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October 26, 2010

VIA ELECTRONIC SUBMISSION

Securities and Exchange Commission
100 F Street, N.E.
Washington, D.C. 20549

Attention: James E. O'Connor, Esq.
Division of Investment Management

**Re: Acceleration Request
Horizon Technology Finance Corporation (the "Company")
Registration Statement on Form N-2
File No. 333-165570**

Ladies and Gentlemen:

In accordance with Rule 461 under the Securities Act of 1933, as amended, the undersigned hereby respectfully requests that the effective date of the above-referenced Registration Statement be accelerated to 4:00 p.m. New York City time on October 28, 2010, or as soon as practicable thereafter.

In connection with the request by the Company for acceleration of effectiveness, the Company acknowledges that:

- (i) should the Commission or the Staff, acting pursuant to delegated authority, declare the Registration Statement effective, it does not foreclose the Commission from taking action with respect to the Registration Statement;
 - (ii) the action of the Commission or the Staff, acting pursuant to delegated authority, in declaring the Registration Statement effective, does not relieve the Company from its full responsibility for the adequacy and accuracy of the disclosure in the Registration Statement; and
 - (iii) 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.
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The Company respectfully requests that the Commission notify Stephen C. Mahon of Squire, Sanders & Dempsey L.L.P., counsel to the Company, at (513) 361-1230 upon acceleration of effectiveness of the Registration Statement.

Very truly yours,

HORIZON TECHNOLOGY FINANCE CORPORATION

By: /s/ Robert D. Pomeroy Jr.

Robert D. Pomeroy, Jr.,
Chief Executive Officer

cc: Stephen C. Mahon, Esq.