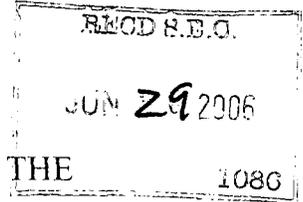


SECURITIES AND EXCHANGE COMMISSION

WASHINGTON, D.C. 20549



06041008



FORM 11-K

(Mark One)

[X]

ANNUAL REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2005

OR

[]

TRANSITION REPORT PURSUANT TO SECTION 15(d) OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from _____ to _____

Commission File Number 1-13828



A. Full title of the plan and the address of the plan, if different from 1 named below:

MEMC RETIREMENT SAVINGS PLAN

B. Name of issuer of the securities held pursuant to the plan and the address of its principal executive office:

MEMC ELECTRONIC MATERIALS, INC.

501 PEARL DRIVE (CITY OF O'FALLON), ST. PETERS, MISSOURI

(Address of principal executive offices)

63376

(Zip Code)

Handwritten signature

Explanatory Note

Subsequent to the year-end of the MEMC Retirement Savings Plan (the "401(k) Plan"), MEMC Electronic Materials, Inc. ("MEMC") was required to suspend the use of the Form S-8 registration statement for the 401(k) Plan. This means that MEMC had to suspend purchases, but not sales, of MEMC shares by participants in the 401(k) Plan (a blackout period).

The blackout is in connection with the previously announced restatement of MEMC's financial statements for the quarterly periods ended March 31, 2005 and June 30, 2005. MEMC had not, and still has not filed its 2005 third quarter report on Form 10-Q, 2005 year end report on Form 10-K, or any 2006 Form 10-Qs with the SEC by the required deadlines.

The blackout only prevents participants from making additional investments in MEMC's common stock fund through the 401(k) Plan. Participants will be unable to "buy" MEMC common stock through the 401(k) Plan during the blackout period, but participants will be able to "sell" MEMC common stock currently held in their 401(k) Plan accounts during the blackout period (by reallocating assets out of the MEMC common stock fund in their 401(k) Plan account to another investment alternative).

MEMC RETIREMENT SAVINGS PLAN

Financial Statements and Supplemental Schedule

December 31, 2005 and 2004

(With Report of Independent Registered Public Accounting Firm Thereon)

MEMC RETIREMENT SAVINGS PLAN

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Definitions	
Plan	– MEMC Retirement Savings Plan
Trustee	– Mercer HR Services
ERISA	– Employee Retirement Income Security Act of 1974
Company	– MEMC Electronic Materials, Inc.
Plan Administrator	– R. Delmon Turns (January 1, 2005 through December 13, 2005) Sylvia Roberts (December 14, 2005 through December 31, 2005)



KPMG LLP
Suite 900
10 South Broadway
St. Louis, MO 63102-1761

Report of Independent Registered Public Accounting Firm

Plan Administrator
MEMC Retirement Savings Plan:

We have audited the accompanying statements of assets available for plan benefits of the MEMC Retirement Savings Plan (Plan) as of December 31, 2005 and 2004, the related statements of changes in assets available for plan benefits for the years ended December 31, 2005 and 2004. These financial statements are the responsibility of the Plan's management. Our responsibility is to express an opinion on these financial statements based on our audits.

We conducted our audits in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, the financial statements referred to above present fairly, in all material respects, the assets available for plan benefits of the Plan as of December 31, 2005 and 2004 and the changes in assets available for plan benefits for the years ended December 31, 2005 and 2004 in conformity with U.S. generally accepted accounting principles.

Our audits were made for the purpose of forming an opinion on the basic financial statements taken as a whole. The supplemental schedule of assets (held at end of year) is presented for the purpose of additional analysis and is not a required part of the basic financial statements, but is supplementary information required by the Department of Labor's Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974. The supplemental schedule is the responsibility of the Plans' management. The supplemental schedule has been subjected to the auditing procedures applied in the audit of the basic financial statements and, in our opinion, is fairly stated, in all material respects, in relation to the basic financial statements taken as a whole.

KPMG LLP

St. Louis, Missouri
June 23, 2006

MEMC RETIREMENT SAVINGS PLA
Statements of Assets Available for Plan Benefits
December 31, 2005 and 2004

	2005	2004
Assets:		
Investments at fair value:		
Noninterest-bearing cash	\$ 49,974	141,993
Money market funds	433,911	2,423,850
Shares of registered investment companies	49,600,135	43,149,931
MEMC Electronic Materials, Inc. common stock	16,395,793	13,110,937
Common/collective trusts	28,691,610	30,740,699
Loans to participants	6,310,723	5,706,114
Total investments at fair value	101,482,146	95,273,524
Investments at contract value:		
Value of investment in PRIMCO Stable Value Fund	37,949,523	34,134,521
Total investments at fair value	139,431,669	129,408,045
Receivables:		
Participant	169,916	143,440
Employer	116,437	98,072
Total receivables	286,353	241,512
Assets available for plan benefits	\$ 139,718,022	129,649,557

See accompanying notes to financial statements.

