Securities and Exchange Commission

Washington, DC 20549

Form 11-K

Annual Report

Pursuant To Section 15(d) Of The

Securities And Exchange Act Of 1934

For The Year Ended December 31, 2004

THRIFT AND SAVINGS PLAN FOR EMPLOYEES OF SENTINEL TRANSPORTATION, LLC

(Full title of plan)

E.I. DU PONT DE NEMOURS AND COMPANY

1007 Market Street

Wilmington, DE 19898

(Name and address of principal executive office of issuer)

Signatures

Pursuant to the requirements of the Securities and Exchange Act of 1934, Sentinel Transportation, LLC has duly caused the Annual Report to be signed by the undersigned hereunto duly authorized.

Thrift and Savings for Employees of

Sentinel Transportation, LLC

June 23, 2005

By: /s/ Marilyn Shaw

Marilyn Shaw Human Resources Manager

THRIFT AND SAVINGS PLAN FOR EMPLOYEES OF SENTINEL TRANSPORTATION, LLC

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^{*} Other supplemental schedules required by Section 2520.103-10 of the Department of Labor Rules and Regulations for Reporting and Disclosure under the Employee Retirement Income Security Act of 1974 have been omitted because they are not applicable.

Report of Independent Registered Public Accounting Firm

To the Participants and Administrator of

Thrift and Savings Plan for Employees of Sentinel Transportation, LLC

In our opinion, the accompanying statement of net assets available for benefits and the related statement of changes in net assets available for benefits present fairly, in all material respects, the net assets available for benefits of Thrift and Savings Plan for Employees of Sentinel Transportation, LLC (the Plan) at December 31, 2004, and the changes in net assets available for benefits for the year then ended in conformity with accounting principles generally accepted in the United States of America. 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 audit. We conducted our audit of these statements 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, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion. The financial statements of the Plan as of December 31, 2003 and for the year then ended were audited by other auditors whose report dated June 15, 2004 expressed an unqualified opinion on those statements.

Our audit was conducted 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. This supplemental schedule is the responsibility of the Plan s 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.

/s/ PricewaterhouseCoopers LLP

Philadelphia, Pennsylvania

June 23, 2005

Statements of Net Assets Available for Benefits

December 31, 2004 and 2003

	2004	2003
Assets		
Investments:		
Plan interest in DuPont and Related Companies Defined Contribution Plan Master Trust	\$ 13,665,374	\$ 12,100,794
Related Companies Stock fund	6,119,375	6,288,327
Mutual funds	4,124,308	2,821,172
Common/collective funds	831,057	465,088
Participant loans	907,507	1,063,886
Total investments	25,647,621	22,739,267
Receivables:		
Employer s contributions	701,584	
Investment income	7,856	7,641
Total receivables	709,440	7,641
Cash:		18,467
Net assets available for benefits	\$ 26,357,061	\$ 22,765,375

The accompanying notes are an integral part of these financial statements.

Statements of Changes in Net Assets Available for Benefits

For the Years Ended December 31, 2004 and 2003

	2004	2003
Additions:		
Investment income:		
Interest	\$ 700,374	\$ 62,795
Dividends	266,907	218,463
Net appreciation in fair value of investments	899,750	1,829,210
Total investment income	1,867,031	2,110,468
Contributions:		
DuPont Company s contributions	1,881,228	764,532
Participant contributions	1,704,417	1,022,943
Rollovers/trust to trust transfers	486,318	1,514,221
Total contributions	4,071,963	3,301,696
Total additions	5,938,994	5,412,164
Deductions:		
Withdrawals	2,347,285	3,070,010
Administrative expenses (net)	23	340
Total deductions	2,347,308	3,070,350
Net increase	3,591,686	2,341,814
Net assets available for benefits:		
Beginning of year	22,765,375	20,423,561
End of year	\$ 26,357,061	\$ 22,765,375

The accompanying notes are an integral part of these financial statements.

Thrift and Savings	Plan for	Employees	of Sentinel	Transportation.	LLC
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Notes to Financial Statements

1. Description of the Thrift Plan:

The Plan

The following description of the Thrift and Savings Plan for Employees of Sentinel Transportation, LLC (the Plan) provides only general information. Participants should refer to the Plan agreement for a more comprehensive description of the Plan s provisions.

