from the date of the director's cessation of Board service.

#### Corporate Transactions

If we are a party to certain corporate transactions (as defined in the stock option plan), including certain mergers or asset sales, each outstanding option and unvested stock issuance will, under certain circumstances, automatically vest in full. Options and stock issuances that do not vest in full at the time of the acquisition will vest in full if the individual's service is terminated, whether involuntarily or through a resignation for good reason, within 18 months following the acquisition. The Compensation Committee may also accelerate the vesting of options and unvested stock issuances upon a change in control (as defined in the stock option plan) of Neose or the termination of the individual's service, whether involuntarily or through a resignation for good reason, within a specified period following the change in control. Options currently outstanding under our predecessor stock option plans contain different provisions for acceleration of vesting in connection with an acquisition of Neose. Options outstanding under the 1992 Stock Option Plan may, under certain circumstances, vest in full upon a change in control. Options outstanding under the 1991 Stock Option Plan do not contain any acceleration of vesting provisions in connection with a change in control. The Compensation Committee has the discretion, however, to extend the acceleration of vesting provisions of the stock option plan to outstanding options under our predecessor stock option plans.

Amendment and Termination of the Stock Option Plan

The Board has complete and exclusive power and authority to amend or modify the stock option plan in any, or all, respects. No amendment, however, may adversely affect the rights and obligations of options outstanding at the time under the stock option plan. In addition, no amendment may adversely affect the rights of any optionee with respect to common stock issued under the stock option plan prior to such action, unless the optionee consents to such action. In addition, the Board may not, without stockholder approval, amend the stock option plan to:

- Increase the maximum number of shares issuable under the stock option plan, or the maximum amount of shares for which any one individual participating in the stock option plan may be granted stock options, stock appreciation rights, and direct stock issuances for any given year;
- . Materially modify the eligibility requirements for participation; or
- . Otherwise materially increase the benefits accruing to participants.

The stock option plan will terminate on the earlier of February 28, 2005 or the date on which all shares available for issuance under the stock option plan have been issued.

Federal income tax consequences of the stock option plan

The following discussion summarizes the principal federal income tax consequences of the stock option plan based on the Internal Revenue Code and its regulations, and administrative and judicial interpretations. The summary does not address any foreign, state, or local tax consequences of participation in the stock option plan.

28

#### Non-Qualified Stock Options

There generally are no federal income tax consequences to an optionee or to Neose upon the grant of a non-qualified stock option. Upon the exercise of a non-qualified stock option, an optionee will recognize ordinary compensation income in an amount equal to the fair market value of the shares at the time of exercise less the exercise price of the non-qualified stock option. We generally will be entitled to a corresponding federal income tax deduction. Upon the sale of shares of common stock that were acquired by the exercise of a non-qualified stock option, an optionee will recognize a capital gain or loss. The amount of the capital gain or loss will be equal to the difference between the amount realized upon the sale of the shares and the optionee's adjusted tax basis in the shares of common stock. The optionee's adjusted tax basis in the shares of common stock is equal to the exercise price plus the amount of ordinary income recognized by the optionee at the time of exercise of the non-qualified stock option. The tax rate for the capital gain will depend on the length of time the shares were held by the optionee and other factors.

### Incentive Stock Options

A recipient of an incentive stock option will not recognize taxable income, for purposes of the regular income tax, upon either the grant or exercise of the incentive stock option. Under the regulations of the Internal Revenue Code governing the alternative minimum tax, however, the exercise of an incentive stock option generally increases the recipient's alternative minimum taxable income in the year in which an incentive stock option is exercised. The amount of the increase is equal to the fair market value of the shares of common stock acquired upon exercise less the stock option exercise price. Upon a qualifying disposition of shares acquired upon exercise of an incentive stock option, an optionee will recognize long-term capital gain or loss, and we will not be entitled to a corresponding federal income tax deduction. For these purposes, a qualifying disposition is defined as a disposition of shares at least two years after the incentive stock option was granted and at least one year after exercise of the incentive stock option. As a general rule, if an optionee disposes of the shares acquired upon exercise of an incentive stock option before satisfying both holding period requirements, the gain recognized on such a disposition will be taxed to the optionee as ordinary income, and we generally will be entitled to a corresponding federal income tax deduction. The amount of ordinary income is the difference between the fair market value of the shares on the date of exercise and the option exercise price. The gain, if any, in excess of the amount recognized as ordinary income on such a disqualifying disposition will be long-term or short-term capital gain, depending upon the length of time the optionee held the shares prior to the disposition.

Stock Appreciation Rights

An optionee will not recognize any income upon the grant of a stock appreciation right. Upon the exercise of a stock appreciation right, the optionee will recognize ordinary compensation income in the amount of both the cash and the fair market value of the shares of common stock received upon such exercise, and we generally will be entitled to a corresponding federal income tax deduction. When an optionee sells shares acquired upon the exercise of a stock appreciation right, the optionee will recognize a capital gain or loss. The amount of the capital gain or loss will be equal to the difference between the amount realized on the sale and the amount of ordinary income recognized at the time of exercise of the stock appreciation right.

#### Stock Issuances

A recipient generally will recognize taxable income upon the grant of a stock issuance if:

- . The shares are not subject to a substantial risk of forfeiture; and
- . There are no restrictions on the transferability of the shares at the time of grant.

29

A recipient of a grant of restricted stock (a stock issuance not meeting either of the above criteria) normally will not recognize taxable income upon the grant, and we will not be entitled to a corresponding federal income tax deduction. When the shares either are transferable or are no longer subject to a substantial risk of forfeiture, the recipient will recognize ordinary compensation income, and we generally will be entitled to a corresponding federal income tax deduction. The amount of the ordinary compensation income will be equal to the difference between the fair market value of the common stock at that time and any amount paid for the shares. A recipient may, however, elect to recognize ordinary compensation income in the year the restricted stock grant is awarded, and we generally will be entitled to a corresponding federal income tax deduction. The amount of ordinary compensation income will be equal to the difference between the fair market value of the common stock at that time and any amount paid for the shares.

#### Payment of Withholding Taxes

Our obligation to deliver shares of common stock upon the exercise of any stock option or upon the issuance of any shares is subject to the satisfaction of all applicable income and employment tax withholding requirements. In some circumstances, we permit an optionee to remit directly to the appropriate taxing authority the amount of the optionee's withholding tax obligations.

### Plan benefits

Option grants to our current executive officers and directors to purchase the following number of shares of common stock have been made under the stock option plan (including our two predecessor stock option plans) from adoption of the 1991 Stock Option Plan through March 21, 2003: C. Boyd Clarke - 262,480; David A. Zopf - 212,498; Robert I. Kriebel - 165,000; Debra J. Poul - 137,500; George J. Vergis - 250,000; Joseph J. Villafranca - 190,000; A. Brian Davis - 91,166; Marjorie A. Hurley - 117,833; current executive officers as a group - 1,426,477; current non-employee directors as a group - 1,340,306; and all other employees and consultants as a group - 1,405,282.

The benefits and amounts that may be received in the future by persons eligible to participate in the stock option plan are not currently determinable, except as to those future automatic grants to be awarded to non-employee

directors under the Automatic Option Grant Program.

The above description is a partial summary of material provisions of our stock option plan. This summary is qualified in its entirety by reference to the full text of the plan, as amended and as proposed to be amended, attached as Appendix B to this proxy statement.

Vote Required and Recommendation

The affirmative vote of the holders of a majority of the shares represented in person or by proxy and entitled to vote on this proposal is required for approval of this proposal.

The Board of Directors unanimously recommends a vote "FOR" the approval of the proposed amendment to the Company's Amended and Restated 1995 Stock Option/Stock Issuance Plan.

30

#### Equity Compensation Plan Information

The following table gives information about our common stock that may be issued upon the exercise of options, warrants and rights under all of our existing equity compensation plans as of March 21, 2003, including the Amended and Restated 1995 Stock Option / Stock Issuance Plan. The table does not include the additional shares requested for issuance under the Amended and Restated 1995 Stock Option/Stock Issuance Plan in this Proposal 3, or the additional shares requested for issuance under the Employee Stock Purchase Plan in Proposal 4.

Plan Category	Number of Securities to be issued upon exercise of outstanding options, warrants and rights	Weighted-average exercise price of outstanding options, warrants and rights
Equity compensation plans approved by securityholders	4,172,065(1)	\$17.14(1)
Equity compensation plans not approved by securityholders	499,186(2)	\$31.62
Total	4,671,251 =======	\$18.65

- (1) Does not include rights granted under the Employee Stock Purchase Plan. The next scheduled purchase date under the Employee Stock Purchase Plan is July 31, 2003, for which rights were granted in connection with the 24-month offering period that commenced in February 2002.
- (2) Includes option grant to C. Boyd Clarke and options to two consultants, each as described in the text below.

Number remaini future equit plans (ex reflected

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34

Option Grants Under Plans Not Approved by Stockholders

On March 29, 2002, the Company's board of directors approved a grant to C. Boyd Clarke in connection with his appointment as President and Chief Executive officer of a non-qualified stock option to purchase 487,520 shares of common stock. The option grant to Mr. Clarke is not pursuant to the stock option plan and has not been submitted to, and is not required to be submitted to, the stockholders for approval. The option is exercisable for a period of ten years at a price of \$32.05 per share, which was the fair market value of the underlying stock on the date of grant. The option is subject to a vesting schedule pursuant to which the options will vest and become exercisable with respect to 121,880 shares on March 29, 2003, and on a monthly basis thereafter such that the option will vest and become exercisable with respect to an aggregate of 93,750, 121,880, 121,880 and 28,130 shares in each of the remainder of 2003, 2004, 2005 and the first three months of 2006, respectively.

On December 6, 1995, the Company granted options to two consultants in connection with services provided to the Company. These options are now fully vested and exercisable at a price of \$13.80 per share with respect to 8,333 shares for one consultant and 3,333 for the other. These options expire on December 6, 2005.

31

Proposal 4 -- Amendment to our Employee Stock Purchase Plan

#### Proposed Amendment

At the Annual Meeting, a proposal will be presented to the stockholders to approve and adopt an amendment to our Employee Stock Purchase Plan to increase by 33,000 shares the number of shares of common stock authorized under the stock purchase plan. Of the 150,000 shares currently authorized under the stock purchase plan, 131,561 shares have been issued purchased pursuant to the plan and, therefore, are no longer available for grant. The stock purchase plan is intended to be qualified under Internal Revenue Code Section 423. If a plan is qualified under Section 423, our employees who participate in the plan enjoy certain tax advantages, as described below. In order for the plan to be qualified, our stockholders must approve the plan.

In February 2003, the Board adopted the proposed amendment, subject to approval by our stockholders. The stock purchase plan allows our employees to purchase our common stock at a discount, without being subject to tax until they sell the stock, and without having to pay any brokerage commissions with respect to the purchases. The purpose of the stock purchase plan is to encourage the purchase of common stock by our employees, to provide employees with a personal stake in Neose, and to help us retain our employees. In addition, we believe that the stock purchase plan encourages employees to devote their best efforts to our business and financial success. An increase in the number of shares available for issuance under the stock option plan is necessary to meet these objectives. The Board of Directors believes that approval of Proposal 4 is in the best interests of Neose and its stockholders.

The material features of the stock purchase plan are described below. Approval of the proposal to amend the Employee Stock Purchase Plan requires the affirmative vote of the holders of a majority of shares present in person or represented by proxy at the Annual Meeting.

The Board of Directors recommends a vote "FOR" the proposal to amend the stock purchase plan.

Description of the Stock Purchase Plan

The stock purchase plan provides employees with the right to purchase shares of our common stock through payroll deduction. Upon approval by stockholders of the amendment to the plan, a total of 183,000 shares of our common stock will be available for purchase under the stock purchase plan, subject to adjustment in the number and price of shares available for purchase in the event the outstanding shares of common stock are increased or decreased through stock dividends, recapitalizations, reorganizations, or similar changes.

The stock purchase plan is administered by a committee of directors appointed by the board. Subject to the terms of the stock purchase plan, the committee has authority to interpret the stock purchase plan, prescribe, amend and rescind rules and regulations relating to it and make all other determinations deemed necessary or advisable in administering the stock purchase plan.

#### Eligibility

To be an eligible participant, an employee must be required to work more than 20 hours per week for more than five months per calendar year in return for wages as defined in Internal Revenue Code Section 3401(a). Employees may participate in the stock purchase plan at the beginning of any purchase period after they have completed at least one month of service.

32

Any employee who, after purchasing our common stock under the stock purchase plan, would own 5% or more of the total combined voting power or value of all classes of our stock or any subsidiary corporation is not eligible to participate. Ownership of stock is determined in accordance with the provisions of Section 424(d) of the Internal Revenue Code. In addition, an employee is not permitted to purchase stock worth more than \$25,000 in fair market value in any calendar year.

#### Purchase Period

Eligible employees may elect to participate in the stock purchase plan during an offering period, which shall commence as designated by the committee and shall not exceed twenty-four months. Stock will be available to be purchased in a series of successive installments, occurring at the end of each purchase period, during the offering period. Shares of common stock will be deemed to have been purchased on the last business day of each purchase period. The purchase price per share will be 85% of the lesser of:

- . the fair market value per share of our common stock on the first day of the applicable offering period; or
- the fair market value per share of our common stock on the last day of the purchase period.

If any of these dates is not a trading day, then fair market value will be determined on the next trading day after such date. In no event shall the maximum number of shares of common stock purchasable per participant on any purchase date exceed 1,000 shares.

#### Purchase Procedures

An eligible employee who wishes to participate in the stock purchase plan must execute a stock purchase agreement and complete the enrollment forms prescribed by the committee. Each participant will have payroll deductions made

from his or her compensation on each regular payday during the time he or she is a participant in the stock purchase plan. All payroll deductions will be credited to the participant's account under the stock purchase plan.

If the total number of shares of common stock for which purchase rights are exercised on the purchase date exceeds the maximum number of shares of common stock available, the committee will make a pro rata allocation of shares available for delivery and distribution. The unapplied account balances will be credited to participants' accounts for the next succeeding offering or, at the participant's election, returned to the participant without interest as soon as practicable following the end of the offering period.

A participant's payroll deductions under the plan may be any multiple of 1% of the participant's base salary up to a maximum of 10% (the "Deduction Rate"). The Deduction Rate shall remain in effect throughout the offering period subject to reduction, at any time, limited to one reduction per purchase period, and the participant may increase the Deduction Rate prior to the commencement of any new purchase period.

A participant may elect to terminate outstanding purchase rights by providing a termination form to the board or the committee at any time before the end of the purchase period. All amounts credited to such participant's account shall be, at the participant's election, paid as soon as practicable following receipt of the participant's termination form or held for the purchase of shares on the next purchase date, and no further payroll deductions will be made with respect to the participant.