MEMC RETIREMENT SAVINGS PLA

Statements of Changes in Assets Available for Plan Benefits

Years ended December 31, 2005 and 2004

	<u>2005</u>	<u>2004</u>
Additions:		
Earnings from investments:		
Interest income	\$ 1,884,836	1,696,808
Dividend income	1,700,294	1,015,654
MEMC Electronic Materials, Inc. common stock realized gains	4,170,011	683,476
Other investment realized gains	1,446,398	799,120
Unrealized appreciation, net	<u>4,954,365</u>	<u>8,344,880</u>
Total income from investments	<u>14,155,904</u>	<u>12,539,938</u>
Contributions:		
Employer	4,493,460	4,614,914
Participants	6,792,890	6,844,723
Participant rollovers	<u>869,927</u>	<u>244,375</u>
Total contributions	<u>12,156,277</u>	<u>11,704,012</u>
Total additions	<u>26,312,181</u>	<u>24,243,950</u>
Deductions:		
Benefit payments to participants	16,221,800	9,742,915
Administrative expenses	<u>21,916</u>	<u>22,011</u>
Total deductions	<u>16,243,716</u>	<u>9,764,926</u>
Net increase in assets available for plan benefits	10,068,465	14,479,024
Assets available for plan benefits:		
Beginning of year	<u>129,649,557</u>	<u>115,170,533</u>
End of year	<u>\$ 139,718,022</u>	<u>129,649,557</u>

See accompanying notes to financial statements.

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

(1) Description of the Plan

The following description of the Plan provides only general information. Participants should refer to the plan document for a more complete description of the Plan's provisions.

(a) *General*

The Plan was established on April 1, 1989 under the provisions of Section 401(k) of the Internal Revenue Code and is a defined contribution retirement savings plan, subject to the provisions of ERISA, sponsored by the Company. Generally, all employees of the Company compensated in U.S. dollars from a payroll location within the United States are eligible to participate in the Plan. In 2001, the IRS approved the MEMC safe harbor plan.

(b) *Contributions*

Each participant may elect to contribute from 1% to 50% of the participant's covered compensation as described in the Plan on a before-tax basis. The before-tax contribution is limited to the amount specified by Section 402(g) of the Internal Revenue Code (\$14,000 and \$13,000 in 2005 and 2004, respectively). A participant is eligible to receive employer matching contributions of 100% of the first 3% of the employee's contribution, 50% of the next 2% contributed, and 20% of the next 1% contributed, up to 4.2% of the participant's covered compensation for the plan year. The Company contributes 2% of compensation as a special employer contribution on behalf of those individuals who were frozen in the MEMC Pension Plan or hired on or after January 2, 2002.

(c) *Participants' Accounts*

Each participant account is comprised of the following subaccounts: a before-tax account, an after-tax account, a safe harbor matching account, a matching account, and a rollover account, as applicable. Participants may elect to participate and/or adjust contribution elections at any time. Each participant account is credited with participant contributions as specified by the participant; an allocation of the Company's contributions; and the income, loss, appreciation, and depreciation attributable thereto.

(d) *Vesting*

Participant matching accounts are immediately and fully vested in their contributions and the employer matching contributions and the earnings thereon.

(e) *Investment Options*

Participants may direct investment or reinvestment of contributions credited to their individual accounts in any one or a combination of the investment options in increments of 1% of the amount credited. Interfund transfers in and out of the MEMC Electronic Materials, Inc. common stock are limited to one per calendar month. Participants may elect to adjust all other investment options daily.

The following investment options were available:

Putnam International Growth Fund — Funds are invested in a diversified portfolio of stocks of companies located mainly outside the United States of America.

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

Putnam Vista Fund — Funds are invested in a variety of stocks that have the potential for above-average growth, including those of widely traded larger companies; smaller, less well-known companies; and, currently, mostly midsize firms.

Putnam S&P 500 Index Fund — Funds are invested to seek a return, before the assessment of fees, that closely approximates the return of the S&P 500 Index, which is an indicator of U.S. stock market performance.

The George Putnam Fund of Boston — Funds are invested in a well-diversified portfolio composed mostly of stocks and corporate and U.S. government bonds.

