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February 28, 2007

Securities and Exchange Commission
100 F Street, NE
Washington, DC 20549

Attn: Brian V. Breheny, Esq.,
Chief, Office of Mergers & Acquisitions
Division of Corporation Finance

Nicholas P. Panos, Esq.,
Special Counsel, Office of Mergers & Acquisitions
Division of Corporation Finance

**Re: MDS Inc.
Request for Relief under Rule 13e-4(g) and General Instruction III of
Schedule 13E-4F Relating to a Modified Dutch Auction Tender Offer**

Dear Messrs Breheny and Panos:

MDS Inc., a corporation existing under the laws of Canada (the "Company"), proposes to effect an issuer tender offer (the "Offer") to all holders of the outstanding common shares of the Company (the "Shares"). The Offer, to be conducted in the form of a modified "Dutch auction," will be to purchase, for cash, up to C\$500 million (the "Specified Dollar Amount") of Shares at a price per Share (the "Purchase Price") which shall be not less than C\$21.00 per Share (the "Minimum Price") and not more than C\$23.50 per Share (the "Maximum Price"). The combination of the Specified Dollar Amount, Minimum Price and the Maximum Price will have the effect of establishing the maximum and minimum number of Shares that the Company is committed to purchase under the Offer.

The Offer will be conducted pursuant to Canadian statutory requirements, except that the Company has requested exemptive relief from various Canadian securities commissions to exempt the Offer from Canadian valuation requirements, proportionate take-up and associated disclosure requirements, and the requirement to state the specific number of Shares sought under the Offer, as more fully discussed herein.

We are writing to request relief from the U.S. Securities and Exchange Commission (the "Commission") in order that the Offer may proceed in the United States under the Canada/U.S. Multijurisdictional Disclosure System (the "MJDS") and pursuant to Rule 13e-4(g) under the U.S. Exchange Act of 1934, as amended (the "Act").

Background

The Company is an international health and life sciences company that provides products, services and information for the development of drugs and disease diagnosis. Until recently, it operated in two business segments: life sciences and diagnostics. On February 26, 2007, the Company announced that it had sold its diagnostics business for net proceeds of approximately C\$1.052 billion. For the fiscal year ended October 31, 2006, consolidated net revenues from continuing operations, i.e., excluding the diagnostics business, amounted to C\$1.140 billion.

The authorized capital of the Company consists of an unlimited number of Shares. As of February 23, 2007, there were 144,711,483 Shares issued and outstanding.

The Shares are registered under Section 12(b) of the Securities Exchange Act of 1934, as amended (the "1934 Act") and are listed and posted for trading on the Toronto Stock Exchange ("TSX") and the New York Stock Exchange ("NYSE").

The single largest market for the Shares is the TSX, where 112.1 million Shares traded during 2006 as compared to 11.9 million Shares over the same period on the NYSE. On February 23, 2007 the closing price of the Shares on the TSX was C\$21.20, and on the NYSE was US\$18.33. On the basis of these closing prices, the Shares had an aggregate market value of approximately C\$3.06 billion and US\$2.64 billion respectively.

The Offer

Structure

The Company proposes to make the Offer on terms to be more fully described in the Company's Offer to Purchase, Letter of Transmittal and Notice of Guaranteed Delivery (together, the "Offering Circular"), to be sent to all holders of Shares (the "Shareholders").

Shareholders wishing to tender their Shares to the Offer will be able to do so by selecting one of two alternatives. Shareholders will be able to deposit either all or a portion of their Shares pursuant to (i) auction tenders at prices specified by such Shareholders being not less than the Minimum Price or more than the Maximum Price, in increments of C\$0.10 per Share ("Auction Tenders") or (ii) purchase price tenders ("Purchase Price Tenders"). An Auction Tender enables a Shareholder to specify the lowest price, being not less than the Minimum Price, at which the Shareholder is willing to have its Shares purchased by the Company. Under a Purchase Price Tender, a Shareholder does not specify a price; the Shareholder's Shares will be deemed to have been tendered at the Minimum Price and will be purchased at the Purchase Price determined as described below. All Shares purchased in the Offer, whether pursuant to Auction Tenders or Purchase Price Tenders, will be purchased at the same purchase price.

The Offering Circular will set forth (i) the Specified Dollar Amount (C\$500 million) that the Company intends to spend under the Offer, (ii) the Minimum Price (C\$21.00 per

Share), (iii) the maximum number of Shares that may be purchased under the Offer (23,809,523 Shares, being the quotient of the Specified Dollar Amount divided by the Minimum Price), representing approximately 16.5% of the issued and outstanding Shares, and (iv) the Maximum Price (C\$23.50 per Share) and the minimum number of Shares that may be purchased under the Offer, assuming that the Offer is fully subscribed (21,276,595 Shares, being the quotient of the Specified Dollar Amount divided by the Maximum Price).

