



DIVISION OF
CORPORATION FINANCE

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

August 26, 2014

Via E-mail

Zivi Nedivi

President and Chief Executive Officer

Cyalume Technologies Holdings, Inc.

910 SE 17th Street, Suite 300

Fort Lauderdale, FL 33316

**Re: Cyalume Technologies Holdings, Inc.
Form 10-K for Fiscal Year Ended December 31, 2013
Filed April 15, 2014
Definitive Proxy Statement
Filed April 30, 2014
File No. 000-52247**

Dear Mr. Nedivi:

We have reviewed your filing and have the following comments. Please comply with the following comments in future filings. Confirm in writing that you will do so and explain to us how you intend to comply. 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 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, please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Item 15. Exhibits, Financial Statement Schedules, page 26

1. We note that your contract with LC Industries ("LCI"), initially entered into June 1, 2004, and renewed for a five-year term in 2009, continues to represent a significant percentage of your total revenues, approximately 23% in 2013. A contract in which you substantially depend upon is not considered an ordinary course agreement. Refer to Item 601(b)(10)(ii)(B). We note you filed the contract as Exhibit 10.21 on your Form 10-K for the fiscal year ended December 31, 2009. Please tell us why this contract is not filed herein or incorporated by reference. Alternatively, please file or incorporate by reference this agreement with your next Form 10-Q.

Definitive Proxy Statement

Executive Compensation, page 11

2. It appears that the cash bonuses paid to your named executive officers are based upon achievement of “certain performance targets.” If your bonuses are based upon the achievement of certain predetermined annual performance targets over a specified period of time, these payments should be reported under the non-equity incentive plan compensation column. Refer to Compliance Disclosure & Interpretation Question 119.02 of Regulation S-K, available at: <http://www.sec.gov/divisions/corpfin/guidance/regs-kinterp.htm>. Please confirm that Mr. Bielonko’s bonus for 2013 is properly reported under the bonus column or report any future payments under the non-equity incentive plan compensation column with appropriate accompanying narrative disclosure explaining the performance targets considered in determining achievement. Refer to Item 402(o)(5) of Regulation S-K.

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 Exchange Act of 1934 and all applicable Exchange 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.

In responding to our comments, please provide a written statement from the company acknowledging that:

- the company is responsible for the adequacy and accuracy of the disclosure in the filing;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Zivi Nedivi
Cyalume Technologies Holdings, Inc.
August 26, 2014
Page 3

You may contact Michael Henderson, Staff Accountant, at (202) 551-3364, or Terry French, Accountant Branch Chief, at (202) 551-3828 if you have questions regarding comments on the financial statements and related matters. Please contact Justin Kisner, Attorney-Adviser, at (202) 551-3788, or me at (202) 551-3810 with any other questions.

Sincerely,

/s/ Larry Spigel

Larry Spigel
Assistant Director

cc: Via E-mail
Jason Simon
Greenberg Traurig, LLP