



DIVISION OF
CORPORATION FINANCE

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

November 15, 2011

Via e-mail

Mr. Robert Lieberman
Chief Financial Officer
Spire Corporation
One Patriots Park
Bedford, Massachusetts 01730-2396

**Re: Spire Corporation
Form 10-K for the fiscal year ended December 31, 2010
Filed March 15, 2011
File No. 000-12742**

Dear Mr. Lieberman:

We have reviewed your response dated November 14, 2011 and filing and have the following comments. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by amending your filing, by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances or do not believe an amendment is appropriate, please tell us why in your response.

After reviewing any amendment to your filing and the information you provide in response to these comments, we may have additional comments.

Form 10-K for the Fiscal Year Ended December 31, 2010

Item 8. Financial Statements

Note 2. Summary of Significant Accounting Policies

Revenue recognition, page 39

1. Further to your response to prior comment 2, please tell us the amount of revenue recognized in each period presented and for the nine months ended September 30, 2011 under shipping terms with EX-Works Factory and CIP, respectively, where you recorded the revenue based these terms.

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2. We note your response to prior comment 2 which includes the phrase "... and costs transfer from the seller to the buyer when..." Please describe to us the "costs" to which you are referring. Explain why the transfer of costs to the buyer is separate from the transfer of risk.
3. Please clearly explain to us when title passes under your agreements with terms of EX-Works Factory and CIP. Tell us whether each sales contract describes the method of shipment and the method by which you are required to inform the buyer that the goods are available at your premises for EX-Works Factory deliveries. Provide us a sample of relevant clauses from your contracts for an EX-Works Factory as well as a CIP delivery contract.
4. You responded that there are instances when the contract specifically defines when title passes from the company to the customer regardless of the shipping terms. Please explain whether title ever passes prior to the time it would have passed under the shipping terms. If so, please explain further the terms of the contracts allowing for earlier passage of title and how you determined that it was appropriate to record revenue at the earlier date.

You may contact Kate Tillan, Assistant Chief Accountant, at (202) 551-3604 or me at (202) 551-3671 with any questions.

Sincerely,

/s/ Martin James

Martin James
Senior Assistant Chief Accountant