

Registration No. 333-

SECURITIES AND EXCHANGE COMMISSION

Washington, D.C. 20549

FORM S-8

REGISTRATION STATEMENT

Under

The Securities Act of 1933

ALUMINUM COMPANY OF AMERICA

(Exact name of issuer as specified in its charter)

Pennsylvania 25-0317820  
(State of Incorporation) (I.R.S. Employer Identification No.)

201 Isabella Street, Alcoa Corporate Center,  
Pittsburgh, Pennsylvania 15212-5858  
(Address of principal executive office, including zip code)

THE FOLLOWING PLANS ARE ASSUMED BY ALUMINUM COMPANY OF AMERICA  
BY REASON OF THE MERGER DESCRIBED IN THE EXPLANATORY NOTE:

ALUMAX INC., 1993 LONG TERM INCENTIVE PLAN  
ALUMAX INC., 1995 EMPLOYEE EQUITY OWNERSHIP PLAN  
(Full Title of Plan)

Denis A. Demblowski,  
Secretary and Senior Counsel  
201 Isabella Street, Alcoa Corporate Center,  
Pittsburgh, Pennsylvania 15212-5858  
(Name and address of agent for service)

Telephone number of agent for service (412) 553-3856

CALCULATION OF REGISTRATION FEE

Title of Securities to be Registered	Amount to be Registered	Proposed Maximum Offering Price Per Share(1)	Proposed Maximum Aggregate Offering Price(1)	Amount of Registration Fee
Aluminum Company of America, common stock, \$1 par value	341,250	60.625	20,688,281.25	6,103.04

- (1) Estimated solely for the purpose of calculating the registration fee, based on the average of the high and low prices of shares of the Registrant's common stock reported in the consolidated reporting system on August 28, 1998

EXPLANATORY NOTE

On July 31, 1998, Alcoa consummated its acquisition of all of the outstanding shares of common stock (the "Alumax Transaction") of Alumax Inc., a Delaware corporation ("Alumax"). On March 13, 1998, Alcoa commenced the Alumax Transaction with a cash tender offer (the "Offer") for one-half of the outstanding Alumax shares at \$50.00 per share. The Offer expired on June 16, 1998, at which time Alcoa accepted for payment 27,540,00 shares of Alumax common stock, representing approximately 51% of the outstanding Alumax common stock. The Offer was followed by a merger in which each remaining outstanding share of Alumax common stock was converted into 0.6975 of a share of Alcoa common stock. Shares of Alcoa common stock will now be used to fund the Alumax Inc., 1993 Long Term Incentive Plan and the Alumax Inc., 1995

INCORPORATION OF CONTENTS OF PRIOR REGISTRATION STATEMENTS

The Registrant incorporates by reference the contents of previously-filed Registration Statements: Registration Nos. 33-22346, 33-49109, 33-60305, and 333-27903 on Form S-8. The Registrant also incorporates by reference the contents of previously-filed Registration Statements filed by Alumax Inc.: Registration Nos. 33-83008, 333-39079, and 333-26511.

PART II

INFORMATION REQUIRED IN THE REGISTRATION STATEMENT

ITEM 3. INCORPORATION OF DOCUMENTS BY REFERENCE

The following documents filed by the Registrant with the Securities and Exchange Commission are incorporated herein by reference.

(a) Annual Report on Form 10-K for the fiscal year ended December 31, 1997.

(b) Quarterly Report on Form 10-Q for the quarter ended March 31, 1998.

(c) Quarterly Report on Form 10-Q for the quarter ended June 30, 1998.

(d) The description of the Registrant's common stock set forth in the Registrant's Registration Statement filed pursuant to Section 12 of the Securities Exchange Act of 1934, as amended (the "Exchange Act") and any amendments or reports filed for the purpose of updating such description.

ITEM 4. DESCRIPTION OF SECURITIES

Not Applicable.

ITEM 5. INTERESTS OF NAMED EXPERTS AND COUNSEL

The legality of the securities to which this Registration Statement relates has been passed upon by Denis A. Demblowski, Senior Counsel of the Company. Mr. Demblowski is not eligible to participate in the Plans.

