

**UNITED STATES
SECURITIES AND EXCHANGE COMMISSION
WASHINGTON, D.C. 20549**

**SCHEDULE TO
TENDER OFFER STATEMENT UNDER SECTION 14(d)(1) or 13(e)(1) OF
THE SECURITIES EXCHANGE ACT OF 1934**

MDS INC.

(Name of Subject Corporation (issuer))

MDS Inc. (Issuer)

(Name of Filing Persons (identify status as offeror, issuer or other person))

Common Shares, No Par Value

(Title of Class of Securities)

55269P302

(CUSIP Number of Class of Securities)

MDS Inc.

Attention: Chief Financial Officer

2810 Matheson Boulevard East

Suite 500, West Tower

Mississauga, Ontario, Canada, L4W 4X7

(905) 267-4222

(Name, address and telephone number of person authorized to
receive notices and communications on behalf of filing person)

Copy to:

**Christopher W. Morgan, Esq.
Skadden, Arps, Slate, Meagher & Flom LLP
222 Bay Street, Suite 1750
Toronto, Ontario M5K 1J5
(416) 777-4700**

CALCULATION OF FILING FEE

Transaction Valuation ⁽¹⁾	Amount of Filing Fee ⁽²⁾
\$450,000,000	\$ 32,085

⁽¹⁾ Calculated solely for purposes of determining the amount of the filing fee. This amount is based upon the offer to purchase for not more than \$450,000,000 an aggregate of up to 55,555,555 common shares of MDS Inc. at a purchase price of not more than \$9.30 and not less than \$8.10 per share in cash.

⁽²⁾ The amount of the filing fee, calculated in accordance with Rule 0-11 under the Securities Exchange Act of 1934, as amended, equals \$71.30 per \$1,000,000 of the value of the transaction.

Check the box if any part of the fee is offset as provided by Rule 0-11(a)(2) and identify the filing with which the offsetting fee was previously paid. Identify the previous filing by registration statement number, or the Form or Schedule and the date of its filing.

Amount Previously Paid: N/A
Form or Registration No.: N/A
Filing Party: N/A

Date Filed: N/A

- Check the box if filing relates solely to preliminary communications made before the commencement of a tender offer.

Check the appropriate boxes below to designate any transactions to which the statement relates:

- third-party tender offer subject to Rule 14d-1.
 issuer tender offer subject to Rule 13e-4.
 going-private transaction subject to Rule 13e-3.
 amendment to Schedule 13D under Rule 13d-2.

Check the following box if the filing is a final amendment reporting the results of the tender offer:

This Tender Offer Statement on Schedule TO relates to the offer by MDS Inc., a Canadian corporation (“MDS” or the “Corporation”), to the holders of its common shares, without par value (the “Shares”), to purchase up to an aggregate amount of US\$450,000,000 of Shares at a price of not more than US\$9.30 per Share and not less than US\$8.10 per Share in cash, without interest, upon the terms and subject to the conditions set forth in the Offer to Purchase, dated February 19, 2010 (the “Offer to Purchase”), the accompanying Issuer Bid Circular (the “Circular”), and the related Letter of Transmittal, Employee Share Ownership Plan Special Transaction Form, Deferred Profit Sharing Plan Special Transaction Form and Group Retirement Savings Plan Special Transaction Form which, collectively, as amended or supplemented from time to time, constitute the “Tender Offer.” This Tender Offer Statement on Schedule TO is intended to satisfy the reporting requirements of Rule 13e-4(c)(2) promulgated under the Securities Exchange Act of 1934, as amended (the “Exchange Act”).

The information contained in the Offer to Purchase and the Circular, filed herewith as Exhibit (a)(1)(A), is hereby incorporated by reference in response to all the items of this Schedule TO.

Item 1. Summary Term Sheet.

The information under the heading “Summary Term Sheet,” included in Exhibit (a)(1)(A), is incorporated herein by reference.

Item 2. Subject Company Information.

(a) The name of the issuer is MDS Inc. The address and telephone number of the issuer’s principal executive offices are: 2810 Matheson Boulevard East, Suite 500, West Tower, Mississauga, Ontario, Canada L4W 4X7, (905) 267-4222.

