



ALCOA INC. BY-LAWS

ARTICLE I - IDENTIFICATION

Section 1. *Principal Office.* The principal office of the Company shall be in the City of New York, New York.

Section 2. *Seal.* The Company shall have a corporate seal in such form as the board of directors shall by resolution from time to time prescribe.

Section 3. *Fiscal Year.* The fiscal year of the Company shall end on the 31st day of December.

ARTICLE II - SHAREHOLDERS' MEETINGS

Section 1. *Place of Meetings.* Meetings of the shareholders of the Company shall be held at such place within or without the Commonwealth of Pennsylvania as may be fixed by the board of directors pursuant to authority hereby granted.

Section 2. *Annual Meeting.* The annual meeting of the shareholders shall be held on the Friday next following the first Monday in May of each year at nine thirty o'clock A.M., local time in effect at the place of the meeting, or on such other day or at such other time as may be fixed by the board of directors pursuant to authority hereby granted.

Section 3. *Chairman of the Meeting.* All meetings of the shareholders shall be called to order and presided over by the chairman of the board, or in the absence of the chairman of the board, by a vice chairman of the board, the president or another director, in the order designated by the chairman of the board, or if none of these be present, by a chairman elected by a majority of the votes which all shareholders present are entitled to cast on any matter coming before the meeting.

Section 4. *Notice of Shareholder Business.*

(A) Annual Meetings of Shareholders.

(1) The proposal of business (other than director nominations) to be considered by the shareholders may be made at an annual meeting of shareholders (a) pursuant to the Company's notice of meeting, (b) by or at the direction of the board of directors or (c) by any shareholder of the Company who was a shareholder of record at the time of giving of notice provided for in these By-laws, who is entitled to vote at the meeting and who complies with the notice procedures set forth in these By-laws.

(2) For business (other than director nominations, which are subject to the requirements of Section A(3) of Article EIGHTH of the Company's Articles, as the same may be amended from time to time) to be properly brought before an annual meeting by a shareholder pursuant to Section 4(A)(1)(c) of this Article II, the shareholder must have given timely notice thereof in proper form in writing to the Secretary and such business must otherwise be a proper matter for shareholder action. To be timely, a shareholder's notice shall be delivered to the Secretary at the principal executive offices of the Company not later than ninety days prior to the anniversary date of the immediately preceding annual meeting and shall be updated and supplemented as set forth below; provided, however, that in the event that the date of the annual meeting is more than thirty days before or more than sixty days after such anniversary date, notice by the shareholder must be so delivered not later than ninety days prior to the date of such annual meeting or, if the first public announcement of the date of such annual meeting is less than one hundred days prior to the

date of such annual meeting, the tenth day following the day on which public announcement of the date of such meeting is first made by the Company. In no event shall the public announcement of an adjournment of an annual meeting commence a new time period for the giving of a shareholder's notice as described above. To be in proper form, a shareholder's notice shall set forth and disclose:

(i) as to any business (other than director nominations) that the shareholder proposes to bring before the meeting, a brief description of the business desired to be brought before the meeting, the reasons for conducting such business at the meeting and any material interest in such business of (x) the shareholder making the proposal, (y) the beneficial owner, if any, on whose behalf the proposal is made and (z) their respective affiliates and associates or others acting in concert therewith (each person or entity specified by the foregoing clauses (x), (y) and (z), a "Proposing Shareholder");

(ii) a description of all agreements, arrangements and understandings between a Proposing Shareholder and any other person or persons (including their names) in connection with the proposal of such business by the shareholder;

(iii) the text of the proposal or business (including the text of any resolutions proposed for consideration and, in the event that such proposal or business includes a proposal to amend the By-laws or Articles of Incorporation of the Company, the text of the proposed amendment);

(iv) the name and address, as they appear on the Company's books, of each Proposing Shareholder;

(v) the class or series and number of shares of the Company which are, directly or indirectly, owned beneficially and of record by each Proposing Shareholder;

