181 W. Huntington Drive, Suite 202 Monrovia, CA 91016 Telephone (626) 357-9983 Fax (626) 359-9628 www.avinc.com

May 6, 2009

VIA FACSIMILE AND OVERNIGHT COURIER

United States Securities and Exchange Commission Division of Corporation Finance 100 F Street, N.E. Washington, DC 20549-3561

Attn: Linda Cvrkel, Branch Chief Mail Stop 3561

> Re: AeroVironment, Inc. Form 10-K for the fiscal year ended April 30, 2008 Form 10-Q for the quarterly period ended January 31, 2009 Definitive Proxy Statement on Schedule 14A File No. 001-33261

AeroVironment, Inc. (the "Company") hereby responds to the comment letter dated April 22, 2009, related to the above-referenced filings, as follows. Each SEC staff comment is repeated for reference, followed by the Company's response.

Form 10-Q for the quarterly period ended January 31, 2009

Financial Statements

Note 6. Stock-Based Compensation, page 11

1. We note your response to our prior comment 2. Based on your disclosure in note 10 to your financial statements in Form 10-K for the fiscal year ended April 30, 2008, it appears that you granted 386,310 stock options as part of the 2006 during your fiscal year ended April 30, 2008 (after adopting SFAS No. 123(R)) of which 379,310 were outstanding at April 30, 2008. Also, we note that during the nine months ended January 31, 2009 that approximately 20,100 of stock options related to the 2006 plan were exercised. In this regard, it would appear that the tax benefit from the exercise of stock options issued after your adoption of SFAS No. 123(R) on May 1, 2006 should be presented as cash flows from financing activities, as required by paragraphs 19(e) of SFAS No. 95. In this regard, please provide us with the amount tax benefit associated with the exercise of stock options that were issued after May 1, 2006 and your rationale for not presenting it as cash inflows from financing activities, as prescribed by paragraph 19(e) of SFAS No. 95. We may have further comment after receipt of your response.

RESPONSE:

The tax benefit associated with the exercise of stock options issued after May 1, 2006 was approximately \$23,000 for the year ended April 30, 2008 and approximately \$99,000 for the nine months ended January 31, 2009. As these amounts were considered immaterial, they were not presented separately as cash flows from financing activities to simplify the presentation of the statements of cash flows.

In future filings, we will classify the tax benefits from the exercise of stock options issued after the adoption of SFAS No. 123(R) on May 1, 2006, as cash flows from financing activities and we will reclassify any prior year amounts to conform to the current presentation.

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Definitive Proxy Statement on Schedule 14A

Executive Performance Bonus Program, page 17

2. We note your response to prior comment 5; however, please either confirm that you will provide quantitative disclosure regarding the targets actually reached based on the specific financial and strategic goals for each executive officer, or provide us with a detailed explanation for your conclusion that such disclosure is not required because it would result in competitive harm and could be excluded under Instruction 4 to Item 402(b) of Regulation S-K. Also, please provide us with analysis supporting your belief that targets need only be disclosed "to the extent such information is materials and would provide meaningful disclosure to the Company's stockholders and would further the goal of providing a clear and concise description of the determination of achievement of such objectives and the bonus determination for the Company's named executive officers". Alternatively, please confirm that in future filings you will provide quantitative disclosure regarding the targets actually reached without this qualification.

RESPONSE:

In future filings, we will provide quantitative disclosure regarding the targets actually reached based on the specific financial and strategic goals for each executive officer.

The Company hereby acknowledges the following:

- \cdot the Company is responsible for the adequacy and accuracy of the disclosure in its filings;
- staff comments or changes to disclosure in response to staff comments do not foreclose the Commission from taking any action with respect to the filing; and
- the Company may not assert staff comments as a defense in any proceeding initiated by the Commission or any person under the federal securities laws of the United States.

If you have any questions regarding this response letter, please contact the undersigned at (626) 357-9983 x249 or, in my absence, Leslie Ravestein, Vice President and Corporate Counsel of the Company, at (626) 357-9983 x544.

Sincerely,

/s/ Stephen C. Wright

Stephen C. Wright Senior Vice President and Chief Financial Officer

cc: Steven Cohn, Ernst & Young LLP