

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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**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 \*  
 McCarthy Kevin S

(Last) (First) (Middle)

C/O KAYNE ANDERSON  
 CAPITAL ADVISORS, LP, 1800  
 AVENUE OF THE STARS,  
 SECOND FLOOR

(Street)

LOS ANGELES, CA 90067

(City) (State) (Zip)

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

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

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

5. Relationship of Reporting Person(s) to Issuer

(Check all applicable)

Director  10% Owner  
 Officer (give title below)  Other (specify below)  
 Chairman, President and CFO

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 Ownership (Instr. 4)
				(A) or (D)	Price		
			Code	V	Amount		
Common Stock	11/26/2007		P		3,000	A	\$ 26.84
					31,000	D	

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

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 (9-02)

