

Kayne Anderson MLP Investment CO  
 Form 4  
 November 27, 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 \*  
 Baker James 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, L.P, 1800  
 AVENUE OF THE STARS,  
 SECOND FLOOR

3. Date of Earliest Transaction  
 (Month/Day/Year)  
 11/26/2007

\_\_\_\_ Director  
 Officer (give title below)  
 \_\_\_\_ 10% Owner  
 \_\_\_\_ Other (specify below)  
 Vice President

(Street)  
 LOS ANGELES, CA 90067

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

(City) (State) (Zip)

**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	11/26/2007		P	V 2,000 A \$ 26.878	8,000	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)

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

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. Nu Deriv Secur Bene Own Follo Repo Trans (Instr
						Date Exercisable	Expiration Date	Title	Amount or Number of Shares
						Code	V (A) (D)		

## Reporting Owners

**Reporting Owner Name / Address**

**Relationships**

Director    10% Owner    Officer    Other

Baker James C  
C/O KAYNE ANDERSON CAPITAL ADVISORS, L.P  
1800 AVENUE OF THE STARS, SECOND FLOOR  
LOS ANGELES, CA 90067

Vice  
President

## Signatures

James C. Baker                      11/27/2007

\_\_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.

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