



DIVISION OF
CORPORATION FINANCE

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

March 9, 2012

Via E-mail

Scott Lang

Chairman of the Board, President and Chief Executive Officer
Silver Spring Networks, Inc.
555 Broadway Street
Redwood City, CA 94063

**Re: Silver Spring Networks, Inc.
Amendment No. 5 to Registration Statement on Form S-1
Filed February 24, 2012
File No. 333-175393**

Dear Mr. Lang:

We have reviewed your registration statement 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 by amending your registration statement and providing the requested information. 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 registration statement and the information you provide in response to these comments, we may have additional comments.

Prospectus Summary

1. We note the disclosure of your revenue growth in the "Overview" section of your prospectus summary. Please balance this disclosure with the disclosure in the second risk factor on page 16 that you anticipate that your revenue for each quarter in 2012 could be lower than the levels reached in each quarter in 2011.

Dilution, page 43

2. It appears that certain information to be included in this section is available based on the financial statements included in the filing, including your net tangible book value as of December 31, 2011. Please revise the filing to include any information that can currently be calculated.

Selected Consolidated Financial Data

Other Financial Measures, page 47

3. We note your presentation of Adjusted EBITDA. We further note that you believe your presentation of non-GAAP measures “offer valuable supplemental information regarding the performance of [y]our business.” Please note that under Item 10(e)(1)(ii)(B) of Regulation S-K you must not adjust a non-GAAP performance measure to eliminate items when the nature of the charge or gain is such that there was a similar charge or gain within the prior two years. It appears as though your adjusted EBITDA is eliminating certain items that you have incurred in the past two years. This comment also applies to your presentation of “Gross Profit on billings.” Please tell us how your presentation of these non-GAAP measures is appropriate under Item 10(e)(1)(ii)(B) of Regulation S-K.

Business

Operational Savings for Utilities, page 91

4. Refer to the third sentence in this section. Please file the consent of Black & Veatch or provide us with your analysis supporting your position that a consent is not required. Refer to Securities Act Section 7(a) and Securities Act Rule 436.

Executive Compensation

2011 Summary Compensation Table, page 131

5. Please include the 2011 total compensation for all your named executive officers in the right column of your table.

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filing to be certain that the filing includes the information the Securities Act of 1933 and all applicable Securities Act rules require. Since the company and its management are in possession of all facts relating to a company’s disclosure, they are responsible for the accuracy and adequacy of the disclosures they have made.

Notwithstanding our comments, in the event you request acceleration of the effective date of the pending registration statement please provide a written statement from the company acknowledging that:

- should the Commission or the staff, acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing;

Scott Lang
Silver Spring Networks, Inc.
March 9, 2012
Page 3

- the action of the Commission or the staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the company from its full responsibility for the adequacy and accuracy of the disclosure in the filing; and
- the company may not assert staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Please refer to Rules 460 and 461 regarding requests for acceleration. We will consider a written request for acceleration of the effective date of the registration statement as confirmation of the fact that those requesting acceleration are aware of their respective responsibilities under the Securities Act of 1933 and the Securities Exchange Act of 1934 as they relate to the proposed public offering of the securities specified in the above registration statement. Please allow adequate time for us to review any amendment prior to the requested effective date of the registration statement.

You may contact Eric Atallah, staff accountant, at (202) 551-3663 or Lynn Dicker, reviewing accountant, at (202) 551-3616 if you have questions regarding comments on the financial statements and related matters. Please contact Gabriel Eckstein, staff attorney, at (202) 551-3286 or Tim Buchmiller, reviewing attorney, at (202) 551-3635 with any other questions.

Sincerely,

/s/ Tim Buchmiller for

Amanda Ravitz
Assistant Director

cc (via e-mail): Robert A. Freedman, Esq.
Fenwick & West LLP