October 23, 2006

Ms. Kathleen B. Allen Vice President and Chief Financial Officer Millipore Corporation 290 Concord Road Billerica, MA 01821

RE: Millipore Corporation

Form 10-K for the fiscal year ended December 31, 2005

File No. 1-09781

Dear Ms. Allen:

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