

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN
SHARES*
NOT APPLICABLE
11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
5.2 %
12. TYPE OF REPORTING PERSON*
CUSIP NO. 604059105 13G PAGE 2A OF 5 PAGES

1. NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF PERSON
STATE STREET BANK AND TRUST COMPANY, TRUSTEE 04-1867445
OR DISCRETIONARY ADVISOR VARIOUS COLLECTIVE INVESTMENT FUNDS FOR
EMPLOYEE BENEFIT PLAN AND OTHER INDEX ACCOUNTS 3M

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP.*
NOT APPLICABLE A ___
B ___

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION
BOSTON, MASSACHUSETTS

5. SOLE VOTING POWER
3,551,598 SHARES

6. SHARED VOTING POWER
0 SHARES

7. SOLE DISPOSITIVE POWER
3,872,898 SHARES

8. SHARED DISPOSITIVE POWER
0 SHARES

9. AGGREGATED AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
3,872,898 SHARES

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN
SHARES*
NOT APPLICABLE

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
.9%

12. TYPE OF REPORTING PERSON*
CUSIP NO. 604059105 13G PAGE 2B OF 5 PAGES

1. NAME OF REPORTING PERSON
S.S. OR I.R.S. IDENTIFICATION NO. OF PERSON
STATE STREET BANK AND TRUST COMPANY, TRUSTEE/CO-TRUSTEE 04-1867445
VARIOUS TRUST ACCOUNTS 3M

2. CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP.*
NOT APPLICABLE A ___
B ___

3. SEC USE ONLY

4. CITIZENSHIP OR PLACE OF ORGANIZATION
BOSTON, MASSACHUSETTS

5. SOLE VOTING POWER
581,443 SHARES

6. SHARED VOTING POWER
342,006 SHARES

7. SOLE DISPOSITIVE POWER
481,301 SHARES

8. SHARED DISPOSITIVE POWER
442,148 SHARES

9. AGGREGATED AMOUNT BENEFICIALLY OWNED BY EACH REPORTING PERSON
923,449 SHARES

10. CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES CERTAIN
SHARES*
NOT APPLICABLE

11. PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW 9
.2%

12. TYPE OF REPORTING PERSON*
SCHEDULE 13G PAGE 3 OF 5 PAGES

ITEM 1.
(A) NAME OF ISSUER
MINNESOTA MINING & MANUFACTURING CO.

(B) ADDRESS OF ISSUER'S PRINCIPAL EXECUTIVE OFFICES
3M CENTER
ST. PAUL, MN 54144

ITEM 2.

(A) NAME OF PERSON FILING
STATE STREET BANK AND TRUST COMPANY, TRUSTEE

(B) ADDRESS OF PRINCIPAL BUSINESS OFFICE OR, IF NONE,
RESIDENCE

225 FRANKLIN STREET, BOSTON, MA 02110

(C) CITIZENSHIP

BOSTON, MASSACHUSETTS

(D) TITLE CLASS OF SECURITIES
COMMON

(E) CUSIP NUMBER
604059105

ITEM 3. IF THIS STATEMENT IS FILED PURSUANT TO RULE 13D-1(B), OR
13D-2(B), CHECK WHETHER THE PERSON FILING IS A:

(B) X BANK AS DEFINED IN SECTION 3(A)(6) OF THE ACT

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ITEM 4. OWNERSHIP

(A) AMOUNT BENEFICIALLY OWNED
26,336,613.8 SHARES

(B) PERCENT OF CLASS
6.3%

(C) NUMBER OF SHARES AS TO WHICH SUCH PERSON HAS:

(I) SOLE POWER TO VOTE OR TO DIRECT THE VOTE
4,133,041 SHARES

(II) SHARED POWER TO VOTE OR TO DIRECT THE VOTE
21,882,272.8 SHARES

(III) SOLE POWER TO DISPOSE OR TO DIRECT THE DISPOSITION OF
4,354,199 SHARES

(IV) SHARED POWER TO DISPOSE OR TO DIRECT THE DISPOSITION OF
21,982,414.8 SHARES

ITEM 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS

NOT APPLICABLE

ITEM 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER
PERSON.

NOT APPLICABLE

ITEM 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH
ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT
HOLDING COMPANY

NOT APPLICABLE

ITEM 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP

NOT APPLICABLE

ITEM 9. NOTICE OF DISSOLUTION OF GROUP

NOT APPLICABLE

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ITEM 10. CERTIFICATION

THE FOLLOWING CERTIFICATION SHALL BE INCLUDED IF THE
STATEMENT IS FILED PURSUANT TO RULE 13D-1(B):

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 PURPOSES OR EFFECT.

THIS REPORT IS NOT AN ADMISSION THAT STATE STREET BANK AND
TRUST COMPANY IS THE BENEFICIAL OWNER OF ANY SECURITIES COVERED BY
THIS REPORT, AND STATE STREET BANK AND TRUST COMPANY EXPRESSLY
DISCLAIMS BENEFICIAL OWNERSHIP OF ALL SHARES REPORTED HEREIN
PURSUANT TO RULE 13D-4.

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.

10 FEBRUARY 1997

STATE STREET BOSTON CORPORATION
STATE STREET BANK AND TRUST COMPANY,
TRUSTEE

/s/ Janet Denneen
Senior Compliance Officer