

Kayne Anderson MLP Investment CO
 Form 4
 July 05, 2007

FORM 4 UNITED STATES SECURITIES AND EXCHANGE COMMISSION
 Washington, D.C. 20549

OMB APPROVAL

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Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See Instruction 1(b).

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF SECURITIES

Filed pursuant to Section 16(a) of the Securities Exchange Act of 1934, Section 17(a) of the Public Utility Holding Company Act of 1935 or Section 30(h) of the Investment Company Act of 1940

(Print or Type Responses)

1. Name and Address of Reporting Person *
 Frey John C

2. Issuer Name and Ticker or Trading Symbol
 Kayne Anderson MLP Investment CO [KYN]

5. Relationship of Reporting Person(s) to Issuer
 (Check all applicable)

(Last) (First) (Middle)
 C/O KAYNE ANDERSON
 CAPITAL ADVISORS LP, 1800
 AVENUE OF THE STARS
 (Street)

3. Date of Earliest Transaction
 (Month/Day/Year)
 07/05/2007

____ Director
 Officer (give title below)
 ____ 10% Owner
 ____ Other (specify below)
 Assistant Secretary

LOS ANGELES, CA 90067
 (City) (State) (Zip)

4. If Amendment, Date Original Filed(Month/Day/Year)

6. Individual or Joint/Group Filing(Check Applicable Line)
 Form filed by One Reporting Person
 Form filed by More than One Reporting Person

Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned

| 1. Title of Security (Instr. 3) | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | 3. Transaction Code (Instr. 8) | 4. Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | 5. Amount of Securities Beneficially Owned Following Reported Transaction(s) (Instr. 3 and 4) | 6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4) | 7. Nature of Indirect Beneficial Ownership (Instr. 4) |
|---------------------------------|--------------------------------------|--|--------------------------------|---|---|--|---|
| Common Stock | 07/05/2007 | | P | V 2,000 A \$ 34.396 | 14,500 | D | |

Reminder: Report on a separate line for each class of securities beneficially owned directly or indirectly.

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SEC 1474 (9-02)

Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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| 1. Title of Derivative Security (Instr. 3) | 2. Conversion or Exercise Price of Derivative Security | 3. Transaction Date (Month/Day/Year) | 3A. Deemed Execution Date, if any (Month/Day/Year) | 4. Transaction Code (Instr. 8) | 5. Number of Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5) | 6. Date Exercisable and Expiration Date (Month/Day/Year) | 7. Title and Amount of Underlying Securities (Instr. 3 and 4) | 8. Price of Derivative Security (Instr. 5) | 9. Number of Derivative Securities Owned Following Transaction (Instr. 6) |
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|---|
|--|--|--------------------------------------|--|--------------------------------|---|--|---|--|---|

Reporting Owners

Reporting Owner Name / Address

Relationships

Director 10% Owner Officer Other

Frey John C
 C/O KAYNE ANDERSON CAPITAL ADVISORS LP
 1800 AVENUE OF THE STARS
 LOS ANGELES, CA 90067

Assistant Secretary

Signatures

John C. Frey 07/05/2007

__Signature of Date
 Reporting Person

Explanation of Responses:

* If the form is filed by more than one reporting person, *see* Instruction 4(b)(v).

** Intentional misstatements or omissions of facts constitute Federal Criminal Violations. *See* 18 U.S.C. 1001 and 15 U.S.C. 78ff(a).

Note: File three copies of this Form, one of which must be manually signed. If space is insufficient, *see* Instruction 6 for procedure. Potential persons who are to respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB number.