

MILLENNIUM CHEMICALS INC  
Form 10-K  
March 15, 2006  
Table of Contents

Index to Financial Statements

---

**UNITED STATES**  
**SECURITIES AND EXCHANGE COMMISSION**

Washington, D.C. 20549

---

**FORM 10-K**

---

(Mark One)

- Annual Report Pursuant to Section 13 or 15(D) of the Securities Exchange Act of 1934 for the Fiscal Year Ended December 31, 2005**
- Transition Report Pursuant to Section 13 or 15(D) of the Securities Exchange Act of 1934**

Commission File No. 1-12091

---

**MILLENNIUM CHEMICALS INC.**

(Exact name of Registrant as specified in its charter)

---

Delaware  
(State or other jurisdiction of  
incorporation or organization)  
Two Greenville Crossing, 4001 Kennett Pike

22-3436215  
(I.R.S. Employee  
Identification No.)  
19807

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Suite 238, Greenville, Delaware  
(Address of principal executive offices)

(Zip Code)

Registrant's telephone number, including area code: (713) 652-7200

Securities registered pursuant to Section 12(b) of the Act:

---

<u>Title of Each Class</u>	<u>Name of each exchange on which registered</u>
4% Senior Convertible Debentures  Due November 15, 2023	New York Stock Exchange

Securities registered pursuant to Section 12(g) of the Act: None

---

Indicate by check mark if the Registrant is a well-known seasoned issuer, as defined in Rule 405 of the Securities Act. Yes  No

Indicate by check mark if the Registrant is not required to file reports pursuant to Section 13 or Section 15(d) of the Act. Yes  No

Indicate by check mark whether the Registrant (1) has filed all reports required to be filed by Section 13 or 15(d) of the Securities Exchange Act of 1934 during the preceding 12 months (or for such shorter period that the Registrant was required to file such reports), and (2) has been subject to such filing requirements for the past 90 days. Yes  No

Indicate by check mark if disclosure of delinquent filers pursuant to Item 405 of Regulation S-K is not contained herein, and will not be contained, to the best of the Registrant's knowledge, in definitive proxy or information statements incorporated by reference in Part III of this Form 10-K or any amendment to this Form 10-K.

Indicate by check mark whether the Registrant is a large accelerated filer, an accelerated filer, or a non-accelerated filer. See definition of accelerated filer and large accelerated filer in Rule 12b-2 of the Exchange Act. Large accelerated filer  Accelerated filer  Non-accelerated filer

Indicate by check mark whether the Registrant is a shell company (as defined in Rule 12b-2 of the Exchange Act). Yes  No

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

There is no established public trading market for the Registrant's equity securities. As of June 30, 2005, the last business day of the Registrant's most recently completed second fiscal quarter, all of the Registrant's equity securities were held by affiliates.

**The Registrant meets the conditions set forth in General Instructions I(1)(a) and (b) of Form 10-K and, therefore, is filing this form with a reduced disclosure format.**

---

**Table of Contents**

**Index to Financial Statements**

**TABLE OF CONTENTS**

<u>PART I</u>	1
<u>Item 1. Business</u>	1
<u>MILLENNIUM</u>	1
<u>Overview of the Business</u>	1
<u>Additional Information Available</u>	1
<u>INORGANIC CHEMICALS SEGMENT</u>	2
<u>Overview</u>	2
<u>Raw Materials</u>	3
<u>Marketing and Sales</u>	3
<u>Competition and Industry Conditions</u>	3
<u>ETHYLENE, CO-PRODUCTS AND DERIVATIVES SEGMENT</u>	4
<u>Acetyls Business</u>	4
<u>Overview</u>	4
<u>Raw Materials</u>	5
<u>Marketing and Sales</u>	5
<u>Competition and Industry Conditions</u>	6
<u>Equity Investment in Equistar</u>	6
<u>Overview</u>	6
<u>Raw Materials</u>	10
<u>Marketing and Sales</u>	11
<u>Competition and Industry Conditions</u>	12
<u>OTHER CHEMICALS</u>	13
<u>ENVIRONMENTAL CAPITAL EXPENDITURES</u>	13
<u>RESEARCH AND TECHNOLOGY; INTELLECTUAL PROPERTY</u>	13
<u>EMPLOYEE RELATIONS</u>	14
<u>Item 1A. Risk Factors</u>	14
<u>Risks Relating to the Businesses</u>	14
<u>Risks Relating to Debt</u>	22
<u>FORWARD-LOOKING STATEMENTS</u>	24
<u>INDUSTRY AND OTHER INFORMATION</u>	25
<u>NON-GAAP FINANCIAL MEASURES</u>	25
<u>Item 2. Properties</u>	26
<u>Principal Manufacturing Facilities and Mine</u>	26
<u>Other Locations and Properties</u>	28
<u>Item 3. Legal Proceedings</u>	28
<u>Litigation Matters</u>	28
<u>Environmental Matters</u>	32
<u>Indemnification</u>	33



