

Enterprise GP Holdings L.P.
 Form 5
 February 15, 2006

FORM 5

**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).
 Form 3 Holdings Reported Form 4 Transactions Reported

ANNUAL 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

1. Name and Address of Reporting Person *
Smith Edwin E
 (Last) (First) (Middle)

2. Issuer Name and Ticker or Trading Symbol
Enterprise GP Holdings L.P. [EPE]

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

2727 NORTH LOOP WEST, SUITE 100
 (Street)

3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year)
12/31/2005

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

HOUSTON, TX 77008
 (City) (State) (Zip)

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

6. Individual or Joint/Group Reporting
 (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 at end of Issuer's Fiscal Year (Instr. 3 and 4)	6. Ownership Form: Direct (D) or Indirect (I) (Instr. 4)	7. Nature of Indirect Beneficial Ownership (Instr. 4)
Units Representing Limited Partnership Interests	11/08/2005		P	5,000 A	\$ 36.692	13,800	D (1) A

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

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SEC 2270 (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. of D S B O E Is F (I
						Date Exercisable (A) (D)	Expiration Date	Title	Amount or Number of Shares

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
Smith Edwin E 2727 NORTH LOOP WEST, SUITE 100 HOUSTON, TX 77008	X	A	A	A

Signatures

By: John E. Smith, Attorney-in-Fact, on behalf of Edwin E. Smith 02/15/2006

**Signature of Reporting Person Date

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).
- (1) The power of attorney under which this form was signed is on file with the Commission.

Note: File three copies of this Form, one of which must be manually signed. If space provided 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.