If a participant's employment terminates for any reason (including death, disability, or change in status) all amounts credited to such participant's account will be, at the participant's election, immediately refunded or held for the purchase of shares on the next purchase date. A participant who is on an approved leave of absence shall have the election to withdraw all payroll deductions or have such funds held for the

33

purchase of shares at the end of such purchase period. Upon the participant's return, his or her payroll deductions under the plan shall automatically resume at the rate in effect at the time the leave began.

All funds held or received by us under the stock purchase plan may be used for any corporate purpose until applied to the purchase of shares of our common stock or refunded to employees and will not be segregated from our general assets. Shares of our common stock purchased under the stock purchase plan will be issued from our authorized but unissued or reacquired common stock. We will pay all fees and expenses incurred, excluding individual Federal, state, local, or other taxes, in connection with the stock purchase plan.

An employee's rights under the stock purchase plan belong to the employee alone and may not be transferred or assigned to any other person during the employee's lifetime.

Corporate Transactions

Immediately prior to a merger, consolidation, or sale, transfer or other disposition of all or substantially all of the assets of the corporation ("Corporate Transaction"), all outstanding purchase rights shall automatically be exercised. The purchase price per share preceding a Corporate Transaction shall be 85% of the lower of: (a) the fair market value per share of common stock on the first day of the offering period, or (b) the fair market value per

share of common stock immediately prior to the effective date of such Corporate Transaction. The corporation shall attempt to provide ten days prior written notice before the occurrence of any Corporate Transaction, and following the receipt of such notice, participants may terminate their outstanding purchase rights.

Federal income tax consequences of the stock purchase plan

The stock purchase plan is not qualified under Section 401(a) of the Internal Revenue Code, but is intended to qualify under Section 423 of the Internal Revenue Code. We generally will not be entitled to a deduction with respect to stock purchased under the stock purchase plan, unless the stock is disposed of less than one year after it is purchased by the employee, or less than two years after the start of the offering period pursuant to which the stock was purchased.

Generally, no tax consequences arise at the time the participant purchases shares of common stock. Upon a disposition of shares, the participant will receive compensation taxable as ordinary income for the taxable year in which the disposition occurs in an amount equal to the lesser of:

- . the excess of the purchase price over the fair market value of the shares at the beginning of the offering period, or
- the excess over the purchase price of (a) the amount actually received for the shares if sold or exchanged or (b) the fair market value of the shares on the date of any other termination of his or her ownership (such as by gift).

The amount of such ordinary income is then added to the participant's basis in his shares for purposes of determining capital gain or loss. This tax treatment only applies if the following holding period requirement is satisfied:

- the participant does not dispose of the shares for at least one year after the date of purchase, and
- . the participant does not dispose of the shares for at least two years after the beginning of the offering period during which the shares were purchased.

If a participant disposes of shares of common stock purchased under the stock purchase plan before the holding period is satisfied, he or she will receive compensation taxable as ordinary income in the amount of the difference between the amount paid for the shares and the fair market value of the shares at the time of

34

purchase. If the shares are sold or exchanged, the amount of such ordinar income is added to the participant's basis in his shares for purposes of determining capital gain or loss.

If a participant dies before disposing of the shares purchased under the stock purchase plan, he or she will be deemed to have realized compensation income taxable as ordinary income in the taxable year closing with his or her death in an amount equal to the lesser of:

- . the excess of the purchase price over the fair market value of the shares at the beginning of the offering period, or
- . the excess of the fair market value of the shares on the date of death over the purchase price  $% \left( 1\right) =\left( 1\right) +\left( 1\right) +\left$

Amendment and Termination of the Stock Purchase Plan

The committee has the right to amend, modify, or terminate the stock purchase plan at any time to become effective immediately following close of any purchase period. However, the committee may not, without the approval of the corporation's stockholders: (i) materially increase the number of shares of common stock issuable under the plan or the maximum number of shares purchasable per participant on any one purchase date, (ii) alter the purchase price formula so as to reduce the purchase price payable for the shares of common stock purchasable under the plan, (iii) materially increase the benefits accruing to participants under the plan or materially modify the requirements for eligibility to participate in the plan, or (iv) otherwise amend the stock purchase plan, if such amendment, by law, requires stockholder approval.

### Plan benefits

Our current executive officers have purchased the following number of shares of common stock under the stock purchase plan since adoption of the Employee Stock Purchase Plan in 1995 through March 21, 2003: C. Boyd Clarke - 0; David A. Zopf - 5,661; Robert I. Kriebel - 0; Debra J. Poul - 1,855; George J. Vergis - 1,443; Joseph J. Villafranca - 0; A. Brian Davis - 3,579; Marjorie A. Hurley - 3,651; current executive officers as a group--16,189; and all other employees as a group--115,372. The benefits and amounts that may be received in the future by persons eligible to participate in the stock purchase plan are not currently determinable.

The above description is a partial summary of material provisions of our stock purchase plan. This summary is qualified in its entirety by reference to the full text of the plan, as amended and as proposed to be amended, attached as Appendix C to this proxy statement.

Vote Required and Recommendation

The affirmative vote of the holders of a majority of the shares represented in person or by proxy and entitled to vote on this proposal is required for approval of this proposal.

The Board of Directors unanimously recommends a vote "FOR" the approval of the proposed amendment to the Company's Employee Stock Purchase Plan.

35

Requirements for Advance Notification of Nominations and Stockholder Proposals

Advance Notice Requirements for next year's Annual Meeting

Under Section 11 of Article II of our By-Laws, you may nominate a person for election as a director or propose business to be considered at next year's Annual Meeting if you:

- . Are a holder of record at the time of giving the notice described below:
- . Are entitled to vote at next year's Annual Meeting; and
- Deliver a written notice of intent to make a nomination or proposal to our Corporate Secretary at our offices. You must deliver the written notice of intent, which must contain the relevant information described below, between November 10, 2003 and December 9, 2003. If the date of next year's Annual Meeting is earlier than April 12, 2004 or later than July 13, 2004, however, your written notice of intent

must be delivered between the 90th day before next year's Annual Meeting and the later of:

- The 60th day before next year's Annual Meeting; or
- The 10th day after our first public announcement of next year's Annual Meeting date.

If the Board of Directors decides to propose, for next year's Annual Meeting, an increase in the number of directors, the advance notice requirements will differ from those described above if we fail to make a timely public announcement of the proposal. Our public announcement must be made as described in our By-Laws, and must either name all of the nominees for director or specify the new size of the Board of Directors. To be considered timely, our first public announcement of such a proposal must be made:

- . By March 28, 2004, if the date of next year's Annual Meeting is between April 12, 2004 and July 13, 2004; or
- By 70 days before next year's Annual Meeting, if the date of next year's Annual Meeting is earlier than April 12, 2004 or later than July 13, 2004.

If we fail to meet the applicable deadline for making a timely public announcement, and you would like to nominate individuals for the new position(s) created by the increase, you must deliver your written notice of intent by no later than the 10th day after our first public announcement. Your written notice of intent may nominate individuals only for new position(s) created by the increase, and must contain the information described below.

Requirements for a Written Notice of Intent

Your written notice of intent to make a nomination or proposal must contain your name, address, and the number of each class of our shares you own beneficially and of record. If you are delivering the written notice of intent on behalf of a beneficial owner of our shares, the written notice of intent also must contain the beneficial owner's name, address, and the number of each class of our shares held beneficially and of record. Your written notice of intent also must include:

- . As to each person you propose to nominate for election or re-election as a director, the nominee's written consent to be named in the proxy statement as a nominee and to serve as a director if elected.
- . As to any other business you propose to bring before the meeting:

36

- A brief description of the business;
- The reasons for conducting the business at the meeting; and
- Your material interest in the business, or the material interest in the business of the beneficial owner, if any, on whose behalf the proposal is made.

Other Requirements

You also must comply with all applicable requirements of the Securities Exchange Act of 1934 for nominations of directors and proposals of business to be conducted at stockholder meetings. If you have not complied with the procedures described above, the chairman of a meeting may refuse to acknowledge your nomination or proposal. These procedures will not be deemed to affect any of your rights under Rule 14a-8 under the Securities Exchange Act of 1934 to

request inclusion of proposals in our proxy statements.

37

APPENDIX A

AMENDED AND RESTATED CHARTER
OF THE AUDIT COMMITTEE
OF THE BOARD OF DIRECTORS OF
NEOSE TECHNOLOGIES, INC.

The Board of Directors (the "Board") of Neose Technologies, Inc. (the "Company") hereby adopts this Amended and Restated Charter to establish the new governing principles of the Audit Committee.

- 1. Role of the Audit Committee. The role of the Audit Committee is:
  - 1.1 To act, directly, to fulfill the responsibilities that are required of audit committees under the regulations of the Securities and Exchange Commission ("SEC") or Nasdaq;
  - 1.2 To oversee all material aspects of the Company's reporting, control and audit functions;
  - 1.3 To oversee the independence and performance of the Company's independent auditors; and
  - 1.4 To provide a means for open communication between and among the Company's independent auditors, financial and senior management, the Audit Committee and the Board.

While the Audit Committee has the responsibilities and powers set forth in this Charter, it is not the duty of the Audit Committee to plan or conduct audits, or to determine that the Company's financial statements are complete and accurate, or that they are in accordance with generally accepted accounting principles. The responsibility to plan and conduct audits is that of the Company's independent auditors. The Company's management has the responsibility to determine that the Company's financial statements are complete and accurate and in accordance with generally accepted accounting principles. It is also not the duty of the Audit Committee to ensure the Company's compliance with laws and regulations. The primary responsibility for these matters also rests with the Company's management.

- 2. Composition of the Audit Committee
  - 2.1 The Board shall designate the members of the Audit Committee at each annual organizational meeting of the Board, and the members shall serve until the next such meeting or until their successors are designated by the Board.
  - 2.2 All members of the Audit Committee shall be "independent" as that term is defined in the regulations of the SEC and Nasdaq. Each member of the

A-1

Audit Committee shall be free of any relationship that, in the opinion of the Board, would interfere with his or her exercise of

independent judgment as an Audit Committee member. All Audit Committee members shall have a basic understanding of finance and accounting, and shall be able to read and understand financial statements at the time of their appointment.

One member of the Committee shall have accounting or related financial management experience, and the Board shall use best efforts to assure that one member of the Audit Committee is a "financial expert" as that term is defined by SEC rulemaking. In addition, the members of the Audit Committee shall meet any other requirements of the applicable regulations of the SEC and Nasdaq.

- 3. Meetings of the Audit Committee. The Audit Committee shall meet at least four times annually, and more frequently as circumstances require. The Audit Committee, or the Chair of the Audit Committee, shall be responsible for meeting with the independent auditors to discuss the interim financial statements.
- 4. Responsibilities of the Audit Committee. The Audit Committee shall have the responsibilities set forth below with respect to:
  - 4.1 The Company's Risk and Control Environment
    - 4.1.1 To discuss with the Company's management, independent auditors and financial management the integrity of the Company's financial reporting processes and controls, particularly the controls in areas representing significant financial and business risks; and
    - 4.1.2 To investigate any matter brought to its attention within the scope of its role and responsibilities.
  - 4.2 The Company's Independent Auditors
    - 4.2.1 To appoint, oversee, and authorize the compensation of the Company's independent auditors;
    - 4.2.2 To have sole authority to hire and fire the Company's independent auditors;
    - 4.2.3 To approve in advance any audit or non-audit services provided by the Company's outside auditors;
    - 4.2.4 To actively engage in a dialogue with the independent auditors about any relationships between the independent auditors and the Company or any services that the independent auditors provide or propose to provide that may impact upon the objectivity and independence of the independent auditors, and to take any appropriate action to oversee the independence of the independent accountants;

A-2

- 4.2.5 To have a constructive and positive working relationship with the Company's independent auditors because of the ultimate responsibility of the independent auditors to the Audit Committee, as representatives of the shareholders;
- 4.2.6 To be available to the independent auditors at all times,

and to provide sufficient opportunity for the independent auditors to meet with members of the Audit Committee without members of management present, to discuss, among other things, the independent auditors' evaluation of the Company's financial and accounting personnel, and the cooperation that the independent auditors received during the course of each audit;

- 4.2.7 To ensure that the Audit Committee receives annually from the Company's independent auditors the information about all of the relationships between the independent auditors and the Company that the independent auditors are required to provide to the Audit Committee;
- 4.2.8 To discuss with the independent auditors their qualitative judgments about the appropriateness, not just the acceptability, of the accounting principles and financial disclosure practices used or proposed to be adopted by the Company, particularly about the degree of aggressiveness or conservatism of the Company's accounting principles and underlying estimates; and
- 4.2.9 To evaluate annually the effectiveness and objectivity of the Company's independent auditors.
- 4.3 The Company's Financial Reporting Process
  - 4.3.1 To oversee the Company's selection of and changes to its accounting policies;
  - 4.3.2 To meet with the Company's independent auditors and financial management, both to discuss the proposed scope of the audit and to discuss the conclusions of the audit, including any items that the independent auditors are required by generally accepted auditing standards to discuss with the Audit Committee, such as any significant changes to the Company's accounting policies, the integrity of the Company's financial reporting processes, and any proposed changes or improvements in financial, accounting or auditing practices;
  - 4.3.3 To review with the independent auditors and the Company's financial management the adequacy and effectiveness of the accounting and financial controls of the Company, and to elicit any recommendations for the improvement of such internal control

A-3

procedures or particular areas where new or more detailed controls or procedures may be desirable;

- 4.3.4 To discuss with the Company's financial management and independent auditors the Company's annual results and interim results before they are made public;
- 4.3.5 To review and discuss with the Company's financial management and independent auditors the Company's audited financial statements and interim financial statements before they are made public; and

4.3.6 To issue for public disclosure by the Company the report required by the rules of the SEC.

#### 4.4 Other Matters

- 4.4.1 To establish and review adherence to the Company's cash management and investment policies;
- 4.4.2 To review and approve all of the Company's related-party transactions;
- 4.4.3 To establish and maintain in place a mechanism for the confidential and anonymous submission by Company employees of complaints or concerns regarding the Company's accounting practices, and procedures for the receipt and treatment of such complaints or concerns;
- 4.4.4 To adopt clear guidelines for the Company's hiring of any employees of the independent auditors who were previously engaged on the Company's account;
- 4.4.5 To review and reassess the adequacy of this Charter on an annual basis;
- 4.4.6 To report to the Board the matters discussed at each meeting of the Audit Committee; and
- 4.4.7 To retain, at the Company's expense, special legal, accounting or other consultants or experts that the Audit Committee deems necessary in the performance of its duties.
- 5. Compensation of Audit Committee
  - 5.1 Each member of the Audit Committee shall be compensated by the Company for his or her Board and Committee service, in the manner and at the rates established from time to time by the Board.

A-4

5.2 The Company shall not provide any direct compensation for Audit Committee members except for their Board and Committee service, as authorized in Section 5.1.