**Table of Contents**

**Index to Financial Statements**

<b><u>PART II</u></b>	34
<u>Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities</u>	34
<u>Item 6. Selected Financial Data</u>	34
<u>Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations</u>	35
<u>Overview</u>	35
<u>Results Of Operations</u>	36
<u>Financial Condition</u>	42
<u>Current Business Outlook</u>	47
<u>Related Party Transactions</u>	47
<u>Critical Accounting Policies</u>	48
<u>Accounting and Reporting Changes</u>	50
<u>Environmental Matters</u>	51
<u>Item 7A. Disclosure of Market Risk</u>	51
<u>Commodity Price Risk</u>	52
<u>Foreign Exchange Risk</u>	52
<u>Interest Rate Risk</u>	52
<u>Item 8. Financial Statements and Supplementary Data</u>	53
<u>Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure</u>	98
<u>Item 9A. Controls and Procedures</u>	98
<u>Item 9B. Other Information</u>	98
<b><u>PART III</u></b>	99
<u>Item 10. Directors and Executive Officers of the Registrant</u>	99
<u>Item 11. Executive Compensation</u>	99
<u>Item 12. Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters</u>	99
<u>Item 13. Certain Relationships and Related Transactions</u>	99
<u>Item 14. Principal Accountant Fees and Services</u>	99
<u>Audit and Non-Audit Fees</u>	99
<u>Pre-Approval Policy</u>	100
<b><u>PART IV</u></b>	101
<u>Item 15. Exhibits and Financial Statement Schedules</u>	101

---

**Table of Contents**

**Index to Financial Statements**

**PART I**

**Item 1. *Business***

**MILLENNIUM**

**Overview of the Business**

Millennium Chemicals Inc. (together with its consolidated subsidiaries, Millennium) is a global chemical company, with total 2005 revenues of approximately \$2.0 billion, and assets of approximately \$2.5 billion as of December 31, 2005. On November 30, 2004, Lyondell Chemical Company (Lyondell) acquired Millennium in a stock-for-stock business combination. As a result of the business combination, Millennium is now a wholly owned subsidiary of Lyondell.

Millennium reports its results of operations in two business segments: inorganic chemicals; and ethylene, co-products and derivatives. Millennium's inorganic chemicals segment primarily produces titanium dioxide (TiO<sub>2</sub>). The inorganic chemicals segment also produces titanium tetrachloride (TiCl<sub>4</sub>), titanyl sulfate (TiOSO<sub>4</sub>), ultra-fine TiO<sub>2</sub> and silica gel. Millennium's ethylene, co-products and derivatives segment comprises its acetyls business and its equity investment in Equistar Chemicals, LP (together with its consolidated subsidiaries, Equistar). Millennium's acetyls business produces vinyl acetate monomer (VAM), acetic acid and methanol, which is a raw material for acetic acid. Equistar produces ethylene and its co-products, which primarily include propylene, butadiene and aromatics, which include benzene and toluene. Equistar's derivatives primarily include polyethylene, ethylene oxide (EO), ethylene glycol (EG) and other EO derivatives, as well as ethanol and polypropylene. Equistar also produces fuels, such as methyl tertiary butyl ether (MTBE) and alkylate. Millennium owns 29.5% of Equistar, the balance of which is owned by Lyondell through other subsidiaries. Millennium accounts for its interest in Equistar using the equity method. Millennium also produces fragrance and flavor chemicals. For additional segment information and for geographic information for each of the years in the three-year period ended December 31, 2005, see Note 23 to the Consolidated Financial Statements.

**Additional Information Available**

Millennium was incorporated under the laws of Delaware in 1996. Its principal executive offices are located at Two Greenville Crossing, 4001 Kennett Pike, Suite 238, Greenville, Delaware. Its telephone number is (713) 652-7200 and its website address is [www.lyondell.com](http://www.lyondell.com). Millennium's Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K and all amendments to those reports are available free of charge through [www.lyondell.com](http://www.lyondell.com) as soon as reasonably practicable after those reports are electronically filed with or furnished to the Securities and Exchange Commission.

In addition, Millennium has adopted a code of ethics, as defined in Item 406(b) of Regulation S-K. Millennium's code of ethics, known as its Business Ethics and Conduct Policy, is part of the overall Lyondell Business Ethics and Conduct Policy. It applies to all members of Millennium's Board of Directors and to all officers and employees of Millennium, including Millennium's principal executive officer, principal financial officer, principal accounting officer and controller. A copy of the Business Ethics and Conduct Policy is available at [www.lyondell.com](http://www.lyondell.com) free of charge. In addition, Millennium intends to satisfy the disclosure requirements of Item 5.05 of Form 8-K regarding any

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

amendment to, or waiver from, a provision of the Business Ethics and Conduct Policy that applies to Millennium's principal executive officer, principal financial officer, principal accounting officer or controller and relates to any element of the definition of code of ethics set forth in Item 406(b) of Regulation S-K by posting such information at [www.lyondell.com](http://www.lyondell.com).

Information contained on Millennium's website ([www.lyondell.com](http://www.lyondell.com)) or any other website is not incorporated into this Annual Report and does not constitute a part of this Annual Report.



**Table of Contents****Index to Financial Statements****INORGANIC CHEMICALS SEGMENT****Overview**

TiO<sub>2</sub> is the primary product of the inorganic chemicals segment, which accounted for approximately 65% of Millennium's total revenues in 2005, 71% in 2004 and 69% in 2003. TiO<sub>2</sub> is a white pigment used for imparting whiteness, brightness, opacity and durability in a wide range of products, including paint and coatings, plastics, paper and elastomers.

As of December 31, 2005, Millennium's annual TiO<sub>2</sub> production capacity, using the chloride process and the sulfate process discussed below, was approximately 670,000 metric tons. Unless otherwise specified, annual processing capacities were calculated by estimating the average number of days in a typical year that a production unit of a plant is expected to operate, after allowing downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output. Because the processing capacity of a production unit is an estimated amount, actual production volumes may be more or less than capacities set forth below.

