



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

July 8, 2010

Mr. David A. Garrison  
Executive Vice President and Chief Financial Officer  
Arrhythmia Research Technology, Inc.  
25 Sawyer Passway  
Fitchburg, MA 01420

**Re: Arrhythmia Research Technology, Inc.**  
**Form 10-K for the fiscal year ended December 31, 2009**  
**Filed March 10, 2010**  
**File No. 001-09731**

Dear Mr. Garrison:

We have reviewed your response letter dated June 30, 2010 and related 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. In some of our comments, we may ask you to provide us with information so we may better understand your disclosure.

Please respond to this letter within ten business days by providing the requested information, or by advising us when you will provide the requested response. If you do not believe our comments apply to your facts and circumstances please tell us why in your response.

After reviewing the information you provide in response to these comments, we may have additional comments.

Mr. David A. Garrison  
Arrhythmia Research Technology, Inc.  
July 8, 2010  
Page 2

Form 10-K for the fiscal year ended December 31, 2009

Note 8. Commitments and Contingencies, page F-14

Operating Leases, page F-15

1. We see your response to prior comment 19 which states that the equipment under the sale lease-back transaction met the criteria in FASB ASC 840-10-25-1 such that the present value at the beginning of the lease term of the minimum lease payments equals or exceeds 90% of the excess of the fair value of the leased property to the lessor at lease inception. Please refer to FASB ASC 840-40-25-2 which states that if a sale of property is accompanied by a leaseback of all or any part of the property for all or part of its remaining economic life and the lease meets one of the four lease classification criteria in paragraph ASC 840-10-25-1, the seller-lessee shall account for the lease as a capital lease. Please tell us if you have accounted for this lease as a capital lease or operating lease and your basis for this conclusion.
2. As a related matter, if the equipment is being recorded as a capital lease, tell us how your accounting treatment of the long-term deferred gain is consistent with the guidance in FASB ASC 840-40-35-1.

Note 11. Industry and Geographic Segments, page F-18

3. We note your response to prior comment 20 that management separately reviews the operations of the Micron and MIT divisions. In addition, it appears that discrete financial information may be available since you separately present financial operations of the two divisions within MD&A. Please provide us analysis in fuller detail of the criteria in FASB ASC 280-10-50-10 in determining if MIT and Micron are separate reportable segments.

You may contact Leigh Ann Schultz at (202) 551-3628 or me at (202) 551-3664 if you have questions regarding comments on the financial statements and related matters. In this regard, please do not hesitate to contact Brian Cascio, Accounting Branch Chief, at (202) 551-3676 with any other questions.

Sincerely,

Kristin Lochhead  
Accounting Reviewer