FORM 5

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. See

UNITED STATES SECURITIES AND EXCHANGE COMMISSION

| ANNUAL STATEMENT OF CHANGES IN BENEFICIAL |
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| |
| OWNERSHIP |
| |

| OMB APPROVAL | | | | | | | | |
|--------------------------|-----------|--|--|--|--|--|--|--|
| OMB Number: | 3235-0362 | | | | | | | |
| Estimated average burden | | | | | | | | |
| hours per response: | 1.0 | | | | | | | |

Form 3 Holdings Reported.

Instruction 1(b)

| Form 4 | Transactions R | eported. | File | ed pursuant to or Section | | | | | ities Exchai ompany Ac | | | | | | | | | |
|--|--|---|---|---|-----------------------------|--------------|----|--|--|----------------------|--|--------------------|--|---|----------------------------|---------------------|---|--|
| 1. Name and Address of Reporting Person* PEFANIS HARRY N | | | | 2. Issuer Name and Ticker or Trading Symbol PLAINS ALL AMERICAN PIPELINE LP PAA PAA | | | | | 5. Relationship of Reportir (Check all applicable) Director Officer (give title | | | | 10% | Issuer Owner r (specify | | | | |
| (Last) (First) (Middle) 333 CLAY STREET, # 1600 | | | 3. Statement for Issuer's Fiscal Year Ended (Month/Day/Year) 12/31/2004 | | | | | Year) | X Officer (give title Other (specify below) Pres & Chief Operating Officer | | | | | | | | | |
| (Street) HOUSTO | | | 7002 Zip) | 4. If Amendment, Date of Original Filed (Month/Day/Year) | | | | | | | | .ine) | Individual or Joint/Group Filing (Check Applicable ine) X 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 | | | | | | | | | | | | | | | | | |
| Date | | | 2. Transaction Date (Month/Day/Year) | 2A. Deemed Execution Date, if any (Month/Day/Year) | | Code (Instr. | | 4. Securities Acquired (A) or Dispos Of (D) (Instr. 3, 4 and 5) | | | or Disposed | Securit Benefic | | es | | ership n: Direct | 7. Nature of Indirect Beneficial Ownership | |
| | | | | (| , | 9 | | Amou | nt | (A) or (D) | Price | | Issuer's Fiscal Year (Instr. 3 and 4) | | Indirect (I) (Instr. 4) | | (Instr. 4) | |
| Common Units | | | 06/21/2004 | | | j | 1, | ,588 | D | D \$0 ⁽¹⁾ | | 117,527 | | | D | | | |
| 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 | Date (Month/Day/Year) Execution Date, if any (Month/Day/Year) Transaction Code (Instr. 8) Securities Acquired (A) or Disposed of (D) (Instr. 3, 4 and 5) | | Expir. (Mont | or Numb Expiration of | | | Amount or Number | unt ber | | 9. Number of derivative Securities Beneficially Owned Following Reported Transaction(s) (Instr. 4) | | 10. Ownershi Form: Direct (D) or Indirec (I) (Instr. 4 | Beneficial Ownership t (Instr. 4) | | | | |

Explanation of Responses:

1. N/A

Remarks:

Harry N. Pefanis

02/04/2005

** Signature of Reporting Person Date

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

- * 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.

Persons who respond to the collection of information contained in this form are not required to respond unless the form displays a currently valid OMB Number.