(vi) any option, warrant, convertible security, stock appreciation right, or similar right with an exercise or conversion privilege or a settlement payment or mechanism at a price related to any class or series of shares of the Company or with a value derived in whole or in part from the value of any class or series of shares of the Company, or any derivative or synthetic arrangement having the characteristics of a long position in any class or series of shares of the Company, or any contract, derivative, swap or other transaction or series of transactions designed to produce economic benefits and risks that correspond substantially to the ownership of any class or series of shares of the Company, including due to the fact that the value of such contract, derivative, swap or other transaction or series of transactions is determined by reference to the price, value or volatility of any class or series of shares of the Company, whether or not such instrument, contract or right shall be subject to settlement in the underlying class or series of shares of the Company, through the delivery of cash or other property, or otherwise, and without regard to whether the shareholder of record, the beneficial owner, if any, or any affiliates or associates or others acting in concert therewith, may have entered into transactions that hedge or mitigate the economic effect of such instrument, contract or right, or any other direct or indirect opportunity to profit or share in any profit derived from any increase or decrease in the value of shares of the Company (any of the foregoing, a "Derivative Instrument") directly or indirectly owned beneficially by each Proposing Shareholder;

(vii) any proxy, contract, arrangement, understanding, or relationship pursuant to which any Proposing Shareholder has a right to vote any class or series of shares of the Company;

(viii) any agreement, arrangement, understanding, relationship or otherwise, including any repurchase or similar so-called "stock borrowing" agreement or arrangement, involving a Proposing Shareholder, directly or indirectly, the purpose or effect of which is to mitigate loss to, reduce the economic risk (of ownership or otherwise) of any class or series of the shares of the Company by, manage the risk of share price changes for, or increase or decrease the voting power of, such shareholder with respect to any class or series of the shares of the Company, or which provides, directly or indirectly, the opportunity to profit or share in any profit derived from any decrease in the price or value of any class or series of the shares of the Company (any of the foregoing, a "Short Interest");

(ix) any rights to dividends on the shares of the Company owned beneficially by any Proposing Shareholder that are separated or separable from the underlying shares of the Company;

(x) any proportionate interest in shares of the Company or Derivative Instruments held, directly or indirectly, by a general or limited partnership in which any Proposing Shareholder is a general partner or, directly or indirectly, beneficially owns an interest in a general partner of such general or limited partnership;

(xi) any performance-related fees (other than an asset-based fee) that a Proposing Shareholder is entitled to based on any increase or decrease in the value of shares of the Company or Derivative Instruments, if any, including without limitation any such interests held by members of such Proposing Shareholder's immediate family sharing the same household;

(xii) any significant equity interests or any Derivative Instruments or Short Interests in any principal competitor of the Company held by a Proposing Shareholder;

(xiii) any direct or indirect interest of a Proposing Shareholder in any contract with the Company, any affiliate of the Company or any principal competitor of the Company (including, in any such case, any employment agreement, collective bargaining agreement or consulting agreement);

(xiv) to the extent not covered by the foregoing clauses (i) through (xiii), any disclosures that would be required pursuant to Item 5 or Item 6 of Schedule 13D if the requirements therein were applicable to each Proposing Shareholder; and

(xv) any other information relating to each Proposing Shareholder that would be required to be disclosed in a proxy statement and form of proxy or other filings required to be made in connection with solicitations of proxies for, as applicable, the proposal and/or for the election of directors in a contested election pursuant to Section 14 of the Securities Exchange Act of 1934 and the rules and regulations promulgated thereunder, as amended (the "Exchange Act").

To be considered timely, a shareholder's notice shall be updated and supplemented, if necessary, so that the information provided or required to be provided in such notice shall be true and correct as of the record date for the meeting and as of the date that is ten business days prior to the meeting or any adjournment or postponement thereof, and such update and supplement shall be delivered to the Secretary at the principal executive offices of the Company not later than five business days after the record date for the meeting in the case of the update and supplement required to be made as of the record date, and not later than eight business days prior to the date for the meeting or any adjournment or postponement thereof in the case of the update and supplement required to be made as of ten business days prior to the meeting or any adjournment or postponement thereof.