A-5

Appendix B

NEOSE TECHNOLOGIES, INC. 1995 STOCK OPTION/STOCK ISSUANCE PLAN (Amended and Restated as of May 13, 2003)

ARTICLE ONE

GENERAL

#### I. PURPOSE OF THE PLAN

- A. This 1995 Stock Option/Stock Issuance Plan (the "Plan") is intended to promote the interests of Neose Technologies, Inc., a Delaware corporation (the "Corporation"), by providing eligible individuals with the opportunity to obtain an equity interest, or otherwise increase their equity interest, in the Corporation. This Plan shall serve as the successor equity incentive program to the Corporation's 1992 Stock Option Plan and 1991 Stock Option Plan.
- B. The Discretionary Option Grant and Stock Issuance Programs of the Plan became effective immediately upon the adoption of the Plan by the Corporation's Board of Directors. Such date is hereby designated the "Plan Effective Date." The Automatic Option Grant Program became effective upon the execution and final pricing of the Underwriting Agreement for the initial public offering of the Corporation's Common Stock. The execution date of such Underwriting Agreement is hereby designated as the Automatic Option Program Effective Date. The Director Fee Option Grant Program became effective on March 16, 1996.

### II. DEFINITIONS

A. For the purposes of this Plan, the following definitions shall be in effect:

Board: the Corporation's Board of Directors.

Change in Control: a change in ownership or control of the Corporation effected through either of the following transactions:

-- the direct or indirect acquisition by any person or related group of persons (other than the Corporation or a person that directly or indirectly controls, is controlled by, or is under common control with, the Corporation) of beneficial ownership (within the meaning of Rule 13d-3 of the 1934 Act) of securities possessing more than fifty percent (50%) of the total combined voting power of the Corporation's outstanding securities pursuant to a tender or exchange offer made directly to the Corporation's shareholders which the Board does not recommend such shareholders to accept, or

B-1

contested elections for Board membership, to be comprised of individuals who either (a) have been Board members continuously since the beginning of such period or (b) have been elected or nominated for election as Board members during such period by at least a majority of the Board members described in clause (a) who were still in office at the time such election or nomination was approved by the Board.

Code: the Internal Revenue Code of 1986, as amended.

Committee: the committee of two (2) or more Board members appointed by the Board to administer and interpret the Plan. The Committee members shall be "outside directors" as defined under Code Section 162(m) and related Treasury Regulations and may be "non-employee" Board members as defined under Rule 16b-3 of the 1934 Act. However, notwithstanding anything in the Plan to the contrary, the Board must ratify or approve any grants made under the Discretionary Option Grant Program or Stock Issuance Program to any Board members or officers of the

Corporation. References in the Plan to the Committee shall be deemed to include the Board, with respect to ratification or approval of grants made to Board members and officers of the Corporation. In addition, the Board may appoint a "Non-Section 16(b) Committee" solely for the purpose of making grants under the Discretionary Option Grant Program to individuals who are not covered by Section 16 of the 1934 Act. Such Committee shall have no powers other than the power to make grants to such individuals. Any reference to "Committee" herein shall also encompass the Non-Section 16(b) Committee where appropriate.

Common Stock: shares of the Corporation's common stock.

Corporate Transaction: either of the following shareholder-approved transactions to which the Corporation is a party:

- (i) a merger or consolidation in which securities possessing more than fifty percent (50%) of the total combined voting power of the Corporation's outstanding securities are transferred to a person or persons different from the persons holding those securities immediately prior to such transaction, or
- (ii) the sale, transfer or other disposition of all or substantially all of the Corporation's assets in complete liquidation or dissolution of the Corporation.

Employee: an individual who performs services while in the employ of the Corporation or one or more parent or subsidiary corporations, subject to the control and direction of the employer entity not only as to the work to be performed but also as to the manner and method of performance.

 $\,$  Exercise Date: the date on which the Corporation shall have written notice of the option exercise.

Fair Market Value: the Fair Market Value per share of Common Stock determined in accordance with the following provisions:

 $\,$  -- If the Common Stock is at the time traded on the Nasdaq National Market, the Fair Market Value shall be the closing selling price per share on the date in question, as such

B-2

price is reported by the National Association of Securities Dealers on the Nasdaq National Market or any successor system. If there is no reported closing selling price for the Common Stock on the date in question, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.

- -- If the Common Stock is at the time listed or admitted to trading on any national securities exchange, then the Fair Market Value shall be the closing selling price per share on the date in question on the exchange determined by the Plan Administrator to be the primary market for the Common Stock, as such price is officially quoted in the composite tape of transactions on such exchange. If there is no reported sale of Common Stock on such exchange on the date in question, then the Fair Market Value shall be the closing selling price on the exchange on the last preceding date for which such quotation exists.
- -- If the Common Stock is on the date in question neither listed nor admitted to trading on any national securities exchange nor traded on the Nasdaq National Market, then the Fair Market Value of the Common Stock on such date

shall be determined by the Plan Administrator after taking into account such factors as the Plan Administrator shall deem appropriate.

Hostile Take-Over: a change in ownership of the Corporation effected through the following transaction:

-- the direct or indirect acquisition by any person or related group of persons (other than the Corporation or a person that directly or indirectly controls, is controlled by, or is under common control with, the Corporation) of beneficial ownership (within the meaning of Rule 13d-3 of the 1934 Act) of securities possessing more than fifty percent (50%) of the total combined voting power of the Corporation's outstanding securities pursuant to a tender or exchange offer made directly to the Corporation's shareholder's which the Board does not recommend such shareholders to accept, and

-- the acceptance of more than fifty percent (50%) of the securities so acquired in such tender or exchange offer from holders other than the officers and directors of the Corporation subject to the short-swing profit restrictions of Section 16 of the 1934 Act.

Incentive Option: a stock option which satisfies the requirements of Code Section 422.

Involuntary Termination: the termination of the Service of any Optionee or Participant which occurs by reason of:

-- such individual's voluntary resignation following (A) a change in his or her position with the Corporation which materially reduces his or her level of responsibility, (B) a reduction in his or her level of compensation (including base salary, fringe benefits and any non-discretionary and objective-standard incentive payment or bonus award) by more than ten percent (10%) in the aggregate or (C) a relocation of such individual's place of employment by more than fifty (50) miles, provided and only if such change, reduction or relocation is effected by the Corporation without the individual's consent.

B-3

Misconduct: the commission of any act of fraud, embezzlement or dishonesty by the Optionee or Participant, any unauthorized use or disclosure by such individual of confidential information or trade secrets of the Corporation or its parent or subsidiary corporations, any failure to perform specific lawful direction of the Corporation's Board or officers of the Corporation, any refusal or neglect to perform such individual's duties, any conviction of, or entering of a plea of nolo contendre to, a crime which constitutes a felony or any other Misconduct by such individual adversely affecting the business or affairs of the Corporation. The foregoing definition shall not be deemed to be inclusive of all the acts or omissions which the Corporation or any parent or subsidiary may consider as grounds for the dismissal or discharge of any Optionee, Participant or other individual in the Service of the Corporation.

1934 Act: the Securities Exchange Act of 1934, as amended.

Non-Statutory Option: a stock option not intended to meet the requirements of Code Section 422.

Optionee: a person to whom an option is granted under the Discretionary Option Grant Program, the Automatic Option Grant Program or the Director Fee Option Grant Program.

 $\label{eq:participant: a person who is issued Common Stock under the Stock Issuance Program. \\$ 

Permanent Disability: the inability of an individual to engage in any substantial gainful activity, by reason of any medically determinable physical or mental impairment which is expected to result in death or which has lasted or can be expected to last for a period of not less than twelve (12) months.

Plan Administrator: either the Board or the Committee, to the extent the Committee is at the time responsible for the administration of the Plan in accordance with Section IV of Article One.

 $\label{eq:predecessor} \mbox{Plans: the Corporation's 1992 Stock Option Plan and 1991 Stock Option Plan.}$ 

Service: the performance of services on a periodic basis for the Corporation (or any parent or subsidiary corporation) in the capacity of an Employee, a non-employee member of the board of directors or an independent consultant, except to the extent otherwise specifically provided in the applicable stock option or stock issuance agreement.

Section 12(g) Registration Date: the date on which the initial registration of the Common Stock under Section 12(g) of the 1934 Act became effective.

Take-Over Price: the greater of (a) the Fair Market Value per share of Common Stock on the date the particular option to purchase such stock is surrendered to the Corporation in connection with a Hostile Take-Over or (b) the highest reported price per share of Common Stock paid by the tender offeror in effecting such Hostile Take-Over. However, if the canceled option is an Incentive Option, then the Take-Over Price shall not exceed the clause (a) price per share.

B-4

10% Shareholder: the owner of stock (as determined under Code Section 424(d)) possessing ten (10%) percent or more of the total combined voting power of all classes of stock of the Corporation or any parent or subsidiary corporation.

B. The following provisions shall be applicable in determining the parent and subsidiary corporations of the Corporation:

Any corporation (other than the Corporation) in an unbroken chain of corporations ending with the Corporation shall be considered to be a parent of the Corporation, provided each such corporation in the unbroken chain (other than the Corporation) owns, at the time of the determination, stock possessing fifty percent (50%) or more of the total combined voting power of all classes or stock in one of the other corporations in such chain.

Each corporation (other than the Corporation) in an unbroken chain of corporations beginning with the Corporation shall be considered to be a subsidiary of the Corporation, provided each such corporation (other than the last corporation) in the unbroken chain owns, at the time of the determination, stock possessing fifty percent (50%) or more of the total combined voting power of all classes of stock in one of the other corporations in such chain.

## III. STRUCTURE OF THE PLAN

- The Plan shall be divided into four separate components: the Discretionary Option Grant Program specified in Article Two, the Stock Issuance Program specified in Article Three, the Automatic Option Grant Program specified in Article Four and the Director Fee Option Grant Program specified in Article Five. Under the Discretionary Option Grant Program, eligible individuals may at the discretion of the Plan Administrator be granted options to purchase shares of Common Stock in accordance with the provisions of Article Two at a price not less than eighty-five percent (85%) of the Fair Market Value of such shares on the grant date. Under the Stock Issuance Program, eligible individuals may be issued shares of Common Stock directly, either through the immediate purchase of the shares (at Fair Market Value or at discounts of up to 15%) or as a bonus tied to the individual's performance of services or the Corporation's attainment of prescribed milestones. Under the Automatic Option Grant Program, each individual serving as a non-employee Board member on the Automatic Option Grant Program Effective Date and each individual who first joins the Board as a non-employee director at any time after such Effective Date shall at periodic intervals receive option grants to purchase shares of Common Stock in accordance with the provisions of Article Four, with the first such grants to be made on such Effective Date. Under the Director Fee Option Grant Program, each non-employee Board member may elect to apply all or a portion of his or her annual retainer fee otherwise payable in cash to a special below market option grant.
- B. Unless the context clearly indicates otherwise, the provisions of Articles One and Six shall apply to all equity programs under the Plan and shall accordingly govern the interests of all individuals under the Plan.

B-5

### IV. ADMINISTRATION OF THE PLAN

- A. The Discretionary Option Grant and Stock Issuance Programs shall be administered solely and exclusively by the Committee, subject to such conditions and limitations as the Board may decide, to the extent permissible under applicable securities and tax laws requirements.
- B. Members of the Committee shall serve for such period of time as the Board may determine and shall be subject to removal by the Board at any time.
- C. The Plan Administrator shall have full power and authority (subject to the express provisions of the Plan) to establish rules and regulations for the proper administration of the Discretionary Option Grant and Stock Issuance Programs and to make such determinations under, and issue such interpretations of, the provisions of such programs and any outstanding option grants or stock issuances thereunder as it may deem necessary or advisable. Decisions of the Plan Administrator shall be final and binding on all parties who have an interest in the Discretionary Option Grant or Stock Issuance Program or any outstanding option grant or share issuance thereunder.
- D. Administration of the Automatic Option Grant and Director Fee Option Grant Programs shall be self-executing in accordance with the express terms and conditions of those programs, and the Plan Administrator shall exercise no discretionary functions with respect to option grants made pursuant to those programs.

### V. OPTION GRANTS AND STOCK ISSUANCES

A. The persons eligible to participate in the Discretionary Option Grant Program under Article Two and the Stock Issuance Program under Article Three

shall be limited to the following

- (i) officers and other employees of the Corporation (or any parent or subsidiary corporation);
- (ii) non-employee members of the Board or the non-employee members of the board of directors of any parent or subsidiary corporation; and
- (iii) consultants who provide valuable services to the Corporation (or any parent or subsidiary corporation); provided such services are not in connection with the offer or sale of securities in a capital-raising transaction.
- B. The Plan Administrator shall have full authority to determine, (i) with respect to the option grants made under the Discretionary Option Grant Program, which eligible individuals are to receive option grants, the time or times when such grants are to be made, the number of shares to be covered by each such grant, the status of the granted option as either an Incentive Option or a Non-Statutory Option, the time or times at which each granted option is to become exercisable and the maximum term for which the option may remain outstanding, and (ii) with respect to stock issuances under the Stock Issuance Program, the number of shares to be issued

B-6

to each Participant, the vesting schedule (if any) to be applicable to the issued shares, and the consideration to be paid by the Participant for such shares.

## VI. STOCK SUBJECT TO THE PLAN

- Shares of Common Stock shall be available for issuance under the Plan and shall be drawn from either the Corporation's authorized but unissued shares of Common Stock or from reacquired shares of Common Stock, including shares repurchased by the Corporation on the open market. The maximum number of shares of Common Stock which may be issued over the term of the Plan shall not exceed 5,876,666\* shares, subject to adjustment from time to time in accordance with the provisions of this Section VI. Such authorized share reserve is comprised of (i) the number of shares which remained for issuance, as of the Plan Effective Date, under the Predecessor Plans as last approved by the Corporation's shareholders, including the shares subject to the outstanding options incorporated into this Plan and any other shares which would have been available for future option grant under the Predecessor Plans as last approved by the shareholders, plus (ii) an additional increase of 333,333\* shares authorized by the Board on the Plan Effective Date, (iii) an additional increase of 600,000\* shares authorized by the Board on December 6, 1995, (iv) an additional increase of 500,000 shares authorized by the Board on March 19, 1997, (v) an additional increase of 495,000 shares authorized by the Board on April 16, 1999, (vi) an additional increase of 690,000 shares authorized by the Board on April 17, 2000, (vii) an additional increase of 700,000 shares authorized by the Board on March 21, 2001, (viii) an additional increase of 1,150,000 shares authorized by the Board on April 10, 2002, and (ix) an additional increase of 825,000 shares authorized by the Board on February 12, 2003. As one or more outstanding options under the Plan are exercised, the number of shares issued with respect to each such option shall reduce, on a share-for-share basis, the number of shares available for issuance under this Plan.
- B. In no event shall the aggregate number of shares of Common Stock for which any one individual participating in the Plan may be granted stock options, separately exercisable stock appreciation rights and direct stock issuances for

any given year exceed fifty percent (50%) of the total number of shares for which stock options, separately exercisable stock appreciation rights and direct stock issuances may be granted over the term of the Plan.