Purchase Price

The Purchase Price for the Shares will be the lowest price at or above the Minimum Price, but not exceeding the Maximum Price, that will enable the Company to purchase the maximum number of deposited Shares having an aggregate purchase price not exceeding the Specified Dollar Amount. Under the modified Dutch auction method, the Purchase Price will be determined automatically by the number of Shares deposited by Shareholders pursuant to Auction Tenders and Purchase Price Tenders and the prices specified by Shareholders pursuant to Auction Tenders. Shares deposited pursuant to Purchase Price Tenders will be deemed to have been deposited at the Minimum Price for the purpose of the Purchase Price determination. All Shares purchased by the Company will be at the Purchase Price, including Shares deposited at or below the Purchase Price pursuant to Auction Tenders and Shares deposited pursuant to Purchase Price Tenders.

Proration

If the number of Shares deposited pursuant to Auction Tenders at or below the Purchase Price or pursuant to Purchase Price Tenders would result in an aggregate purchase price in excess of the Specified Dollar Amount, than such deposited Shares will be purchased on a *pro rata* basis according to the number of such Shares (with adjustments to avoid the purchase of fractional shares), except that the Company will accept for purchase without proration all Shares deposited by any Shareholder owning fewer than 100 Shares ("Odd Lots"), provided such Shareholder deposits all such Shares at or below the Purchase Price.

Hypothetical Scenarios

To illustrate the effect of the terms of the Offer, we have considered three hypothetical scenarios: (i) fewer Shares are tendered than can be purchased for the Specified Dollar Amount at the Purchase Price, (ii) exactly such number of Shares are tendered that can be purchased for the Specified Dollar Amount at the Purchase Price, and (iii) more Shares are tendered than can be purchased for the Specified Dollar Amount at the Purchase Price.

Offer Under-subscribed. If the Offer is under-subscribed, all Shares tendered will be taken up and paid for by the Company without proration. In this case, as in all tender offers conducted in the form of a modified Dutch auction, the actual number of Shares taken up in the Offer will be lower than the maximum number of shares that could be purchased under the Offer at the Minimum Price, and the actual Purchase Price will be the single highest price, at or below the Maximum Price, specified by Shareholders tendering pursuant to Auction Tenders.

Offer Fully-subscribed. If the Offer is fully-subscribed, all Shares tendered will be taken up and paid for by the Company without proration. Given that the Specified Dollar Amount is fixed, the actual number of Shares taken up in a fully-subscribed Offer will vary inversely with the Purchase Price, determined in the manner described above. If the Purchase Price is the Minimum

Price, the actual number of Shares taken up in the Offer will equal the maximum number of Shares specified in the Offering Circular. If the Purchase Price exceeds the Minimum Price, the number of Shares purchased will be less than such maximum number of shares.

Offer Over-subscribed. If the Offer is over-subscribed, Odd Lots deposited at or below the Purchase Price will be taken up first. Other Shares tendered pursuant to Auction Tenders at or below the Purchase Price and Shares deposited pursuant to Purchase Price Tenders (the "Prorated Shares") will be purchased on a *pro rata* basis according to the number of such Shares so deposited. Given that the Specified Dollar Amount is fixed, the actual number of Shares purchased in an over-subscribed Offer will vary inversely with the Purchase Price. If the Purchase Price is the Minimum Price, the actual number of Shares taken up in the Offer will equal the maximum number of Shares specified in the Offering Circular. If the Purchase Price exceeds the Minimum Price, the number of Shares purchased will be less than such maximum number of shares.

Shares Returned to Shareholders

All Shares deposited pursuant to Auction Tenders at prices above the Purchase Price will be returned to the appropriate Shareholders. In addition, all Prorated Shares not taken up by the Company will be returned to the appropriate Shareholders.

Offering Circular

The Company will file a Schedule 13E-4F with the Commission at the commencement of the Offer, including the Offering Circular, which will be disseminated to Shareholders, and all other required documents. The Offering Circular will include disclosure regarding the terms of the Offer required by provisions of applicable Canadian securities laws, including the mechanics of take-up and payment for, or the return of, Shares. In particular, the Offering Circular will set forth the Specified Dollar Amount, the Minimum Price, the Maximum Price, the maximum number of shares that could be purchased under the Offer at the Minimum Price and the minimum number of Shares that could be purchased under the Offer at the Maximum Price, assuming that the Offer is fully subscribed.