Sentinel Transportation Company (the Company or Sentinel) became a wholly owned subsidiary of E. I. du Pont de Nemours and Company (DuPont) in December 1995. Prior to its incorporation, the Company was part of Conoco, Inc. s (Conoco) downstream operation. As part of Conoco, Inc., eligible employees of such operations participated in the Thrift Plan for the Employees of Conoco, Inc.

With the incorporation of the Company, Conoco employees dedicated to such operations were transferred to and became Sentinel employees. Sentinel s Board of Directors adopted, effective January 1, 1996, the Thrift and Savings for Employees of Sentinel Transportation Company to provide the continued participation of such former Conoco employees and the participation of new employees in a tax qualified plan.

Effective January 1, 2000, the Company merged into a joint venture operating as a limited liability company (LLC) under the name Sentinel Transportation, LLC whose members are DuPont (80%) and Conoco, Inc. (20%).

The Plan is subject to the provisions of the Employee Retirement Income Security Act of 1974 (ERISA) and the Internal Revenue Code (the Code).

The purpose of the Plan is to encourage and assist employees to systematically save a portion of their current compensation and to assist them to accumulate additional financial means for the time of their retirement. The Plan is a tax-qualified, contributory profit sharing plan. Employees of affiliated companies that have adopted the Plan, who have previously met the eligibility requirements of the Plan, are eligible to participate in the Plan. Regular, full-time employees, are eligible to participate in the Plan on the first day of the calendar month following their date of hire as an employee.

Eligible employees may participate in the Plan by authorizing the Company to make a payroll deduction under the Plan ranging from 1% to 19% of monthly compensation. The amount deducted can be deposited into a before-tax or after-tax account or some combination thereof. Participants monthly deductions up to 6% are called basic deposits. The Company will contribute an amount equal to 100% of the participant s monthly basic deposits. All of the above participants savings and elections are subject to regulatory and plan limitations.

Effective January 1, 2004, the Plan was amended to provide discretionary profit-sharing contributions to participants hired on or after January 1, 2004. These profit sharing contributions are allocated proportional to compensation and are vested after five years of service. Also effective

January 1, 2004, employee after-tax contributions are eliminated and pre-tax contributions are permitted up to 100% of compensation, subject to legal limits. Participants hired on or after January 1, 2004 are immediately vested in company matching contributions. Profit-sharing contributions and matching contributions contributed on or after January 1, 2004, may be withdrawn only at separation from service or after attaining age $59^{1}/2$.

Thrift and Savings Plan for Employees of Sentinel Transportation, LLC

Notes to Financial Statements

Subject to certain limitations, certain participants are eligible to make supplemental deposits, either as lump sum deposits or deposits in the form of monthly deductions in excess of 6% of monthly compensation. Due to the application of Internal Revenue Code discrimination testing requirements, only non-highly compensated participants are currently eligible to make cash lump sum supplemental deposits.

A participant with less than three years of service who withdraws any matched pre-tax or after-tax savings will forfeit a portion of related company contributions in accordance with specific plan provisions. Company contributions will be suspended for six months if a participant withdraws, while in-service, any matched pre-tax or after-tax savings contributed or company contributions made to the account. A participant who retires from active service may elect to make an account withdrawal at any time. Required minimum distributions will begin in April of the calendar year following the later of the year in which the participant attains age 70 ½ or the year following retirement or termination of employment.

Participants may borrow up to one-half of their non-forfeitable account balances subject to certain minimum and maximum loan limitations. The loans are executed by promissory notes and have a minimum term of 12 months and a maximum term of 60 months, except for qualified residential loans, which have a maximum term of 120 months. The loans bear an interest rate commensurate with local prevailing rates as determined by the Plan administrator on a monthly basis. The loans are repaid over the term in monthly installments of principal and interest by deduction from pay or pension checks. A participant also has the right to repay the loan in full at any time without penalty. At December 31, 2004, the rates range from 5 percent to 9.25 percent.

At December 31, 2004 and December 31, 2003 forfeited non-vested accounts totaled \$15,162 and \$303, respectively. For the years ended December 31, 2004 and 2003, employer contributions were reduced by \$0 and \$32,949 from forfeited non-vested accounts, respectively.