(B) Special Meetings of Shareholders. Except as otherwise required by law or the Articles, only such business shall be conducted at a special meeting of shareholders as shall have been brought before the meeting pursuant to the Company's notice of meeting or otherwise brought by or at the direction of the board of directors. Nominations of persons for election to the board of directors may be made at a special meeting of shareholders at which directors are to be elected pursuant to the Company's notice of meeting (a) by or at the direction of the board of directors or (b) provided that the board of directors has determined that directors shall be elected at such meeting, by any shareholder of the Company who is a shareholder of record at the time of giving notice provided for in these By-laws, who shall be entitled to vote at the meeting and who complies with the notice procedures set forth in these By-laws. In the event the Company calls a special meeting of shareholders for the purpose of electing one or more directors to the board of directors, any such shareholder may nominate a person or persons (as the case may be), for election to such position(s) as specified in the Company's notice of meeting, if a shareholder's notice satisfying the requirements set forth in Section A(3) of Article EIGHTH of the Company's Articles is delivered to the Secretary of the Company not later than the close of business on the later of the 90th day prior to such special meeting or the 10th day following the day on which public announcement is first made of the date of

the special meeting and of the nominees proposed by the board of directors to be elected at such meeting. In no event shall the public announcement of an adjournment of a special meeting commence a new time period for the giving of a shareholder's notice as described above.

(C) General.

(1) Only such persons who are nominated in accordance with the procedures set forth in the Articles and in these By-laws shall be eligible to serve as directors and only such business shall be conducted at a meeting of shareholders as shall have been brought before the meeting in accordance with the procedures set forth in these By-laws or in the Articles of the Company. Except as otherwise provided by law, the Articles or these By-laws, the presiding officer of the meeting shall have the power and duty to determine whether any business proposed to be brought before the meeting was proposed in accordance with the procedures set forth in these By-laws or the Articles and, if any proposed business is not in compliance with these By-laws or the Articles, to declare that such defective proposal shall be disregarded.

(2) For purposes of these By-laws, "public announcement" shall mean disclosure in a press release reported by the Dow Jones News Service, Associated Press or comparable national news service or in a document publicly filed by the Company with the Securities and Exchange Commission pursuant to Section 13, 14 or 15(d) of the Exchange Act.

(3) Notwithstanding the foregoing provisions of these By-laws, a shareholder shall also comply with all applicable requirements of the Exchange Act with respect to the matters set forth in these By-laws; provided, however, that any references in these By-laws to the Exchange Act are not intended to and shall not limit the separate and additional requirements set forth in these By-laws with respect to nominations or proposals as to any other business to be considered pursuant to this Section 4 of this Article II. Nothing in these By-laws shall be deemed to affect any rights (i) of shareholders to request inclusion of proposals in the Company's proxy statement pursuant to Rule 14a-8 under the Exchange Act, including without limiting the generality of the foregoing, the time limits for notice of such proposals as provided under Rule 14a-8 under the Exchange Act or (ii) of the holders of any series of preferred stock to elect directors under specified circumstances. Subject to Rule 14a-8 under the Exchange Act, nothing in these By-laws shall be construed to permit any shareholder, or give any shareholder the right, to include or have disseminated or described in the Company's proxy statement any nomination of a director or directors or any other business proposal.

(D) Submission of Questionnaire, Representation and Agreement. To be eligible to be a nominee for election or reelection as a director of the Company, a person must deliver (in accordance with the time periods prescribed for delivery of notice under Section A(3) of Article EIGHTH of the Articles or Section 4(B) of this Article II, as applicable) to the Secretary of the Company a written questionnaire with respect to the background and qualification of such person and any other person or entity that such person may represent or on whose behalf the nomination is being made (which questionnaire shall be provided by the Secretary) and a written representation and agreement (in the form provided by the Secretary) that such person (A) has no agreement or understanding with any person or entity as to how such person will act or vote on any issue or question as a director, (B) is not and will not become a party to any agreement or understanding with any person or entity other than the Company with respect to compensation, reimbursement or indemnification in connection with service or action as a director, (C) will comply with the director stock ownership guidelines of the Company and (D) in such person's individual capacity and on behalf of any person or entity for whom such person may be a representative or on whose behalf the nomination is being made, has complied and will comply with all applicable corporate governance, conflicts, confidentiality and stock ownership and trading policies of the Company, including, for the avoidance of doubt, Section 5 of this Article II. In addition, a director nominee must comply with all applicable laws regarding service as a director of the Company, including, without limitation, the requirements as amended of: the Clayton Antitrust Act of 1914, 15 U.S.C. §19; the Company's Department of State export license; the Department of Defense rules and regulations applicable to the Company; the New York Stock Exchange and other exchanges on which the Company's



