



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

September 11, 2009

Mail Stop 4631

Mr. James C. Katzaroff, President
Advanced Medical Isotope Corporation
8131 W. Grandridge Blvd., Suite 101
Kennewick, WA 99336

**Re: Advanced Medical Isotope Corporation
Amendment No. 4 to Registration Statement on Form 10
Filed on August 25, 2009
File No. 0-53497**

Dear Mr. Katzaroff:

We have reviewed your filing and have the following additional comments. We may have additional comments upon our review of the amended Form 10-K and Form 10-Q that we requested in our comment letter dated July 10, 2009.

Item 2. Financial Information, page 15

Liquidity and Capital Resources, page 17

1. Your response to comment 4 in our letter dated July 10, 2009 should be included in the revised liquidity discussion in the amended Form 10 and Form 10-K. Please clarify that the cash run rate, approximately \$3,000,000, needed to fund your operations over the next twelve months that is referred to in the going concern note in your financial statements is stated as of December 31, 2008, and that you have modified your growth and operating plans as a result of your continuing losses.

Contractual Obligations, page 19

2. We note your disclosure that you are in default on your capital lease obligations. If material, please discuss in the Description of Business and Risk Factors sections the potential effect on your business and financial condition.

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Item 10. Recent Sales of Unregistered Securities, page 33

3. Please provide the information required by Item 701 of Regulation S-K with respect to the February and May 2009 transactions you describe on pages 29-30. Also ensure that all the sales of unregistered securities listed under the Options/SARs Grant section beginning on page 27 are also included in this section.

Please respond to these comments within 10 business days, or tell us when you will provide us with a response. Please provide us with a response letter that keys your responses to our comments and provides any requested information. Detailed letters greatly facilitate our review. Please file your response on EDGAR as a correspondence file. Please understand that we may have additional comments after reviewing your responses to our comments.

You may contact Jeffrey Gordon, Accountant, at (202) 551-3866 or Nudrat Salik, Reviewing Accountant, at (202) 551-3692 if you have questions regarding comments on the financial statements and related matters. Please contact Dorine H. Miller, Financial Analyst, at (202) 551-3711 or Brigitte Lippmann, Senior Staff Attorney, at (202) 551-3713 with any other questions.

Sincerely,

Pamela A. Long
Assistant Director

cc: Andrea Cataneo, Esq.
Sichenzia Ross Friedman Ference LLP
61 Broadway, 32nd Floor
New York, NY 10006