Administration

The designated trustee of the Plan is Merrill Lynch Trust Company of America (Merrill Lynch). The administration of the Plan is vested in the Company, which may designate three or more persons to serve on the Employee Benefit Plans Board to operate and administer the Plan. The Company has the responsibility of appointing the trustees and the authority to designate the Plan s investment options.

Reasonable expenses of administering the Plan, including, but not limited to, record-keeping expenses, trustee fees and transactional costs may, at the election of the Plan Administrator, be paid by participants. Expenses paid by the plan for the years ended December 31, 2004 and 2003 were \$23 and \$340, respectively, net of any fee reimbursements. Brokerage fees, transfer taxes, investment fees and other expenses incident to the purchase and sale of securities and investments shall be included in the cost of such securities or investments, or deducted from the sales proceeds, as the case may be.

2. Significant Accounting Policies

Basis of Accounting

The financial statements have been prepared on the accrual method of accounting.

Investment Valuation and Income Recognition

The investments of the Plan are carried at fair value, except for the Plan $\,$ s interest in the DuPont and Related Companies Defined Contribution Plan Master Trust (Master Trust). The Plan $\,$ s interest in the

Thrift and Savings Plan for Employees of Sentinel Transportation, LLC

Notes to Financial Statements

Master Trust relating to stable value investment contracts is based upon its beginning value plus actual contributions and allocated investment income less actual distributions (see Note 3). The Master Trust s stable value investment contracts are fully benefit-responsive and, thus, are stated at contract value, which has a ratio of fair value to contract value of approximately 105% and 106% for years ended December 31, 2004 and 2003, respectively. Shares of registered investment companies (mutual funds) are valued at quoted market prices, which represent the net asset value of shares held by the Plan at year-end. Shares of common and collective trust funds are valued at net unit value, which is based upon the value of the underlying securities as determined by the trustee at year end. Company stock is valued at quoted market prices at year-end. Participant loans and cash and cash equivalents are valued at cost, which approximates fair value.

Dividend income is recorded on the ex-dividend date and interest income is recorded when earned. Realized gains and losses on the sale of the DuPont Common Stock Fund and ConocoPhillips Common Stock Fund investment securities are based on average cost of the securities sold for each fund respectively. Purchases and sales are recorded on a trade date basis.

Payment of Benefits

Benefits are recorded when paid.

Use of Estimates

The preparation of financial statements in conformity with accounting principles generally accepted in the United States of America requires the Plan Administrator to make estimates and assumptions that affect the reported amounts in the financial statements. Actual results could differ from those estimates.

3. DuPont and Related Companies Defined Contribution Master Trust

The Company and certain affiliates (employers) have entered into a Master Trust Agreement with Merrill Lynch (Trustee) to establish a master trust to allow participants from affiliated plans to invest in a Stable Value Fund and three different Asset Allocation Funds: the Conservative, Moderate, and Aggressive Asset Allocation Funds. To participate in the Master Trust, affiliates who sponsor qualified savings plans and who have adopted the Master Trust Agreement are required to make monthly payments to the Trustee of designated portions of employees—savings and other contributions by the affiliate. Investment income relating to the Master Trust is allocated proportionately by investment fund to the plans within the Master Trust based on the plan—s interest to the total fair value of the Master Trust investment funds.

The Stable Value Fund is invested in money market funds, guaranteed investment contracts (GIC s), separate account GIC s and synthetic GIC s, which are backed by, fixed income assets. The crediting interest rates on investment contracts ranged from 4.31% to 7.10% for the year ended December 31, 2004 and from 4.21% to 7.10% for the year ended December 31, 2003. The rate of return was 5.38% in 2004 and 5.71% in 2003.

The contract or crediting rates for certain stable value investment contracts are reset annually and are based on the market value of the portfolio of assets underlying these contracts. Inputs used to determine the crediting rate include each contract s portfolio market value, current yield-to-maturity, duration (i.e., weighted average life) and market value relative to contract value. All contracts have a guaranteed rate of 0% or higher with respect to determining interest rate resets.

Notes to Financial Statements

A synthetic GIC provides for a guaranteed return on principal over a specified period of time through benefit responsive wrapper contracts issued by a third party which are backed by underlying assets. Included in the contract value of the synthetic GIC s is (\$207,211,279) and (\$219,759,535) at December 31, 2004 and 2003, respectively, attributable to wrapper contract providers representing the amounts by which the value of contracts are greater than (less than) the value of the underlying assets.