<b>TiO<sub>2</sub> Production Process</b>	<b>Annual Capacity</b>	<b>Percentage of Capacity</b>
Chloride Process	515,000 metric tons	77%
Sulfate Process	155,000 metric tons	23%
<b>Total</b>	<b>670,000 metric tons</b>	<b>100%</b>

TiO<sub>2</sub> is produced in two crystalline forms: rutile and anatase. Rutile TiO<sub>2</sub> is primarily used in paint and coatings, ink and plastics. Anatase TiO<sub>2</sub> is primarily used in paper, ceramics, rubber and man-made fibers.

TiO<sub>2</sub> is manufactured using two different technologies. The newer chloride process is a high-temperature process in which chlorine is used to produce an intermediate TiO<sub>2</sub> rutile crystal pigment, with greater purity and higher control over the size distribution of the pigment particles than the alternative sulfate process permits. In general, the chloride process is also less intensive than the sulfate process in terms of labor and energy. Because much of the chlorine can be recycled, the chloride process produces less waste than does the sulfate process.

The sulfate process is a wet chemical process that uses concentrated sulfuric acid to produce either an intermediate TiO<sub>2</sub> anatase or rutile crystal pigment. The sulfate process generates higher volumes of waste, including iron sulfate and spent sulfuric acid.

Millennium's TiO<sub>2</sub> plants are located in the four major world markets for TiO<sub>2</sub>: North America, South America, Western Europe and the Asia/Pacific region. The North American plants, consisting of one in Baltimore, Maryland and two in Ashtabula, Ohio, use the chloride process. The plant in Salvador, Bahia, Brazil uses the sulfate process. Millennium also owns a mineral sands mine located at Mataraca, Paraiba, Brazil, which supplies the Brazilian plant with most of its titanium ores. As of December 31, 2005, the mine had approximately 1.6 million metric tons of recoverable ilmenite reserves, approximately 266,000 metric tons of zircon reserves and approximately 26,600 metric tons of natural rutile

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

reserves. The mine produced approximately 114,000 metric tons of ilmenite, a titanium-bearing ore, in 2005. Approximately 100,000 metric tons of ilmenite produced at the mine were processed by the Salvador TiO<sub>2</sub> plant in 2005, while approximately 600 metric tons were sold to unrelated parties. The mine also produced approximately 20,000 metric tons of zircon and approximately 2,000 metric tons of natural rutile titanium ore, all of which were sold to unrelated parties. The Stallingborough, United Kingdom plant uses the chloride process. The plants in France at Le Havre, Normandy and Thann, Alsace use the sulfate process. The Kemerton plant in Western Australia uses the chloride process.

Millennium's inorganic chemicals segment also produces a number of specialty and performance TiO<sub>2</sub> related products, some of which are manufactured at dedicated facilities and others of which are manufactured at facilities

## **Table of Contents**

### **Index to Financial Statements**

that also produce other TiO<sub>2</sub> products. These products include titanium tetrachloride ( TiCl<sub>4</sub> ), titanyl sulfate ( TiOSO<sub>4</sub> ), ultra-fine TiO<sub>2</sub> and silica gel.

### **Raw Materials**

Naturally occurring titanium-bearing ores such as ilmenite and natural rutile occur as sand or hard rock deposits in various parts of the world and are used as raw materials in the TiO<sub>2</sub> extraction process. Mining companies are increasingly treating ilmenite to extract iron and other minerals to produce slag or synthetic rutile with higher TiO<sub>2</sub> concentrations, resulting in lower amounts of wastes and by-products during processing by TiO<sub>2</sub> pigment plants. Generally, titanium-bearing ores are shipped by using bulk carriers from terminals in the country of origin to TiO<sub>2</sub> production plants, usually located near port facilities. Millennium obtains ores from a number of suppliers in South Africa, Australia, Canada, Brazil and Norway, generally pursuant to multi-year supply contracts. Rio Tinto Iron & Titanium Inc. (through its affiliates Richards Bay Iron & Titanium (Proprietary) Limited and QIT-Fer et Titane Inc.) and Iluka Resources Limited are the world's largest producers of titanium ores and accounted for approximately 77% of the titanium ores purchased for Millennium's inorganic chemicals segment in 2005.

Other major raw materials used in the production of TiO<sub>2</sub> are chlorine, caustic soda, coke, aluminum, sodium silicate, sodium aluminate, sulfuric acid, oxygen, nitrogen and natural gas. The number of sources for and availability of these materials is specific to the particular geographic region in which a facility is located. There are certain risks related to the acquisition of raw materials from less-developed or developing countries. See Item 1A. Risk Factors Risks Relating to the Businesses Millennium's international operations are subject to exchange rate fluctuations, exchange controls, political risks and other risks relating to non-U.S. operations.

A number of the raw materials used by Millennium in the production of TiO<sub>2</sub> and Millennium's other inorganic chemicals products are provided by only a few vendors and, accordingly, if one significant supplier or a number of significant suppliers were unable to meet their obligations under present supply arrangements, Millennium could suffer reduced supplies and/or be forced to incur increased costs for these raw materials. For example, for the Australian plant, chlorine and caustic soda are obtained exclusively from one supplier under a long-term supply agreement. See Item 1A. Risk Factors Risks Relating to the Businesses Costs of raw materials and energy, as well as reliability of supply, may result in increased operating expenses and reduced results of operations. However, at the present time, chloride- and sulfate-process raw materials are available in sufficient quantities.

### **Marketing and Sales**

Of the TiO<sub>2</sub> sold by Millennium in 2005, approximately 66% was sold to customers in the paint and coatings industry, approximately 24% to customers in the plastics industry, approximately 9% to customers in the paper industry, and approximately 1% to other customers. Millennium experiences some seasonality in its TiO<sub>2</sub> sales because, in general, its customers' production of paint and coatings are greatest in the spring and summer months. TiO<sub>2</sub> generally is sold by Millennium at prices determined by market-based negotiation under annual and multi-year contracts. TiO<sub>2</sub> is sold either directly to customers or, to a lesser extent, through agents or distributors, and is distributed by rail, truck and ocean carrier in either dry or slurry form.

