

**CHARTER
OF THE
AUDIT COMMITTEE
OF THE
BOARD OF DIRECTORS
OF
NORTHFIELD LABORATORIES INC.**

Purposes

The primary purposes of the Audit Committee (the “Committee”) of the Board of Directors of Northfield Laboratories Inc. (the “Company”) are to oversee on behalf of the Board of Directors:

- the Company’s accounting and financial reporting processes and the integrity of its financial statements;
- the audits of the Company’s financial statements and the appointment, compensation, qualifications, independence and performance of the Company’s independent auditors; and
- the performance of the Company’s internal control over financial reporting.

The Committee also has the purpose of preparing the audit committee report that the rules of the Securities and Exchange Commission (the “SEC”) require the Company to include in its annual proxy statement.

The Committee’s function is one of oversight only and does not relieve management of its responsibilities for preparing financial statements that accurately and fairly present the Company’s financial results and condition, nor the Company’s independent auditors of their responsibilities relating to the audit or review of financial statements. Members of the Committee will not be deemed to have assumed any fiduciary or other duties greater than the other members of the Board of Directors.

Organization

Number of Members

The Committee must consist of at least three directors. The Board of Directors may designate a Committee member as the chairperson of the Committee. If the Board of Directors does not do so, the Committee members will appoint a Committee member as chairperson by a majority vote of the Committee members.

Independence

All Committee members must have been determined by the Board of Directors to be independent, as defined and to the extent required in the applicable SEC rules and listing standards of the Nasdaq Stock Market, Inc., as they may be amended from time to time (the “listing standards”), for purposes of audit committee membership.

Financial Literacy

Each Committee member must be financially literate upon appointment to the Committee, as determined by the Board of Directors in accordance with the listing standards. At all times, there should be at least one Committee member who, as determined by the Board of Directors, meets any requirement in the listing standards for finance, accounting or comparable experience or background. The Board of Directors will also determine whether any members of the Committee possess the requisite accounting or financial management experience and expertise to qualify as an “audit committee financial expert,” as defined by the rules of the SEC, and the Company will make any disclosures required under the rules of the SEC with respect to such determination.

Appointment

Subject to any requirements of the listing standards, the Board of Directors may appoint and remove Committee members in accordance with the Company’s Bylaws. Committee members will serve for such terms as the Board of Directors may fix, and in any case at the will of the Board of Directors, whether or not a specific term is fixed.

Independent Auditors and Their Services

Overall Authority

The Committee has the sole authority and direct responsibility for the appointment, compensation, retention, termination, evaluation and oversight of the work of the independent auditors engaged by the Company for the purpose of preparing or issuing an audit report or related work or performing other audit, review or attest services for the Company. The Company’s independent auditors report directly to the Committee. The Committee’s authority includes resolution of disagreements between the Company’s management and independent auditors regarding financial reporting and the receipt of communications from the independent auditors as may be required under professional standards applicable to the independent auditors.

Terms of Audit and Non-Audit Engagements

The Committee must pre-approve all audit, review, attest and permissible non-audit services to be provided to the Company by its independent auditors. The Committee may establish pre-approval policies and procedures in compliance with applicable SEC rules.

Annual Quality Control Report and Review

The Committee must obtain and review, at least annually, a report by the Company's independent auditors describing the firm's internal quality-control procedures. In addition, the Committee's annual review of its independent auditors' qualifications must also include the review and evaluation of the lead partner of the independent auditors for the Company's account, and evaluation of such other matters as the Committee may consider relevant to the engagement of the independent auditors, including views of the Company's management and internal finance employees, and whether the lead partner or auditing firm itself should be rotated.

Policy on Hiring Employees of the Auditors

The Committee may from time to time establish hiring policies that will govern the Company's hiring of employees or former employees of the Company's independent auditors, taking into account possible pressures on the auditors' personnel who might seek a position with the Company, and report these policies to the Board of Directors.

Annual Financial Reporting

As often and to the extent the Committee deems necessary or appropriate, but at least annually in connection with the audit of each fiscal year's financial statements, the Committee will:

Discuss Financial Statements and Internal Control Reports with Management

Review and discuss with appropriate members of management:

- the Company's audited financial statements;
- related accounting and auditing principles and practices; and
- management's assessment of internal control over financial reporting and the related reports on internal control over financial reporting to be included in the Company's annual report on Form 10-K (as and when these reports are required under SEC rules).