(b) The subject securities are common shares, without par value, of MDS. As of February 18, 2010, there were 120,137,829 Shares outstanding.

(c) Information about the trading market and price of the Shares is incorporated herein by reference from the Circular, included in Exhibit (a)(1)(A), under the heading “Section 4 — Price Range of Shares; Dividends; Previous Purchases and Sales of Shares.”

Item 3. Identity and Background of Filing Person.

(a) The filing person to which this Schedule TO relates is MDS Inc. The address and telephone number of MDS is set forth under Item 2(a) above. The names of the directors and executive officers of MDS are as set forth in the Circular, included in Exhibit (a)(1)(A), under the heading “Section 5 — Interests of Directors and Officers and Ownership of Securities of MDS Inc.,” and such information is incorporated herein by reference. The business address and business telephone number of each director and executive officer of MDS is c/o MDS Inc., 2810 Matheson Boulevard East, Suite 500, West Tower, Mississauga, Ontario, Canada L4W 4X7, (905) 267-4222.

Item 4. Terms of the Transaction.

(a) The material terms of the transaction are incorporated herein by reference from the Offer to Purchase and the Circular, each included in Exhibit (a)(1)(A). There will be no material differences in the rights of security holders as a result of this transaction.

(b) The details regarding any purchases from an officer, director or affiliate of MDS are incorporated herein by reference from the Circular, included in Exhibit (a)(1)(A), under the heading “Section 5 — Interests of Directors and Officers and Ownership of Securities of MDS Inc.”.

Item 5. Past Contracts, Transactions, Negotiations and Agreements.

Information regarding agreements involving MDS’s securities is incorporated herein by reference from the Circular under the headings “Section 4 – Price Range of Shares; Dividends; Previous Purchases and Sales of Shares” and “Section 5 — Interests of Directors and Officers and Ownership of Securities of MDS Inc.”.

Item 6. Purposes of the Transaction and Plans or Proposals.

(a) Information regarding the purpose of the transaction is incorporated herein by reference from Exhibit (a)(1)(A) under the heading “Summary Term Sheet” and from the Circular under the heading “Section 2 — Purpose and Effect of the Offer”.

(b) The Shares purchased in the Tender Offer will be cancelled by the Corporation.

(c) Information about any plans or proposals is incorporated herein by reference from the Circular, included in Exhibit (a)(1)(A), under the headings:

- “Section 2 — Purpose and Effect of the Offer;”
- “Section 4 — Price Range of Shares; Dividends; Previous Purchases and Sales of Shares;”
- “Section 5 — Interests of Directors and Officers and Ownership of Securities of MDS Inc.,” and
- “Section 6 — Material Changes in the Affairs of MDS Inc. and Other Material Facts.”

Other than as set forth in the Offer to Purchase and the Circular, neither the Corporation nor any of its directors or executive officers is aware of any plans, proposals or negotiations that (i) would result in the acquisition or disposition by any person of additional securities of the Corporation or (ii) could result in any action that could impede the acquisition or control of the Corporation.

Item 7. Source and Amount of Funds or Other Consideration.

(a) Information regarding the source of funds is incorporated herein by reference from the Circular, included in Exhibit (a)(1)(A), under the heading “Section 10 — Source of Funds.”

(b) Financing will not be required in connection with the Tender Offer.

(d) None of the consideration for the Tender Offer will be borrowed. MDS will use available cash on hand to fund the Tender Offer.

Item 8. Interest in Securities of the Subject Corporation.

(a) The information under the heading “Section 5 — Interests of Directors and Officers and Ownership of Securities of MDS Inc.” in the Circular, included in Exhibit (a)(1)(A), is incorporated herein by reference.

(b) Neither the Corporation nor, to the knowledge of the Corporation after reasonable inquiry, any of the Corporation’s executive officers, directors, associates, subsidiaries or executive officers or directors of the Corporation’s subsidiaries have effected any transaction in the Shares during the 60 days prior to February 19, 2010.

Item 9. Persons/Assets, Retained, Employed, Compensated or Used.

(a) The information under the heading “Summary Term Sheet,” and the information in the Circular under the headings “Section 11 — Depository,” “Section 13 — Dealer Managers,” and “Section 14 — Fees and Expenses,” in each case included in Exhibit (a)(1)(A), is incorporated herein by reference.