ITEM 6. INDEMNIFICATION OF DIRECTORS AND OFFICERS

Article V of the By-laws of the Company provides that the Company shall indemnify, under specified circumstances, persons who were or are directors, officers or employees of the Company or who served or serve other business entities at the request of the Company. Under these By-law provisions, a person who is wholly successful in defending a claim will be indemnified for any reasonable expenses. To the extent a person is not successful in defending a claim, reasonable expenses of the defense and any liability incurred are to be indemnified under these provisions only where independent legal counsel or other disinterested person selected by the Board of Directors determines 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. Any expense incurred with respect to any claim may be advanced by the Company if the recipient agrees to repay such amount if it is ultimately determined that such recipient is not to be indemnified pursuant to Article V.

The foregoing By-law provisions generally parallel Sections 1741 and 1745 of the Pennsylvania Business Corporation Law ("BCL"). Section 1746 and the By-laws both also provide that the indemnification provided for therein shall not be deemed exclusive of any other rights to which those seeking indemnification may otherwise be entitled.

Section 1746 of the BCL and the By-laws provide for increased indemnification protections for directors, officers and others. Indemnification may be provided by Pennsylvania corporations in any case except where the act or failure to act giving

rise to the claim for indemnification is determined by a court to have constituted willful misconduct or recklessness.

Section 1713 of the BCL also sets forth a framework whereby Pennsylvania corporations, with the approval of the shareholders, may limit the personal liability of directors for monetary damages except where the act or omission giving rise to a claim constitutes self-dealing, willful misconduct or recklessness. The section does not apply to a director's responsibility or liability under a criminal or tax statute and may not apply to liability under Federal statutes, such as the Federal securities laws.

The Company's Articles and By-laws were amended by the shareholders to implement the increased protections made available to directors under the BCL as described in the preceding paragraph. Article VIII of the By-laws provides that, except as prohibited by law, every director of the Company shall be entitled as of right to be indemnified by the Company for expenses and any and all liability paid or incurred by such person by reason of such person being or having been a director of the Company. Expenses incurred with respect to any claim may be advanced by the Company, subject to certain exceptions. The shareholders have also approved a form of indemnity agreement. The Company has entered into such an indemnity agreement with each of its current directors.

The Company has purchased a three year liability insurance policy with an aggregate limit of \$100 million, with certain specified deductible amounts, for liability of directors and officers and reimbursement to the Company for indemnification provided to directors and officers. The policy has an expiration date of October 1, 2000 and provides liability insurance and reimbursement coverage for the Company, and its directors and officers, which is permitted by the laws of Pennsylvania referred to above.

#### ITEM 7. EXEMPTION FROM REGISTRATION CLAIMED

Not applicable.

#### ITEM 8. EXHIBITS

Exhibit Number	Description
(5)	Opinion of Denis A. Demblowski, Senior Counsel of the Company.
(15)	Letter from Independent Public Accountants regarding unaudited financial information.
(23)(a)	Consent of PricewaterhouseCoopers LLP
(23)(b)	Consent of Counsel (included as part of Exhibit 5).
(24)	Powers of Attorney of certain officers and directors of the Company.

#### ITEM 9. UNDERTAKINGS

The Company hereby undertakes:

(1) To file, during any period in which offers or sales are being made, a post-effective amendment to this Registration Statement:

(i) To include any prospectus required by Section 10(a)(3) of the Securities Act of 1933;

(ii) To reflect in the prospectus any facts or events arising after the effective date of the Registration Statement (or the most recent post-effective amendment thereof) which, individually or in the aggregate, represent a fundamental change in the information set forth in the Registration Statement. Notwithstanding the foregoing, any increase or decrease in volume of securities offered (if the total dollar value of securities offered would not exceed that which was registered) and any deviation from the low or high end of the estimated maximum offering range may be reflected in the form of prospectus filed with the Commission pursuant to Rule 424(b) if, in the aggregate,

the changes in volume and price represent no more than a 20% change in the maximum aggregate offering price set forth in the "Calculation of Registration Fee" table in the effective registration statement;

(iii) To include any material information with respect to the plan of distribution not previously disclosed in the Registration Statement or any material change to such information in the Registration Statement;

Provided, however, that paragraphs (a)(1)(i) and (a)(1)(ii) of this section do not apply if the information required to be included in a post-effective amendment by those paragraphs is contained in periodic reports filed with or furnished to the Commission by the Registrant pursuant to Section 13 or Section 15(d) of the Exchange Act that are incorporated by reference in this Registration Statement.