C. Should one or more outstanding options under this Plan (including options incorporated from the Predecessor Plans) expire or terminate for any reason prior to exercise in full (including any option canceled in accordance with the cancellation-regrant provisions of Section IV of Article Two of the Plan), then the shares subject to the portion of each option not so exercised shall be available for subsequent issuance under the Plan. Shares subject to any stock appreciation rights exercised under the Plan and all share issuances under the Plan, whether or not the shares are subsequently repurchased by the Corporation pursuant to its repurchase rights under the Plan, shall reduce on a share-for-share basis the number of shares of Common Stock available for subsequent issuance under the Plan. In addition, should the exercise price of an outstanding option under the Plan be paid with shares of Common Stock or should shares of

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 $^{\star}$  Reflects the 1-for-3 stock split that was effected immediately prior to the consummation of the initial public offering of the Common Stock.

B-7

Common Stock otherwise issuable under the Plan be withheld by the Corporation in satisfaction of the withholding taxes incurred in connection with the exercise of an outstanding option under the Plan or the vesting of a direct share issuance made under the Plan, then the number of shares of Common Stock available for issuance under the Plan shall be reduced by the gross number of shares for which the option is exercised or which vest under the share issuance, and not by the net number of shares of Common Stock actually issued to the holder of such option or share issuance.

Should any change be made to the Common Stock issuable under the Plan by reason of any stock split, stock dividend, recapitalization, combination of shares, exchange of shares or other change affecting the outstanding Common Stock as a class without the Corporation's receipt of consideration, then appropriate adjustments shall be made to (i) the maximum number and/or class of securities issuable under the Plan, (ii) the maximum amount and/or class of securities for which any one individual participating in the Plan may be granted stock options, separately exercisable stock appreciation rights and direct stock issuances for any given year under the Plan, (iii) the number and/or class of securities for which automatic option grants are to be subsequently made per eligible non-employee Board member under the Automatic Option Grant Program, (iv) the number and/or class of securities and price per share in effect under each option outstanding under the Discretionary Option Grant, Automatic Option Grant or Director Fee Option Grant Program and (v) the number and/or class of securities and price per share in effect under each outstanding option incorporated into this Plan from the Predecessor Plans. Such adjustments to the outstanding options are to be effected in a manner which shall preclude the enlargement or dilution of rights and benefits under such options. The adjustments determined by the Plan Administrator shall be final, binding and conclusive.

ARTICLE TWO

DISCRETIONARY OPTION GRANT PROGRAM

I. TERMS AND CONDITIONS OF OPTIONS

Options granted pursuant to the Discretionary Option Grant Program shall be authorized by action of the Plan Administrator and may, at the Plan Administrator's discretion, be either Incentive Options or Non-Statutory Options. Individuals who are not Employees of the Corporation or its parent or subsidiary corporations may only be granted Non-Statutory Options. Each granted option shall be evidenced by one or more instruments in the form approved by the Plan Administrator; provided, however, that each such instrument shall comply with the terms and conditions specified below. Each instrument evidencing an Incentive Option shall, in addition, be subject to the applicable provisions of Section II of this Article Two.

#### A. Exercise Price.

1. The exercise price per share shall be fixed by the Plan Administrator in accordance with the following provisions:

B-8

- (i) The exercise price per share of Common Stock subject to an Incentive Option shall in no event be less than one hundred percent (100%) of the Fair Market Value of such Common Stock on the grant date.
- (ii) The exercise price per share of Common Stock subject to a Non-Statutory Option shall in no event be less than eighty-five percent (85%) of the Fair Market Value of such Common Stock on the grant date.
- (iii) If any individual to whom an Incentive Option is granted is a 10% Shareholder, then the exercise price per share shall not be less than one hundred ten percent (110%) of the Fair Market Value per share of Common Stock on the grant date.
- 2. The exercise price shall become immediately due upon exercise of the option and shall, subject to the provisions of Section I of Article Six, be payable in one or more of the forms specified below:
  - (i) cash or check made payable to the Corporation,
- (ii) in shares of Common Stock held by the Optionee for the requisite period necessary to avoid a charge to the Corporation's earnings for financial reporting purposes and valued at Fair Market Value on the Exercise Date, or
- (iii) to the extent the option is exercised for vested shares, through a special sale and remittance procedure pursuant to which the Optionee shall concurrently provide irrevocable written instructions (a) to a Corporation-designated brokerage firm to effect the immediate sale of the purchased shares and remit to the Corporation, out of the sale proceeds available on the settlement date, sufficient funds to cover the aggregate exercise price payable for the purchased shares plus all applicable Federal, state and local income and employment taxes required to be withheld by the Corporation by reason of such purchase and (b) to the Corporation to deliver the certificates for the purchased shares directly to such brokerage firm in order to complete the sale transaction.
- 3. Except to the extent such sale and remittance procedure is utilized, payment of the exercise price for the purchased shares must be made on the Exercise Date.
- B. Term and Exercise of Options. Each option granted under this Plan shall be exercisable at such time or times and during such period as is

determined by the Plan Administrator and set forth in the instrument evidencing the grant. No such option, however, shall have a maximum term in excess of ten (10) years measured from the grant date.

1. During the lifetime of the Optionee, the option, together with any related stock appreciation right, shall be exercisable only by the Optionee and shall not be assignable or transferable by the Optionee, except for a transfer of the option by will or by the laws of descent and distribution following the Optionee's death or, with respect to options other than Incentive Options, if permitted in any specific case by the Plan Administrator, pursuant to a domestic relations order (as defined under the Code or Treasury Regulations).

B-9

- 2. Notwithstanding the foregoing, the Plan Administrator may provide that an Optionee may transfer Non-Statutory Options to family members or other persons or entities according to such terms as the Plan Administrator may determine; provided that the Optionee receives no consideration for the transfer of an option and the transferred option shall continue to be subject to the same terms and conditions as were applicable to the option immediately before the transfer.
  - C. Termination of Service.
- 1. Except to the extent otherwise provided pursuant to subsection C.2 below, the following provisions shall govern the exercise period applicable to any options held by the Optionee at the time of cessation of Service or death:
- (i) Should the Optionee cease to remain in Service for any reason other than death, Permanent Disability or Misconduct, then the period during which each outstanding option held by such Optionee is to remain exercisable shall be limited to the three (3)-month period following the date of such cessation of Service.
- (ii) Should the Optionee's Service terminate by reason of Permanent Disability, then the period during which each outstanding option held by the Optionee is to remain exercisable shall be limited to the twelve (12)-month period following the date of such cessation of Service.
- (iii) Should the Optionee die while holding one or more outstanding options, then the period during which each such option is to remain exercisable shall be limited to the twelve (12)-month period following the date of the Optionee's death. During such limited period, the option may be exercised by the personal representative of the Optionee's estate or by the person or persons to whom the option is transferred pursuant to the Optionee's will or in accordance with the laws of descent and distribution.
- (iv) Should the Optionee's Service be terminated for Misconduct, then all outstanding options held by the Optionee shall terminate immediately and cease to be outstanding.
- (v) Under no circumstances, however, shall any such option be exercisable after the specified expiration date of the option term.
- (vi) During the applicable post-Service exercise period, the option may not be exercised in the aggregate for more than the number of vested shares for which the option is exercisable on the date of the Optionee's cessation of Service. Upon the expiration of the applicable exercise period or

(if earlier) upon the expiration of the option term, the option shall terminate and cease to be exercisable for any vested shares for which the option has not been exercised. However, the option shall, immediately upon the Optionee's cessation of Service, terminate and cease to be outstanding with respect to any option shares for which the option is not at that time exercisable or in which the Optionee is not otherwise at that time vested.

2. The Plan Administrator shall have complete discretion, exercisable either at the time the option is granted or at any time while the option remains outstanding,

B-10

- to extend the period of time for which the option is to remain exercisable following the Optionee's cessation of Service or death from the limited period in effect under subsection C.1 of this Section I of Article Two to such greater period of time as the Plan Administrator shall deem appropriate; provided that in no event shall such option be exercisable after the specified expiration date of the option term; and/or
- to permit one or more options held by the Optionee under this Article Two to be exercised, during the limited post-Service exercise period applicable under this paragraph C, not only with respect to the number of vested shares of Common Stock for which each such option is exercisable at the time of the Optionee's cessation of Service but also with respect to one or more subsequent installments for which the option would otherwise have become exercisable had such cessation of Service not occurred.
- D. Shareholder Rights. An Optionee shall have no shareholder rights with respect to any shares covered by the option until such individual shall have exercised the option and paid the exercise price for the purchased shares.
- E. Unvested Shares. The Plan Administrator shall have the discretion to authorize the issuance of unvested shares of Common Stock under the Plan. Should the Optionee cease Service while holding such unvested shares, the Corporation shall have the right to repurchase, at the exercise price paid per share, any or all of those unvested shares. The terms and conditions upon which such repurchase right shall be exercisable (including the period and procedure for exercise and the appropriate vesting schedule for the purchased shares) shall be established by the Plan Administrator and set forth in the agreement evidencing such repurchase right. All outstanding repurchase rights under the Plan shall terminate automatically upon the occurrence of any Corporate Transaction, except to the extent the repurchase rights are expressly assigned to the successor corporation (or parent thereof) in connection with the Corporate Transaction.

## II. INCENTIVE OPTIONS

Incentive Options may only be granted to individuals who are Employees, and the terms and conditions specified below shall be applicable to all Incentive Options granted under the Plan. Except as modified by the provisions of this Section II, all the provisions of Articles One, Two and Six of the Plan shall be applicable to all Incentive Options granted hereunder. Any Options specifically designated as Non-Statutory shall not be subject to the terms and conditions of this Section II.

A. Dollar Limitation. The aggregate Fair Market Value (determined as of the respective date or dates of grant) of the Common Stock for which one or more options granted to any Employee under this Plan (or any other option plan of the

Corporation or its parent or subsidiary corporations) may for the first time become exercisable as incentive stock options under the Federal tax laws during any one calendar year shall not exceed the sum of One Hundred Thousand Dollars (\$100,000). To the extent the Employee holds two (2) or more such options which become exercisable for the first time in the same calendar year, the foregoing limitation on the exercisability of such options as incentive stock options under the Federal tax

B-11

laws shall be applied on the basis of the order in which such options are granted. Should the number of shares of Common Stock for which any Incentive Option first becomes exercisable in any calendar year exceed the applicable One Hundred Thousand Dollar (\$100,000) limitation, then that option may nevertheless be exercised in that calendar year for the excess number of shares as a Non-Statutory Option under the Federal tax laws.

B. 10% Shareholder. If any individual to whom an Incentive Option is granted is a 10% Shareholder, then the option term shall not exceed five (5) years measured from the grant date.

## III. CORPORATE TRANSACTION/CHANGE IN CONTROL

- In the event of any Corporate Transaction, each option which is at the time outstanding under this Article Two shall automatically accelerate so that each such option shall, immediately prior to the specified effective date for such Corporate Transaction, become fully exercisable with respect to the total number of shares of Common Stock at the time subject to such option and may be exercised for all or any portion of such shares as fully-vested shares. However, an outstanding option under this Article Two shall not so accelerate if and to the extent: (i) such option is, in connection with such Corporate Transaction, either to be assumed by the successor corporation or parent thereof or to be replaced with a comparable option to purchase shares of the capital stock of the successor corporation or parent thereof, (ii) such option is to be replaced with a cash incentive program of the successor corporation which preserves the option spread existing at the time of such Corporate Transaction and provides for subsequent payout in accordance with the same vesting schedule applicable to such option, (iii) such option is to be replaced by another incentive program which the Plan Administrator determines is reasonably equivalent in value to the program contemplated by either clause (i) or (ii) above, or (iv) the acceleration of such option is subject to other limitations imposed by the Plan Administrator at the time of the option grant. However, upon an Optionee's cessation of Service by reason of an Involuntary Termination (other than for Misconduct) within eighteen (18) months after a Corporate Transaction in which his or her outstanding options are assumed or replaced pursuant to clause (i), (ii) or (iii) above, each such option under clause (i) shall automatically accelerate and become fully exercisable with respect to the total number of shares of Common Stock at the time subject to such option and may be exercised for all or any portion of such shares as fully-vested shares, the cash incentive program under clause (ii) shall become fully vested and the benefits under a clause (iii) replacement program shall become fully vested. The option as so accelerated shall remain exercisable until the earlier of (i) the expiration of the option term or (ii) the expiration of a ninety (90)-day period measured from the date of such Involuntary Termination. The determination of option comparability under clause (i) or program comparability under clause (iii) above shall be made by the Plan Administrator, and its determination shall be final, binding and conclusive.
- B. Immediately following the consummation of a Corporate Transaction, all outstanding options under this Article Two shall terminate and cease to remain

outstanding, except to the extent assumed by the successor corporation or its parent company.

C. Each outstanding option under this Article Two that is assumed in connection with a Corporate Transaction shall be appropriately adjusted, immediately after such Corporate

B-12

Transaction, to apply and pertain to the number and class of securities which would have been issued to the option holder in consummation of such Corporate Transaction had such person exercised the option immediately prior to such Corporate Transaction. Appropriate adjustments shall also be made to the exercise price payable per share, provided the aggregate exercise price payable for such securities shall remain the same. In addition, the class and number of securities available for issuance under the Plan on both an aggregate and participant basis following the consummation of such Corporate Transaction shall be appropriately adjusted.

- D. The Plan Administrator shall have the discretionary authority, exercisable either at the time the option is granted or at any time while the option remains outstanding, to provide for the automatic acceleration of one or more outstanding options under this Article Two (and the termination of one or more of the Corporation's outstanding repurchase rights under this Article Two) upon the occurrence of a Change in Control. The Plan Administrator shall also have full power and authority to condition any such option acceleration (and the termination of any outstanding repurchase rights) upon the Optionee's cessation of Service by reason of an Involuntary Termination (other than for Misconduct) within a specified period following such Change in Control.
- E. Any options accelerated in connection with a Change in Control shall remain fully exercisable until the expiration or sooner termination of the option term or the surrender of such option in accordance with Section V of this Article Two.
- F. The grant of options under this Article Two shall in no way affect the right of the Corporation to adjust, reclassify, reorganize or otherwise change its capital or business structure or to merge, consolidate, dissolve, liquidate or sell or transfer all or any part of its business or assets.
- G. The portion of any Incentive Option accelerated under this Section III in connection with a Corporate Transaction or Change in Control shall remain exercisable as an incentive stock option under the Federal tax laws only to the extent the dollar limitation of Section II of this Article Two is not exceeded. To the extent such dollar limitation is exceeded, the accelerated portion of such option shall be exercisable as a non-statutory option under the Federal tax laws.

