

[IRIDEX LETTERHEAD]

April 30, 2007

Via EDGAR and Overnight Courier

Ms. Cecilia D. Blye
Office of Global Security Risk
Division of Corporation Finance
United States Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Re: IRIDEX Corporation
Form 10-K for the Fiscal Year Ended December 31, 2005
Filed April 3, 2006
Form 10-Q for the Quarterly Period Ended July 1, 2006
Filed December 22, 2006
File No. 0-27598

Dear Ms. Blye:

On behalf of IRIDEX Corporation (“we,” the “Company,” or “IRIDEX”), we submit this letter in response to comments from the staff of the Securities and Exchange Commission (the “Staff”) received by letter dated March 30, 2007, relating to the Company’s Form 10-K for the fiscal year ended December 31, 2005 (the “Form 10-K”) and the Company’s Form 10-Q for the quarterly period ended July 1, 2006 (the “Form 10-Q”).

In this letter, we have recited the comments from the Staff in italicized type and have followed each comment with the Company’s response. Capitalized terms used but not defined herein shall have the meanings ascribed thereto in the Form 10-K and Form 10-Q.

General

- 1. We refer you to the last paragraph of your response to our prior comment 1. Please advise us whether the products exported to Iran are among the products described in your response. If they are not, please describe those products. Provide the same type of materiality analysis regarding the products exported to Iran as we previously requested regarding your products sold into Sudan and Syria. Discuss whether the products exported to Iran have military uses;*
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whether, to the best of your knowledge, understanding and belief, any of the products have been put to military use in Iran; and, if so, the military uses of which you are aware.

Please advise us of the outcome of your investigation into the Iranian exports upon its completion.

Response:

Our business in Iran is comprised of the delivery and sale of medical lasers, laser delivery devices and accessories exported for medical end use. Our sales into Iran have historically all been conducted through third party distributors and these sales have not historically been quantitatively or qualitatively material to our business or operations.

Transactions in Iran

In our fiscal years 2004, 2005 and 2006 we received one purchase order through our third party distributor for an end-customer located in Iran. We do not have any agreements, commercial arrangements or contacts with the governments of Iran or, to our knowledge, with any entities controlled by those governments.

- In December 2005, we received a purchase order from Hamilens Co., a distributor in Tehran, Iran for two OcuLight SLx Infrared Lasers, 20 Gauge straight Endoprobes and two Dovetail lens filters with an aggregate purchase price equal to \$39,040.00. The products related to this order were shipped on December 30, 2005. Iridex received a partial payment of \$15,472.00 in June 2006 for this order.

Description of Products that we have sold into Iran

OcuLight SL/SLx Infrared (810) Solid-State Laser

The OcuLight SL or SLx is an infrared photocoagulator console used to perform retinal photocoagulation and glaucoma procedures including transscleral applications. These consoles are available in two infrared output power ranges: OcuLight SL at 2 watts and the OcuLight SLx at 3 watts of power output.

Ophthalmic Delivery Devices

EndoProbe – The EndoProbe or laser probe is used for endophotocoagulation, a retinal treatment performed in a hospital operating room or surgery center. These sterile, disposable probes are available in different styles.

The Company's sales into Iran have not been material to our business or results of operations on either a quantitative or qualitative basis and we do not believe that these sales constitute a material investment risk for our investors. As discussed above, the aggregate value of the Company's sales into Iran were \$39,040.00 in fiscal 2005, which represented 0.1 % of our annual revenues for that year. No sales have been made into Iran during fiscal 2006 or fiscal 2007. As all of our sales into Iran were through a third party distributor, IRIDEX does not have any assets located in Iran. To our knowledge, the Iranian government has not received cash or acted as intermediaries in connection with our operations in Iran. Due to the immateriality of our activities in Iran from a financial standpoint and the fact that the products that we marketed and sold in this country are medical products and that the ultimate end-users of such products are healthcare providers, we do not believe that our activities in Iran should be deemed material to a reasonable investor.

To the best of our knowledge, understanding, and belief (i) none of our products, technologies or services provided into Iran has military uses and (ii) none of our products, technologies or services have been put to military use by Iran.

In connection with IRIDEX's responses to the Staff's comments, we acknowledge that we are responsible for the adequacy and accuracy of the disclosure in our filings with the Securities and Exchange Commission, Staff comments or changes to disclosure in response to Staff comments do not foreclose the Securities and Exchange Commission from taking any action with respect to such filings, and we may not assert Staff comments as a defense in any proceeding initiated by the Securities and Exchange Commission or any person under the federal securities laws of the United States.

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Please acknowledge receipt of this letter by stamping the enclosed duplicate of this letter and returning it to the undersigned in the envelope provided.

We would like to discuss these comments and responses at your earliest convenience. David J. Segre, Esq. and Todd C. Carpenter, Esq. of Wilson Sonsini Goodrich & Rosati, Professional Corporation can be reached at (650) 493-9300, and I may be reached at (650) 962-8848 ext. 3016.

Sincerely,

/s/ Meryl Rains

Meryl Rains
IRIDEX Corporation
Chief Financial Officer

cc: Barry Caldwell
Larry Tannenbaum
David J. Segre
Todd C. Carpenter