Critical Accounting Policy Report

Review and discuss with the Company's independent auditors the report or update required pursuant to applicable SEC rules concerning:

- all critical accounting policies and practices to be used;
- all alternative treatments within generally accepted accounting principles for policies and practices relating to material items that have been discussed with Company management, including ramifications of the use of such alternative disclosures and treatments and the treatment preferred by the independent auditors; and
- other material written communications between the independent auditors and Company management, such as any management letter or schedule of unadjusted differences

SAS 61 Review

Discuss with the Company's independent auditors the matters required to be discussed by Statement on Auditing Standards No. 61, including such matters as:

- the quality and acceptability of the accounting principles applied in the Company's financial statements;
- new or changed accounting policies, the effect of regulatory and accounting initiatives, and significant estimates, judgments, uncertainties or unusual transactions;
- the selection, application and effects of critical accounting policies and estimates applied by the Company;
- issues raised by any "management" or "internal control" letter from the Company's independent auditors, problems or difficulties encountered in the audit (including any restrictions on the scope of the work or on access to requested information) and management's response to such problems or difficulties, significant disagreements with management, or other significant aspects of the audit; and
- any off-balance sheet transactions, and relationships with any unconsolidated entities or any other persons, which may have a material current or future effect on the financial condition or results of the Company and are required to be reported under SEC rules.

MD&A

Review with appropriate members of the Company's management and independent auditors the intended disclosures under "Management's Discussion and Analysis of Financial Condition and Results of Operations" to be included in the Company's annual report on Form 10-K.

SB 1 Disclosure

Receive from the Company's independent auditors a formal written statement of all relationships between the auditors and the Company consistent with Independence Standards Board Standard No. 1.

Auditor Independence

Actively discuss with the Company's independent auditors any disclosed relationships or services that may impact their objectivity and independence, and take any other appropriate action to oversee their independence.

Recommend Filing of Audited Financial Statements

Recommend whether the Company's annual report on Form 10-K to be filed with the SEC should include the Company's audited financial statements.

Quarterly Financial Reporting

The Committee's quarterly review will normally include:

Quarterly Review

Review and discuss the quarterly financial statements of the Company and the results of its independent auditors' review of these financial statements with appropriate members of the Company's management and independent auditors.

Discussion of Significant Matters with Management

Review and discuss with the Company's management and, if appropriate, independent auditors, significant matters relating to:

- the quality and acceptability of the accounting principles applied in the financial statements;
- new or changed accounting policies, and significant estimates, judgments, uncertainties or unusual transactions;
- the selection, application and effects of critical accounting policies and estimates applied by the Company; and
- any off-balance sheet transactions and relationships with any unconsolidated entities or any other persons that may have a material current or future effect on the financial condition or results of the Company and are required to be reported under SEC rules.

MD&A

Review and discuss the Company’s disclosures under “Management’s Discussion and Analysis of Financial Condition and Results of Operations” to be included in the Company’s quarterly report on Form 10-Q with appropriate members of the Company’s management and independent auditors.

Other Functions

Annual Review of this Charter

The Committee will review and assess the adequacy of this charter annually and recommend any proposed changes to the Board of Directors.

Earnings Releases and Other Financial Guidance

The Committee will discuss with management earnings press releases and other published financial information or guidance provided to analysts and rating agencies. This may be conducted generally as to types of information and presentations, and need not include advance review of each release, other information or guidance.

Compliance

The Committee, to the extent it deems necessary or appropriate, will periodically review with management the Company’s disclosure controls and procedures, internal control over financial reporting and systems and procedures to promote compliance with laws.

Risk Assessment

The Committee will periodically:

- inquire of the Company’s management and independent auditors about the Company’s major financial risks or exposures;
- discuss the steps management has taken to monitor and control such exposures; and
- discuss guidelines and policies with respect to risk assessment and risk management.

Code of Business Conduct and Ethics

The Committee will conduct any activities relating to the Company’s Code of Business Conduct and Ethics as may be delegated from time to time to the Committee by the Board of Directors.

Complaints and Anonymous Submissions

The Committee will establish and maintain procedures for:

- the receipt, retention and treatment of complaints received by the Company regarding accounting, internal accounting controls or auditing matters; and
- the confidential, anonymous submission by employees of the Company of concerns regarding questionable accounting or auditing matters.

