



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

Mail Stop 3030

February 26, 2010

Mr. Roger G. Little
Chief Executive Officer
Spire Corporation
One Patriots Park
Bedford, MA 01730-2396

Re: Spire Corporation
Form 10-K for the fiscal year ended December 31, 2008
Filed March 31, 2009
File No. 0-12742

Dear Mr. Little:

We have completed our review of your Form 10-K and related filings and have no further comments at this time.

Sincerely,

Daniel H. Morris
Special Counsel