



12988 VALLEY VIEW ROAD
EDEN PRAIRIE, MN 55344

February 13, 2013

VIA EDGAR

Securities and Exchange Commission
Division of Corporation Finance
100 F Street N.E.
Washington, D.C. 20549

Mail Stop 4561

Attention: Russell Mancuso, Legal Branch Chief
Tim Buchmiller, Senior Attorney

Re: *Sunshine Heart, Inc.*
Registration Statement on Form S-1 filed February 13, 2013
File No. 333-186259

Acceleration Request

Requested Date: February 13, 2013

Requested Time: 4:00 P.M. Eastern Time

Dear Mr. Mancuso and Mr. Buchmiller:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, Sunshine Heart, Inc., a Delaware corporation (the "**Company**"), hereby requests that the above-referenced Registration Statement on Form S-1 (File No. 333-186259) (the "**Registration Statement**") be declared effective at the "Requested Date" and "Requested Time" set forth above or at such later time as the Company or its counsel may orally request via telephone call to the staff (the "**Staff**") of the Division of Corporation Finance of the Securities and Exchange Commission (the "**Commission**") (the "**Registration Statement Acceleration Request**"). Once the Registration Statement has been declared effective, please orally confirm that event with our counsel, Honigman Miller Schwartz and Cohn LLP, by calling Phillip D. Torrence at (269) 337-7702.

In connection with the Registration Statement Acceleration Request, the Company hereby acknowledges that:

- should the Commission or the Staff, acting pursuant to delegated authority, declare the Registration Statement on Form S-1 effective, it does not foreclose the Commission from taking any action with respect to the Registration Statement on

Form S-1;

- the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the filing effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement on Form S-1; and
- the Company may not assert Staff comments and the declaration of effectiveness as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Sincerely,

/S/ JEFFREY MATHIESEN

Jeffrey Mathiesen
Chief Financial Officer
Sunshine Heart, Inc.

cc: David A. Rosa, Sunshine Heart, Inc.
Phillip D. Torrence, Honigman Miller Schwartz and Cohn LLP
Jeffrey Kuras, Honigman Miller Schwartz and Cohn LLP