SPIRE CORP
Form 4
May 26, 2009

FORM 4

Check this box if no longer subject to Section 16. Form 4 or Form 5 obligations may continue. *See* Instruction 1(b).

UNITED STATES SECURITIES AND EXCHANGE COMMISSION
Washington, D.C. 20549

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	2. Issuer Name **and** Ticker or Trading Symbol **SPIRE CORP [SPIR]**	5. Relationship of Reporting Person(s) to Issuer (Check all applicable)
(Last) (First) (Middle)	3. Date of Earliest Transaction (Month/Day/Year) 05/21/2009	__X__ Director _____ 10% Owner __X__ Officer (give title _____ Other (specify below) below) CEO, Spire Biomedical
ONE PATRIOTS PARK		
(Street)	4. If Amendment, Date Original Filed(Month/Day/Year)	6. Individual or Joint/Group Filing(Check Applicable Line) _X_ Form filed by One Reporting Person ___ Form filed by More than One Reporting Person
BEDFORD, MA 01730-2396		
(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)
			Code	V	Amount	(A) or (D)	Price			
Common Stock, $0.01 par value								94,970	D	
Common Stock, $0.01 par value								6,415	I	Held by Spouse
Common Stock, $0.01 par value								5,390	I	Held as Custodian for Son

1

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

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)	
				Code	V	(A)	(D)	Date Exercisable	Expiration Date	Title	Amount or Number of Shares
Employee Incentive Stock Option (right to buy)	$ 6.24	05/21/2009		A		5,000		05/21/2010[(1)]	05/21/2019	Common Stock	5,000

Reporting Owners

Reporting Owner Name / Address	Relationships			
	Director	10% Owner	Officer	Other
LITTLE MARK C ONE PATRIOTS PARK BEDFORD, MA 01730-2396	X		CEO, Spire Biomedical	

Signatures

Mark C. Little	05/26/2009
**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 option is exercisable in annual increments of 25% of the option shares, with the first quarter becoming exercisable on the date 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.