UNITED STATES

SECURITIES AND EXCHANGE COMMISSION Washington, D.C. 20549 FORM 8-K **CURRENT REPORT** Pursuant to Section 13 or 15(d) of The Securities Exchange Act of 1934 Date of Report (Date of earliest event reported): December 16, 2004 NANOGEN, INC. (Exact name of registrant specified in its charter)

Delaware (State or other jurisdiction

000-23541 (Commission File Number)

33-0489621 (I.R.S. Employer

of incorporation)

Identification No.)

10398 Pacific Center Court, San Diego, California (Address of principal executive offices)

92121 (Zip Code)

Registrant s telephone, including area code: (858) 410-4600

(Former name and former address, if changed since last report)

Check the appropriate box below if the Form 8-K filing is intended to simultaneously satisfy the filing obligation of the registrant under any of the following provisions (*see* General Instruction A.2. below):

- " Written communications pursuant to Rule 425 under the Securities Act (17 CFR 230.425)
- " Soliciting material pursuant to Rule 14a-12 under the Exchange Act (17 CFR 240.14a-12)
- " Pre-commencement communications pursuant to Rule 14d-2(b) under the Exchange Act (17 CFR 240.14d-2(b))
- " Pre-commencement communications pursuant to Rule 13e-4(c) under the Exchange Act (17 CFR 240.13e-4(c))

Item 2.01. Completion of Acquisition or Disposition of Assets.

On December 16, 2004, Empire Acquisition Corp. (Merger Sub), a wholly owned subsidiary of Nanogen, Inc. (Nanogen), was merged with and into Epoch Biosciences, Inc. (Epoch), with Epoch surviving as a wholly-owned subsidiary of Nanogen (the Merger). In addition, Nanogen filed an amendment to its restated certificate of incorporation to increase the number of authorized shares of Nanogen common stock from 50,000,000 to 135,000,000 (the Share Increase). Upon completion of the Merger, Epoch s common stock was delisted from the Nasdaq SmallCap Market.

The Merger and Share Increase were made pursuant to the Agreement and Plan of Merger and Reorganization (the Merger Agreement), dated as of September 7, 2004, by and among Nanogen, Merger Sub and Epoch. At a special meeting of Nanogen s stockholders, which was adjourned on December 8, 2004 and reconvened on December 15, 2004, Nanogen stockholders approved the issuance of shares of Nanogen common stock under the Merger Agreement and the Share Increase. A copy of the certificate of amendment effecting the Share Increase is included as Exhibit 3.1 and incorporated by reference herein.

As a result of the Merger, each share of Epoch common stock outstanding at the effective time of the Merger was converted into the right to receive 0.4673 (the Exchange Ratio) shares of Nanogen common stock. In addition, Nanogen assumed all Epoch options and warrants outstanding at the effective time of the Merger, and each such option or warrant is now exercisable for a number of shares of Nanogen common stock, and at an exercise price, adjusted to reflect the Exchange Ratio. Accordingly, the former Epoch stockholders have the right to receive an aggregate of approximately 15.1 million shares of Nanogen common stock, which includes approximately 1.7 million shares of Nanogen common stock issuable upon the exercise of options and warrants.

A copy of the Merger Agreement is included as an exhibit to Nanogen s Current Report on Form 8-K filed with the Securities and Exchange Commission on September 8, 2004 and is incorporated by reference herein. A copy of the press release dated December 16, 2004 announcing the completion of the Merger is attached as Exhibit 99.1 hereto and incorporated by reference herein.

Item 9.01. Financial Statements and Exhibits.

(a) Financial Statements of Businesses Acquired.

The information required by Item 9.01(a) is filed as Exhibit 99.2 and 99.3 to this Current Report and is incorporated by reference herein.

(b) Pro Forma Financial Information.

The information required by Item 9.01(b) is filed as Exhibit 99.4 to this Current Report and is incorporated by reference herein.

- (c) Exhibits. The following documents are filed as exhibits to this report:
 - 2.1(1) Agreement and Plan of Merger and Reorganization dated as of September 7, 2004, by and among Nanogen, Inc., Epoch Biosciences, Inc. and Empire Acquisition Corp.
 - 3.1 Certificate of Amendment to Restated Certificate of Incorporation of Nanogen, Inc., dated December 16, 2004.
 - 23.1 Consent of KPMG LLP, Independent Registered Accounting Firm
 - 99.1 Press Release of Nanogen, Inc., dated December 16, 2004.
 - 99.2 The balance sheets of Epoch at December 31, 2003 and 2002, the statements of operations, cash flows and stockholders equity of Epoch for each of the years ended December 31, 2003, 2002 and 2001, the notes to the financial statements filed along with the above referenced balance sheets, statements of operations, statements of cash flows and statements of stockholders equity and the related report of KPMG LLP.
 - 99.3 The unaudited condensed balance sheet of Epoch at September 30, 2004, the unaudited statements of operations and cash flows of Epoch for the nine months ended September 30, 2004 and 2003 and the notes to the condensed financial statements filed along with the above referenced unaudited balance sheet, statements of operations and statements of cash flows.
 - 99.4 The unaudited pro forma condensed combined financial statements.

⁽¹⁾ Incorporated by reference to Exhibit 2.1 of Nanogen s Current Report on Form 8-K filed on September 8, 2004.

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.

NANOGEN, INC.

Date: December 20, 2004 By: /s/ Nicholas J. Venuto

Name: Nicholas J. Venuto Title: Senior Director, Finance