

Mail Stop 6010

July 26, 2007

Via Facsimile and U.S. Mail

Mr. David V. Smith
Executive Vice President and Chief Financial Officer
Thoratec Corporation
6035 Stoneridge Drive
Pleasanton, CA 94588

**Re: Thoratec Corporation
Form 10-K for the fiscal year ended December 30, 2006
Filed April 2, 2007
File No. 0-49798**

Dear Mr. Smith:

We have completed our review of your Form 10-K and related filings and do not, at this time, have any further comments.

Sincerely,

Martin F. James
Senior Assistant Chief Accountant