No single inorganic chemicals customer accounted for 10% or more of Millennium's total revenues in 2005. For geographic data, see Note 23 to the Consolidated Financial Statements.

**Competition and Industry Conditions**

The bases for competition in the inorganic chemicals businesses are price, product quality, product performance, product delivery, customer service and reliability of supply. The major competitors for sales of

**Table of Contents**

**Index to Financial Statements**

TiO<sub>2</sub> are E. I. du Pont de Nemours and Company ( DuPont ), Huntsman Tioxide ( Huntsman Tioxide, a business unit of Huntsman Corporation), Kronos Worldwide, Inc. ( Kronos ) and Tronox Incorporated ( Tronox, formerly a business unit of Kerr-McGee Corporation). Millennium estimates that collectively, as of December 31, 2005, DuPont, Millennium, Huntsman Tioxide, Kronos and Tronox accounted for approximately 70% of the world's TiO<sub>2</sub> production capacity. Millennium is the second largest producer of TiO<sub>2</sub> in the world, based on published rated capacity.

In certain applications, TiO<sub>2</sub> competes with other whitening agents that are generally less effective but less expensive. These alternate products include kaolin clays, calcium carbonate pigments and synthetic polymers materials.

Generally, new plant capacity additions in the TiO<sub>2</sub> industry are slow to develop because of the substantial capital expenditure required and the significant lead time (three to five years typically for a new plant) needed for planning, obtaining environmental approvals and permits, construction of manufacturing facilities and arranging for raw material supplies. DuPont has announced plans to construct a 200,000 ton per year TiO<sub>2</sub> plant in Dongying, China with a planned completion date of 2010. Debottlenecking and other capacity expansions at existing plants require substantially less time and capital and can also increase overall industry capacity.

**ETHYLENE, CO-PRODUCTS AND DERIVATIVES SEGMENT**

Millennium's ethylene, co-products and derivatives segment comprises its acetyls business and its equity investment in Equistar.

**Acetyls Business**

**Overview**

The acetyls business includes VAM, acetic acid and methanol, which is a raw material for acetic acid. VAM and acetic acid are manufactured by Millennium at facilities in La Porte, Texas. VAM is used to produce a variety of polymers used in adhesives, water-based paint, textile coatings and paper coatings. Acetic acid is used to produce VAM, purified terephthalic acid, industrial solvents and a variety of other chemicals. Millennium also owns an 85% interest in La Porte Methanol Company, which produces methanol at a plant in La Porte, Texas. The remaining 15% interest is owned by Linde AG ( Linde ).

Sales of VAM accounted for approximately 16% of Millennium's total revenues in 2005, 2004 and 2003. Sales of acetyls collectively accounted for approximately 26% of Millennium's total revenues in 2005, 24% in 2004 and 25% in 2003.

**Table of Contents****Index to Financial Statements**

The following table outlines the acetyls business' primary products, annual processing capacity at December 31, 2005, and the primary uses for such products. Unless otherwise specified, annual processing capacity was calculated by estimating the average number of days in a typical year that a production unit of a plant is expected to operate, after allowing for downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output based on the design raw material mix. Because the processing capacity of a production unit is an estimated amount, actual production volumes may be more or less than the capacities set forth below. Capacities shown include 100% of the capacity of joint venture facilities.

<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
Vinyl Acetate Monomer (VAM)	820 million pounds	VAM is a petrochemical product used to produce a variety of polymers products used in adhesives, water-based paint, textile coatings and paper coatings.
Acetic Acid	1.2 billion pounds	Acetic acid is a raw material used to produce VAM, terephthalic acid (used to produce polyester for textiles and plastic bottles), industrial solvents and a variety of other chemicals.
Methanol	190 million gallons (a)	Methanol is a raw material used to produce acetic acid, MTBE, formaldehyde and several other products.

(a) Represents 100% of the methanol capacity at the La Porte, Texas facility, which is owned by La Porte Methanol Company, a partnership owned 85% by Millennium and 15% by Linde.

**Raw Materials**

The primary raw materials for the production of VAM are acetic acid and ethylene. For VAM produced by Millennium, Millennium obtains its entire requirements for acetic acid from its internal production and buys all of its ethylene requirements from Equistar under a long-term supply contract based on market prices. In 2005, Millennium used a large percentage of its acetic acid production to produce VAM.

The primary raw materials required for the production of acetic acid are carbon monoxide and methanol. Millennium purchases its carbon monoxide from Linde pursuant to a long-term contract under which pricing is based primarily on cost of production. La Porte Methanol Company, Millennium's 85%-owned joint venture, supplies all of Millennium's requirements for methanol production. Natural gas is the primary raw material required for the production of methanol and carbon monoxide.

**Marketing and Sales**

VAM generally is sold into domestic and export markets under multi-year contracts, and also on a spot basis. Acetic acid that is not consumed internally for the production of VAM generally is sold into domestic and export markets under multi-year contracts, and also on a spot basis. Contract pricing for sales of VAM and acetic acid generally is determined by market-based negotiation, market index or cost-based formulas. Millennium also sells VAM to Equistar and acetic acid to both Lyondell and Equistar at market-based pricing. In addition, Millennium has an agreement with DuPont to convert a portion of the acetic acid produced at Millennium's La Porte, Texas plant into VAM through DuPont's nearby VAM plant and to acquire all of the VAM production at DuPont's plant that is not utilized internally by DuPont. The contract expires on December 31, 2006. VAM and acetic acid are shipped by barge, ocean-going vessel, pipeline, tank car and tank truck. Millennium has bulk

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

storage arrangements in Europe and Asia to better serve its customers requirements in those regions. Sales are made through a direct sales force, agents and distributors.

