

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

DIVISION OF CORPORATION FINANCE

May 27, 2011

Eric C. Scroggins Vice President – General Counsel and Secretary Allison Transmission Holdings, Inc. 4700 West 10th Street Indianapolis, IN 46222

Re: Allison Transmission Holdings, Inc. Amendment No. 2 to Registration Statement on Form S-1 Filed May 16, 2011 File No. 333-172932

Dear Mr. Scroggins:

We have received your response to our prior comment letter dated May 10, 2011 and have the following additional comments.

Leverage Our Efficient Cost Structure, page 8

1. We note the disclosure regarding your substantial indebtedness and net losses elsewhere in the prospectus. However, you describe your cost structure as "efficient." Please revise here, the risk factor entitled, "We could be materially adversely affected by any failure to maintain cost controls" and throughout the prospectus accordingly.

Services Agreement, page 111

2. We note your response to our prior comment 18 and reissue. Although we note your assertion that the management agreement "is not significant to the operations of the Company," and will be terminated in connection with the offering, the agreement is with your two majority stockholders, who are also the selling stockholders listed in the registration statement. In addition, these parties will be paid a \$16 million termination fee pursuant to the agreement. Please either file the services agreement or provide a more thorough legal and factual analysis as to why the agreement does not need to be filed.

Senior Notes and the New Notes Held by Executive Officers, page 112

3. We note your disclosure on page 38 that certain of your executive officers will receive net proceeds of the offering in connection with the repayment of the Senior Cash Pay Notes. Please revise this section to disclose the amount of Senior Cash Pay Notes owned by each named executive officer, as opposed to presenting the aggregate value of all notes owned. Eric C. Scroggins Allison Transmission Holdings, Inc. May 27, 2011 Page 2

Principal and Selling Stockholders, page 113

4. Please disclose that the selling stockholders may be deemed underwriters in connection with the transaction.

Description of Capital Stock, page 117

5. Please remove the legal conclusion that all of your outstanding common stock are "fully paid and non-assessable" or attribute the statement to counsel.

Exhibit 5.1, Opinion of Counsel

- 6. We note the statement that counsel is opining on the "General Corporation Law" of the State of Delaware. Please have counsel confirm to us that the opinion opines upon Delaware law including all applicable statutory provisions and all applicable reported judicial decisions interpreting those laws.
- 7. Counsel conditions its opinion on the assumption that the securities will be delivered to the underwriters at a price per share not less than the per share par value of the Common Stock. Please remove this assumption as it is inappropriate.
- 8. Please delete the assumption that the "[c]ompany will comply with all applicable notice requirements regarding uncertificated shares," as it is inappropriate.
- 9. Please delete the sentence that begins "[t]his opinion is for your benefit," as it inappropriately limits reliance on the opinion.

Exhibit 10.17, Second Amendment to the Credit Agreement

10. Please revise to file Exhibits B and D to this agreement or advise.

You may contact Amy Geddes at (202) 551-3304 or Margery Reich at (202) 551-3347 if you have questions regarding comments on the financial statements and related matters. You may contact Chanda DeLong at (202) 551-3490 or me at (202) 551-3642 with any other questions.

Sincerely,

Loan Lauren P. Nguyen Special Counsel

cc: Rachel W. Sheridan, Esq. via facsimile (202) 637-2201