

[AMTECH LETTERHEAD]

September 8, 2011

**VIA EDGAR**

Securities and Exchange Commission  
Division of Corporate Finance  
Mail Stop 3561  
Washington, D.C. 20549-3561

Re: Amtech Systems, Inc.  
Registration Statement on Form S-3 ( File No. 333-172115)  
Form RW - Application for Withdrawal

Ladies and Gentlemen:

Pursuant to Rule 477(a) promulgated under the Securities Act of 1933, as amended (the "Securities Act"), Amtech Systems, Inc., an Arizona corporation (the "Company"), hereby applies for an order granting the immediate withdrawal of its Registration Statement on Form S-3 (Registration No. 333-172115) together with all exhibits and amendments thereto (the "Registration Statement"). The Registration Statement was originally filed with the Securities and Exchange Commission (the "Commission") on February 8, 2011.

The Company elected not to proceed with the offering due to general market conditions and a determination that it would not have been in the best interest of the Company or its stockholders to proceed. No securities have been sold under the Registration Statement or in connection with the offering. The Company requests that the Commission consent to this application on the grounds that withdrawal of the Registration Statement is consistent with the public interest and the protection of investors, as contemplated by paragraph (a) of Rule 477.

The Company reserves the right to undertake one or more subsequent private offerings in reliance on Rule 155(c) of the Securities Act.

The Company requests, in accordance with Rule 457(o) of the Securities Act, that all fees paid to the Commission in connection with the filing of the Registration Statement be credited to the Company's account for offset against the filing fee for any future registration statement.

Please send a facsimile copy of the order consenting to the withdrawal of the Registration Statement to Christopher Johnson of Squire, Sanders & Dempsey (US) LLP at (602) 253-8129 as soon as it is available.

Should you have any questions regarding this matter, please do not hesitate to contact Christopher Johnson at (602) 528-4046.

Very truly yours,

AMTECH SYSTEMS, INC.

By: /s/ Bradley Anderson  
Bradley Anderson  
Chief Financial Officer