## **Table of Contents**

### **Index to Financial Statements**

The La Porte, Texas methanol facility is owned by La Porte Methanol Company, Millennium's 85%-owned joint venture. Each party to the joint venture receives its respective share of the methanol production. Millennium uses the methanol as a raw material for acetic acid and also sells the methanol under annual contracts and on a spot basis to large domestic customers. The product is shipped by barge and pipeline.

No single acetyls customer accounted for 10% or more of Millennium's total revenues in 2005. For geographic data, see Note 23 to the Consolidated Financial Statements.

### **Competition and Industry Conditions**

The bases for competition in the acetyls businesses are price, product performance, product quality, product delivery, reliability of supply and customer service. The acetyls businesses compete globally with other large marketers and producers for sales of acetyls, including Celanese Corporation (Celanese), The Dow Chemical Company (Dow), Eastman Chemical Company, Ineos, Methanex Corporation and Saudi Basic Industries Corp. Millennium is the second largest producer of VAM and acetic acid in North America, and the third largest producer worldwide, based on 2005 published rated production capacity.

### **Equity Investment in Equistar**

Millennium owns a 29.5% interest in Equistar, a joint venture with Lyondell. Millennium accounts for its interest in Equistar as an equity investment. Equistar reports its results of operations in one segment: ethylene, co-products and derivatives.

### **Overview**

Equistar can produce ethylene, co-products and derivatives at sixteen facilities located in six states in the U.S. Ethylene co-products primarily include propylene, butadiene and aromatics, which include benzene and toluene. Derivatives primarily include polyethylene, EO, EG and other EO derivatives, as well as ethanol and polypropylene. Equistar also produces fuels, such as MTBE and alkylate. Ethylene, co-products and derivatives are fundamental to many segments of the economy, including the production of consumer products, packaging, housing and automotive components and other durable and nondurable goods.

Ethylene is the most significant petrochemical in terms of worldwide production volume and is the key building block for polyethylene and a large number of other chemicals, plastics and synthetics. Equistar can produce ethylene at seven sites located in four states. The Chocolate Bayou, Corpus Christi and Channelview, Texas plants predominantly use heavy liquids to produce ethylene. These heavy liquids include crude oil-based naphtha and gas oil, as well as condensate, a very light crude oil resulting from natural gas production (collectively referred to as heavy liquids). The use of heavy liquid raw materials results in the production of a significant amount of co-products such as propylene, butadiene, benzene and toluene. The Morris, Illinois; Clinton, Iowa; Lake Charles, Louisiana; and La Porte, Texas plants are designed to consume primarily natural gas liquids, including ethane, propane and butane (collectively NGLs), to produce ethylene with some co-products such as propylene. The Corpus Christi and Channelview plants also may consume NGLs to produce ethylene, depending upon the relative economic advantage of the alternative raw materials. The Lake Charles, Louisiana ethylene and co-products facility has been idled since the first quarter 2001, pending sustained improvement in market conditions. Sales of ethylene accounted for approximately 13% of Equistar's total



## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

revenues in 2005, 12% in 2004 and 13% in 2003.

Ethylene co-products are manufactured by Equistar primarily at four facilities in Texas. The Morris, Illinois; Clinton, Iowa; and Lake Charles, Louisiana facilities also can produce propylene. Sales of propylene, which is used to produce polypropylene, acrylonitrile and propylene oxide, accounted for approximately 18% of Equistar's total revenues in 2005, 18% in 2004 and 16% in 2003. Benzene is used to produce styrene, phenol and cyclohexane, which are used in the production of nylon, plastics, synthetic rubber and polystyrene. Sales of benzene accounted for less than 10% of Equistar's total revenues in 2005 and 2003 and approximately 10% in 2004.

**Table of Contents**

**Index to Financial Statements**

Polyethylene is manufactured by Equistar using a variety of technologies at five facilities in Texas and at the Morris, Illinois and Clinton, Iowa facilities. Polyethylene is used in a variety of consumer and industrial products, including packaging film, trash bags, automotive parts, plastic bottles and caps and compounds for wire and cable insulation. The Morris and Clinton facilities enjoy a freight cost advantage over Gulf Coast facilities in delivering products to customers in the U.S. Midwest. Polyethylene includes high density polyethylene ( HDPE ), low density polyethylene ( LDPE ) and linear low density polyethylene ( LLDPE ). HDPE accounted for approximately 12% of Equistar s total revenues in 2005, 14% in 2004 and 15% in 2003, and polyethylene (HDPE, LDPE and LLDPE collectively) accounted for approximately 21% of Equistar s total revenues in 2005, 26% in 2004 and 28% in 2003.

EO and its primary derivative, EG, are produced at the Bayport facility located in Pasadena, Texas and through a 50/50 joint venture between Equistar and DuPont in Beaumont, Texas. The Bayport facility also produces other derivatives of EO, principally ethylene glycol ethers and ethanolamines. EG is used in antifreeze, polyester fibers, resins and films. EO and its other derivatives are used in many consumer and industrial end uses, such as detergents and surfactants, brake fluids and polyurethane seating and bedding foams.

The Morris, Illinois facility manufactures polypropylene using propylene produced as a co-product of Equistar s ethylene production, as well as propylene purchased from unrelated parties. Polypropylene is sold for various applications in the automotive, housewares and appliance industries.