(2) That, for the purpose of determining any liability under the Securities Act of 1933, each such post-effective amendment shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof;

(3) To remove from registration by means of a post-effective amendment any of the securities being registered which remain unsold at the termination of the offering; and

(4) That, for purposes of determining any liability under the Securities Act of 1933, each filing of the Registrant's annual report pursuant to Section 13(a) or Section 15(d) of the Exchange Act (and, where applicable, each filing of an employee benefit plan's annual report pursuant to section 15(d) of the Securities Exchange Act of 1934) that is incorporated by reference in the Registration Statement shall be deemed to be a new Registration Statement relating to the securities offered therein, and the offering of such securities at that time shall be deemed to be the initial bona fide offering thereof.

Insofar as indemnification for liabilities arising under the Securities Act of 1933 may be permitted to directors, officers and controlling persons of the Company pursuant to the foregoing provisions described in Item 6 above, the Company has been informed that in the opinion of the Securities and Exchange Commission such indemnification is against public policy as expressed in the Act and is, therefore, unenforceable. In the event that a claim for indemnification against such liabilities (other than the payment by the Company of expenses incurred or paid by a director, officer or controlling person of the Company in the successful defense of any action, suit or proceeding) is asserted by such director, officer or controlling person in connection with the securities being registered, the Company will, unless in the opinion of its counsel the matter has been settled by controlling precedent, submit to a court of appropriate jurisdiction the question whether such indemnification by it is against public policy as expressed in the Act and will be governed by the final adjudication of such issue.

#### SIGNATURES

Pursuant to the requirements of the Securities Act of 1933, the Registrant certifies that it meets all of the requirements for filing on Form S-8 and has duly caused this Registration Statement to be signed on its behalf by the undersigned, thereunto duly authorized, in the City of Pittsburgh, the Commonwealth of Pennsylvania, on this 31st day of August, 1998.

ALUMINUM COMPANY OF AMERICA  
(Registrant)

/s/Robert F. Slagle  
Robert F. Slagle  
Executive Vice President -  
Human Resources and  
Communications

Pursuant to the requirements of the Securities Act of 1933, this registration statement has been signed below by the following persons in the capacities and on the dates indicated.

Signature -----	Title -----	Date -----
/s/Paul H. O'Neill Paul H. O'Neill	Chairman of the Board and Chief Executive Officer (Principal Executive Officer)	August 31, 1998
/s/Richard B. Kelson Richard B. Kelson	Executive Vice President and Chief Financial Officer (Principal Financial Officer)	August 31, 1998
/s/Earnest J. Edwards Earnest J. Edwards	Senior Vice President and Controller (Principal Accounting Officer)	August 31, 1998

Kenneth W. Dam, Joseph T. Gorman, Judith M. Gueron, Sir Ronald Hampel, Hugh M. Morgan, John P. Mulrone, Paul H. O'Neill, Henry B. Schacht, Franklin A. Thomas and Marina v.N. Whitman, each as a Director, on August 31, 1998, by Denis A. Demblowski, their attorney-in-fact.

/s/Denis A. Demblowski  
Denis A. Demblowski  
Attorney-in-fact

#### INDEX TO EXHIBITS

Exhibit Number	Description
5	Opinion of Denis A. Demblowski, Senior Counsel of the Company.
15	Letter from Independent Public Accountants regarding unaudited financial information.
23(a)	Consent of PricewaterhouseCoopers LLP
23(b)	Consent of Counsel (included in Exhibit 5).
24	Powers of Attorney for certain officers and directors of the Company.

August 31, 1998

Aluminum Company of America  
Alcoa Corporate Center  
201 Isabella Street  
Pittsburgh, PA 15212-5858

Ladies and Gentlemen:

You have requested my opinion as to the legality of any original issue shares, up to 341,250 shares, of common stock, par value \$1.00 per share, of Aluminum Company of America (the "Company") which may be distributed pursuant to the Alumax Inc. 1993 Long Term Incentive Plan and the Alumax Inc. 1995 Employee Equity Ownership Plan (collectively the "Plans"), which shares of common stock you are seeking to register with the Securities and Exchange Commission under the provisions of the Securities Act of 1933, as amended.

As a Senior Counsel of the Company I am generally familiar with its legal affairs. In addition, I have examined such documents as I have deemed appropriate for the purpose of this opinion.

In my opinion, if authorized but previously unissued shares of common stock of the Company shall be issued and sold or delivered to participants in the Plans pursuant to the provisions thereof, the said shares of common stock will be legally issued, fully paid and non-assessable.