### IV. CANCELLATION AND REGRANT OF OPTIONS

The Plan Administrator shall have the authority to effect, at any time and from time to time, with the consent of the affected Optionees, the cancellation of any, or all outstanding options under this Article Two (including outstanding options under the Predecessor Plans incorporated into this Plan) and to grant in substitution new options under the Plan covering the same or different numbers of shares of Common Stock but with an exercise price per share not less than (i) one hundred percent (100%) of the Fair Market Value on the new grant date in the case of a grant of an Incentive Option, (ii) one hundred ten percent (110%) of such Fair Market Value in the case of an Incentive Option grant to a 10% Shareholder or (iii) eighty-five percent (85%) of such

Fair Market Value in the case of all other grants.

B - 13

#### V. STOCK APPRECIATION RIGHTS

- A. Provided and only if the Plan Administrator determines in its discretion to implement the stock appreciation right provisions of this Section V, one or more Optionees may be granted the right, exercisable upon such terms and conditions as the Plan Administrator may establish, to surrender all or part of an unexercised option under this Article Two in exchange for a distribution from the Corporation in an amount equal to the excess of (i) the Fair Market Value (on the option surrender date) of the number of shares in which the Optionee is at the time vested under the surrendered option (or surrendered portion thereof) over (ii) the aggregate exercise price payable for such vested shares.
- B. No surrender of an option shall be effective hereunder unless it is approved by the Plan Administrator. If the surrender is so approved, then the distribution to which the Optionee shall accordingly become entitled under this Section V may be made in shares of Common Stock valued at Fair Market Value on the option surrender date, in cash, or partly in shares and partly in cash, as the Plan Administrator shall in its sole discretion deem appropriate.
- C. If the surrender of an option is rejected by the Plan Administrator, then the Optionee shall retain whatever rights the Optionee had under the surrendered option (or surrendered portion thereof) on the option surrender date and may exercise such rights at any time prior to the later of (i) five (5) business days after the receipt of the rejection notice or (ii) the last day on which the option is otherwise exercisable in accordance with the terms of the instrument evidencing such option, but in no event may such rights be exercised more than ten (10) years after the date of the option grant.
- One or more officers of the Corporation subject to the short-swing profit restrictions of the Federal securities laws may, in the Plan Administrator's sole discretion, be granted limited stock appreciation rights in tandem with their outstanding options under this Article Two. Upon the occurrence of a Hostile Take-Over at a time when the Corporation's outstanding Common Stock is registered under Section 12(q) of the 1934 Act, each such officer holding one or more options with such a limited stock appreciation right in effect for at least six (6) months shall have the unconditional right (exercisable for a thirty (30)-day period following such Hostile Take-Over) to surrender each such option to the Corporation, to the extent the option is at the time exercisable for fully vested shares of Common Stock. The officer shall in return be entitled to a cash distribution from the Corporation in an amount equal to the excess of (i) the Take-Over Price of the vested shares of Common Stock at the time subject to each surrendered option (or surrendered portion of such option) over (ii) the aggregate exercise price payable for such vested shares. Such cash distribution shall be made within five (5) days following the option surrender date. Neither the approval of the Plan Administrator nor the consent of the Board shall be required in connection with such option surrender and cash distribution. Any unsurrendered portion of the option shall continue to remain outstanding and become exercisable in accordance with the terms of the instrument evidencing such grant.
- E. The shares of Common Stock subject to any option surrendered for an appreciation distribution pursuant to this Section V shall not be available for subsequent issuance under the Plan.

#### ARTICLE THREE

#### STOCK ISSUANCE PROGRAM

#### I. TERMS AND CONDITIONS OF STOCK ISSUANCES

Shares of Common Stock may be issued under the Stock Issuance Program through direct and immediate purchases without any intervening stock option grants. The issued shares shall be evidenced by a Stock Issuance Agreement ("Issuance Agreement") that complies with the terms and conditions of this Article Three.

#### A. Consideration.

- 1. Shares of Common Stock may be issued under the Stock Issuance Program for one or more of the following items of consideration which the Plan Administrator may deem appropriate in each individual instance:
- (i) full payment in cash or check made payable to the Corporation's order;
- (ii) a promissory note payable to the Corporation's order in one or more installments; or
- $\,$  (iii) past services rendered to the Corporation or any parent or subsidiary corporation.
- 2. The shares may, in the absolute discretion of the Plan Administrator, be issued for consideration with a value less than one hundred percent (100%) of the Fair Market Value of such shares at the time of issuance, but in no event less than eighty-five percent (85%) of such Fair Market Value.

### B. Vesting Provisions.

- 1. Shares of Common Stock issued under the Stock Issuance Program may, in the absolute discretion of the Plan Administrator, be fully and immediately vested upon issuance (as a bonus for past services) or may vest in one or more installments over the Participant's period of Service or the Corporation's attainment of performance milestones. The elements of the vesting schedule applicable to any unvested shares of Common Stock issued under the Stock Issuance Program, namely:
- (i) the Service period to be completed by the Participant or the performance objectives to be achieved by the Corporation,
  - (ii) the number of installments in which the shares are to vest,

B-15

(iv) the effect which death, Permanent Disability or other event designated by the Plan Administrator is to have upon the vesting schedule, shall be determined by the Plan Administrator and incorporated into the Issuance Agreement executed by the Corporation and the Participant at the time such unvested shares are issued.

- 2. The Participant shall have full shareholder rights with respect to any shares of Common Stock issued to him or her under the Plan, whether or not his or her interest in those shares is vested. Accordingly, the Participant shall have the right to vote such shares and to receive any regular cash dividends paid on such shares. Any new, additional or different shares of stock or other property (including money paid other than as a regular cash dividend) which the Participant may have the right to receive with respect to his or her unvested shares by reason of any stock dividend, stock split, recapitalization, combination of shares, exchange of shares or other change affecting the outstanding Common Stock as a class without the Corporation's receipt of consideration or by reason of any Corporate Transaction, shall be issued subject to (i) the same vesting requirements applicable to his or her unvested shares and (ii) such escrow arrangements as the Plan Administrator shall deem appropriate.
- 3. Should the Participant cease to remain in Service while holding one or more unvested shares of Common Stock under the Stock Issuance Program, then the Corporation shall have the right to require the Participant to surrender those shares immediately to the Corporation for cancellation, and the Participant shall cease to have any further shareholder rights with respect to the surrendered shares. To the extent the surrendered shares were previously issued to the Participant for consideration paid in cash or cash equivalent (including the Participant's purchase-money promissory note), the Corporation shall repay to the Participant the cash consideration paid for the surrendered shares and shall cancel the unpaid principal balance of any outstanding purchase-money note of the Participant attributable to such surrendered shares.
- 4. The Plan Administrator may in its discretion elect to waive the surrender and cancellation of one or more unvested shares of Common Stock (or other assets attributable thereto) which would otherwise occur upon the non-completion of the vesting schedule applicable to such shares. Such waiver shall result in the immediate vesting of the Participant's interest in the shares of Common Stock as to which the waiver applies. Such waiver may be effected at any time, whether before or after the Participant's cessation of Service or the attainment or non-attainment of the applicable performance objectives.

### II. CORPORATE TRANSACTION/CHANGE IN CONTROL

A. All of the Corporation's outstanding repurchase rights under this Article Three shall automatically terminate upon the occurrence of a Corporate Transaction, except to the extent the Corporation's outstanding repurchase rights are expressly assigned to the successor corporation (or parent thereof) in connection with such Corporate Transaction. However, any assigned repurchase rights covering the unvested shares held by a Participant under this Article Three shall immediately terminate should there occur an Involuntary Termination of that Participant's Service (other than for Misconduct) within eighteen (18) months after such Corporate Transaction.

B-16

B. The Plan Administrator shall have the discretionary authority, exercisable either at the time the shares are issued under this Article Three or at any time while those shares remain outstanding, to provide for the automatic termination of the Corporation's repurchase rights with respect to those shares should there occur a Change in Control. The Plan Administrator shall also have full power and authority to condition the termination of those repurchase rights upon the Participant's cessation of Service by reason of an Involuntary Termination (other than for Misconduct) within a specified period following such

Change in Control.

#### III. SHARE ESCROW/TRANSFER RESTRICTIONS

- A. Unvested shares may, in the Plan Administrator's discretion, be held in escrow by the Corporation until the Participant's interest in such shares vests or may be issued directly to the Participant with restrictive legends on the certificates evidencing such unvested shares. To the extent an escrow arrangement is utilized, the unvested shares and any securities or other assets distributed with respect to such shares (other than regular cash dividends) shall be delivered in escrow to the Corporation to be held until the Participant's interest in such (or the distributed securities or assets) vests.
- B. The Participant shall have no right to transfer any unvested shares of Common Stock issued to him or her under the Stock Issuance Program. For purposes of this restriction, the term "transfer" shall include (without limitation) any sale, pledge, assignment, encumbrance, gift or other disposition of such shares, whether voluntary or involuntary. Upon any such attempted transfer, the unvested shares shall immediately be canceled in accordance with substantially the same procedure in effect under Section I.B.3 of this Article Three, and neither the Participant nor the proposed transferee shall have any rights with respect to such canceled shares. However, the Participant shall have the right to make a gift of unvested shares acquired under the Stock Issuance Program to his or her spouse or issue, including adopted children, or to a trust established for such spouse or issue, provided the transferee of such shares delivers to the Corporation a written agreement to be bound by all the provisions of the Stock Issuance Program and the Issuance Agreement applicable to the gifted shares.

#### ARTICLE FOUR

### AUTOMATIC OPTION GRANT PROGRAM

### I. ELIGIBILITY

The individuals eligible to receive automatic option grants pursuant to the provisions of this Article Four program shall be limited to (i) those individuals who are serving as non-employee Board members on the Automatic Option Grant Program Effective Date, (ii) those individuals who are first elected or appointed as non-employee Board members on or after such Effective Date, whether through appointment by the Board or election by the Corporation's shareholders, and (iii) those individuals who are re-elected to serve as non-employee Board members at one or more Annual Shareholders Meetings held after the Section 12(g) Registration Date. In no event, however, shall a non-employee Board member be eligible to receive an automatic option grant pursuant to clause (i) or (ii) above if such individual has at any time been

B-17

in the prior employ of the Corporation (or any parent or subsidiary corporation), but such individual shall be eligible to receive one or more automatic option grants pursuant to clause (iii). Each non-employee Board member eligible to receive one or more automatic option grants pursuant to the foregoing criteria shall be designated an "Eligible Director" for purposes of the Plan.

# II. TERMS AND CONDITIONS OF AUTOMATIC OPTION

A. Grant Dates. Option grants shall be made under this Article Four on the dates specified below:

- 1. Initial Grant. Each Eligible Director who is first elected or appointed as a non-employee Board member after the Automatic Option Grant Program Effective Date shall automatically be granted, on the date of such initial election or appointment (as the case may be), a Non-Statutory Option to purchase 30,000 shares of Common Stock upon terms and conditions of this Article
- 2. Annual Grant. On the date of each Annual Shareholders Meeting, beginning with the first Annual Meeting held after the Section 12(g) Registration Date, each individual who will continue to serve as an Eligible Director shall automatically be granted, whether or not such individual is standing for re-election as a Board member at that Annual Meeting, a Non-Statutory Option to purchase an additional 10,000 shares of Common Stock upon the terms and conditions of this Article Four, provided he or she has served as a non-employee Board member for at least six (6) months prior to the date of such Annual Meeting.
- 3. No Limitation. There shall be no limit on the number of shares for which any one Eligible Director may be granted stock options under this  $Article\ Four\ over\ his\ or\ her\ period\ of\ Board\ service.$
- B. Exercise Price. The exercise price per share of Common Stock subject to each automatic option grant made under this Article Four shall be equal to one hundred percent (100%) of the Fair Market Value per share of Common Stock, on the automatic grant date.
- C. Payment. The exercise price shall be payable in one of the alternative forms specified below. To the extent the option is exercised for any unvested shares, the Optionee must execute and deliver to the Corporation a stock purchase agreement for those unvested shares which provides the Corporation with the right to repurchase, at the exercise price paid per share, any unvested shares held by the Optionee at the time of cessation of Board service and which precludes the sale, transfer or other disposition of the purchased shares at any time while those shares remain subject to the Corporation's repurchase right.
- (i) full payment in cash or check drawn to the Corporation's order;
- (ii) full payment in shares of Common Stock held for the requisite period necessary to avoid a charge to the Corporation's earnings for financial reporting purposes and valued at Fair Market Value on the Exercise Date;

B-18

- (iii) full payment in a combination of shares of Common Stock held for the requisite period necessary to avoid a charge to the Corporation's earnings for financial reporting purposes and valued at Fair Market Value on the Exercise Date and cash or check drawn to the Corporation's order; or
- (iv) to the extent the option is exercised for vested shares, full payment through a sale and remittance procedure pursuant to which the Optionee shall provide irrevocable written instructions to (a) a Corporation designated brokerage firm to effect the immediate sale of the purchased shares and remit to the Corporation, out of the sale proceeds available on the settlement date, sufficient funds to cover the aggregate exercise price payable for the purchased shares and (b) the Corporation to deliver the certificates for the purchased shares directly to such brokerage firm in order to complete the sale transaction.

Except to the extent the sale and remittance procedure specified above is used for the exercise of the option for vested shares, payment of the exercise price for the purchased shares must accompany the exercise notice.

- D. Option Term. Each automatic grant under this Article Four shall have a maximum term of ten (10) years measured from the automatic grant date.
- E. Exercisability/Vesting. Each automatic grant shall be immediately exercisable for any or all of the option shares. However, any shares purchased under the option shall be subject to repurchase by the Corporation, at the exercise price paid per share, upon the Optionee's cessation of Board service prior to vesting in those shares in accordance with the applicable schedule below:

Initial Grant. Each initial 30,000-share automatic grant shall vest, and the Corporation's repurchase right shall lapse, in a series of four successive and equal annual installments over the Optionee's period of continued service as a Board member, with the first such installment to vest upon Optionee's completion of one (1) year of Board service measured from the automatic grant date.

Annual Grant. Each additional 10,000-share automatic grant shall vest, and the Corporation's repurchase right shall lapse, upon the Optionee's completion of one (1) year of Board service measured from the automatic grant date.

Vesting of the option shares shall be subject to acceleration, as provided in Section II.G.3 and Section III of this Article Four. In no event shall any additional option shares vest after the Optionee's cessation of Board service, except as otherwise provided in Section II.G.3 of this Article Four.

- F. Non-Transferability.
- 1. During the lifetime of the Optionee, each automatic option grant, together with the limited stock appreciation right pertaining to that option, shall be exercisable only by the Optionee and shall not be assignable or transferable by the Optionee, except for a transfer of the option by will or by the laws of descent and distribution following Optionee's death or, with

B-19

respect to options other than Incentive Options, if permitted in any specific case by the Plan Administrator, pursuant to a domestic relations order (as defined under the Code or Treasury Regulations).