Item 10. Financial Statements.

(a)-(b) Not applicable. The consideration offered consists solely of cash. The Tender Offer is not subject to any financing condition and MDS is a public reporting company under Section 13(a) or 15(d) of the Exchange Act that files reports electronically on EDGAR.

Item 11. Additional Information.

(a)(1) The information under the heading “Section 5 — Interests of Directors and Officers and Ownership of Securities of MDS Inc.” in the Circular, included in Exhibit (a)(1)(A), is incorporated herein by reference. Other

than as set forth in the Offer to Purchase and the Circular or above, the Corporation is not aware of any present or proposed material agreement, arrangement, understanding or relationship between the Corporation and any of its executive officers, directors, controlling persons or subsidiaries.

(a)(2) The information under the heading “Section 9 — Certain Legal Matters; Regulatory Approvals” in the Circular, included in Exhibit (a)(1)(A), is incorporated herein by reference.

(a)(3) Not applicable.

(a)(4) Not applicable.

(a)(5) None. The information under the heading “Section 9 — Certain Legal Matters; Regulatory Approvals” in the Circular, included in Exhibit (a)(1)(A), is incorporated herein by reference.

(b) The information set forth under the heading “Summary Term Sheet,” and the information set forth in the Offer to Purchase, the Circular and the related Letter of Transmittal, Employee Share Ownership Plan Special Transaction Form, Deferred Profit Sharing Plan Special Transaction Form and Group Retirement Savings Plan Special Transaction Form, as each may be amended or supplemented from time to time, is incorporated herein by reference.

Item 12. Exhibits.

<u>Exhibit No.</u>	<u>Description</u>
(a)(1)(A)	Offer to Purchase, dated February 19, 2010 and the accompanying Issuer Bid Circular.
(a)(1)(B)	Letter of Transmittal.
(a)(1)(C)	Notice of Guaranteed Delivery.
(a)(1)(D)	Employee Share Ownership Plan Special Transaction Form.
(a)(1)(E)	Deferred Profit Sharing Plan Special Transaction Form.
(a)(1)(F)	Group Retirement Savings Plan Special Transaction Form.
(a)(2)	None.
(a)(3)	Not applicable.
(a)(4)	Not applicable.
(a)(5)	Press release announcing commencement of Tender Offer, dated February 19, 2010.
(b)	None.
(d)(1)	MDS Inc. Stock Option Plan (incorporated by reference from the Corporation's Report on Form 6-K, furnished to the Securities and Exchange Commission on March 14, 2007).
(d)(2)	MDS Inc. Amended and Restated Employee Share Ownership Plan.
(d)(3)	MDS Inc. Amended and Restated Stock Dividend and Share Purchase Plan.
(d)(4)	MDS Inc. Deferred Profit Sharing Plan.
(d)(5)	MDS Inc. Group Registered Retirement Savings Plan.

(g) None.

(h) None.

Item 13. Information Required by Schedule 13E-3.

Not applicable.

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
(a)(1)(A)	Offer to Purchase, dated February 19, 2010 and the accompanying Issuer Bid Circular.
(a)(1)(B)	Letter of Transmittal.
(a)(1)(C)	Notice of Guaranteed Delivery.
(a)(1)(D)	Employee Share Ownership Plan Special Transaction Form.
(a)(1)(E)	Deferred Profit Sharing Plan Special Transaction Form.
(a)(1)(F)	Group Retirement Savings Plan Special Transaction Form.
(a)(2)	None.
(a)(3)	Not applicable.
(a)(4)	Not applicable.
(a)(5)	Press release announcing commencement of Tender Offer, dated February 19, 2010.
(b)	None.
(d)(1)	MDS Inc. Stock Option Plan (incorporated by reference from the Corporation's Report on Form 6-K, furnished to the Securities and Exchange Commission on March 14, 2007).
(d)(2)	MDS Inc. Amended and Restated Employee Share Ownership Plan.
(d)(3)	MDS Inc. Amended and Restated Stock Dividend and Share Purchase Plan.
(d)(4)	MDS Inc. Deferred Profit Sharing Plan.
(d)(5)	MDS Inc. Group Registered Retirement Savings Plan.
(g)	None.
(h)	None.