

10. Check box if the aggregate amount in row (9) excludes certain shares*

[]

11. Percent of class represented by amount in row 9
10.22%

12. Type of reporting person
IA, HC

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Item 1(a). Name of Issuer:

ALUMINUM COMPANY OF AMERICA

Item 1(b). Address of Issuer's Principal Executive Offices:

425 Sixth Avenue
Pittsburgh PA 15129

Item 2(a). Name of Person Filing:

Wellington Management Company, LLP ("WMC")

Item 2(b). Address of Principal Business Office or, if None,
Residence:

75 State Street
Boston, Massachusetts 02109

Item 2(c). Citizenship:

Massachusetts

Item 2(d). Title of Class of Securities:

COMMON STOCK

Item 2(e). CUSIP Number:

022249106

Item 3. If this statement is filed pursuant to Rules 13d-1(b), or
13d-2(b), check whether the person filing is a:

- (a) [] Broker or Dealer registered under Section 15 of the Act,
- (b) [] Bank as defined in Section 3(a)(6) of the Act,
- (c) [] Insurance Company as defined in Section 3(a)(19) of the Act,
- (d) [] Investment Company registered under Section 8 of the Investment Company Act,
- (e) [X] Investment Adviser registered under Section 203 of the Investment Advisers Act of 1940,

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- (f) [] Employee Benefit Plan, Pension Fund which is subject to the provisions of the Employee Retirement Income Security Act of 1974 or Endowment Fund; see 13d-1(b)(1)(ii)(F),
- (g) [X] Parent Holding Company, in accordance with Rule 13d-1(b)(1)(ii)(G); see Item 7,
- (h) [] Group, in accordance with Rule 13d-1(b)(1)(ii)(H).

Item 4. Ownership:

(a) Amount beneficially owned: WMC, in its capacity as investment adviser, may be deemed to beneficially own 17,208,104 shares of the Issuer which are held of record by clients of WMC.

(b) Percent of Class: 10.22%

(c) Number of shares as to which such person has:

- (i) Sole power to vote or to direct the vote 0
- (ii) Shared power to vote or to direct the vote 2,402,880
- (iii) Sole power to dispose or to direct the disposition of 0
- (iv) Shared power to dispose or to direct the disposition of 17,208,104

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Item 5. Ownership of Five Percent or Less of a Class.

If this statement is being filed to report the fact that as of the date hereof the reporting person has ceased to be the beneficial owner of more than five percent of the class of securities, check the following [].

Item 6. Ownership of More than Five Percent on Behalf of Another Person.

The securities as to which this Schedule is filed by WMC, in its capacity as investment adviser, are owned of record by clients of WMC. Those clients have the right to receive, or the power to direct the receipt of, dividends from, or the proceeds from the sale of, such securities. No such client is known to have such right or power with respect to more than five percent of this class of securities, except as follows:

Vanguard/Windsor Funds, Inc.

Item 7. Identification and Classification of the Subsidiary Which Acquired the Security Being Reported on by the Parent Holding Company.

See Exhibit A

Item 8. Identification and Classification of Members of the Group.

Not Applicable. This schedule is not being filed pursuant to Rule 13d-1(b)(1)(ii)(H) or Rule 13d-1(c).

Item 9. Notice of Dissolution of Group.

Not Applicable.

Item 10. Certification.

"By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were acquired in the ordinary course of business and were not acquired for the purpose of and do not have the effect of changing or influencing the control of the issuer of such securities and were not acquired in connection with or as a participant in any transaction having such purpose or effect."

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SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Date: June 30, 1998
Signature: --//Brian P. Hillery//--
Name/Title: Brian P. Hillery
Assistant Vice President

* Signed pursuant to a Power of Attorney dated January 15, 1997 and filed with the SEC on January 24, 1997.

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Exhibit A

Pursuant to the instructions in Item 7 of this Schedule 13G, the identity and the Item 3 classification of the relevant subsidiary are: Wellington Trust Company, NA, 75 State Street, Boston MA 02109, a wholly-owned subsidiary of Wellington Management Company, LLP and a bank as defined in Section 3(a)(6) of the Securities Exchange Act of 1934.