Equistar also produces performance polymer products, which include enhanced grades of polyethylene and polypropylene. Wire and cable insulating resins and compounds are performance polymers used to insulate copper and fiber optic wiring in power, telecommunication, computer and automobile applications. Many of Equistar s polyethylene facilities can produce wire and cable insulating resins, some of which can be compounded with additive materials at the facility in Fairport Harbor, Ohio. Equistar believes that, over a business cycle, average selling prices and profit margins for performance polymers tend to be higher than average selling prices and profit margins for higher-volume commodity polyethylenes.

**Table of Contents****Index to Financial Statements**

The following table outlines Equistar's primary products, annual processing capacity as of December 31, 2005, and the primary uses for such products. Unless otherwise specified, annual processing capacity was calculated by estimating the average number of days in a typical year that a production unit of a plant is expected to operate, after allowing for downtime for regular maintenance, and multiplying that number by an amount equal to the unit's optimal daily output based on the design raw material mix. Because the processing capacity of a production unit is an estimated amount, actual production volumes may be more or less than the capacities set forth below. Capacities shown include 100% of the capacity of joint venture facilities.

<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
Ethylene	11.6 billion pounds (a)	Ethylene is used as a raw material to manufacture polyethylene, EO, ethanol, ethylene dichloride, styrene and VAM.
Propylene	5 billion pounds (a)(b)	Propylene is used to produce polypropylene, acrylonitrile and propylene oxide.
Butadiene	1.2 billion pounds	Butadiene is used to manufacture styrene-butadiene rubber and polybutadiene rubber, which are used in the manufacture of tires, hoses, gaskets and other rubber products. Butadiene is also used in the production of paints, adhesives, nylon clothing, carpets, paper coatings and engineered plastics.
MTBE	284 million gallons (18,500 barrels/day) (c)	MTBE is a gasoline component used for reducing emissions in reformulated gasolines and enhancing octane value.
Benzene	310 million gallons	Benzene is used to produce styrene, phenol and cyclohexane. These products are used in the production of nylon, plastics, synthetic rubber and polystyrene. Polystyrene is used in insulation, packaging and drink cups.
Toluene	66 million gallons	Toluene is used as an octane enhancer in gasoline, as a chemical raw material for benzene and/or paraxylene production, and a core ingredient in toluene diisocyanate, a compound used in urethane production.
Alkylate	337 million gallons (d)	Alkylate is a premium gasoline blending component used by refiners to meet Clean Air Act standards for reformulated gasoline.
High density polyethylene (HDPE)	3.2 billion pounds	HDPE is used to manufacture grocery, merchandise and trash bags; food containers for items from frozen desserts to margarine; plastic caps and closures; liners for boxes of cereal and crackers; plastic drink cups and toys; dairy crates; bread trays; pails for items from paint to fresh fruits and vegetables; safety equipment such as hard hats; house wrap for insulation; bottles for household and industrial chemicals and motor oil; milk, water, and juice bottles; and large (rotomolded) tanks for storing liquids such as agricultural and lawn care chemicals.

**Table of Contents****Index to Financial Statements**

<b>Product</b>	<b>Annual Capacity</b>	<b>Primary Uses</b>
Low density polyethylene (LDPE)	1.4 billion pounds	LDPE is used to manufacture food packaging films; plastic bottles for packaging food and personal care items; dry cleaning bags; ice bags; pallet shrink wrap; heavy-duty bags for mulch and potting soil; boil-in-bag bags; coatings on flexible packaging products; and coatings on paper board such as milk cartons. Ethylene vinyl acetate is a specialized form of LDPE used in foamed sheets, bag-in-box bags, vacuum cleaner hoses, medical tubing, clear sheet protectors and flexible binders.
Linear low density polyethylene (LLDPE)	1.2 billion pounds	LLDPE is used to manufacture garbage and lawn-leaf bags; industrial can liners; housewares; lids for coffee cans and margarine tubs, dishpans, home plastic storage containers, kitchen trash containers; large (rotomolded) toys like outdoor gym sets; drip irrigation tubing; wire and cable insulating resins and compounds used to insulate copper and fiber optic wiring, and film; shrink wrap for multi-packaging canned food, bag-in-box bags, produce bags, and pallet stretch wrap.
Ethylene Oxide (EO)	1.5 billion pounds EO equivalents; 400 million pounds as pure EO (e)	EO is used to produce surfactants, industrial cleaners, cosmetics, emulsifiers, paint, heat transfer fluids and ethylene glycol.
Ethylene Glycol (EG)	1.4 billion pounds (e)	EG is used to produce polyester fibers and film, polyethylene terephthalate ( PET ) resin, heat transfer fluids and automobile antifreeze.
Other Ethylene Oxide Derivatives	225 million pounds	EO derivatives include ethylene glycol ethers and ethanolamines, and are used to produce paint and coatings, polishes, solvents and chemical intermediates.
Ethanol	50 million gallons	Ethanol is used in the production of solvents as well as household, medicinal and personal care products.
Polypropylene	280 million pounds	Polypropylene is used to manufacture fibers for carpets, rugs and upholstery; housewares; automotive battery cases; automotive fascia, running boards and bumpers; grid-type flooring for sports facilities; fishing tackle boxes; and bottle caps and closures.

- (a) Includes 850 million pounds/year of ethylene capacity and 200 million pounds/year of propylene capacity at the Lake Charles, Louisiana ethylene and co-products facility. The Lake Charles facility has been idled since the first quarter 2001, pending sustained improvement in market conditions.
- (b) Does not include refinery-grade material or production from the product flexibility unit at the Channelview facility, which can convert ethylene and other light petrochemicals into propylene. This facility has an annual processing capacity of an additional one billion pounds/year of propylene.

