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

DIVISION OF
CORPORATION FINANCE

April 21, 2009

Mail Stop 7010

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. 2 to Registration Statement on Form 10
Filed on April 7, 2009
Form 10-K for the Fiscal Year Ended December 31, 2008
Filed on April 15, 2009
File No. 0-53497

Dear Mr. Katzaroff:

We have reviewed your filings and have the following additional comments.

Form 10

1. Where we ask for revisions to your disclosure in the registration statement, please make similar revisions in the applicable places in your Form 10-K.

Item 1A. Risk Factors, page 9

2. Please include your response to comment 5 in our letter dated March 6, 2009 in a separate risk factor discussing the track record of companies affiliated with UTEK. We note your disclosure on page 3 that UTEK is in the business of creating newly formed companies to acquire a new technology from a university, medical center, corporation or federal research laboratory and then sell this newly formed company for securities or cash. Please also disclose whether any other public company affiliated with UTEK or Mr. Katzaroff has not achieved profitability, implemented its business plan or is delinquent in its periodic reporting obligations. For example, we note the disclosure in UTEK's Form 10-K regarding the write down of other investments in UTEK's portfolio, some of which are public companies.

Item 2. Financial Information, page 16

Management's Discussion and Analysis of Financial Condition and Results of Operation, page 16

Liquidity and Capital Resources, page 17

3. Please discuss in your liquidity section all material changes in your operating, investing, and financing cash flows as depicted in your statement of cash flows. See the SEC Interpretive Release No. 33-8350.

Item 6. Executive Compensation, page 24

Narrative to Summary Compensation Table, page 25

4. We note your response to comment 10 in our letter dated March 6, 2009. However, the disclosure relating to the compensation reflected in the table is still unclear. For example, the employment agreement compensation (salary and stock awards) you describe does not reconcile to the amounts reflected in the table. There is also no description of how the bonuses in the fourth column of the table were determined. Please revise. If the amounts in the table do not reconcile to the compensation described in the employment agreements, please provide footnotes to these amounts and explain how the compensation was calculated. See Item 402(o) of Regulation S-K.

5. Please describe how your chief executive officer is compensated and whether the company has entered into an employment agreement with him.

Item 7. Certain Relationships and Related Transactions, page 31

6. We note the disclosure in Note 9 to the financial statements that the company has received a loan from two of its major shareholders. Please provide the disclosure required by Item 404 of Regulation S-K with respect to this transaction.

Item 10. Recent Sales of Unregistered Securities, Page 32

7. We note the disclosure in Note 15 to the financial statements that the company issued securities in 2009. Please provide the disclosure required by Item 701 of Regulation S-K with respect to these securities.

Item 15. Financial Statements and Exhibits, page 36

Note 2 – Summary of Significant Accounting Policies, page F-10

8. We note your response to comment 14 in our letter dated March 6, 2009. You determined that certain unamortized license fees and intangible assets were no longer of value to you and therefore recorded an impairment charge during the year ended December 31, 2008. Please consider further expanding your disclosures to address what consideration you gave as to whether the same factors that led to these impairment charges also indicated that you may need to test your fixed assets for potential impairment. For any fixed assets which have been tested for impairment in accordance with SFAS 144, we encourage you to provide qualitative and quantitative descriptions of the material assumptions used to determine fair value in your impairment analysis and a sensitivity analysis of those assumptions used based upon reasonably likely changes. For any asset groups for which the carrying value was close to the fair value, please consider disclosing the carrying value of the asset groups.

Note 8 – Prepaid Expenses Paid with Stock, page F-20

9. We note that you had prepaid expenses in the amount of $75,336 that were expected to mature in 2009; however, you disclose on the face of your balance sheet that the current portion of prepaid expenses paid with stock was $140,579. In addition, it appears that prepaid expenses in the total amount of $172,211 as disclosed in this footnote is not equal to the total amount of current and non-current prepaid expenses as disclosed on the face of your balance sheet. Please advise or revise.

