

(772) 617-4340

(Registrant's Telephone Number, Including Area Code)

n/a

(Former Name or 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 (17CFR 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 7.01.

Regulation FD Disclosure.

Commencing on May 10, 2010, ARMOUR Residential REIT, Inc. ("ARMOUR") will be making presentations to certain investors. Attached as Exhibit 99.1 to this report is the form of investor presentation to be used by ARMOUR in its presentations.

The investor presentation attached to this report as Exhibit 99.1 is furnished pursuant to this Item 7.01 and shall not be deemed filed in this or any other filing of ARMOUR under the Securities Exchange Act of 1934, as amended, unless expressly incorporated by specific reference in any such filing.

Item 9.01.

Financial Statements and Exhibits.

(c) Exhibits

| Exhibit No. | Description |
|--------------------|-----------------------|
| 99.1 | Investor Presentation |

SIGNATURES

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: May 10, 2010

ARMOUR RESIDENTIAL REIT, INC.

By: /s/ Jeffrey J. Zimmer

Name: Jeffrey J. Zimmer

Title: Co-Chief Executive Officer, President and Vice Chairman

Exhibit Index

| Exhibit No. | Description |
|------------------------|-----------------------|
| 99.1 | Investor Presentation |