securities are listed; and the minimum standards for service as a director prescribed in the Company's Corporate Governance Guidelines.

Section 5. *Election of Directors.* In any non-contested election of directors, any incumbent director nominee who receives a greater number of votes cast against his or her election than in favor of his or her election (excluding abstentions) by holders of shares entitled to vote in the election shall immediately tender his or her resignation, and the Board of Directors shall decide, through a process managed by the Governance and Nominating Committee and excluding the nominee in question, whether to accept the resignation at its next regularly scheduled Board meeting. The Board's explanation of its decision shall be promptly disclosed in accordance with the rules and regulations of the Securities and Exchange Commission. An election of directors shall be considered to be contested if there are more nominees for election than positions on the board of directors to be filled by election at the meeting of shareholders.

ARTICLE III - BOARD OF DIRECTORS

Section 1. *Number.* Until the board of directors has increased or decreased the number of the directors as hereinafter provided, the number of the directors shall be eleven. The board is hereby authorized to increase or decrease the number of the directors from time to time without a vote of the shareholders, provided, however, that such number shall not be less than seven nor more than fifteen.

Section 2. *General Powers.* The board of directors shall have power in general to manage the business and affairs of the Company consistent with the law, the Articles of the Company and these By-laws, and may from time to time adopt such regulations regarding the powers and duties of the respective officers, assistant officers and agents and the conduct of the Company's business as the board may deem proper and expedient.

Section 3. *Election and Nomination of Directors.* Candidates for election as directors at any annual meeting of shareholders shall be nominated and elected for terms to expire not later than the third annual meeting following their election, in accordance with the By-laws and Articles of the Company and applicable law.

Section 4. *Annual Meeting.* The board of directors shall without notice meet each year upon adjournment of the annual meeting of the shareholders at the principal office of the Company, or at such other time or place as shall be designated in a notice given to all nominees for director, for the purposes of organization, election of officers and consideration of any other business that may properly be brought before the meeting.

Section 5. *Regular Meetings.* Regular meetings of the board of directors shall be held at such times and places as shall be fixed by the board at any time in advance of the meeting date or designated in a notice of the meeting.

Section 6. *Special Meetings.* Special meetings of the board of directors may be called by the chairman of the board, a vice chairman of the board, the president or any two directors.

Section 7. *Notice of Regular and Special Meetings.* No notice of a regular meeting of the board of directors shall be necessary if the meeting is held at the time and place fixed by the board in advance of the meeting date. Notice of any regular meeting to be held at another time or place and of all special meetings of the board, setting forth the time and place of the meeting, shall be given by letter or other writing

deposited in the United States mail or with an express mail or private courier service not later than during the second day immediately preceding the day for such meeting, or by word of mouth, telephone, facsimile or other oral or written means received not later than during the day immediately preceding the day for such meeting.

Section 8. *Quorum.* A majority of the directors in office shall be necessary to constitute a quorum for the transaction of business at a meeting of the board of directors, but if at any meeting a quorum shall not be present the meeting may adjourn from time to time until a quorum shall be present.

Section 9. *Executive Committee.* The board of directors may, by resolution adopted by a majority of the whole board, designate three or more of the directors to constitute an executive committee which to the extent provided in a resolution adopted by a majority of the whole board shall have and exercise the authority of the board in the management of the business and affairs of the Company except as otherwise limited by law.

