

HORIZON TECHNOLOGY FINANCE CORPORATION  
312 FARMINGTON AVENUE  
FARMINGTON, CONNECTICUT 06032

July 1, 2014

VIA EDGAR

Securities and Exchange Commission  
Division of Investment Management  
100 F Street, NE  
Washington, DC 20549  
Attention: James E. O'Connor

Re: Horizon Technology Finance Corporation  
Registration Statement on Form N-2  
File Nos. 333-178516 and 814-00802

Dear Commissioners:

Pursuant to Rule 461 under the Securities Act of 1933, as amended, Horizon Technology Finance Corporation, a Delaware corporation (the "Company"), respectfully requests acceleration of the effective date of post-effective amendment no. 9 to its Registration Statement on Form N-2 (File No. 333-178516; 814-00802) (the "Registration Statement") so that such Registration Statement may be declared effective at 12:00 p.m. on Wednesday, July 2, 2014, or as soon as practicable thereafter.

We request that we be notified of such effectiveness by a telephone call to Thomas J. Friedmann of Dechert LLP at (202) 261-3313, and that such effectiveness also be confirmed in writing.

---

The Company hereby acknowledges that (i) should the Securities and Exchange Commission (the “Commission”) or the staff of the Commission (the “Staff”), acting pursuant to delegated authority, declare the filing effective, it does not foreclose the Commission from taking any action with respect to the filing; (ii) 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 filing; and (iii) the Company may not assert this action as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

Very truly yours,

Horizon Technology Finance Corporation

By: /s/ Christopher M. Mathieu

Name: Christopher M. Mathieu

Title: Chief Financial Officer

---