If the Committee or the Board of Directors so determines, the submission procedures may also include a method for interested parties to communicate directly with the Board's presiding director or with the non-management directors as a group.

Related Party Transactions

It is the Company's policy that the Company will not enter into transactions required to be disclosed under Item 404 of the SEC's Regulation S-K unless the Committee or another independent body of the Board of Directors first reviews and approves the transactions.

Internal Control Over Financial Reporting

The Committee will periodically discuss and review, as appropriate, with the Company's management and independent auditors:

- the design and effectiveness of the Company's internal control over financial reporting; and
- any significant deficiencies or material weaknesses in that internal control, any change that has materially affected or is reasonably likely to materially affect that internal control, and any fraud, whether or not material, that involves management or other employees who have a significant role in that internal control, that have been reported to the Committee.

Reports from Legal Counsel

The Committee will review and take appropriate action with respect to any reports to the Committee from legal counsel engaged by the Company concerning any material violation of securities law or breach of fiduciary duty or similar violation by the Company or any person acting on its behalf.

Other Reviews and Functions

The Committee, as it may consider appropriate, may consider and review with the Board of Directors, Company management, internal or outside legal counsel, the independent auditors or any other appropriate person any other topics relating to the purposes of the Committee that may come to the Committee's attention. The Committee may perform any other activities consistent with this charter, the Company's corporate governance documents and applicable listing standards, laws and regulations as the Committee or the Board of Directors considers appropriate.

Meetings, Reports and Resources

Meetings

The Committee will meet as often as it determines is necessary, but not less than quarterly. The Committee may also act by unanimous written consent in lieu of a meeting. The Committee will meet separately and periodically with the Company's management and independent auditors. In addition, the Committee may meet with any other persons, as it deems necessary.

Procedures

The Committee may establish its own procedures, including the formation and delegation of authority to subcommittees, in a manner not inconsistent with this charter, the Company's Bylaws, the listing standards or SEC rules. The chairperson or a majority of the Committee members may call meetings of the Committee. A majority of the authorized number of Committee members constitutes a quorum for the transaction of Committee business, and the vote of a majority of the Committee members present at a meeting at which a quorum is present will be the act of the Committee, unless in either case a greater number is required by this charter, the Company's Bylaws or the listing standards. The Committee will keep written minutes of its meetings and deliver copies of the minutes to the Company's corporate secretary for inclusion in the corporate records.

Reports

The Committee will timely prepare the audit committee report required to be included in the Company's annual meeting proxy statement, and report to the Board of Directors on the other matters relating to the Committee or its purposes, as required by the listing standards or SEC rules. The Committee will also report to the Board of Directors annually the overall results of its annual review of the independent auditors' qualifications, performance and independence and the annual review by the Committee of its own performance. The Committee also will report to the Board of Directors on the major items covered by the Committee at each Committee meeting, and provide additional reports to the Board of Directors as the Committee may determine to be appropriate, including review with the Board of Directors of any issues that arise from time to time with respect to the quality or integrity of the Company's financial statements, the Company's compliance with legal or regulatory requirements or the performance and independence of the independent auditors.

Committee Access and Investigations

The Committee is at all times authorized to have direct, independent and confidential access to the Company's independent auditors and to the Company's other directors, management and personnel to carry out the Committee's purposes. The Committee is authorized to conduct or authorize investigations into any matters relating to the purposes, duties or responsibilities of the Committee.

Committee Advisers and Funding

As the Committee deems necessary to carry out its duties, it is authorized to select, engage (including approval of the fees and terms of engagement), oversee, terminate and obtain advice and assistance from outside legal, accounting or other advisers or consultants. The Company will provide for appropriate funding, as determined by the Committee, for payment of:

- compensation to the Company's independent auditors for their audit and audit-related, review and attest services;
- compensation to any advisers engaged by the Committee; and
- ordinary administrative expenses of the Committee that are necessary or appropriate in carrying out its duties.

No Assumption of Additional Duties; Reliance on Others

The members of the Committee, through their service on the Committee, will not be deemed to have assumed any fiduciary duties greater than those applicable to the other members of the Board of Directors. Nothing in this charter is intended to preclude or impair the protection provided in Section 141(e) of the Delaware General Corporation Law for good faith reliance by members of the Committee on reports or other information provided by others.

Effective: April 15, 2004