- 2. Notwithstanding the foregoing, the Plan Administrator may provide that an Optionee may transfer Non-Statutory Options to family members or other persons or entities according to such terms as the Plan Administrator may determine; provided that the Optionee receives no consideration for the transfer of an option and the transferred option shall continue to be subject to the same terms and conditions as were applicable to the option immediately before the transfer.
  - G. Effect of Termination of Board Service.
- 1. Should the Optionee cease to serve as a Board member for any reason (other than death or Permanent Disability) while holding one or more automatic option grants under this Article Four, then such individual shall have a six (6)-month period following the date of such cessation of Board service in which to exercise each such option for any or all of the shares of Common Stock

in which the Optionee is vested at the time of such cessation of Board service. However, each such option shall immediately terminate and cease to be outstanding at the time of such cessation of Board service, with respect to any shares in which the Optionee is not otherwise at that time vested under that option.

- 2. Should the Optionee die within six (6) months after cessation of Board service, then any automatic option grant held by the Optionee at the time of death may subsequently be exercised. for any or all of the shares of Common Stock in which the Optionee is vested at the time of his or her cessation of Board service (less any option shares subsequently purchased by the Optionee prior to death), by the personal representative of the Optionee's estate or by the person or persons to whom the option is transferred pursuant to the Optionee's will or in accordance with the laws of descent and distribution. The right to exercise such option shall lapse upon the expiration of a twelve (12)-month period measured from the date of the Optionee's death.
- 3. Should the Optionee die or become Permanently Disabled while serving as a Board member, then the shares of Common Stock at the time subject to each automatic option grant held by such Optionee under this Article Four which are vested may be purchased by the Optionee (or the representative of the Optionee's estate or the person or persons to whom the option is transferred upon the Optionee's death) pursuant to the option for a twelve (12)-month period following the date of the Optionee's cessation of Board service.
- 4. In no event shall any automatic grant under this Article Four remain exercisable after the expiration date of the ten (10)-year option term. Upon the expiration of the applicable post-service exercise period under subparagraphs 1 through 3 above or (if earlier) upon the expiration of the ten (10)-year option term, the automatic grant shall terminate and cease to be outstanding for any option shares in which the Optionee was vested at the time of his or her cessation of Board service but for which such option was not subsequently exercised.

B-20

- H. Shareholder Rights. The holder of an automatic option grant under this Article Four shall have none of the rights of a shareholder with respect to any shares subject to such option until such individual shall have exercised the option and paid the exercise price for the purchased shares.
- I. Remaining Terms. The remaining terms and conditions of each automatic option grant shall be as set forth in the form of Automatic Stock Option Agreement attached as Exhibit A to the Plan.

## III. CORPORATE TRANSACTION/CHANGE IN CONTROL/HOSTILE TAKE-OVER

- A. In the event of any Corporate Transaction, the shares of Common Stock at the time subject to each outstanding option under this Article Four but not otherwise vested shall automatically vest in full so that each such option shall, immediately prior to the specified effective date for the Corporate Transaction, become fully exercisable for all of the shares of Common Stock at the time subject to that option and may be exercised for all or any portion of those shares as fully-vested shares. Immediately following the consummation of the Corporate Transaction, all automatic option grants under this Article Four shall terminate and cease to be outstanding, except to the extent one or more of those grants are assumed by the acquiring entity or its parent corporation.
- B. In connection with any Change in Control of the Corporation, the shares of Common Stock at the time subject to each outstanding option under this

Article Four but not otherwise vested shall automatically vest in full so that each such option shall, immediately prior to the specified effective date for the Change in Control, become fully exercisable for all of the shares of Common Stock at the time subject to that option and may be exercised for all or any portion of those shares as fully-vested shares. Each such option shall remain so exercisable for all the option shares following the Change in Control, until the expiration or sooner termination of the option term.

- C. Should a Hostile Take-Over occur at any time following the Section 12(g) Registration Date, then the Optionee shall have a thirty (30)-day period in which to surrender to the Corporation each option held by him or her under this Article Four for a period of at least six (6) months. The optionee shall in return be entitled to a cash distribution from the Corporation in an amount equal to the excess of (i) the Take-Over Price of the shares of Common Stock at the time subject to the surrendered option (whether or not those shares are otherwise at the time fully vested) over (ii) the aggregate exercise price payable for such shares. The cash distribution shall be paid within five (5) days following the surrender of the option to the Corporation. Neither the approval of the Plan Administrator nor the consent of the Board shall be required in connection with such option surrender and cash distribution. The shares of Common Stock subject to each option surrendered in connection with the Hostile Take-Over shall not be available for subsequent issuance under the Plan.
- D. The automatic option grants outstanding under this Article Four shall in no way affect the right of the Corporation to adjust, reclassify, reorganize or otherwise change its capital or business structure or to merge, consolidate, dissolve, liquidate or sell or transfer all or any part of its business or assets.

B-21

## ARTICLE FIVE

## DIRECTOR FEE OPTION GRANT PROGRAM

## I. OPTION GRANTS

Effective with respect to elections of Board members occurring at or after the Company's regular 2003 annual meeting of shareholders, each non-employee Board member may elect to receive all or any portion of the retainer fees otherwise payable in cash for his or her service on the Board (on any committee thereof) in the form of a special option grant under this Director Fee Option Grant Program. Such election must be filed with the Corporation's Chief Financial Officer prior to the shareholder vote that will determine whether that Board member (or Board candidate) will be elected to serve or continue to serve as a Board member and will apply to all retainer fees payable during the entire term for which that Board member (or Board candidate) is then nominated to serve. Each non-employee Board member (or Board candidate) who files such a timely election and is then elected to serve as a Board member will automatically be granted an option under this Director Fee Option Grant Program on the date of the applicable shareholder vote.

With respect to the period between January 1, 2003 and the Company's regular 2003 annual meeting of shareholders, a pro-rata portion of the regular annual retainer (the "Fractional Retainer") will be payable to non-employee Board members. Each non-employee Board Member may elect to receive all or a portion of the Fractional Retainer that would otherwise be payable in cash in the form of a special option grant under this Director Fee Option Grant Program. Such election must be filed with the Corporation's Chief Financial Officer prior to the Company's regular 2002 annual meeting of shareholders and will apply only

to the Fractional Retainer. Each non-employee Board member (or Board candidate) who files a timely election with respect to the Fractional Retainer and is then elected to serve as a Board member at the Company's regular 2002 annual meeting will automatically be granted an option under this Director Fee Option Grant Program on the date of the Company's regular 2002 annual meeting of shareholders.

#### II. OPTION TERMS

Each option shall be a Non-Statutory Option governed by the terms and conditions specified below.

#### A. Exercise Price.

- 1. The exercise price per share will be thirty-three and one-third percent (33-1/3%) of the Fair Market Value per share of Common Stock on the option grant date.
- 2. The exercise price will become immediately due upon exercise of the option and will be payable in one or more of the alternative forms authorized under the Discretionary Option Grant Program. Except to the extent the sale and remittance procedures specified thereunder is utilized, payment of the exercise price for the purchased shares must be made on the Exercise Date.

B-22

B. Number of Option Shares: The number of shares of Common Stock subject to the option shall be determined pursuant to the following formula (rounded down to the nearest whole number):

 $X = A / (B \times 66-2/3\%)$ , where

X is the number of option shares,

A is the portion of the annual retainer fee subject to the nonemployee Board member's election, and

 $\ensuremath{\mathtt{B}}$  is the Fair Market Value per share of Common Stock on the option grant date.

- C. Exercise and Term of Options. Each option granted under this Article Five will be fully vested and immediately exercisable. Each such option will have a maximum term of ten (10) years measured from the option grant date.
- D. Effect of Termination of Service. Should the Optionee cease Board service for any reason while holding one or more options under this Article Five, then each such option will remain exercisable until the earlier of (i) the expiration of the ten (10)-year option term or (ii) the expiration of the three (3)-year period measured from the date of such cessation of Board service.
- E. Death or Permanent Disability. Should the Optionee die while holding one or more options under this Article Five, then each such option may be exercised by the personal representative of the Optionee's estate or by the person or persons to whom the option is transferred pursuant to the Optionee's will or in accordance with the laws of descent and distribution.

### III. CORPORATE TRANSACTION/CHANGE IN CONTROL

A. In the event of any Corporate Transaction while the Optionee remains a Board member, each outstanding option held by such Optionee under this

Director Fee Option Grant Program will be assumed by the successor corporation (or parent thereof) in the Corporate Transaction and will remain exercisable until the earlier of (i) the expiration of the ten (10)-year option term or (ii) the expiration of the three (3)-year period measured from the date of the Optionee's cessation of Board service.

B. The grant of options under the Director Fee Option Grant Program will in no way affect the right of the Corporation to adjust, reclassify, reorganize or otherwise change its capital or business structure or to merge, consolidate, dissolve, liquidate or sell or transfer all or any part of its business or assets.

#### IV. REMAINING TERMS

The remaining terms of each option granted under this Director Fee Option Grant Program will be the same as the terms in effect for option grants made under the Discretionary Option Grant Program.

B-23

#### ARTICLE SIX

#### MISCELLANEOUS

#### I. LOANS OR INSTALLMENT PAYMENTS

- A. The Plan Administrator may, in its discretion, assist any Optionee or Participant (including an Optionee or Participant who is an officer of the Corporation) in the exercise of one or more options granted to such Optionee under the Discretionary Option Grant and Automatic Option Grant Programs or the purchase of one or more shares issued to such Participant under the Stock Issuance Program, including the satisfaction of any Federal, state and local income and employment tax obligations arising therefrom, by:
- (i) authorizing the extension of a loan from the Corporation to such Optionee or Participant, or
- $\,$  (ii) permitting the Optionee or Participant to pay the exercise price or purchase price for the purchased Common Stock in installments over a period of years.
- B. The terms of any loan or installment method of payment (including the interest rate and terms of repayment) shall be upon such terms as the Plan Administrator specifies in the applicable option or issuance agreement or otherwise deems appropriate at the time such exercise price or purchase price becomes due and payable. Loans or installment payments may be authorized with or without security or collateral. In all events, the maximum credit available to the Optionee or Participant may not exceed the option or purchase price of the acquired shares (less the par value of such shares) plus any Federal, state and local income and employment tax liability incurred by the Optionee or Participant in connection with the acquisition of such shares.
- C. The Plan Administrator may, in its absolute discretion, determine that one or more loans extended under this Section I shall be subject to forgiveness by the Corporation in whole or in part upon such terms and conditions as the Plan Administrator may in its discretion deem appropriate.

# II. AMENDMENT OF THE PLAN AND AWARDS

A. The Board has complete and exclusive power and authority to amend or

modify the Plan (or any component thereof) in any or all respects whatsoever. However, (i) no such amendment or modification shall adversely affect rights and obligations with respect to options at the time outstanding under the Plan, nor adversely affect the rights of any Participant with respect to Common Stock issued under the Stock Issuance Program prior to such action, unless the Optionee or Participant consents to such amendment. In addition, the Board may not, without the approval of the Corporation's shareholders, amend the Plan to (i) increase the maximum number of shares issuable under the Plan or the maximum amount of shares for which any one individual participating in the Plan may be granted stock options, separately exercisable stock appreciation rights and direct stock issuances for any given year under the Plan, except for permissible adjustments under Article One, (ii) materially modify the eligibility requirements for Plan participation, or (iii) otherwise materially increase the benefits accruing to Plan participants.

B-24

B. (i) Options to purchase shares of Common Stock may be granted under the Discretionary Option Grant Program and (ii) shares of Common Stock may be issued under the Stock Issuance Program, which are in both instances in excess of the number of shares then available for issuance under the Plan, provided any excess shares actually issued under the Discretionary Option Grant or the Stock Issuance Programs are held in escrow until shareholder approval is obtained for a sufficient increase in the number of shares available for issuance under the Plan. If such shareholder approval is not obtained within twelve (12) months after the date the first such excess option grants or excess share issuances are made, then (i) any unexercised excess options shall terminate and cease to be exercisable and (ii) the Corporation shall promptly refund the purchase price paid for any excess shares actually issued under the Plan and held in escrow, together with interest (at the applicable Short Term Federal Rate) for the period the shares were held in escrow.

### III. TAX WITHHOLDING

- A. The Corporation's obligation to deliver shares of Common Stock upon the exercise of any stock options granted under Article Two or upon the issuance of any shares under Article Three shall be subject to the satisfaction of all applicable Federal, state and local income and employment tax withholding requirements.
- B. The Plan Administrator may, in its discretion and in accordance with the provisions of this Section III of Article Six and such supplemental rules as the Plan Administrator may from time to time adopt (including the applicable safe-harbor provisions of Rule 16b-3 of the Securities and Exchange Commission), provide any or all holders of Non-Statutory Options or unvested shares under the Plan with the right to use shares of Common Stock in satisfaction of all or part of the Federal, state and local income and employment tax liabilities incurred by such holders in connection with the exercise of their options or the vesting of their shares (the "Taxes"). Such right may be provided to any such holder in either or both of the following formats:
  - The holder of the Non-Statutory Option or unvested shares may be provided with the election to have the Corporation withhold, from the shares of Common Stock otherwise issuable upon the exercise of such Non-Statutory Option or the vesting of such shares, a portion of those shares with an aggregate Fair Market Value equal to the percentage of the applicable Taxes (not to exceed one hundred percent (100%)) designated by the holder.

<sup>---</sup> The Plan Administrator may, in its discretion, provide the

holder of the Non-Statutory Option or the unvested shares with the election to deliver to the Corporation, at the time the Non-Statutory Option is exercised or the shares vest, one or more shares of Common Stock previously acquired by such individual (other than in connection with the option exercise or share vesting triggering the Taxes) with an aggregate Fair Market Value equal to the percentage of the Taxes incurred in connection with such option exercise or share vesting (not to exceed one hundred percent (100%)) designated by the holder.

