

January 20, 2012

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. 333-176269)
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 respectfully requests that the Securities and Exchange Commission (the "Commission") issue a written order granting the withdrawal of the Company's Registration Statement on Form S-3 (Registration No. 333-176269) together with all exhibits and amendments thereto (the "Registration Statement"). The Registration Statement was originally filed with the Commission on August 12, 2011.

In connection with the Company acquisition of 55% ownership interest in Kingstone Technology Hong Kong Semiconductors Company Ltd ("Kingstone"), the Company, pursuant to a Stock Purchase and Sale Agreement (the "Purchase Agreement"), effective as of January 27, 2011, among the Company, Kingstone, Silicon Jade, the sole shareholder of Kingstone, and certain other shareholders of Silicon Jade (collectively, with Kingstone and Silicon Jade, the "Kingstone Group"), agreed to register, and by filing the Registration Statement had registered, shares of the Company's common stock. On October 10, 2011, however, the Purchase Agreement was amended to provide that the consideration which was to be paid to the Kingstone Group partly in cash and partly in stock of the Company will now be paid all in cash. The Amendment also removed the obligation of the Company to register the Company's shares for the shareholders of the Kingstone Group. Therefore, the Company has elected not to proceed with the offering due to a determination that it is not in the best interests 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 Linda Park of Squire Sanders (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 Linda Park at (602) 528-4823.

Very truly yours,

AMTECH SYSTEMS, INC.

By: /s/ Robert T. Hass

Robert T. Hass

Vice President and Chief Accounting Officer