The carrying value of Synthetic GIC sheld by the Master Trust is \$4,287,444,333 and \$4,047,684,669 at December 31, 2004 and 2003, respectively.

Total Assets of the Master Trust include:

	Decem	December 31,	
	2004	2003	
Investment contracts	\$ 5,632,875,430	\$ 5,623,767,738	
Common/collective trust funds	39,140,484	26,785,725	
Money market funds	31,900,036	17,693,396	
Total	\$ 5,703,915,950	\$ 5,668,246,859	

The Plan s undivided interest in the Master Trust was .24% and .213% as of December 31, 2004 and 2003, respectively.

Investments of the Master Trust that represent more than 5% of the assets of the Master Trust were as follows:

	Decem	December 31,	
	2004	2003	
Investment contracts			
Connecticut General Life Ins.	\$ 438,948,027	\$ 498,762,751	
ING Life Insurance & Annuity Co. (14522-440-1) *	614,180,342	587,630,740	
Monumental Life Insurance Co. (BDA-0063-TR/MDA00665TR-1) *	614,180,342	575,530,478	
JPMorgan Chase Bank (95-04)		581,824,103	
JPMorgan Chase Bank (ADUPOT03/DupontT02) *	614,180,342	491,539,351	
State Street Bank & Trust (102001)	614,180,342	585,779,747	
State Street Bank & Trust (102061)		491,539,350	
Union Bank of Switzerland		586,043,904	

AIG Life Insurance Company (583407)

614,180,342

At December 31, 2004, the total assets of the Master Trust of \$5,703,915,950 included participant investments in the Stable Value Fund of \$5,633,250,295 and \$70,665,655 in the Conservative, Moderate and Aggressive Allocation Funds. At December 31, 2003, the total assets of the Master Trust of \$5,668,246,859 included participant investments in the Stable Value Fund of \$5,620,743,404 and \$47,503,455 in the Conservative, Moderate and Aggressive Allocation Funds.

Total investment income of the Master Trust for the years ended December 31, 2004 and 2003 was \$304,545,427 and \$304,693,615, respectively.

^{*} Contracts were renegoitiated during the 4th quarter of 2004 to provide for a global wrap agreement.

Notes to Financial Statements

4. Investments

Investments that represent more than 5% of the net assets available for plan benefits as of December 31, 2004 and 2003 were as follows:

	Decer	December 31,	
	2004	2003	
DuPont Company Stock fund	\$ 5,828,211	\$ 6,064,664	
Master Trust	13,665,374	12,100,794	

During the years ended December 31, 2004 and 2003, the Plan s investments appreciated in value (including realized gains and losses) as follows:

	Decen	December 31,	
	2004	2003	
Company Stock funds	\$ 442,019	\$ 535,863	
Mutual funds	369,886	576,273	
Common/collective trust funds	81,973	88,776	
Master Trust	5,872	628,298	
Net appreciation in fair value of investments	\$ 899,750	\$ 1,829,210	

5. ConocoPhillips Stock Fund

On September 28, 1998, DuPont announced that the Board of Directors had approved a plan to divest DuPont s 100 percent-owned petroleum business, Conoco, Inc. On August 6, 1999, DuPont completed the planned divestiture through a tax-free split-off. DuPont exchanged its shares of Conoco, Inc. Class B common stock for shares of DuPont common stock. Plan participants had the option to exchange shares of DuPont common stock, which were held in their participant accounts in the DuPont Common Stock Fund. For each share of DuPont common stock exchanged, the participants received an appropriate number of shares of Conoco Class B common stock. Accordingly, the Conoco Class B Stock Fund was created as an investment fund of the Plan. No additional shares of Conoco Class B common stock may be purchased by Plan participants through payroll deductions, fund transfers, or the reinvestment of dividends. Dividends earned on Conoco Class B common stock are distributed pro rata to the investment options in participants accounts based upon their current investment elections. On August 30, 2002, Conoco Stock Fund became ConocoPhillips Stock Fund. The balance of the ConocoPhillips Stock Funds was \$291,164 and \$223,663 at December 31, 2004 and 2003, respectively.

