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November 2, 2012

BY EDGAR

Melissa Campbell Duru
Special Counsel
Office of Mergers & Acquisitions
Division of Corporation Finance
Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549-3628

Re: **Ceradyne, Inc.**
Schedule TO-T filed by 3M Company and Cyborg Acquisition Corporation
Filed October 15, 2012
File No. 05-37271

Dear Ms. Duru:

We write on behalf of 3M Company ("3M") and Cyborg Acquisition Corporation, a wholly owned subsidiary of 3M ("Purchaser"), in response to the letter from the staff (the "Staff") of the U.S. Securities and Exchange Commission (the "Commission"), dated October 24, 2012 (the "Comment Letter") setting out comments with respect to the Schedule TO-T, filed with the Commission on October 15, 2012 (the "Schedule TO"), relating to 3M's proposed acquisition of Ceradyne, Inc. ("Ceradyne"). In connection with this response to the Comment Letter, 3M and Purchaser are filing with the Commission Amendment No. 1 to the Schedule TO.

Set forth below is the response of 3M and Purchaser to each comment contained in the Comment Letter. For ease of reference, we have repeated the Staff's comments in italicized text prior to the responses. Capitalized terms used but not defined herein are used as defined in the Offer to Purchase, attached as Exhibit (a)(1)(A) to the Schedule TO.

Schedule TO

Exhibit (a)(1)(A)-Offer to Purchase

Prospective Financial Information, page 16

1. *We refer to the non-GAAP financial measures provided to the bidders by Ceradyne, Inc., which are presented in this section. Please refer to Regulation G and provide the reconciliation called for by Rule 100(a).*

Response: We respectfully submit that Rule 100(a) of Regulation G does not require additional disclosure with respect to the financial projections in the Offer to Purchase (since the Offer is not by or on behalf of Ceradyne), and we note that the Solicitation/Recommendation Statement on Schedule 14D-9 (the "Schedule 14D-9"), which was filed by Ceradyne on October 15, 2012 and mailed to stockholders of Ceradyne with the Offer to Purchase, includes the reconciliation called for by Rule 100(a) of Regulation G with respect to the non-GAAP financial measures provided to 3M by Ceradyne. We further note that such reconciliation was not provided by Ceradyne to 3M during the negotiation of the transaction. However, in response to the Staff's comment, the disclosure with respect to the prospective financial information in the Offer to Purchase has been revised to include the reconciliation contained in Ceradyne's Schedule 14D-9.

2. *We refer to disclosure in "Background of the Offer," in which you disclose that management of Ceradyne provided supplements to the June 28, 2012 projections on or around July 5, 2012. If the information is material to an understanding of the projections provided, please revise to disclose such supplemental information.*

Response: The supplement provided to 3M on July 5, 2012 did not include new prospective financial information but instead consisted of a breakdown by market application (defense, industrial, energy, automotive/diesel and commercial) of certain of the projected total net sales figures provided to 3M as part of the June 28, 2012 projections and disclosed on page 18 of the Offer to Purchase. We therefore respectfully submit that the information provided to 3M on July 5, 2012 is not material to an understanding of the June 28, 2012 projections.

Conditions of the Offer, page 41

3. *Please refer to the last paragraph in this section. When an offer condition is triggered and you decide to proceed with the offer anyway, we believe that this decision constitutes a waiver of the triggered condition. Depending on the materiality of the waived condition and the number of days remaining in the offer, you may be required to extend the offer and re-circulate new disclosure to security holders. You may not, however, as the language seems to imply, simply fail to assert a*

effectively waive it without officially doing so. Please confirm your understanding in your response letter.

Response: We confirm 3M’s and Purchaser’s understanding that consummating the Offer at a time when a condition is triggered would constitute a waiver of that triggered condition. We further acknowledge on behalf of 3M and Purchaser that if any condition to the Offer is waived, applicable rules promulgated under the Securities Exchange Act of 1934, as amended, may require that the Offer be extended to the extent that the waiver constitutes a material change to the Offer and the Offer would not otherwise remain open for a period sufficient for security holders to become reasonably informed of such change.

4. *When an offer condition is triggered by events that occur during the offer period and before the expiration of the offer, the offeror should inform holders of securities how it intends to proceed promptly, rather than wait until the end of the offer period, unless the condition is one where satisfaction of the condition may be determined only upon expiration. Please confirm your understanding in your response letter.*

Response: We confirm 3M’s and Purchaser’s understanding that if an Offer condition is triggered by events that occur during the Offer period, they will inform holders of Shares how they intend to proceed promptly, rather than waiting until the expiration of the Offer, unless the condition is one where satisfaction of the condition may be determined only upon expiration of the Offer.

Litigation, page 47

5. *Please update your disclosure as of the most reasonable practicable date. Refer also to the Instruction to Item 1011(a)(5) of Regulation M-A and provide us with such supplemental materials.*

Response: The disclosure on page 47 of the Offer to Purchase has been revised in response to the Staff’s comment. As requested, copies of the documents referenced in the Instruction to Item 1011(a)(5) of Regulation M-A are being provided to the Commission on a supplemental basis.

* * * *

We acknowledge and confirm on behalf of 3M and Purchaser that:

- each of 3M and Purchaser is responsible for the adequacy and accuracy of the disclosure in the filing;
- Staff comments or changes to disclosure in response to the Staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- neither 3M nor Purchaser may 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.

We hope that these responses adequately address the Staff’s comments. If the Staff has any questions concerning this letter or requires further information, please do not hesitate to contact me at (212) 225-2434.

Very truly yours,

/s/ Christopher E. Austin
Christopher E. Austin

cc: Gregg M. Larson
Carol A. Peterson