PIMCO Total Return Fund — Funds are invested in bonds that target intermediate-maturity, fixed-income securities from all major sectors of the bond market.

PRIMCO Stable Value Fund — Funds are invested in assets consisting of a number of investment contracts with a diversified, highly rated group of insurance companies, banks, and other financial institutions.

MEMC Electronic Materials, Inc. Common Stock — Funds are invested in common stock of MEMC Electronic Materials, Inc.

RS Diversified Growth Fund — Funds are invested primarily in small- and mid-cap size companies. The fund's focus is to achieve long-term capital growth by creating a portfolio broadly diversified over industries and companies.

Putnam Voyager Fund — Funds are invested primarily in stock of large and midsize companies across a range of industries. The fund targets companies that are enjoying rising sales and profits and that are expected to grow over time.

Dodge and Cox Stock Fund — Funds are invested in a broadly diversified portfolio of common stocks. The fund's focus is long-term growth and principal and income.

DFA Small Cap Value Fund — Funds are invested in securities of small-cap companies located in the United States. The fund seeks growth of principal by focusing on companies that have a high book value in relation to their market value.

(f) *Loans to Participants*

Participants may apply for and receive loans from their vested account. Generally, no more than two loans may be outstanding to a participant at any one time. The amount of loans to an individual participant shall not exceed the lesser of \$50,000 or one-half of the vested portion of the account balance of the participant as of the date the loan is requested by the participant without regard to any contributions allocated to the account of the participant on or after such date. The minimum amount of any loan shall be \$1,000.

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

(g) *Payment of Benefits*

Under the terms of the Plan, participants or their designated beneficiaries are entitled to receive the amounts credited to their accounts upon normal retirement at age 65, early retirement, disability, or death. Participants terminating prior to retirement are entitled to receive that portion of their account that is vested. Distributions are made in the form of a lump-sum payment. If the participant's vested balance exceeds \$5,000, the participant may elect to defer receipt of the distribution.

A participant may elect to withdraw all or any portion of the amount credited to the participant's after-tax account that exceeds the aggregate amount of matched after-tax contributions to such account in the 24-month period ending on the valuation date as of which such withdrawal is made.

A participant may elect to withdraw the amount credited to the participant's matching account that exceeds the aggregate contributions credited to such account in the 24-month period ending on the valuation date immediately preceding the date as of which such withdrawal is made.

A participant who has attained age 59½ may elect to withdraw the amounts credited to the participant's before-tax and safe harbor matching account and the participant's nonmatching account that exceeded the aggregate contributions credited to such accounts in the 24-month period ending on the valuation date immediately preceding the date as of which such withdrawal is made. A participant who has not yet attained age 59½ shall not be eligible to withdraw amounts credited to the participant's before-tax and safe harbor matching account, and the participant's nonmatching account except as provided for hardship withdrawals of before-tax contributions.

A participant may elect to withdraw all or any portion of the amount credited to the participant's rollover account.

In addition, hardship withdrawals are allowed for employees under age 59½ under certain circumstances in an amount equal to the value of accumulated before-tax contributions and the safe harbor match account. Account earnings are not eligible for inclusion in the withdrawal amount. Participants incurring a hardship withdrawal will not be eligible to make further contributions to the plan for at least 12 months after the receipt of such distribution.

(2) **Summary of Accounting Policies**

The following are the significant accounting policies followed by the Plan:

(a) *Basis of Accounting*

The accompanying financial statements have been prepared on the accrual basis of accounting, except for benefit payments, which are recorded when paid.

(b) *Use of Estimates*

The preparation of the accompanying financial statements in conformity with U.S. generally accepted accounting principles requires the Plan Administrator to make estimates and assumptions that affect the reported amounts of assets and liabilities at the date of the financial statements and the reported amounts of revenue and expenses during the reporting period. Actual results could differ from those estimates.

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

(c) *Valuation of Investments*

Purchases and sales of investments are recorded on a trade-date basis. Interest income is recorded on the accrual basis. Dividends are recorded on the ex-dividend date. Investments are valued as follows:

- Investments in the MEMC Electronic Materials, Inc. common stock and shares of a registered investment company are valued based on the fair value as determined by quoted market price on a daily basis per national exchanges.
- Investments in common/collective or pooled funds maintained by the Trustee are valued at the price furnished by the Trustee. The cost of securities sold is based on the average cost of all such securities held at the time of sale.
- The value in the loan fund represents the unpaid principal of employee loans. Loans to participants are valued at cost, which approximates fair value.
- Investments in the PRIMCO Stable Value Fund are valued at contract value as the contracts are fully benefit responsive. Contract value represents contributions made under the contract, plus interest at the contract rate, less funds used to pay for benefits. At December 31, 2005 and 2004, the contract value approximated the fair value. There are no reserves against contract value for credit risk of the contract issuer or otherwise. The average yield and crediting interest rates ranged from 3.35% to 7.21% in 2005 and 2.85% to 6.32% in 2004. (Refer to note 7 for further discussion.)

