NOVOSTE CORP /FL/ Form SC 13G October 14, 2005

SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549

----SCHEDULE 13G

(RULE 13D-102)

INFORMATION TO BE INCLUDED IN STATEMENTS FILED PURSUANT TO RULES 13D-1(B) (C) AND (D) AND AMENDMENTS THERETO FILED PURSUANT TO RULE 13D-2(B)

(AMENDMENT NO. __)*

Novoste Corporation

(Name of Issuer)

Common Stock

(Title of Class of Securities)

67010C100

(CUSIP Number)

October 3, 2005

(Date of Event which Requires
Filing of this Statement)

Check the appropriate box to designate the rule pursuant to which this Schedule is filed:

[] Rule 13d-1(b)
[X] Rule 13d-1(c)
[] Rule 13d-1(d)

Page 1 of 5

* The remainder of this cover page shall be filled out for a reporting person's initial filing on this form with respect to the subject class of securities, and for any subsequent amendment containing information which would alter disclosures provided in a prior cover page.

The information required on the remainder of this cover page shall not be deemed to be "filed" for the purpose of Section 18 of the Securities Exchange Act of 1934 ("Act") or otherwise subject to the liabilities of that section of the Act but shall be subject to all other provisions of the Act (however, see the Notes).

SCHEDULE 13G

| CUSIP NO. 67010C100 | PAGE 2 OF 5 PAGES |
|--|----------------------|
| 1 NAME OF REPORTING PERSON S.S. OR I.R.S. IDENTIFICATION NO. OF ABOVE PERSON | |
| Lloyd I. Miller, III 279-42-7925 | 5 |
| 2 CHECK THE APPROPRIATE BOX IF A MEMBER OF A GROUP* | (A) [] (B) [] |
| 3 SEC USE ONLY | |
| 4 CITIZENSHIP OR PLACE OF ORGANIZATION | |
| United States | |
| 5 SOLE VOTING POWER | |
| 578,431 | |
| NUMBER OF | |
| BENEFICIALLY OWNED BY 255,253 | |
| EACH REPORTING 7 SOLE DISPOSITIVE POWER PERSON | |
| WITH 578,431 | |
| 8 SHARED DISPOSITIVE POWER | |
| 255,253 | |
| 9 AGGREGATE AMOUNT BENEFICIALLY OWNED BY EACH REPORTING | G PERSON |
| 833,684 | |
| 10 CHECK BOX IF THE AGGREGATE AMOUNT IN ROW (9) EXCLUDES | S CERTAIN SHARES* [] |
| 11 PERCENT OF CLASS REPRESENTED BY AMOUNT IN ROW (9) | |
| 5.1% | |
| 12 TYPE OF REPORTING PERSON | |
| IN-IA-00** | |
| *SEE INSTRUCTIONS BEFORE FILLING OUT | ! |
| ** See Item 4. | |

Item 1(a). Name of Issuer: Novoste Corporation

Item 1(b). Address of Issuers's Principal Executive Offices:

4350 International Blvd. Norcross, GA 30093

Item 2(a). Name of Person Filing: Lloyd I. Miller, III

Item 2(c). Citizenship: U.S.A.

Item 2(d). Title of Class of Securities:

Common Stock

Item 2(e). CUSIP Number: 67010C100

Item 3. IF THIS STATEMENT IS FILED PURSUANT TO RULE 13d-1(b) OR 13d-2(b) or (c), CHECK WHETHER THE PERSON FILING IS A:

Not Applicable, this statement is filed pursuant to 13d-1(c)

- Item 4. OWNERSHIP: The reporting person has sole voting and dispositive power with respect to 578,431 of the reported securities (i) as the manager of a limited liability company that is the general partner of a certain limited partnership and (ii) as an individual. The reporting person has shared voting and dispositive power with respect to 255,253 of the reported securities as an investment advisor to the trustee of certain family trusts.
 - (a) 833,684
 - (b) 5.1%
 - (c) (i) sole voting power: 578,431
 - (ii) shared voting power: 255,253
 - (iii) sole dispositive power: 578,431
 - (iv) shared dispositive power: 255,253
- Item 5. OWNERSHIP OF FIVE PERCENT OR LESS OF A CLASS:

Not Applicable

Item 6. OWNERSHIP OF MORE THAN FIVE PERCENT ON BEHALF OF ANOTHER PERSON:

Persons other than Lloyd I. Miller III, have the right to receive or the power to direct the receipt of dividends from, or the proceeds from the sale of, the reported securities.

Item 7. IDENTIFICATION AND CLASSIFICATION OF THE SUBSIDIARY WHICH ACQUIRED THE SECURITY BEING REPORTED ON BY THE PARENT HOLDING COMPANY:

Not Applicable

Item 8. IDENTIFICATION AND CLASSIFICATION OF MEMBERS OF THE GROUP:

Not Applicable

Item 9. NOTICE OF DISSOLUTION OF GROUP:

Not Applicable

Item 10. CERTIFICATION:

By signing below I certify that, to the best of my knowledge and belief, the securities referred to above were not acquired and are not held for the purpose of or with the effect of changing or influencing the control of the issuer of the securities and were not acquired and are not held in connection with or as a participant in any transaction having that purpose or effect.

SIGNATURE

After reasonable inquiry and to the best of my knowledge and belief, I certify that the information set forth in this statement is true, complete and correct.

Dated: October 14, 2005 /s/ Lloyd I. Miller, III

Lloyd I. Miller, III