REDMOND ROGER

Form 4

March 16, 2010

FORM 4

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

STATEMENT OF CHANGES IN BENEFICIAL OWNERSHIP OF

SECURITIES

OMB Number:

3235-0287

Expires:

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OMB APPROVAL

if no longer subject to Section 16. Form 4 or Form 5

obligations

Check this box

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 may continue.

30(h) of the Investment Company Act of 1940

1(b).

Common Stock,

\$0.01 par value

(Print or Type Responses)

See Instruction

1. Name and Address of Reporting Person * 5. Relationship of Reporting Person(s) to 2. Issuer Name and Ticker or Trading REDMOND ROGER Issuer Symbol SPIRE CORP [SPIR] (Check all applicable) (Middle) (Last) (First) 3. Date of Earliest Transaction (Month/Day/Year) _X__ Director 10% Owner Officer (give title Other (specify C/O SPIRE CORPORATION, ONE 03/15/2010 below) PATRIOTS PARK (Street) 4. If Amendment, Date Original 6. Individual or Joint/Group Filing(Check Filed(Month/Day/Year) Applicable Line) _X_ Form filed by One Reporting Person Form filed by More than One Reporting BEDFORD, MA 01730 (City) (State) (Zip) Table I - Non-Derivative Securities Acquired, Disposed of, or Beneficially Owned 1.Title of 2. Transaction Date 2A. Deemed 4. Securities 5. Amount of 6. Ownership 7. Nature of 3. TransactionAcquired (A) or Security (Month/Day/Year) Execution Date, if Securities Form: Direct Indirect (Instr. 3) Code Disposed of (D) Beneficially (D) or Beneficial any (Month/Day/Year) (Instr. 8) (Instr. 3, 4 and 5) Owned Indirect (I) Ownership Following (Instr. 4) (Instr. 4) Reported (A) Transaction(s) or (Instr. 3 and 4) Code V Amount (D) Price

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

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Table II - Derivative Securities Acquired, Disposed of, or Beneficially Owned (e.g., puts, calls, warrants, options, convertible securities)

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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. Transacti Code (Instr. 8)	5. Number on f Derivative Securities Acquired (A) or Disposed of (D) (Instr. 3, 4, and 5)	6. Date Exercis Expiration Dat (Month/Day/Y	te Underlying		Securit
				Code V	(A) (D)	Date Exercisable	Expiration Date	Title	Amo or Num of Share
Non-Qualified Stock Option (right to buy)	\$ 4.8	03/15/2010		A	2,000	03/15/2010	03/15/2020	Common Stock	2,0

Reporting Owners

Reporting Owner Name / Address	Relationships					
1 8	Director	10% Owner	Officer	Other		
REDMOND ROGER C/O SPIRE CORPORATION ONE PATRIOTS PARK BEDFORD, MA 01730	X					

Signatures

Roger Redmond 03/16/2010

**Signature of Date Reporting Person

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).

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.

Reporting Owners 2