

Mail Stop 6010

February 9, 2007

VIA U.S. MAIL AND FAX (509) 375-3473

Mr. Jonathan R. Hunt
Chief Financial Officer
IsoRay, Inc.
350 Hills Street
Suite 106
Richland, Washington 99354

**Re: IsoRay, Inc.
Form 10-KSB for the year ended June 30, 2006
Filed September 28, 2006
Form 10-QSB for Fiscal Quarter Ended September 30, 2006
File No. 000-14247**

Dear Mr. Hunt:

We have reviewed your filings and have the following comments. We have limited our review to only your financial statements and related disclosures and do not intend to expand our review to other portions of your documents. Where indicated, we think you should revise future filings in response to these comments. If you disagree, we will consider your explanation as to why our comment is inapplicable or a revision is unnecessary. Please be as detailed as necessary in your explanation. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure. After reviewing this information, we may or may not raise additional comments.

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 filings. 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.

Accounting Comments

Form 10-KSB for the year ended June 30, 2006

Item 8A – Controls and Procedures, page 41

1. We see your description of the significant internal control deficiencies identified by your independent registered public accounting firm. Tell us and revise your filing to disclose in reasonable detail the basis for your officers' conclusions that the company's disclosure controls and procedures were nonetheless effective as of the end of the period covered by the report.

Financial Statements, page F-1

Consolidated Statements of Operations, page F-4

2. We noted your presentation of only basic earnings per share on the income statement. Please revise future filings to disclose basic and diluted earnings per share. If such amounts are the same you may present on one line as "Basic and Diluted loss per share." See paragraph 36 of SFAS 128.

Note 2. Summary of Significant Accounting Policies, page F-8

Deferred Financing Costs, page F-9

3. We noted that you included the fair value of shares issued to certain shareholders for their guarantee of certain company debt as a financing cost to be amortized over the term of the related debt. Please tell us and revise future filings to disclose the related fair value capitalized and discuss the basis in GAAP for the capitalization of such amounts.

Revenue Recognition, page F-10

4. We noted that the company accrues for sales returns and other allowances at the time of shipment. Please tell us and revise future filings to further discuss the nature of the "other allowances." In addition, in view of your limited history of commercial sales please tell us how you have developed the requisite historical data on which to base estimates of returns for these new products. Refer to SFAS 5 and paragraphs 6(f) and 8 of SFAS 48.

Note 11. Convertible Debentures Payable, page F-15

5. We noted that you issued convertible debentures in 2005. Please tell us and revise future filings to disclose your accounting for the conversion feature and how it complied with SFAS 133 and EITF 00-19 and 98-5.
6. We also noted that in conjunction with the short term conversion inducement in December 2005 you issued a callable warrant. Please clarify for us and revise future filings to disclose how you accounted for the issuance of the warrant and the call feature. Please discuss how your accounting and presentation for the issuance complies with SFAS 133 and EITF 00-19.

Note 12. Shareholders' Equity, page F-16

Isoray, Inc. June 2006 Warrant Exercise Solicitation, page F-17

7. We noted the one-time discount of the exercise price of outstanding warrants. Please tell us and revise future filings to disclosure how you accounted for this transaction. Cite the guidance upon which you based your accounting.

Isoray, Inc. February 2006 Private Placement, page F-17

8. We noted that the October 2005 and February 2006 offerings included the issuance of common stock and warrants to purchase additional shares of common stock. Please tell us and revise future filings to disclose how you have accounted for and presented the warrants in your financial statements. Please address the impact of SFAS 133 and EITF 00-19 on you as it relates to this matter.

Form 10-QSB for the period ended September 30, 2006

Financial Statements

Note 6. August 2006 Stock Purchase Agreement, page 7

9. We noted that the company issued warrants in conjunction with the August 2006 offering of common shares. We also noted that these warrants included a call feature. Please tell us and revise future filings to disclose how you accounted for the warrants and the call feature. Refer to the impact of SFAS 133 and EITF 00-19 or other applicable GAAP on this matter in your response.

As appropriate, please revise future filings and respond to these comments within 10 business days or tell us when you will provide us with a response. Please furnish a letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please understand that we may have additional comments after reviewing your responses to our comments.

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 all information required under the Securities Exchange Act of 1934 and that they have provided all information investors require for an informed investment decision. 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 connection with responding to our comments, please provide, in writing, a 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.

Mr. Jonathan R. Hunt
IsoRay, Inc.
February 9, 2007
Page 5

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.

You may contact Julie Sherman, Staff Accountant, at (202) 551-3640 or me at (202) 551-3603 if you have any questions regarding these comments. In this regard, do not hesitate to contact Angela Crane, Branch Chief, at (202) 551-3554.

Sincerely,

Jay Webb
Reviewing Accountant