Tax Status

The Plan is a qualified plan pursuant to Section 401(a) of the Internal Revenue Code (the Code) and the related Trusts are exempt from federal taxation under Section 501(a) of the Code. The Company has received a favorable tax determination letter from the Internal Revenue Service dated September 3, 2003. The Plan has been amended since receiving the determination letter. However, the Plan administrator and the Plan s ERISA counsel believe that the Plan is currently designed and operated in accordance with the applicable sections of the Code. Accordingly, no provision has been made for federal income taxes in the accompanying financial statements.

Notes to Financial Statements

7. Related Party Transactions

Certain Plan investments are shares of mutual funds and units of common/collective trust funds managed by Merrill Lynch, the Trustee. In addition, the Plan offers the DuPont Company Stock fund investment option. Then plan held 118,821.8292 and 132,156.5416 shares of E. I. du Pont de Nemours common stock as of December 31, 2004 and December 31, 2003, respectively. Also, the assets of the Stable Value Fund are managed by DuPont Capital Management Corporation (DCMC), a registered investment adviser and wholly-owned subsidiary of DuPont, under the terms of an investment management agreement between DCMC and the Company. DCMC hires additional investment managers to manage a portion of the fixed income assets backing synthetic GIC s allocated to the Stable Value Fund. The amount of DCMC fees accrued and paid was \$1,705,028 and \$1,611,449 for years ended December 31, 2004 and 2003, respectively.

8. 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. In the event of Plan termination, participants would become 100 percent vested in the employer contributions.

9. 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 statement of net assets available for benefits.

Supplemental Schedule

Schedule I

Schedule of Assets (Held at End of Year)

Form 5500, Schedule H, Part IV, Line I

As of December 31, 2004

	Identity of Issue	Description of Investment	_	Current Value
	AIM Constellation Fund Class A	Registered Investment Company	\$	104,354
	AIM Premier Equity Fund A	Registered Investment Company	\$	164,835
	Fidelity Equity Income Fund	Registered Investment Company	\$	188,077
	Fidelity Fund PV 1	Registered Investment Company	\$	120,418
	Fidelity Growth & Income Fund Class A	Registered Investment Company	\$	155,135
	Fidelity Low Priced Stock Fund	Registered Investment Company	\$	593,006
	Fidelity Magellan Fund	Registered Investment Company	\$	668,742
	Franklin Balance Sheet	Registered Investment Company	\$	374,852
	Franklin Cust Fund Inc Growth	Registered Investment Company	\$	48,022
	Franklin Small-Mid Cap Growth Fund Class A	Registered Investment Company	\$	315,303
	Janus Enterprise Fund	Registered Investment Company	\$	213,585
	Janus Mercury Fund	Registered Investment Company	\$	433,636
*	Merrill Lynch Global Growth Fund Class I	Registered Investment Company	\$	54,044
*	Merrill Lynch Intl Value Fund Class I	Registered Investment Company	\$	44,456
*	Merrill Lynch Balanced Capital Fund Class I	Registered Investment Company	\$	100,700
*	Merrill Lynch Basic Value Fund Class I	Registered Investment Company	\$	78,168
*	Merrill Lynch Fundamental Growth Fund Class I	Registered Investment Company	\$	59,112
	MFS Research Fund Class A	Registered Investment Company	\$	16,003
	MFS Total Return Fund Class A	Registered Investment Company	\$	134,701
	Templeton Foreign Fund Class A	Registered Investment Company	\$	85,112
	Templeton Growth Fund Class A	Registered Investment Company	\$	172,047
	Barclays 3-Way Asset Allocation Fund	Common/Collective Trusts	\$	184,782
*	Merrill Lynch Small Capital Index CT Tier 2	Common/Collective Trusts	\$	166,353
*	Merrill Lynch Equity Index TR Tier 6	Common/Collective Trusts	\$	471,350
*	Merrill Lynch International Index CT Tier 2	Common/Collective Trusts	\$	8,572
*	E. I. du Pont de Nemours and Company	Company Stock Fund	\$	5,828,211
	ConocoPhillips	Company Stock Fund	\$	291,164
*	Plan interest in the DuPont and Related			
	Companies Defined Contribution Plan			
	Master Trust (Master Trust)	Master Trust	\$	13,665,374
*	Participant Loans	4% to 9.25%	\$	907,507
	-		<u> </u>	
	Investment Total		\$ 2	25,647,621

^{*} Party in Interest