B-25

#### IV. EFFECTIVE DATE AND TERM OF PLAN

- The Discretionary Option Grant and Stock Issuance Programs of this Plan became effective immediately upon adoption of the Plan by the Board on March 23, 1995 (the "Plan Effective Date"). The Plan was approved by the Corporation's shareholders on April 12, 1995. On December 9, 1995, the Board approved an increase of 600,000 shares (which number reflects the 1-for-3 reverse stock split that was effected immediately prior to the consummation of the initial public offering of the Common Stock) in the aggregate number of shares issuable under the Plan; such increase was approved by the Corporation's shareholders on December 19, 1995. The Automatic Option Grant Program of this Plan became effective on the Automatic Option Grant Program Effective Date. The Plan was amended by the Board on March 16, 1996 to implement the Director Fee Option Grant Program, which amendment was approved by the Corporation's shareholders at the 1996 Annual Stockholders Meeting. On March 19, 1997, the Board approved an increase of 500,000 shares in the aggregate number of shares issuable under the Plan, and on April 23, 1997, the Board approved a change in the aggregate number of shares of Common Stock for which any one individual participating in the Plan may be granted stock options, separately exercisable stock appreciation rights and direct stock issuances, from a limitation of 250,000 shares over the term of the Plan, to an annual limitation not in excess of 50% of the total number of shares for which stock options, separately exercisable stock appreciation rights and direct stock issuances may be granted over the term of the Plan. Both of such amendments became effective on April 23, 1997, and were approved by the Corporation's shareholders at the 1997 Annual Stockholders Meeting. On April 16, 1999, the Board approved an increase of 495,000 shares in the aggregate number of shares issuable under the Plan and an increase in the number of shares issuable to Eliqible Directors under the annual grant provisions of the Automatic Option Grant Program from 3,333 to 10,000 shares. Both of these changes became effective on June 15, 1999, upon their approval by the Corporation's shareholders at the 1999 Annual Stockholders Meeting. On April 17, 2000, the Board approved an increase of 690,000 shares in the aggregate number of shares issuable under the Plan. This change became effective on June 26, 2000, upon its approval by the Corporation's shareholders at the 2000 Annual Stockholders Meeting. On March 21, 2001, the Board approved an increase of 700,000 shares in the aggregate number of shares issuable under the Plan. This change became effective on June 20, 2001, upon its approval by the Corporation's shareholders at the 2001 Annual Stockholders Meeting. On April 10, 2002, the Board approved an increase of 1,200,000 shares in the aggregate number of shares issuable under the Plan. This change became effective on June 25, 2002, upon its approval by the Corporation's shareholders at the 2002 Annual Stockholders Meeting. On February 12, 2003, the Board approved an increase of 825,000 shares in the aggregate number of shares issuable under the Plan. This change became effective on May 13, 2003, upon its approval by the Corporation's shareholders at the 2003 Annual Stockholders Meeting.
- B. Each stock option grant outstanding under the Predecessor Plans immediately prior to the Plan Effective Date shall be incorporated into this

Plan and treated as an outstanding option under this Plan, but each such option shall continue to be governed solely by the terms and conditions of the instrument evidencing such grant, and nothing in this Plan shall be deemed to affect or otherwise modify the rights or obligations of the holders of such options with respect to their acquisition of shares of Common Stock thereunder. However, the Plan Administrator shall have complete discretion to extend, under such circumstances as it may deem appropriate,

B-26

one or more provisions of this Plan to any or all of the stock options which are incorporated into this Plan from the Predecessor Plans but which do not otherwise contain such provisions.

- C. No further option grants or stock issuances shall be made under the Predecessor Plans from and after the Plan Effective Date.
- D. The Plan shall terminate upon the earlier of (i) February 28, 2005 or (ii) the date on which all shares available for issuance under the Plan shall have been issued pursuant to the exercise of the options or stock appreciation rights granted under the Plan or the issuance of shares (whether vested or unvested) under the Stock Issuance Program. If the date of termination is determined under clause (i) above, then all option grants and unvested share issuances outstanding on such date shall thereafter continue to have force and effect in accordance with the provisions of the instruments evidencing such option grants or share issuances.

### V. NO EMPLOYMENT/SERVICE RIGHTS

Neither the action of the Corporation in establishing the Plan, nor any action taken by the Plan Administrator hereunder, nor any provision of the Plan shall be construed so as to grant any individual the right to remain in the employ or service of the Corporation (or any parent or subsidiary corporation) for any period of specific duration, and the Corporation (or any parent or subsidiary corporation retaining the services of such individual) may terminate such individual's employment or service at any time and for any reason, with or without cause.

## VI. USE OF PROCEEDS

Any cash proceeds received by the Corporation from the sale of shares pursuant to option grants or share issuances under the Plan shall be used for general corporate purposes.

### VII. REGULATORY APPROVALS

The implementation of the Plan, the granting of any option under the Plan, the issuance of any shares under the Stock Issuance Program, and the issuance of Common Stock upon the exercise or surrender of the option grants made hereunder shall be subject to the Corporation's procurement of all approvals and permits required by regulatory authorities having jurisdiction over the Plan, the options granted under it, and the Common Stock issued pursuant to it.

### VIII. CHANGE OF CONTROL/CORPORATE TRANSACTION

Notwithstanding any other provision of the Plan to the contrary, in the event of a Corporate Transaction or a Change in Control, the Plan Administrator shall not have the right to take any actions described in the Plan, nor shall any provisions of the Plan be operative, if such actions or

provisions would make the Corporate Transaction or Change in Control ineligible for pooling of interests accounting treatment or would make the Corporate Transaction or Change in Control ineligible for desired tax treatment if, in the absence of such actions or provisions, the Corporate Transaction or Change in Control would qualify for such treatment and the Corporation intends to use such treatment with respect to the Corporate Transaction or Change in Control.

B-27

#### IX. MISCELLANEOUS PROVISIONS

- A. The right to acquire Common Stock or other assets under the Plan may not be assigned, encumbered or otherwise transferred by any Optionee or Participant.
- B. The provisions of the Plan relating to the exercise of options and the vesting of shares shall be governed by the laws of the Commonwealth of Pennsylvania as such laws are applied to contracts entered into and performed in such Commonwealth.
- C. The provisions of the Plan shall inure to the benefit of, and be binding upon, the Corporation and its successors or assigns, whether by Corporate Transaction or otherwise, and the Participants and Optionees, the legal representatives of their respective estates, their respective heirs or legatees and their permitted assignees.

B-28

Appendix C

## NEOSE TECHNOLOGIES, INC. EMPLOYEE STOCK PURCHASE PLAN

## I. PURPOSE OF THE PLAN

This Employee Stock Purchase Plan is intended to promote the interests of Neose Technologies, Inc. by providing eligible employees with the opportunity to acquire a proprietary interest in the Corporation through participation in a payroll-deduction based employee stock purchase plan designed to qualify under Section 423 of the Code.

Capitalized terms herein shall have the meanings assigned to such terms in the attached Appendix.  $\,$ 

### II. ADMINISTRATION OF THE PLAN

The Plan Administrator shall have full authority to interpret and construe any provision of the Plan and to adopt such rules and regulations for administering the Plan as it may deem necessary in order to comply with the requirements of Code Section 423. Decisions of the Plan Administrator shall be final and binding on all parties having an interest in the Plan.

### III. STOCK SUBJECT TO PLAN

A. The stock purchasable under the Plan shall be shares of authorized but unissued or reacquired Common Stock, including shares of Common Stock purchased on the open market. The maximum number of shares of Common Stock which may be issued over the term of the Plan shall not exceed 183,000 shares.

B. Should any change be made to the Common Stock by reason of any stock split, stock dividend, recapitalization, combination of shares, exchange of shares or other change affecting the outstanding Common Stock as a class without the Corporation's receipt of consideration, appropriate adjustments shall be made to (i) the maximum number and class of securities issuable under the Plan, (ii) the maximum number and class of securities purchasable per Participant on any one Purchase Date and (iii) the number and class of securities and the price per share in effect under each outstanding purchase right in order to prevent the dilution or enlargement of benefits thereunder.

#### IV. OFFERING PERIODS

- A. Shares of Common Stock shall be offered for purchase under the Plan through a series of successive offering periods until such time as (i) the maximum number of shares of Common Stock available for issuance under the Plan shall have been purchased or (ii) the Plan shall have been sooner terminated.
- B. Each offering period shall be of such duration (not to exceed twenty-four (24) months) as determined by the Plan Administrator prior to the start date. The initial offering period shall commence at the Effective Time and terminate on the last business day in January

C - 1

1998. The next offering period shall commence on the first business day in February 1998, and subsequent offering periods shall commence as designated by the Plan Administrator.

C. Each offering period shall be comprised of a series of one or more successive Purchase Periods. Purchase Periods shall begin on the first business day in February and August each year and terminate on the last business day in the following July and January, respectively, each year. However, the first Purchase Period under the initial offering period shall commence at the Effective Time and terminate on the last business day in July 1996.

### V. ELIGIBILITY

- A. Each individual who is an Eligible Employee at the Effective Time may enter an offering period under the Plan on the start date of any Purchase Period within that offering period, provided he or she remains an Eligible Employee on such start date.
- B. Each individual who first becomes an Eligible Employee after the Effective Time may enter an offering period under the Plan on the start date of any Purchase Period following his or her completion of one (1) month of Service, provided he or she remains an eligible Employee on such start date.
- C. The date an individual enters the offering period shall be designated his or her Entry Date for purposes of that offering period.
- D. To participate in the Plan for a particular offering period, the Eligible Employee must complete the enrollment forms prescribed by the Plan Administrator (including a stock purchase agreement and a payroll deduction authorization form) and file such forms with the Plan Administrator (or its designate) on or before his or her scheduled Entry Date.

### VI. PAYROLL DEDUCTIONS

A. The payroll deduction authorized by the Participant for purposes of

acquiring shares of Common Stock under the Plan may be any multiple of one percent (1%) of the Base Salary paid to the Participant during each Purchase Period within that offering period, up to a maximum of ten percent (10%). The deduction rate so authorized shall continue in effect for the remainder of the offering period, except to the extent such rate is changed in accordance with the following guidelines:

- (i) The Participant may, at any time during the offering period, reduce his or her rate of payroll deduction to become effective as soon as possible after filing the appropriate form with the Plan Administrator. The Participant may not, however, effect more than one (1) such reduction per Purchase Period.
- (ii) The Participant may, prior to the commencement of any new Purchase Period within the offering period, increase the rate of his or her payroll deduction by filing the appropriate form with the Plan Administrator. The new rate (which may not exceed the ten percent (10%) maximum) shall become effective as of the start date of the Purchase Period following the filing of such form.

C-2

- B. Payroll deductions shall begin on the first pay day following the Participant's Entry Date into the offering period and shall (unless sooner terminated by the Participant) continue through the pay day ending with or immediately prior to the last day of that offering period. The amounts so collected shall be credited to the Participant's book account under the Plan, but no interest shall be paid on the balance from time to time outstanding in such account. The amounts collected from the Participant shall not be held in any segregated account or trust fund and may be commingled with the general assets of the Corporation and used for general corporate purposes.
- C. Payroll deductions shall automatically cease upon the termination of the Participant's purchase right in accordance with the provisions of the Plan.
- D. The Participant's acquisition of Common Stock under the Plan on any Purchase Date shall neither limit nor require the Participant's acquisition of Common Stock on any subsequent Purchase Date, whether within the same or a different offering period.

### VII. PURCHASE RIGHTS

A. Grant of Purchase Right. A Participant shall be granted a separate purchase right for each offering period in which he or she participates. The purchase right shall be granted on the Participant's Entry Date into the offering period and shall provide the Participant with the right to purchase shares of Common Stock, in a series of successive installments over the remainder of such offering period, upon the terms set forth below. The Participant shall execute a stock purchase agreement embodying such terms and such other provisions (not inconsistent with the Plan) as the Plan Administrator may deem advisable.

Under no circumstances shall purchase rights be granted under the Plan to any Eligible Employee if such individual would, immediately after the grant, own (within the meaning of Code Section 424(d)) or hold outstanding options or other rights to purchase, stock possessing five percent (5%) or more of the total combined voting power or value of all classes of stock of the Corporation or any Corporate Affiliate.

B. Exercise of the Purchase Right. Each purchase right shall be

automatically exercised in installments on each successive Purchase Date within the offering period, and shares of Common Stock shall accordingly be purchased on behalf of each Participant (other than any Participant whose payroll deductions have previously been refunded in accordance with the Termination of Purchase Right provisions below) on each such Purchase Date. The purchase shall be effected by applying the Participant's payroll deductions for the Purchase Period ending on such Purchase Date (together with any carryover deductions from the preceding Purchase Period) to the purchase of shares of Common Stock (subject to the limitation on the maximum number of shares purchasable per Participant on any one Purchase Date) at the purchase price in effect for the Participant for that Purchase Date.

C. Purchase Price. The purchase price per share at which Common Stock will be purchased on the Participant's behalf on each Purchase Date within the offering period shall be equal to eighty-five percent (85%) of the lower of (i) the Fair Market Value per share of Common Stock on the Participant's Entry Date into that offering period or (ii) the Fair Market

C-3

Value per share of Common Stock on that Purchase Date. However, for each Participant whose Entry Date is other than the start date of the offering period, the clause (i) amount shall in no event be less than the Fair Market Value per share of Common Stock on the start date of that offering period.

- D. Number of Purchasable Shares. The number of shares of Common Stock purchasable by a Participant on each Purchase Date during the offering period shall be the number of shares obtained by dividing the amount collected from the Participant through payroll deductions during the Purchase Period ending with that Purchase Date (together with any carryover deductions from the preceding Purchase Period) by the purchase price in effect for the Participant for that Purchase Date. However, the maximum number of shares of Common Stock purchasable per Participant on any one Purchase Date shall not exceed 1,000 shares, subject to periodic adjustments in the event of certain changes in the Corporation's capitalization.
- E. Excess Payroll Deductions. Any payroll deductions not applied to the purchase of Common Stock by reason of the limitation on the maximum number of shares purchasable by the Participant on the Purchase Date shall be promptly refunded.
- $\hbox{F. Termination of Purchase Right. The following provisions shall govern the termination of outstanding purchase rights:}$ 
  - (i) A Participant may, at any nine prior to the next Purchase Date in the offering period, terminate his or her outstanding purchase right by filing the appropriate form with the Plan Administrator (or its designate), and no further payroll deductions shall be collected from the Participant with respect to the terminated purchase right. Any payroll deductions collected during the Purchase Period in which such termination occurs shall, at the Participant's election, be immediately refunded or held for the purchase of shares on the next Purchase Dare. If no such election is made at the time such purchase right is terminated, then the payroll deductions collected with respect to the terminated right shall be refunded as soon as possible.
  - (ii) The termination of such purchase right shall be irrevocable, and the Participant may not subsequently rejoin the offering period for which the terminated purchase right was granted. In order to resume participation in any subsequent offering period, such individual

must re-enroll in the Plan (by making a timely filing of the prescribed enrollment forms) on or before his or her scheduled Entry Dale into that offering period.

(iii) Should the Participant cease to remain an Eligible Employee for any reason (including death, disability or change in status) while his or her purchase right remains outstanding, then that purchase right shall immediately terminate, and all of the Participant's payroll deductions for the Purchase Period in which the purchase right so terminates shall, at the Participant's election, be immediately refunded or held for the purchase of shares on the next Purchase Date. If no such election is made at the time such purchase right is terminated, then the payroll deductions collected with respect to the terminated right shall be refunded as soon as possible.

C-4

- (iv) Should the Participant cease to remain in active service by reason of an approved unpaid leave of absence, then the Participant shall have the election, exercisable up until the last business day of the Purchase Period in which such leave commences, to (a) withdraw all the payroll deductions collected during such Purchase Period or (b) have such funds held for the purchase of shares at the end of such Purchase Period. In no event, however, shall any further payroll deductions be collected from the Participant during such leave. Upon the Participant's return to active service, his or her payroll deductions under the Plan shall automatically resume at the rate in effect at the time the leave began.
- G. Corporate Transaction. Each outstanding purchase right shall automatically be exercised, immediately prior to the effective date of any Corporate Transaction, by applying the payroll deductions of each Participant for the Purchase Period in which such Corporate Transaction occurs to the purchase of shares of Common Stock at a purchase price per share equal to eighty-five percent (85%) of the lower of (i) the Fair Market Value per share of Common Stock on the Participant's Entry Date into the offering period in which such Corporate Transaction occurs or (ii) the Fair Market Value per share of Common Stock immediately prior to the effective date of such Corporate Transaction. However, the applicable limitation on the number of shares of Common Stock purchasable per Participant shall continue to apply to any such purchase, and the clause (i) amount above shall not, for any Participant whose Entry Date for the offering period is other than the start date of that offering period, be less than the Fair Market Value per share of Common Stock on such start date.