Note 10 – Capital Lease Obligations, page F-20

10. You disclose that you are not in compliance with the minimum debt service coverage ratio stipulated in the loan covenants. Accordingly, the lenders could accelerate the debt. In light of this, please help us understand how you determined that it was appropriate to classify a portion of this debt as a long term liability on your balance sheet as of December 31, 2008. Refer to EITF 86-30.

Note 12 – Stockholders' Equity

Common Stock Issued for Convertible Debt, page F-26

11. Your statement of cash flows shows proceeds from convertible debt of $218,283 during the year ended December 31, 2008. Please help us understand how you arrived at this amount given your disclosures in Note 12 indicate that you issued

convertible notes for $250,000, $50,000, and $375,000. Please also clearly disclose the conversion terms of each of these debt agreements.

12. Please help us better understand your accounting of the convertible promissory note issued in December 2008. Specifically, please help us better understand how you determined that your shares of common stock are not readily convertible to cash pursuant to paragraph 9(c) of SFAS 133. Please provide us with a summary of your analysis that you performed that led to this determination.

Form 10-K for the Fiscal Year Ended December 31, 2008

13. Please amend your Form 10-K to address the comments in this letter.

Item 5. Market for Registrant's Common Equity . . ., page 15

14. Please identify the market in which your common stock is traded. See Item 201(a)(1)(i) of Regulation S-K.

Item 9A(T). Controls and Procedures, page 22

15. Please provide the disclosure controls and procedures information required by Item 307 of Regulation S-K.

Management's Report on Internal Control over Financial Reporting, page 22

16. You disclose that your evaluation was done not using the COSO framework. Please identify the framework used by management to evaluate the effectiveness of your internal control over financial reporting. See Item 308T(a)(2) of Regulation S-K.

17. We note your disclosure that there were material weaknesses in your internal controls. Please disclose how the material weakness affects your financial reporting and internal controls. Also disclose the status of the material weaknesses and whether or not they have been remediated. If the material weaknesses have not been remediated, please tell us when and how the company expects to do so. Please tell us in detail the steps you have taken (or plan to take) and procedures you implemented (or plan to implement) to correct the material weaknesses you identified.

18. Management is not permitted to conclude that the registrant's internal control over financial reporting is effective if there are one or more material weaknesses in your internal control over financial reporting. See Item 308T(a)(3) of Regulation S-K. Please revise accordingly.

Signatures, page 32

19. Please revise to reflect that the company's principal financial officer and its controller or principal accounting officer have also signed the Form 10-K. See General Instruction D to Form 10-K.

Exhibits 31.1 and 31.2 – Certifications

20. Please file an amendment to the Form 10-K that includes the entire periodic report and new, corrected certifications. Revise your certifications to reflect the exact form set forth in Item 601(b)(31) of Regulation S-K. In that regard, we note the following:

- The identification of the certifying individual at the beginning of each certification required by Exchange Act Rule 13a-14(a) also includes the title of the certifying individual. Revise the identification of the certifying individuals so as not to include such individual's title.
- Since you are not using Form 10-KSB, replace the references to "small business issuer" in paragraphs 3, 4, 4(a), and 4(d) with "registrant."
- Since you have elected to include the disclosure set forth in Item 308T(a) of Regulation S-K in the Form 10-K, you must add the language "and internal control over financial reporting (as defined in Exchange Act Rules 13a-15(f) and 15d-15(f)" in paragraph 4.
- Insert the words "and procedures" after the words "disclosure controls" in paragraph 4(c).
- Insert the words "of internal control over financial reporting" after the word "evaluation" in paragraph 5.
- There are numerous omissions and errors in paragraph 5(a). Revise to reflect the exact language in the form.
- Revise Exhibit 31.2 to reflect the correct name under L. Bruce Jolliff's signature.

Please respond to these comments 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 P. 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