Section 10. *Audit Committee.* The board of directors shall, by resolution adopted by a majority of the whole board, designate three or more of the directors to constitute an audit committee. Audit committee members shall not be officers or full time employees of the Company or its subsidiaries. The audit committee shall have such authority and shall perform such duties as shall be provided from time to time in accordance with resolutions of the board.

Section 11. *Compensation and Benefits Committee.* The board of directors may, by resolution adopted by a majority of the whole board, designate three or more of the directors to constitute a compensation committee which to the extent provided in such resolution or other action by the board shall have and exercise the authority (a) to fix and determine, and change from time to time, the compensation of all officers of the Company elected by the board, including, but not restricted to, monthly or other periodic compensation and incentive or other additional compensation, (b) to authorize or approve all contracts of the Company with any officer for remuneration (whether in the form of a pension, deferred compensation or otherwise) to be paid from the general funds of the Company after the termination of regular employment of such officer, and (c) to administer or perform specified functions under any one or more of the stock option or other incentive, pension or benefit plans of the Company; provided that the said committee shall not exercise any of its said authority with respect to any of its members.

Section 12. *Compensation of Assistant Officers and Agents.* Unless otherwise determined by the board of directors, the chief executive officer of the Company shall have the authority to fix and determine, and change from time to time, the compensation of all assistant officers and agents of the Company elected or appointed by the board or by the chief executive officer, including, but not restricted to, monthly or other periodic compensation and incentive or other additional compensation.

Section 13. *Limitation Regarding Incentive Plans.* Nothing contained in the foregoing two sections of this Article III shall be construed to vest, or to authorize vesting, in the chief executive officer of the Company any authority with respect to stock options or other incentives under plans which provide for administration by the board of directors or a committee thereof.

Section 14. *Other Committees.* In addition to the committees described in this Article III, the board of directors may, by resolution adopted by a majority of the whole board, designate one or more other committees of the board, each of which shall consist of one or more of the directors. Each such other committee shall have such authority and shall perform such other duties as may be provided from time to time in resolutions of the board.

Section 15. *Substitute Committee Members.* In the absence or disqualification of any member of any committee of the board of directors, the member or members thereof present at any meeting and not disqualified from voting, whether or not such member or members constitute a quorum, may unanimously appoint another director to act at the meeting in the place of any such absent or disqualified member.

Section 16. *Participation by Conference Telephone.* One or more directors may participate in a meeting of the board of directors or of a committee thereof by means of conference telephone or similar communications equipment by means of which all persons participating in the meeting can hear each other.

Section 17. *Personal Liability of Directors.* To the fullest extent that the laws of the Commonwealth of Pennsylvania, as in effect on May 15, 1987 or as thereafter amended, permit elimination or limitation of the liability of directors, no director of the Company shall be personally liable for monetary damages for any action taken, or any failure to take any action. This Section 17 shall not apply to any action filed prior to May 15, 1987, nor to any breach of performance of duty or any failure of performance of duty occurring prior to May 15, 1987. The provisions of this Section shall be deemed to be a contract with each director of the Company who serves as such at any time while such provisions are in effect, and each such director shall be deemed to be serving as such in reliance on the provisions of this Section. Any amendment or repeal of this Section or adoption of any other By-law or provision of the Articles of the Company which has the effect of increasing director liability shall operate prospectively only and shall not affect any action taken, or any failure to act, prior to such amendment, repeal or adoption. This Section 17 may be amended or repealed only with the affirmative vote of the holders of a majority of the outstanding shares of common stock of the Company.

ARTICLE IV - OFFICERS

Section 1. *Number and Election.* The board of directors at its annual meeting shall elect a president, a secretary and a treasurer, or persons who act as such, and may elect a chairman of the board, one or more vice presidents, a controller, a general counsel and such other officers and assistant officers as the board may deem appropriate. The board shall from time to time designate the chief executive officer who shall be either the chairman of the board or the president. The board may also from time to time elect such other officers and assistant officers and appoint such agents as it may deem appropriate. Assistant officers and agents also may be appointed by the chief executive officer.

