





Item 2.02 Results of Operations and Financial Condition.

On February 23, 2010, Microfluidics International Corporation issued a press release entitled “Microfluidics International Corporation Announces Fourth Quarter and Year-End 2009 Financial Results.” A copy of the press release is attached as Exhibit 99.1 to this report and is incorporated by reference into this Item 2.02.

**NON-GAAP FINANCIAL MEASURES:** The attached press release addresses our financial results for the fourth quarter and year end December 31, 2009, and contains disclosure of our non-GAAP EBITDA (Earnings Before Interest, Taxes, Depreciation and Amortization), and non-GAAP adjusted EBITDA which are not measures of financial performance calculated in accordance with generally accepted accounting principles (GAAP) in the United States. The press release contains disclosure regarding why we believe the presentation of these non-GAAP measures provides useful information to investors in analyzing our underlying business and operating performance. It also contains a tabular reconciliation of GAAP to non-GAAP financial information that is discussed in the release.

The information being provided in this report, including Exhibit 99.1, shall not be deemed to be “filed” for purposes of Section 18 of the Securities Exchange Act of 1934 (the “Exchange Act”) or otherwise subject to the liabilities of that section, nor shall it be deemed incorporated by reference in any filing under the Securities Act of 1933, as amended, or the Exchange Act, except as expressly set forth by specific reference in such a filing.

Item 9.01 Financial Statements and Exhibits.

(d) The following exhibit is hereby filed as part of this Current Report on Form 8-K:

| Number | Exhibit |
|--------|---------|
|--------|---------|

|      |   |
|------|---|
| 99.1 | Press Release titled “Microfluidics International Corporation Announces Fourth Quarter and Year-End 2009 Financial Results” |
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SIGNATURE

Pursuant to the requirements of the Securities Exchange Act of 1934, the registrant has duly caused this report to be signed on its behalf by the undersigned hereunto duly authorized.

Dated: February 23, 2010  
INTERNATIONAL CORPORATION

MICROFLUIDICS

By: /s/ Peter F. Byczko

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Name: Peter F. Byczko  
Title: Vice President of Finance & Chief Accounting Officer

EXHIBIT INDEX

| Exhibit<br>Number | Description   |
|-------------------|---|
| 99.1              | Press Release titled "Microfluidics International Corporation Announces Fourth Quarter and Year-End 2009 Financial Results" |