



DIVISION OF
CORPORATION FINANCE

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

January 7, 2011

Timothy C. Barabe
Executive Vice President and Chief Financial Officer
Affymetrix, Inc.
3420 Central Expressway
Santa Clara, CA 95051

Re: Affymetrix, Inc.
Form 10-K for the fiscal year ended December 31, 2009
Filed March 1, 2010
File No. 000-28218

Dear Mr. Barabe:

We have completed our review of your filings and do not have any further comments at this time.

Sincerely,

Brian R. Cascio
Accounting Branch Chief