Section 2. *Qualifications.* The chairman of the board shall be a member of the board of directors but the other officers need not be directors.

Section 3. *Term of Office.* Each officer and assistant officer shall hold office until the annual meeting of the board of directors next following the meeting of the board at which such officer or assistant officer is elected, except in the case of earlier death, resignation or removal.

Section 4. *Chairman of the Board.* The chairman of the board shall preside at all meetings of the board of directors at which such chairman is present. In the absence of the chairman of the board, a vice chairman of the board, the president or another director, in the order designated by the chairman of the board, shall preside at meetings of the board of directors. If the chairman of the board is not the chief executive officer, the chairman of the board shall have such powers and perform such other duties as the president may from time to time delegate to such chairman, except as otherwise determined by the board.

Section 5. *President.* If the president is not the chief executive officer, the president shall have such powers and perform such other duties as the chairman of the board may from time to time delegate to the president, except as otherwise determined by the board.

Section 6. *Vice Presidents.* Each vice president, including any vice president designated as executive, senior or otherwise, shall have such powers and perform such duties as the chairman of the board or the president may from time to time delegate to such vice president, except as otherwise determined by the board of directors.

Section 7. *Secretary.* The secretary shall attend meetings of the shareholders, the board of directors and the executive committee, shall keep minutes thereof in suitable books, and shall send out all notices of meetings as required by law or these By-laws. The secretary shall be ex officio an assistant treasurer. The secretary shall, in general, perform all duties incident to the office of secretary.

Section 8. *Treasurer.* The treasurer shall receive all money paid to the Company and keep or cause to be kept accurate accounts of all money received or payments made in books kept for that purpose. The treasurer shall deposit all money received by the treasurer in the name and to the credit of the Company in banks or other places of deposit. The treasurer shall disburse the money of the Company by checks or vouchers. The treasurer shall be ex officio an assistant secretary. The treasurer shall, in general, perform all duties incident to the office of treasurer.

Section 9. *Controller.* The controller shall be responsible for the implementation of accounting policies and procedures, the installation and supervision of all accounting records, including the preparation and interpretation of financial statements, the compilation of production costs and cost distributions and the taking and valuation of physical inventories. The controller shall also be responsible for the maintenance of adequate records of authorized appropriations and the approval for payment of all checks and vouchers. The controller shall, in general, perform all duties incident to the office of controller.

Section 10. *General Counsel.* The general counsel shall advise the Company on legal matters affecting the Company and its activities and shall supervise and direct the handling of all such legal matters. The general counsel shall, in general, perform all duties incident to the office of general counsel.

Section 11. *Assistant Officers.* Each assistant officer shall have such powers and perform such duties as may be delegated to such assistant officer by the officer to whom such assistant officer is an assistant or, in the absence or inability to act of such officer, by the officer to whom such officer reports or by the chief executive officer.

ARTICLE V - INDEMNIFICATION

Section 1. *Indemnification Granted.* Every person who is or was a director, officer or employee of the Company or of any other corporation, partnership, joint venture, trust or other enterprise which such person serves or served as such at the request of the Company (hereinafter referred to as an "eligible person") shall in accordance with this Article V, but not if prohibited by law, be indemnified by the Company as hereinafter provided against reasonable expense and any liability paid or incurred by such person in connection with or resulting from any claim in which such person may be involved, as a party or otherwise, by reason of such person's being or having been a director, officer or employee of the Company or such other enterprise, whether or not such person continues to be such at the time such liability or expense shall have been paid or incurred.

Section 2. *Certain Definitions.* As used in this Article V, the term "claim" shall mean any threatened or actual claim, action, suit or proceeding (whether brought by or in the right of the Company or such other enterprise or otherwise), whether civil, criminal, administrative or investigative; the term "expense" shall mean counsel fees and disbursements and all other expenses (except any liability) incurred in connection with any claim; and the term "liability" shall mean amounts of judgments, fines or penalties against, and amounts paid in settlement by, an eligible person with respect to any claim.