(d) *Administrative Expenses*

The reasonable expenses incident to the operation of this Plan shall be paid out of the trust fund, unless the Company, in its sole discretion, elects at any time to pay part or all of such expenses.

(3) **Trust Fund Managed by the Trustee**

The Plan assets are maintained in a trust fund. The investments, and changes therein, of this trust fund have been reported to the Plan by the Trustee.

(4) **Plan Termination**

Although it has not expressed any intent to do so, the Company has the right under the Plan to discontinue its contributions at any time and to terminate the Plan subject to the provisions of ERISA.

(5) **Tax Status**

The Internal Revenue Service issued its latest determination letter on June 6, 2001, which stated that the Plan and its underlying trust qualify under the applicable provisions of the Internal Revenue Code and, therefore, are exempt from federal income taxes. The Plan has been amended since receiving the determination letter. However, the Plan Administrator and the Plan's counsel believe that the Plan is currently designed and being operated in compliance with the applicable requirements of the Internal Revenue Code.

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

(6) Investments

The following table presents investments as of December 31, 2005 and 2004. Investments that represent 5% or more of the Plan's assets are separately identified.

	<u>2005</u>	<u>2004</u>
Investments, at fair value:		
The George Putnam Fund of Boston	\$ 10,712,047	11,842,239
Putnam S&P 500 Index Fund	28,691,610	30,740,699
MEMC Electronic Materials, Inc. common stock	16,395,793	13,110,937
RS Diversified Growth Fund	7,367,166	7,749,676
Dodge and Cox Stock Fund	8,547,862	5,746,785
Other	29,767,668	26,083,188
	<u>101,482,146</u>	<u>95,273,524</u>
Investments, at contract value:		
Monumental Life—MDA-0055ITR	7,883,054	6,136,704
Other	30,066,469	27,997,817
	<u>37,949,523</u>	<u>34,134,521</u>
Total investments	\$ <u>139,431,669</u>	<u>129,408,045</u>

Net Appreciation in Fair Value

The Plan's investments (including investments bought, sold, and held during the year) appreciated in value by \$10,570,774 in 2005 and by \$9,827,476 in 2004, as follows:

	<u>2005</u>	<u>2004</u>
Investments at fair value as determined by quoted market price:		
Shares of registered investment companies	\$ 865,369	2,498,218
Common/collective trusts	1,278,720	2,941,439
MEMC Electronic Materials, Inc. common stock	8,426,685	4,387,819
Net appreciation in fair value	\$ <u>10,570,774</u>	<u>9,827,476</u>

(7) Investment Contract with Insurance Company

The Plan has entered into a benefit-responsive investment contract with Invesco. Invesco maintains the contributions in a general account. The account is credited with earnings on the underlying investments and charged for participant withdrawals and administrative expenses. The contract is included in the financial statements at contract value as reported to the Plan by Invesco. Contract value represents contributions made under the contract, plus earnings, less participant withdrawals and administrative expenses. Participants may ordinarily direct the withdrawal or transfer of all or a portion of their investments at contract value.

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

(8) Related-party Transactions

Certain plan investments are shares of mutual funds managed by Mercer HR Services. Mercer HR Services is the Trustee, as defined by the Plan, and, therefore, these transactions qualify as party-in-interest transactions. Fees paid by the Plan for the investment management services amounted to \$21,916 and \$22,011 for the years ended December 31, 2005 and 2004, respectively.

(9) Reconciliation of Financial Statements to Form 5500

The following is a reconciliation of assets available for plan benefits per the financial statements at December 31, 2005 and 2004 to Form 5500:

	2005	2004
Assets available for benefits per the financial statements	\$ 139,718,022	129,649,557
Contributions receivable:		
Participant	—	(143,440)
Employer	—	(98,072)
Assets available for benefits per the Form 5500	\$ 139,718,022	129,408,045
	2005	2004
Contributions per the financial statements	\$ 12,156,277	11,704,012
Contributions receivable:		
Participant	143,440	(143,440)
Employer	98,072	(98,072)
Contributions per the form 5500	\$ 12,397,789	11,462,500

(10) Risks and Uncertainties

The Plan invests in various investment securities. Investment securities are exposed to various risks such as interest rate, market, and credit risks. Due to the level of risk associated with certain investment securities, it is at least reasonably possible that changes in the values of investment securities will occur in the near term and that such changes could materially affect participants' account balances and the amounts reported in the statements of assets available for plan benefits.

