



DIVISION OF
CORPORATION FINANCE

UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549-0303

Mail Stop 3628

November 1, 2005

By Facsimile (713) 229-2761 and U.S. Mail

Christopher G. Chavez
President and Chief Executive Officer
Advanced Neuromodulation Systems, Inc.
6901 Preston Road
Plano, Texas 75024

Re: Advanced Neuromodulation Systems, Inc.
Schedule 14D-9
Filed on October 19, 2005
File No. 005-33902

Dear Mr. Chavez:

We have the following comments on the above referenced filing. Please understand that the purpose of our review process is to assist you in your compliance with the applicable disclosure requirements and to enhance the overall disclosure in your filing. We look forward to working with you in these respects. We welcome any questions you may have about our comments or on any other aspect of our review. Feel free to call us at the telephone numbers listed at the end of this letter.

Item 4. The Solicitation or Recommendation, page 7

Background of the Transaction, page 8

1. Please revise to discuss whether the company considered soliciting third-party bids from companies other than St. Jude Medical's and Company X. In this regard, address whether the company considered conducting an auction process.

Reasons for the Recommendation of the Board of Directors, page 14

2. Please expand each factor that supports the board's recommendation that all security holders accept the Offer and tender their shares. Vague and conclusory statements are not sufficient. See Item 1012(b) of Regulation M-A. For example, but without limitation, we refer you to the statement under the first bullet point on page 14 that "[t]he Board considered the current and historical financial condition and results of operations

of the Company, as well as its prospects and objectives, including the risks of the company support the involved in achieving those prospects and objectives, and current and expected conditions in the medical device industry.” Your disclosure should explain how the current financial condition and results of operations support the Board’s recommendation to security holders. Similarly, your disclosure should explain why the “Trading Price of the Company Common Stock” and the “Minimum Tender Condition” factors support the board’s recommendation.

3. We note that the board considered the opinion and presentation provided by Piper Jaffray in recommending that all security holders accept the Offer. To the extent that the board considered the presentation by Piper Jaffray in making its recommendation, please revise to provide a reasonably detailed description of the fairness opinion provided by Piper Jaffray. In the alternative, please advise as to why you do not believe such a summary is necessary. This summary should include a discussion of the valuation methodologies utilized by Piper Jaffray in determining that the Per Share Price to be received by your security holders is fair. Also, disclose what consideration the board gave to the results of the advisor’s valuation methodologies and how they support the board’s recommendation.

Annex A

4. We note that Piper Jaffray’s fairness opinion states that it is “solely for the use of the Board of Directors of the Company in connection with its consideration of the Transaction and may not be relied upon by any other person.” This limitation on reliance is inconsistent with the disclosure about the opinion in the Schedule 14D-9 and should be deleted. Alternatively, disclose the basis for the fairness advisor’s belief that shareholders may not rely on the opinion. Describe any applicable state-law authority regarding the availability of this disclaimer as a defense against claims against Piper Jaffray. In the absence of such authority, disclose that the availability of such a defense will be resolved by a court. Finally, disclose that the availability of such a defense to Piper Jaffray will have no effect on the rights and responsibilities of the company’s board of directors under state law or the federal securities laws. You should similarly address the statement on page 14 of your Schedule 14D-9 that “[t]he Piper Jaffray opinion was directed solely to the Board”

Closing

We urge all persons who are responsible for the accuracy and adequacy of the disclosure in the filings reviewed by the staff to be certain that they have provided all information investors require for an informed decision. Since the issuer is in possession of all facts relating to its disclosure, it is responsible for the accuracy and adequacy of the disclosures it has made.

In connection with responding to our comments, please provide, in writing, a statement acknowledging that:

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- the company is responsible for the adequacy and accuracy of the disclosure in the filings;
- staff comments or changes to disclosure in response to staff comments in the filings reviewed by the staff 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.

In addition, please be advised that the Division of Enforcement has access to all information you provide to the staff of the Division of Corporation Finance in our review of your filing or in response to our comments on your filing.

As appropriate, please amend your Schedule 14D-9 in response to these comments. You may wish to provide us with marked copies of the amendment, if required, to expedite our review. Please furnish a cover letter with your amendment that keys your responses to our comments and provides any requested information. Detailed cover letters greatly facilitate our review.

Please file your cover letter on EDGAR. Please understand that we may have additional comments after reviewing your amendment and responses to our comments. In addition, depending upon your response to these comments, a supplement may need to be sent to security holders.

Please direct any questions to me at (202) 551-3456. You may also contact me via facsimile at (202) 772-9203.

Very truly yours,

Jeffrey B. Werbitt
Attorney-Advisor
Office of Mergers & Acquisitions

cc: Kenneth G. Hawari
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