Section 3. *Expense Reimbursement to the Extent Successful.* Any eligible person who has been wholly successful, on the merits or otherwise, with respect to any claim shall be reimbursed by the Company for such person's reasonable expense. Any eligible person who has been partially successful shall be proportionately reimbursed by the Company for such person's reasonable expense.

Section 4. *Indemnification Where Not Wholly Successful.* Any eligible person who has been partially unsuccessful and any other eligible person not described in Section 3 of this Article V shall be reimbursed by the Company for such person's reasonable expense and for any liability if a Referee shall deliver to the Company the written finding of such Referee that such person acted in good faith and in a manner such person reasonably believed to be in, or not opposed to, the best interests of the Company, and in addition with respect to any criminal action or proceeding, had no reasonable cause to believe the conduct of such person was unlawful. Where such person is found by the Referee to have met the foregoing standards of conduct with respect to one or more but not all the claims made against such person, such person shall be entitled to indemnification for such expense and liability in such proportion as the Referee shall determine. The termination of any claim by judgment, order, settlement (whether with or without court approval), adverse decision, or conviction after trial or upon a plea of guilty or of nolo contendere or its equivalent, shall not of itself create a presumption that an eligible person did not meet the foregoing standards of conduct. The person claiming indemnification shall, at the request of the Referee, appear before the Referee and answer questions which the Referee deems relevant and shall be given ample opportunity to present to the Referee evidence upon which such person relies for indemnification; and the Company shall at the request of the Referee, make available to the Referee facts, opinions or other evidence in any way relevant for the Referee's finding which are within the possession or control of the Company. As used in this Article V, the term "Referee" shall mean independent legal counsel (who may be regular independent legal counsel of the Company), or other disinterested person or persons, selected to act as such hereunder by the board of directors of the Company, whether or not a disinterested quorum exists.

Section 5. *Advancement of Expenses.* Any expense incurred with respect to any claim may be advanced by the Company prior to the final disposition thereof upon receipt of an undertaking by or on behalf of the recipient to repay such amount if it is ultimately determined that such recipient is not to be indemnified under this Article V.

Section 6. *Article V Not Exclusive; Survival of Rights.* The rights of indemnification provided in this Article V shall be in addition to any rights to which any eligible person may otherwise be entitled by contract or as a matter of law; and in the event of such person's death, such rights shall extend to the heirs and legal representatives of such person.



ARTICLE VI - SHARE CERTIFICATES AND TRANSFERS

Section 1. *Share Certificates.* Share certificates shall be in such form as the board of directors may from time to time determine. Each certificate shall be signed by the chairman of the board, the president, the treasurer or the secretary of the Company, by manual or facsimile signature.

Section 2. *Transfer Agent and Registrar.* The board of directors may from time to time appoint one or more transfer agents and may appoint one or more registrars of transfer, each to act with respect to such preferred and common shares of the Company as the board of directors may designate. No share certificate of the Company shall be valid or binding unless countersigned, manually or by facsimile signature, by a transfer agent if one has been appointed to act with respect to the shares evidenced by such certificate, and registered before issue by a registrar if one has been appointed to act with respect to the shares evidenced by such certificate.

Section 3. *Signatures by Former Corporate Officers or Agents.* In case any officer of the Company, or any authorized signatory of any transfer agent or registrar, who has signed, or whose facsimile signature has been placed upon, any share certificate shall have ceased to be such officer or authorized signatory because of death, resignation or otherwise, before the certificate is issued, it may be issued with the same effect as if the officer or authorized signatory had not ceased to be such at the date of its issue.

ARTICLE VII - AMENDMENTS

These By-laws may be altered, amended, added to or repealed by the board of directors at any meeting of the board duly convened with or without notice of that purpose, subject to the power of the shareholders to change such action.