---

**Table of Contents**

**Index to Financial Statements**

- (c) Includes up to 44 million gallons/year of capacity produced for and returned to LYONDELL-CITGO Refining LP (a joint venture owned 58.75% by Lyondell ( LCR )).
- (d) Includes up to 172 million gallons/year of capacity produced for and returned to LCR.
- (e) Includes 700 million pounds/year of EO equivalents capacity and 800 million pounds/year of EG capacity at the Beaumont, Texas facility, which represents 100% of the EO equivalents capacity and EG capacity, respectively, at the facility. The Beaumont, Texas facility is owned by PD Glycol, a partnership owned 50% by Equistar and 50% by DuPont.

**Raw Materials**

Raw material cost is the largest component of the total cost for the production of ethylene and co-products. The primary raw materials used are heavy liquids and NGLs. The flexibility to consume a wide range of raw materials, including heavy liquids, has historically provided plants with that flexibility with an advantage over plants that are restricted in their raw material processing capability to NGLs such as ethane and propane, assuming the co-products were recovered and sold. Facilities using heavy liquids historically have generated, on average, approximately four cents of additional variable margin per pound of ethylene produced compared to facilities restricted to using ethane. This margin advantage is based on an average of historical data over a period of years and is subject to short-term fluctuations, which can be significant. For example, the advantage during first quarter 2004 was slightly above the historical average. However, in the fourth quarter 2005, the variable cost to produce ethylene from ethane rose to record high levels due to the impact of multiple hurricanes, which resulted in the best quarterly and annual heavy liquids average advantage in twenty years. Equistar has the capability to realize this margin advantage due to its ability to process heavy liquids at the Channelview, Corpus Christi and Chocolate Bayou ethylene and co-products facilities.

The Channelview facility is particularly flexible because it can range from processing all heavy liquids to processing a majority of NGLs. The Corpus Christi plant can range from processing predominantly heavy liquids to processing significant levels of NGLs. The Chocolate Bayou facility processes 100% heavy liquids. The La Porte facility processes mainly lighter NGLs, but can process some butane, natural gasoline and light naphtha. The three other ethylene and co-products facilities process only NGLs.

As described above, management believes that this raw material flexibility is a key advantage in the production of ethylene and co-products. As a result, Equistar's heavy liquids requirements are purchased via a mix of contractual and spot arrangements from a variety of domestic and international sources. Spot market purchases are made in order to maintain raw material flexibility and to take advantage of raw material pricing opportunities. A large portion of Equistar's NGLs requirements are purchased via contractual arrangements from a variety of sources, but NGLs also are purchased on the spot market. Equistar also obtains a portion of its heavy liquids requirements from LCR at market-related prices. Heavy liquids generally are delivered by ship or barge, and NGLs generally are delivered via pipeline.

Equistar purchases all of its methanol requirements for ethylene and co-products from Lyondell at market-based prices. Also, Equistar purchases large amounts of natural gas to be used as energy for consumption in its business via market-based contractual arrangements with a variety of sources.

The primary raw material for the derivatives products is ethylene. Equistar's derivatives facilities generally can receive their ethylene directly from Equistar's ethylene and co-products facilities via its pipeline system, pipelines owned by unrelated parties or on-site production. All of the ethylene used in Equistar's polyethylene production is produced internally by Equistar's ethylene and co-products facilities. However, the polyethylene plants at Chocolate Bayou, La Porte and Bayport, Texas are connected by pipeline to unrelated parties and could receive ethylene via exchanges or purchases. The polypropylene facility at Morris, Illinois receives propylene from Equistar's ethylene and co-products facilities, as well as unrelated parties.

The raw materials for ethylene, co-products and derivatives are, in general, commodity chemicals with numerous bulk suppliers and ready availability at competitive prices. Historically, raw material availability for

**Table of Contents**

**Index to Financial Statements**

ethylene, co-products and derivatives has not been an issue. For additional discussion regarding the effects of raw material pricing and supply on recent operating results, see Item 1A. Risk Factors Risks Relating to the Businesses Costs of raw materials and energy, as well as reliability of supply, may result in increased operating expenses and reduced results of operations and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

**Marketing and Sales**

Ethylene produced by Equistar generally is consumed internally as a raw material in the production of derivatives, or is shipped by pipeline to related and unrelated parties. For the year ended December 31, 2005, approximately 85% of Equistar's ethylene, based on sales dollars, was used by Equistar's derivatives facilities or sold to related parties at market-related prices. The sales to related parties during 2005 include significant ethylene sales to Occidental Chemical Corporation (a subsidiary of Occidental Petroleum Corporation (together with its subsidiaries and affiliates, collectively, Occidental)), which owns approximately 12% of Lyondell's outstanding common stock pursuant to a long-term ethylene supply agreement.

Equistar consumes propylene in the production of polypropylene and also sells propylene to Lyondell at market-related prices. Equistar's propylene production that is not consumed internally or sold to related parties generally is sold under multi-year contracts. In addition, pursuant to a 15-year propylene supply arrangement entered into in 2003 with a subsidiary of Sunoco, Inc. (Sunoco), Equistar supplies 700 million pounds of propylene annually to Sunoco. Under the arrangement, a majority of the propylene is supplied under a cost-based formula and the balance is supplied on a market-related basis.

