

SPIRE CORP  
 Form 4  
 September 16, 2005

**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 \*  
**LITTLE MARK C**

(Last) (First) (Middle)

**C/O SPIRE CORPORATION, ONE PATRIOTS PARK**

(Street)

**BEDFORD, MA 01730-2396**

(City) (State) (Zip)

2. Issuer Name and Ticker or Trading Symbol  
**SPIRE CORP [SPIR]**

3. Date of Earliest Transaction (Month/Day/Year)  
**09/14/2005**

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)

CEO, Spire Biomedical

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)
			Code	V	Amount or Price		
Common Stock, \$0.01 par value	09/14/2005		M		3,750 A \$ 3.875	96,370 <sup>(1)</sup>	D
Common Stock, \$0.01 par value	09/14/2005		S		3,750 D \$ 11.14 <sup>(2)</sup>	92,620 <sup>(1)</sup>	D
Common Stock, \$0.01 par value	09/14/2005		M		2,000 A \$ 1.782	94,620 <sup>(1)</sup>	D

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Common Stock, \$0.01 par value	09/14/2005	S	2,000	D	\$ 11.14 <u>(2)</u>	92,620 <u>(1)</u>	D
Common Stock, \$0.01 par value	09/14/2005	M	11,000	A	\$ 2.5	103,620 <u>(1)</u>	D
Common Stock, \$0.01 par value	09/14/2005	S	11,000	D	\$ 11.14 <u>(2)</u>	92,620 <u>(1)</u>	D
Common Stock, \$0.01 par value	09/14/2005	M	3,250	A	\$ 3.9	95,870 <u>(1)</u>	D
Common Stock, \$0.01 par value	09/14/2005	S	3,250	D	\$ 11.14 <u>(2)</u>	92,620 <u>(1)</u>	D

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

**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 control number.**

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(9-02)

**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 Security (Instr. 3 and 4)	Amount or Number of Shares	
				Code	V (A) (D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Employee Stock Option (right to buy)	\$ 3.875	09/14/2005		M	3,750	05/21/1999 <sup>(3)</sup>	05/21/2008	Common Stock	3,750
Employee Stock	\$ 1.782	09/14/2005		M	2,000	03/18/2000 <sup>(3)</sup>	03/18/2009	Common Stock	2,000

Option  
(right to  
buy)

Employee  
Stock

Option (right to buy)	\$ 2.5	09/14/2005	M	11,000	04/11/2001 <sup>(3)</sup>	04/11/2010	Common Stock	11,0
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Employee  
Stock

Option (right to buy)	\$ 3.9	09/14/2005	M	3,250	05/22/2003 <sup>(4)</sup>	05/22/2012	Common Stock	3,25
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## Reporting Owners

### Reporting Owner Name / Address

### Relationships

Director    10% Owner    Officer    Other

LITTLE MARK C  
C/O SPIRE CORPORATION  
ONE PATRIOTS PARK  
BEDFORD, MA 01730-2396

CEO, Spire Biomedical

## Signatures

Mark C. Little                      09/16/2005

\_\_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 amount of securities beneficially owned includes 92,620, directly held by the reporting person, which have been previously reported.
- (2) Price is based on weighted average of sale prices.
- (3) The option is exercisable in annual increments of 25% of the option shares, with the first quarter increment becoming exercisable on the date shown in this column. This option is now fully vested.
- (4) The option is exercisable in annual increments of 25% of the option shares, with the first quarter increment becoming exercisable on the date shown in this column.

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.