ARTICLE VIII - INDEMNIFICATION FOR DIRECTORS

Section 1. *Right to Indemnification.* Except as prohibited by law, every director of the Company shall be entitled as of right to be indemnified by the Company against expenses and any liability paid or incurred by such person in connection with any actual or threatened claim, action, suit or proceeding, civil, criminal, administrative, investigative or other, whether brought by or in the right of the Company or otherwise, in which he or she may be involved, as a party or otherwise, by reason of such person being or having been a director of the Company or by reason of the fact that such person is or was serving at the request of the Company as a director, officer, employee, fiduciary or other representative of another corporation, partnership, joint venture, trust, employee benefit plan or other entity (such claim, action, suit or proceeding hereinafter being referred to as a "claim"); provided, that no such right of indemnification shall exist with respect to a claim brought by a director against the Company except as provided in the last sentence of this Section 1. Indemnification hereunder shall include the right to have expenses incurred by such person in connection with a claim paid in advance by the Company prior to final disposition of such claim, subject to any obligation which may be imposed by law, By-law, agreement or otherwise to reimburse the Company in certain events. As used herein, "expenses" shall include fees and expenses of counsel selected by any such director and "liability" shall include amounts of judgments, excise taxes, fines, penalties and amounts paid in settlement. With respect to any claim brought by a director or other person against the Company, the director or other person shall be entitled to be indemnified for expenses incurred in connection with such claim pursuant to this Section 1 only (i) if the claim is a suit brought as a claim for indemnity under Section 2 of this Article VIII or otherwise, (ii) if the director or other person is successful in

whole or in part in the claim for which expenses are claimed or (iii) if the indemnification for expenses is included in a settlement of the claim or is awarded by a court.

Section 2. *Right of Claimant to Bring Suit.* If a claim under Section 1 of this Article VIII is not paid in full by the Company within thirty days after a written claim has been received by the Company, the claimant may at any time thereafter bring suit against the Company to recover the unpaid amount of the claim and, if successful in whole or in part, the claimant shall also be entitled to be paid the expense of prosecuting such claim. It shall be a defense to any such suit to recover indemnification that the claimant's conduct was such that under Pennsylvania law the Company is prohibited from indemnifying the claimant for the amount claimed, but the burden of proving such defense shall be on the Company. Neither the failure of the Company (including its board of directors, legal counsel and its shareholders) to have made a determination prior to the commencement of such suit that indemnification of the claimant is proper in the circumstances, nor an actual determination by the Company (including its board of directors, legal counsel or its shareholders) that the claimant's conduct was such that indemnification is prohibited by law, shall be a defense to the suit to recover indemnification or create a presumption that the claimant's conduct was such that indemnification is prohibited by law. The only defense to any such suit to receive payment of expenses in advance shall be failure to make an undertaking to reimburse if such an undertaking is required by law, By-law, agreement or otherwise.

Section 3. *Insurance and Funding.* The Company may purchase and maintain insurance to protect itself and any person eligible to be indemnified hereunder against any liability or expense asserted or incurred by such person in connection with any claim, whether or not the Company would have the power to indemnify such person against such liability or expense by law or under the provisions of this Article. The Company may create a trust fund, grant a security interest, cause a letter of credit to be issued or use other means (whether or not similar to the foregoing) to ensure the payment of such sums as may become necessary to effect indemnification as provided herein.

Section 4. *Non-Exclusivity; Nature and Extent of Rights.* The right of indemnification provided for in this Article VIII (i) shall not be deemed exclusive of any other rights, whether now existing or hereafter created, to which those seeking indemnification hereunder may be entitled under any provision of the Articles or By-laws, or any agreement, vote of shareholders or directors or otherwise, (ii) shall be deemed to create contractual rights in favor of persons entitled to indemnification hereunder, (iii) shall continue as to persons who have ceased to have the status pursuant to which they were entitled or were denominated as entitled to indemnification hereunder and shall inure to the benefit of the heirs and legal representatives of persons entitled to indemnification hereunder and (iv) shall be applicable to claims commenced after the adoption hereof, whether arising from acts or omissions occurring before or after the adoption hereof. The right of indemnification provided for herein may not be amended or repealed so as to limit in any way the indemnification provided for herein with respect to any acts or omissions occurring prior to any such amendment or repeal.

(Amended January 20, 2012)