Issues Presented

Rule 13e-4(g)

Rule 13e-4(g) permits a tender offer by a Canadian issuer for a class of its own securities to proceed in the United States in accordance with all relevant Canadian federal, provincial and territorial rules and regulations. The rule provides that, for cash offers, if a Schedule 13E-4F is filed with the Commission, the requirements of Section 13(e)(1) of the Act and Rule 13e-4 and Schedule TO thereunder will be deemed satisfied with respect to any issuer tender offer where the issuer is incorporated or organized under the laws of Canada (or any Canadian province or territory), is a foreign private issuer and is not an investment company registered or required to be registered under the U.S. Investment Company Act of 1940, if less than 40% percent of the class of securities that is the subject of the tender offer is held by U.S. holders (collectively, the "status requirements") and the tender offer is subject to, and the issuer complies with, the laws, regulations and policies of Canada and/or any of its provinces or territories governing the conduct of the offer (unless the issuer has received an exemption(s) from, and the issuer tender offer does

not comply with, requirements that otherwise would be prescribed by Rule 13e-4).

The note to Rule 13e-4(g) provides that notwithstanding a grant of an exemption from one or more of the applicable Canadian regulatory provisions imposing requirements that otherwise would be prescribed by such section, an issuer tender offer will be eligible to proceed in accordance with the requirements of Rule 13e-4(g) if the Commission by order determines that the applicable Canadian regulatory provisions are adequate to protect the interests of investors.

MJDS Eligibility

The Company is eligible to use Schedule 13E-4F in connection with the Offer because it meets all of the status requirements listed above.

- The Company exists under the laws of Canada.
- The Offer involves a cash tender offer by the Company for the Company's Shares.
- As of October 31, 2006, approximately 25% of the outstanding Shares were held by U.S. holders, calculated in accordance with the instructions to Schedule 13E-4F.
- The Company is a foreign private issuer, as such term is defined in Rule 405 of Regulation C under the U.S. Securities Act of 1933, as amended (the "Securities Act").
- The Company is not an investment company registered or required to be registered under the Investment Company Act of 1940.

Implication of Exemptive Relief in Canada

As is customarily the case in Canada for an issuer tender offer conducted as a modified Dutch auction, the Company is seeking exemptive relief from the securities regulatory authorities of the provinces of Canada from various provisions of provincial securities laws. The relief sought will exempt the Company from the following Canadian regulatory requirements with respect to the Offer:

- valuation requirements (of certain of the Canadian provinces);
- requirements for proportionate take-up and associated disclosure requirements;
and
- requirements to state the number of Shares sought under the Offer.

A copy of the request for relief in Canada in connection with the Offer was forwarded to your attention on February 26, 2007. A copy of the orders from the relevant Canadian securities regulators will be attached as Exhibits to an amendment to the Schedule 13E-4F when they are received.

Although the Company meets the status requirements of Rule 13e-4(g), the Rule

requires an analysis, whenever an issuer seeks exemptive relief under Canadian rules, of whether the relief sought is from a requirement that otherwise would be prescribed by Section 13(e)(1) and Rule 13e-4 and Schedule TO thereunder. If this is the case, to proceed with the offer in reliance on Rule 13e-4(g), an issuer must seek an order from the Commission that the applicable provisions are adequate to protect the interests of investors.¹

Williams Act Requirements

Despite the requirements of the "best price" rule set forth in Rule 13e-4(f)(8)(ii) and the disclosure requirements under Schedule TO, issuer tender offers may be conducted in the United States under the Williams Act in the form of a modified Dutch auction. The terms under which an issuer tender offer may be conducted as a modified Dutch auction are specified in interpretations of the staff of the Commission's Division of Corporation Finance (the "Staff").² These terms include:

- disclosure in the tender offer materials of the minimum and maximum consideration to be paid;
- *pro rata* acceptance during the offer with all securities purchased participating equally in prorationing;
- withdrawal rights during the offer;
- prompt announcement of the purchase price, if determined prior to the expiration of the offer; and
- purchase of all accepted securities at the highest price paid to any shareholder under the offer.

The Tektronix, Inc. no-action letter (available June 18, 1987) ("Tektronix") addressed an additional requirement, namely that an issuer tender offer, including a modified Dutch auction tender offer, specify the exact number of securities being sought and that such an offer remain open at least 10 business days from the date of any increase in the number of securities sought unless such increase does not exceed 2 percent of the class of securities that is the subject of the tender offer.³ However, under the recent Alliance Semiconductor no-action letter (available September 22, 2006), in which an exact number of securities sought was not specified in connection with a proposed modified Dutch auction tender offer, staff of the Division of Corporation Finance stated that it would not recommend that the Commission take enforcement action on the basis that:

- the total number and dollar value of securities being sought in the Offer is disclosed in the offer materials as required by Item 1004(a)(1)(i) of Regulation M-A;

¹ See Release No. 34-29354 (June 21, 1991) at section III D.

² See Release No. 34-23421 (July 11, 1986) at footnote 64.

³ See, also, Janet S. Thiele no-action letter (available August 10, 1987) and Alliance Semiconductor no-action letter (available September 22, 2006).

