

AerCap Holdings N.V.  
AerCap House  
Stationsplein 965  
1117 CE Schiphol Airport Amsterdam  
The Netherlands

January 27, 2010

VIA EDGAR AND HAND DELIVERY

**Mail Stop 4631**

Pamela Long  
Assistant Director  
Division of Corporation Finance  
U.S. Securities and Exchange Commission  
100 F Street, NE  
Washington, D.C. 20549-4631

**Re: AerCap Holdings N.V.  
Amendment No. 4 to Registration Statement on Form F-4  
Filed January 26, 2010  
File No. 333-162365  
Annual Report on Form 20-F for the fiscal year ended December 31, 2008  
Filed April 1, 2009  
File No. 1-33159**

Dear Ms. Long:

On behalf of AerCap Holdings N.V. ("AerCap" or the "Company"), this letter is submitted in response to an additional telephonic inquiry made by the Division of Corporation Finance of the U.S. Securities and Exchange Commission (the "Staff") on January 27, 2010 requesting additional information with respect to the Company's response to the Staff's comment letter dated January 22, 2010, which response was dated January 26, 2010 (the "Company's Response Letter").

As requested, below please find a presentation of the change in the accrued maintenance liability relating to aircraft purchases and sales, which is the same presentation set forth on page one of Exhibit A to the Company's Response Letter, but which has been supplemented to include data for the nine-month period ended September 30, 2009.

	<u>2006</u>	<u>2007</u>	<u>2008</u>	<u>Sep. 30, 2009</u>
Change relating to aircraft purchase	(1,563)	(44,256)	(19,936)	—
Change relating to aircraft sales	54,508	2,143	18,619	5,182
<b>Net change</b>	<b>52,945</b>	<b>(42,113)</b>	<b>(1,317)</b>	<b>5,182</b>
<b>Reported net cash provided by operating activities</b>	<b>348,379</b>	<b>205,938</b>	<b>250,433</b>	<b>338,659</b>
<b>Reported net cash used in investing activities</b>	<b>(843,289)</b>	<b>(415,790)</b>	<b>(1,160,998)</b>	<b>(1,178,512)</b>
<b>Quantitative analysis operating activities</b>	<b>15%</b>	<b>-20%</b>	<b>-1%</b>	<b>2%</b>
<b>Quantitative analysis investing activities</b>	<b>-6%</b>	<b>10%</b>	<b>0%</b>	<b>0%</b>

If you have any questions, please do not hesitate to contact Robert S. Reder at (212) 530-5680 or Dean W. Sattler at (212) 530-5629, both of Milbank, Tweed, Hadley & McCloy LLP. In addition, please feel free to contact me at +31 206 559 600.

Sincerely,

/s/ KLAUS HEINEMANN  
Klaus Heinemann  
Chief Executive Officer

Enclosures

cc: John McMahon — Genesis Lease Limited  
Raymond O. Gietz — Weil, Gotshal & Manges LLP  
Boris Dolgonos — Weil, Gotshal & Manges LLP  
Robert S. Reder — Milbank, Tweed, Hadley & McCloy LLP  
Drew S. Fine — Milbank, Tweed, Hadley & McCloy LLP