The Corporation shall use its best efforts to provide at least ten (10)-days prior written notice of the occurrence of any Corporate Transaction, and Participants shall, following the receipt of such notice, have the right to terminate their outstanding purchase rights prior to the effective date of the Corporate Transaction.

- H. Proration of Purchase Rights. Should the total number of shares of Common Stock which are to be purchased pursuant to outstanding purchase rights on any particular date exceed the number of shares then available for issuance under the Plan, the Plan Administrator shall make a pro-rata allocation of the available shares on a uniform and nondiscriminatory basis, and the payroll deductions of each Participant, to the extent in excess of the aggregate purchase price payable for the Common Stock pro-rated to such individual, shall be refunded.
  - I. Assignability. During the Participant's lifetime, the purchase right

shall be exercisable only by the Participant and shall not be assignable or transferable by the Participant.

J. Stockholder Rights. A Participant shall have no stockholder rights with respect to the shares subject to his or her outstanding purchase right until the shares are purchased on the Participant's behalf in accordance with the provisions of the Plan and the Participant has become a holder of record of the purchased shares.

### VIII. ACCRUAL LIMITATIONS

A. No Participant shall be entitled to accrue rights to acquire Common Stock pursuant to any purchase right outstanding under this Plan if and to the extent such accrual, when aggregated

C-5

- with (i) rights to purchase Common Stock accrued under any other purchase right granted under this Plan and (ii) similar rights accrued under other employee stock purchase plans (within the meaning of Code Section 423) of the Corporation or any Corporate Affiliate, would otherwise permit such Participant to purchase more than Twenty-Five Thousand Dollars (\$25,000) worth of stock of the Corporation or any Corporate Affiliate (determined on the basis of the Fair Market Value of such stock on the date or dates such rights are granted) for each calendar year such rights are at any time outstanding.
- B. For purposes of applying such accrual limitations, the following provisions shall be in effect:
  - (i) The right to acquire Common Stock under each outstanding purchase right shall accrue in a series of installments on each successive Purchase Dare during the offering period on which such right remains outstanding.
  - (ii) No right to acquire Common Stock under any outstanding purchase right shall accrue to the extent the Participant has already accrued in the same calendar year the right to acquire Common Stock under one (1) or more other purchase rights at a rate equal to Twenty-Five Thousand Dollars (\$25,000) worth of Common Stock (determined on the basis of the Fair Market Value of such stock on the date or dates of grant) for each calendar year such rights were at any time outstanding.
- C. If by reason of such accrual limitations, any purchase right of a Participant does not accrue for a particular Purchase Period, then the payroll deductions which the Participant made during that Purchase Period with respect to such purchase right shall be promptly refunded.
- D. In the event there is any conflict between the provisions of this Article and one or more provisions of the Plan or any instrument issued thereunder, the provisions of this Article shall be controlling.

## IX. EFFECTIVE DATE AND TERM OF THE PLAN

A. The Plan was adopted by the Board on December 6, 1995 and shall become effective at the Effective Time, provided no purchase rights granted under the Plan shall be exercised, and no shares of Common Stock shall be issued hereunder, until (i) the Plan shall have been approved by the stockholders of the Corporation and (ii) the Corporation shall have complied with all applicable requirements of the 1933 Act (including the registration of the shares of Common Stock issuable under the Plan on a Form S-8 registration statement filed with

the Securities and Exchange Commission), all applicable listing requirements of any stock exchange (or the Nasdaq National Market, if applicable) on which the Common Stock is listed for trading and all other applicable requirements established by law or regulation. In the event such stockholder approval is not obtained, or such compliance is not effected, within twelve (12) months after the date on which the Plan is adopted by the Board, the Plan shall terminate and have no further force or effect and all sums collected from Participants during the initial offering period hereunder shall be refunded.

B. Unless sooner terminated by the Board, the Plan shall terminate upon the earliest of (i) the last business day in January 2006, (ii) the date on which all shares available for issuance

C-6

under the Plan shall have been sold pursuant to purchase rights exercised under the Plan or (iii) the date on which all purchase rights are exercised in connection with a Corporate Transaction. No further purchase rights shall be granted or exercised, and no further payroll deductions shall be collected, under the Plan following its termination.

## X. AMENDMENT OF THE PLAN

The Board may alter, amend, suspend or discontinue the Plan at any time to become effective immediately following the close of any Purchase Period. However, the Board may not, without the approval of the Corporation's stockholders, (i) materially increase the number of shares of Common Stock issuable under the Plan or the maximum number of shares purchasable per Participant on any one Purchase Date, except for permissible adjustments in the event of certain changes in the Corporation's capitalization, (ii) alter the purchase price formula so as to reduce the purchase price payable for the shares of Common Stock purchasable under the Plan, or (iii) materially increase the benefits accruing to Participants under the Plan or materially modify the requirements for eligibility to participate in the Plan.

## XI. GENERAL PROVISIONS

- A. All costs and expenses incurred in the administration of the Plan shall be paid by the Corporation.
- B. Nothing in the Plan shall confer upon the Participant any right to continue in the employ of the Corporation or any Corporate Affiliate for any period of specific duration or interfere with or otherwise restrict in any way the rights of the Corporation (or any Corporate Affiliate employing such person) or of the Participant, which rights are hereby expressly reserved by each, to terminate such person's employment at any time for any reason, with or without cause.
- C. The provisions of the Plan shall be governed by the laws of the State of Pennsylvania without resort to that State's conflict-of-laws rules.

C-7

Schedule A

Corporations Participating in Employee Stock Purchase Plan
As of the Effective Time

Neose Technologies, Inc.

C-8

#### APPENDIX

The following definitions shall be in effect under the Plan:

- A. Base Salary shall mean the regular base salary paid to a Participant by one or more Participating Companies during such individual's period of participation in the Plan, plus any pre-tax contributions made by the Participant to any Code Section 401(k) salary deferral plan or any Code Section 125 cafeteria benefit program now or hereafter established by the Corporation or any Corporate Affiliate. The following items of compensation shall not be included in Base Salary: (i) all overtime payments, bonuses, commissions (other than those functioning as base salary equivalents), profit-sharing distributions and other incentive-type payments and (ii) any and all contributions (other than Code Section 401(k) or Code Section 125 contributions) made on the Participant's behalf by the Corporation or any Corporate Affiliate under any employee benefit or welfare plan now or hereafter established.
  - B. Board shall mean the Corporation's Board of Directors.
  - C. Code shall mean the Internal Revenue Code of 1986, as amended.
  - D. Common Stock shall mean the Corporation's common stock
- E. Corporate Affiliate shall mean any parent or subsidiary corporation of the Corporation (as determined in accordance with Code Section 424), whether now existing or subsequently established.
- F. Corporate Transaction shall mean either of the following stockholder-approved transactions to which the Corporation is a party:
  - (i) a merger or consolidation in which securities possessing more than fifty percent (50%) of the total combined voting power of the Corporation's outstanding securities are transferred to a person or persons different from the persons holding those securities immediately prior to such transaction, or
  - (ii) the sale, transfer or other disposition of all or substantially all of the assets of the Corporation in complete liquidation or dissolution of the Corporation.
- G. Corporation shall mean Neose Technologies, Inc., a Delaware corporation, and any corporate successor to all or substantially all of the assets or voting stock of Neose Technologies, Inc. which shall by appropriate action adopt the Plan.
- H. Effective Time shall mean the time at which the Underwriting Agreement is executed and finally priced. Any Corporate Affiliate which becomes a Participating Corporation after such Effective Time shall designate a subsequent Effective Time with respect to its employee-Participants.
- I. Eligible Employee shall mean any person who is employed by a Participating Corporation on a basis under which he or she is regularly expected to render more than twenty

C-9

- (20) hours of service per week for more than five (5) months per calendar year for earnings considered wages under Code Section 3401(a).
- J. Entry Date shall mean the date an Eligible Employee first commences participation in the offering period in effect under the Plan. The earliest Entry Date under the Plan shall be the Effective Time.
- K. Fair Market Value per share of Common Stock on any relevant date shall be determined in accordance with the following provisions:
  - (i) If the Common Stock is at the time traded on the Nasdaq National Market, then the Fair Market Value shall be the closing selling price per share of Common Stock on the date in question, as such price is reported by the National Association of Securities Dealers on the Nasdaq National Market or any successor system. If there is no closing selling price for the Common Stock on the date in question, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.
  - (ii) If the Common Stock is at the time listed on any Stock Exchange, then the Fair Market Value shall be the closing selling price per share of Common Stock on the date in question on the Stock Exchange determined by the Plan Administrator to be the primary market for the Common Stock, as such price is officially quoted in the composite tape of transactions on such exchange. If there is no closing selling price for the Common Stock on the date in question, then the Fair Market Value shall be the closing selling price on the last preceding date for which such quotation exists.
  - (iii) For purposes of the initial offering period which begins at the Effective Time, the Fair Market Value shall be deemed to be equal to the price per share at which the Common Stock is sold in the initial public offering pursuant to the Underwriting Agreement.
  - L. 1933 Act shall mean the Securities Act of 1933, as amended.
- M. Participant shall mean any Eligible Employee of a Participating Corporation who is actively participating in the Plan.
- N. Participating Corporation shall mean the Corporation and such Corporate Affiliate or Affiliates as may be authorized from time to time by the Board to extend the benefits of the Plan to their Eligible Employees. The Participating Corporations in the Plan as of the Effective Time are listed in attached Schedule A.
- O. Plan shall mean the Corporation's Employee Stock Purchase Plan, as set forth in this document.
- P. Plan Administrator shall mean the committee of two (2) or more Board members appointed by the Board to administer the Plan.

C-10

Q. Purchase Date shall mean the last business day of each Purchase Period. The initial Purchase Date shall be July 31, 1996.

- R. Purchase Period shall mean each successive period within the offering period at the end of which there shall be purchased shares of Common Stock on behalf of each Participant.
- S. Service shall mean an individual's performance of services for the Corporation or any Corporate Affiliate as an employee, subject to the control and direction of the employer entity as to both the work to be performed and the manner and method of performance.
- T. Stock Exchange shall mean either the American Stock Exchange or the New York Stock Exchange.
- U. Underwriting Agreement shall mean the agreement between the Corporation and the underwriter or underwriters managing the initial public offering of the  $Common\ Stock$ .

C-11

Neose Technologies, Inc.
PROXY FOR ANNUAL MEETING OF STOCKHOLDERS - May 13, 2003
(This Proxy is solicited by the Board of Directors of the Company)

The undersigned stockholder of Neose Technologies, Inc. hereby appoints C. Boyd Clarke, President and Chief Executive Officer, Robert I. Kriebel, Senior Vice President and Chief Financial Officer, and A. Brian Davis, Vice President, Finance, and each of them, with full power of substitution, proxies to vote the shares of stock that the undersigned could vote if personally present at the Annual Meeting of Stockholders of Neose Technologies, Inc. to be held at the Company's headquarters at 102 Witmer Road, Horsham, PA 19044, on May 13, 2003, at 9:00 A.M. (Eastern Daylight Time), or any adjournment thereof.

(Continued and to be signed on reverse side)

Annual Meeting of Stockholders NEOSE TECHNOLOGIES, INC.

May 13, 2003

Please date, sign and mail your proxy card back as soon as possible.

Please Detach and Mail in the Envelope Provided as soon as possible

DIEAGE DAME, GION AND DEMINN DRONDMIN IN MUE ENGLOCED ENVELODE. DIEAGE MADY VOIL

PLEASE DATE, SIGN AND RETURN PROMPTLY IN THE ENCLOSED ENVELOPE. PLEASE MARK YOUR

VOTE IN BLUE OR BLACK INK AS SHOWN HERE [X]

1. ELECTION FOR ALL NOMINEES WITHHOLD FOR ALL EXCEPT
OF AUTHORITY (See instructions
FOR ALL below)
NOMINEES

[\_] [\_] [\_]

INSTRUCTION: To withhold authority to vote for any individual nominee(s), mark "FOR ALL EXCEPT"

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and fill in the circle next to each wish to withhold, as shown here:	h no	minee you O	
NOMINEES:	0 0 0 0 0	C. Boyd Clarke Brian H. Dovey L. Patrick Gage William F. Hamilton Douglas J. MacMaster, Mark H. Rachesky Stephen A. Roth Lowell E. Sears Elizabeth H.S. Wyatt	Jr.
2. PROPOSAL TO RATIFY THE APPOINTMENT OF KPMG LLP AS OUR INDEPENDENT AUDITORS FOR FISCAL 2003.			
FOR [_]		AGAINST ABSTAIN	
3. PROPOSAL TO APPROVE AND ADOPT AN AMENDMENT TO THE NEOSE TECHNOLOGIES, INC. AMENDED AND RESTATED 1995 STOCK OPTION/STOCK ISSUANCE PLAN (THE "PLAN") TO INCREASE THE NUMBER OF SHARES ISSUABLE UNDER THE PLAN BY 825,000 SHARES.			
FOR [_]		AGAINST ABSTAIN	
4. PROPOSAL TO APPROVE AND ADOPT AN AMENDMENT TO OUR EMPLOYEE STOCK PURCHASE PLAN TO INCREASE THE NUMBER OF SHARES ISSUABLE UNDER THE PLAN BY 33,000 SHARES.			
FOR [_]		AGAINST ABSTAIN	
5. IN THEIR DISCRETION UPON SUCH OTHER MATTERS AS MAY PROPERLY COME BEFORE THE MEETING.			
UNLESS OTHERWISE SPECIFIED, THIS PROXY WILL BE VOTED FOR THE ELECTION OF DIRECTORS NAMED IN PROPOSAL 1 AND FOR PROPOSALS 2, 3 AND 4.			
THE UNDERSIGNED HEREBY ACKNOWLEDGES RECEIPT OF THE NOTICE OF ANNUAL MEETING OF STOCKHOLDERS AND THE RELATED PROXY STATEMENT.			
Signature of ShareholderSignature of Shareholder			Date:
Note: Please sign exactly as your	name	or names appear on the	is Proxy. When

Note: Please sign exactly as your name or names appear on this Proxy. When shares are held jointly, each holder should sign.

To change the address on your account, please check the box at right and indicate your new address in the address space above. Please note that changes to the registered name(s) on the account may not be submitted via this method.

When signing as Executor, administrator, attorney, trustee, or guardian, please give full title as such. If the signer is a corporation, please sign full corporate name by duly authorized officer, giving full title as such. If signer is a partnership, please sign in partnership name by authorized person.