- the maximum number of shares that may be purchased in the offer is stated on the cover page of the offer to purchase;
- the offer to purchase discloses the range of shares that will be purchased if the offer is fully subscribed; and
- the exact number of shares to be purchased in the offer will be based on the purchase price established by the shareholders determined in accordance with the terms of the offer as disclosed in the offer to purchase.

Canadian Exemptive Relief

The relief sought by the Company in Canada with respect to the valuation requirements, the proportionate take-up requirements and the requirement to state the number of Shares sought are common features of modified Dutch auction tender offers and should not trigger a need under Rule 13e-4(g) for an order from the Commission.

Relief from Valuation Requirements. Relief from the valuation requirements is specifically referred to in the MJDS adopting release as an example of "a limited grant of exemptive relief" which, according to such release, "normally would not result in the loss of MJDS eligibility, and therefore normally would not require relief from the Commission." Release No. 34-29354 (June 21, 1991).

Relief from Proportionate Take-up Requirements. The Canadian proportionate take-up requirements require an offeror to take up and pay for securities deposited pursuant to an issuer tender offer proportionately according to the number of securities deposited by each depositing shareholder. See, e.g., Section 95(7) of the *Securities Act* (Ontario) (the "Ontario Securities Act"). The Canadian disclosure requirements require disclosure in the Offering Circular that the Company would, if Shares deposited to the Offer exceed the number of Shares that can be purchased under the Offer, take up such number of Shares proportionately according to the number of Shares deposited by each Shareholder. See, e.g., Item 9 of Form 33 under the Ontario Securities Act.⁴ The Commission, in Footnote 64 to Release No. 34-23421 (July 11, 1986), expressly addressed modified Dutch auction tender offers, concluding that they are consistent with the tender offer rules provided several conditions are met, including the *pro rata* acceptance throughout the offer with all securities purchased participating equally in prorationing.⁵ On the basis of this prior action by the Commission, an order should not be required for the relief sought.

Relief from Requirement to Disclose Number of Shares Sought. The Canadian disclosure requirements require that the Offering Circular state the number of Shares sought under the Offer. See, e.g., Item 2 of Form 33 under the Ontario Securities Act. The Company is seeking relief in Canada from this requirement and, accordingly, although the maximum number of Shares that the Company may purchase under the Offer is disclosed (being the Specified Dollar Amount

⁴ See, e.g., Schedule 13E-4F filings of DataMirror Corporation (February 11, 2005), PetroKazakhstan Inc. (June 14, 2004), Descartes Systems Group Inc. (June 4, 2003), Quebecor World Inc. (April 28, 2003) and Russel Metals Inc. (March 6, 2000). Each of these offers, like the Offer, included a modified Dutch auction process and, accordingly, relief was granted in Canada from the proportionate take-up requirement. See, also, Shell Canada Limited no-action letter (available April 30, 1997).

⁵ See the text of this letter at footnote 2.

divided by the Minimum Price), the exact number of Shares sought will not be specified in the Offering Circular.

The total number of Shares to be purchased under the Offer will be specified by reference to the Specified Dollar Amount, which is fixed at C\$500 million, and (i) Minimum Price (C\$21.00 per Share), which determines the maximum number of Shares that may be purchased (23,809,523 Shares) and (ii) the Maximum Price (C\$23.50 per Share), which determines the minimum number of Shares that may be purchased, assuming the Offer is fully subscribed (21,276,595 Shares). The maximum number of Shares that may be purchased will be disclosed on the cover page of the Offering Circular. The Offering Circular will also make it clear that if the Offer is fully subscribed, the Company will purchase a number of Shares between the above minimum and maximum number of shares, with the exact number of Shares dependent upon the Purchase Price determined by Shareholders in accordance with the terms of the Offer, and not on any decision by the Company. Based on the fact that the number of Shares to be purchased under the Offer will be within a specified range (assuming that the Offer is fully subscribed), and will be determined by the actions of Shareholders in setting the Purchase Price, we request assurances that an order of the Commission will not be required for the relief sought or, alternatively, we request such an order from the Commission.⁶ The Company is aware that if any term of the Offer is modified such that the maximum or minimum number of Shares to be purchased is changed and would result in an increase or decrease of more than two percent in the percentage of outstanding Shares being sought, the Offer must remain open until the expiration of at least 10 business days from the date that notice of such increase or decrease is first published, sent or given to Shareholders.

If you have any questions or comments with respect to this matter, please call the undersigned at (416) 777-4700.

Very truly yours,

A handwritten signature in black ink, appearing to read 'CWMorgan', with a large, stylized flourish at the end.

Christopher W. Morgan

⁶ See, Alliance Semiconductor no-action letter (available September 22, 2006); see also PetroKazakhstan Inc. no-action letter (available June 10, 2004) in which the terms of the modified Dutch auction specified only the total dollar amount and a minimum price per share.