I hereby consent to be named, in the registration statement, and amendments thereof, by which the securities to be issued pursuant to the Plans are registered with the Securities and Exchange Commission, and in any prospectus which is a part thereof, as counsel for the Company who has passed upon the legality of the securities registered thereby. I further consent to the filing of this opinion as an exhibit to the registration statement. I do not concede by these consents that I come within the category of persons whose consent is required under Section 7 of the Securities Act of 1933, as amended, or by the rules and regulations of the Securities and Exchange Commission under that Act.

Very truly yours,

/s/Denis A. Demblowski  
Denis A. Demblowski  
Senior Counsel

August 31, 1998

Securities and Exchange Commission  
450 Fifth Street, N.W.  
Washington, DC 20549

Re: Aluminum Company of America Registration Statement on  
Form S-8

We are aware that our reports dated April 6, 1998 and July 7, 1998 except for Note i, for which the date is August 5, 1998, accompanying interim financial information of Aluminum Company of America and subsidiaries for the three month and six month periods ended March 31 and June 30, 1998 and included in Alcoa's Quarterly Reports on Form 10-Q for the quarters then ended, are incorporated by reference in this registration statement. Pursuant to Rule 436(c) under the Securities Act of 1933, these reports should not be considered a part of the registration statement prepared or certified by us within the meaning of Sections 7 and 11 of that Act.

Very truly yours,

/s/PricewaterhouseCoopers LLP  
PRICEWATERHOUSECOOPERS LLP

CONSENT OF INDEPENDENT CERTIFIED PUBLIC ACCOUNTANTS

We hereby consent to the incorporation by reference in the Prospectus forming part of the Registration Statement on Form S-8, relating to the Alumax Inc. 1993 Long Term Incentive Plan and the Alumax Inc. 1995 Employee Equity Ownership Plan, the shares of common stock to be issued in accordance with the Plans, of our reports dated January 8, 1998, except for Note V, for which the date is February 6, 1998, on our Audits of the consolidated financial statements and financial statement schedule of Aluminum Company of America and consolidated subsidiaries as of December 31, 1997 and 1996, and for each of the three years in the period ended December 31, 1997 which reports are incorporated by reference or included in the Company's 1997 Annual Report on Form 10-K for the fiscal year ended December 31, 1997.

/s/PricewaterhouseCoopers LLP  
PRICEWATERHOUSECOOPERS LLP

Pittsburgh, Pennsylvania  
August 31, 1998



## POWER OF ATTORNEY

KNOW ALL PERSONS BY THESE PRESENTS, that each of the undersigned Directors of Aluminum Company of America (the "Company") hereby constitutes and appoints RICHARD B. KELSON, EARNEST J. EDWARDS and DENIS A. DEMBLOWSKI, or any of them, his or her true and lawful attorneys and agents to do any and all acts and things and execute any and all instruments which said attorneys and agents, or any of them, may deem necessary or advisable or may be required to enable the Company to comply with the Securities Exchange Act of 1933, as amended, and any rules, regulations or requirements of the Securities and Exchange Commission in respect thereof, in connection with the registration under said Act of shares of common stock of the Company to be issued and distributed pursuant to the stock options issued under Alumax Inc. benefit plans or any successor plans, including specifically, but without limiting the generality of the foregoing, power and authority to sign the name of each of the undersigned Directors of the Company in the capacity of Director thereof to any registration statement to be filed with the Securities Exchange Commission in respect of said plans or successor plans and shares of common stock, or either of them, to any and all pre-effective amendments, post-effective amendments and supplements to any such registration statement, and to any instruments or documents filed as part of or in connection with any such registration statement or pre-effective amendments or post-effective amendments or supplements thereto; and the undersigned hereby ratifies and confirms all that said attorneys and agents, or any of them, shall do or cause to be done by virtue hereof.

IN WITNESS WHEREOF, the undersigned have subscribed these presents on the date set opposite their names below.

/s/Kenneth W. Dam	7/10/98	/s/John P. Mulroney	7/10/98
Kenneth W. Dam		John P. Mulroney	

/s/Joseph T. Gorman	7/10/98	/s/Henry B. Schacht	7/10/98
Joseph T. Gorman		Henry B. Schacht	

/s/Judith M. Gueron	7/10/98	/s/Franklin A. Thomas	7/10/98
Judith M. Gueron		Franklin A. Thomas	

/s/Sir Ronald Hampel	7/10/98	/s/Marina v.N. Whitman	7/10/98
Sir Ronald Hampel		Marina v.N. Whitman	

/s/Hugh M. Morgan	7/10/98		
Hugh M. Morgan			