(11) Subsequent Events

Subsequent to the Plan's year-end, MEMC was required to suspend the use of the Form S-8 registration statement for the Plan. This means that the Company had to suspend purchases, but not sales, of MEMC shares by participants in the 401(k) Plan (a blackout period). The blackout is in connection with the previously announced restatement of MEMC's financial statements for the quarterly periods ended March 31, 2005 and June 30, 2005. Through the date of this report, MEMC has not filed its 2005 third quarter report on Form 10-Q, 2005 year end report on Form 10-K, or any 2006 Form 10-Qs with the SEC by the

MEMC RETIREMENT SAVINGS PLAN

Notes to Financial Statements

December 31, 2005 and 2004

required deadlines. The blackout only prevents participants from making additional investments in MEMC's common stock fund through the Plan. Participants are unable to purchase MEMC common stock through the Plan during the blackout period, Participants are able to sell MEMC common stock currently held in their 401(k) Plan accounts during the blackout period by reallocating assets out of the MEMC common stock fund in their 401(k) Plan account to another investment alternative.

MEMC RETIREMENT SAVINGS PLAN

Schedule H, Line 4i—Schedule of Assets (Held at End of Year)

December 31, 2005

Identity of issuer, borrower, lessor, or similar party	Description of issue, including maturity date, rate of, interest, collateral, par, or maturity value	Current value
PIMCO Total Return Fund	Mutual Fund, 609,722 shares	\$ 6,402,604
* The George Putnam Fund of Boston	Mutual Fund, 597,770 shares	10,712,047
* Putnam Vista Fund	Mutual Fund, 389,070 shares	4,147,476
* Putnam S&P 500 Index Fund	Common/collective Trust, 891,875 shares	28,691,610
* Putnam International Growth Fund	Mutual Fund, 161,318 shares	4,215,231
* Putnam Voyager Fund	Mutual Fund, 113,433 shares	1,973,740
DFA Small Cap Value Fund	Mutual Fund, 235,068 shares	6,234,009
RS Diversified Growth Fund	Mutual Fund, 329,922 shares	7,367,166
Dodge and Cox Stock Fund	Mutual Fund, 62,293 shares	8,547,862
* MEMC Electronic Materials, Inc. common stock	Common stock, 739,549 shares	16,395,793
PRIMCO Stable Value Fund:		
UBS AG — #5178-T	Insurance contract, 5.21%	6,820,864
State Street Bank Short Term Bond — #103045	Insurance contract, 4.50%	4,537,283
ING Life Insurance #60030	Insurance contract, 4.56%	4,863,309
Bank of America NT & SA — #03-069-T	Insurance contract, 5.87%	5,908,312
Monumental Life — #MDA-00551TR	Insurance contract, 4.32%	7,883,054
Monumental Life — #MDA00100TR	Insurance contract, 3.35%	963,327
JPMorgan Chase Bank — #441894-MGC	Insurance contract, 5.20%	6,973,374
Participant loans	Interest rates range from 4% to 5%	6,310,723
Putnam Institutional Managemen	Interest-bearing cash	433,911
Noninterest bearing cash		49,974
	Total investments	\$ <u>139,431,669</u>

* Represents party in interest allowable by ERISA

See accompanying report of independent registered public accounting firm.

SIGNATURES

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

MEMC Retirement Savings Plan

A handwritten signature in black ink, appearing to read 'T. J. Higgins', is written over a solid horizontal line. The signature is stylized and cursive.

Date: June 28, 2006

T. J. Higgins
Plan Administrator

EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
23	Consent of KPMG LLP



KPMG LLP

Consent of Independent Registered Public Accounting Firm

Plan Administrator
MEMC Electronic Materials, Inc.:

We consent to the incorporation by reference in the registration statement No. 333-19159 on Form S-8 of MEMC Electronic Materials, Inc. of our report dated June 23, 2006, with respect to the statements of assets available for the plan benefits of the MEMC Retirement Savings Plan as of December 31, 2005 and 2004, the related statements of changes in assets available for plan benefits for each of the years then ended, and the related supplemental schedule as of December 31, 2005, which report appears in the 2005 Annual Report on Form 11-K of the MEMC Retirement Savings Plan.

KPMG LLP

St. Louis, Missouri
June 28, 2006