Equistar generally sells its butadiene under multi-year contracts. Equistar sells benzene to Lyondell and toluene to LCR at market-related prices. Most of Equistar's benzene and toluene production that is not sold to related parties generally is sold under multi-year contracts. Equistar also sells benzene produced by LCR, which it purchases from LCR at market-related prices. Equistar serves as LCR's sole agent to market toluene produced by LCR and receives a marketing fee for such services. Equistar produces alkylate for and returns alkylate to LCR for a processing fee, and also sells alkylate under annual and multi-year contracts.

Equistar at times purchases ethylene, propylene, benzene and butadiene for resale, when necessary, to satisfy customer demand for these products above production levels. Volumes of ethylene, propylene, benzene and butadiene purchased for resale can vary significantly from period to period. However, purchased volumes generally do not have a significant impact on profitability.

The co-products that are not consumed internally or sold to related parties generally are sold to customers with whom Equistar has had long-standing relationships. These sales generally are made under written agreements that typically provide for monthly negotiation of price and customer purchases of a specified minimum quantity.

MTBE produced at one of the two Channelview units is sold to Lyondell and LCR at market-related prices. MTBE is produced for LCR at the second Channelview unit for a processing fee. In addition, MTBE produced at the Chocolate Bayou plant is sold at market-related prices to Lyondell.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Most of the ethylene and propylene production of the Channelview, Chocolate Bayou, Corpus Christi, La Porte and Lake Charles facilities is shipped via a pipeline system which has connections to numerous Gulf Coast ethylene and propylene consumers. This pipeline system, some of which is owned and some of which is leased by Equistar, extends from Corpus Christi to Mont Belvieu to Port Arthur, Texas as well as around the Lake Charles, Louisiana area. In addition, exchange agreements with other ethylene and co-products producers allow access to customers who are not directly connected to Equistar's pipeline system. Some ethylene is shipped by railcar from Clinton, Iowa to Morris, Illinois and also to customers. A pipeline owned and operated by an unrelated party is used to transport ethylene from Morris, Illinois to Tuscola, Illinois. Some propylene is shipped



## **Table of Contents**

### **Index to Financial Statements**

by ocean-going vessel. Butadiene, benzene, toluene and other products are distributed by pipeline, railcar, truck, barge or ocean-going vessel.

Polyethylene products primarily are sold to an extensive base of established customers. Approximately two-thirds of Equistar's domestic polyethylene product volumes are sold to customers under annual or multi-year contracts. The remainder of the polyethylene volume generally is sold under customary terms and conditions without formal contracts. In either case, in most of the continuous supply relationships, prices are subject to change upon mutual agreement.

EO and EG typically are sold under multi-year contracts, with market-based pricing. Glycol ethers, ethanalamines and brake fluids are sold primarily into the solvent and distributor markets at market prices. Ethanol and ethers primarily are sold under contracts at market prices. EO is shipped by railcar, and its derivatives are shipped by railcar, truck, isotank or ocean-going vessel.

Other derivatives products are primarily distributed via railcar. The vast majority of the derivatives products are sold in North America, primarily through Equistar's sales organization. Sales agents are generally engaged to market the derivatives products in the rest of the world.

Other than Lyondell, which accounted for approximately 10% of Equistar's total revenues in 2005, no single customer accounted for 10% or more of Equistar's total revenues in 2005. For geographic data, see Note 23 to the Consolidated Financial Statements.

### **Competition and Industry Conditions**

The bases for competition in the ethylene, co-products and derivatives businesses are price, product quality, product delivery, reliability of supply, product performance and customer service. Industry consolidation has brought North American production capacity under the control of fewer, although larger, competitors.

Profitability is affected not only by supply and demand for ethylene, co-products and derivatives, but also by raw material costs and price competition among producers, which may intensify due to, among other things, the addition of new capacity. In general, demand is a function of economic growth in the United States and elsewhere in the world, which fluctuates. It is not possible to accurately predict the changes in raw material costs, market conditions, capacity utilization and other factors that will affect industry profitability in the future. In 2004, ethylene markets began a cyclical recovery from the downturn brought about by the prior three years of weak demand. The shutdown of two of a competitor's U.S. Gulf Coast ethylene and co-products plants in 2003 and improving demand, driven by worldwide economic recovery, resulted in greatly improved industry operating rates in 2004 and 2005. However, in 2005, temporary hurricane-related shutdowns greatly impacted supply and demand during the last four months of 2005. Over the next five years, forecasts for the worldwide average annual ethylene capacity additions are projected at more than 5%, with more than half of these additions in the Middle East and Northeast Asia. The average worldwide demand growth is expected to lag this rate only by approximately 1%. In the U.S., minor capacity increases combined with sustained demand levels are projected to result in continued high average operating rates in the next few years. Capacity share figures for Equistar and its competitors, discussed below, are based on completed production facilities and, where appropriate, include the full capacity of joint venture facilities and certain long-term supply arrangements.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Equistar competes with other large domestic marketers and producers for sales of ethylene and co-products, including Chevron Phillips Chemical Company LP ( ChevronPhillips ), Enterprise Products Partners L.P., Exxon Mobil Corporation ( ExxonMobil ), Huntsman Corporation ( Huntsman ), Ineos and Shell Chemical Company. Equistar's ethylene rated capacity at December 31, 2005 was approximately 11.6 billion pounds per year, or approximately 15% of total North American ethylene production capacity. Based on published rated production capacities, Equistar is the second largest producer of ethylene in North America. North American

**Table of Contents**

**Index to Financial Statements**

ethylene rated capacity at December 31, 2005 was approximately 77 billion pounds per year. Approximately 78% of the total ethylene production capacity in North America is located along the Gulf Coast.

Equistar competes with other large marketers and producers for sales of derivatives, including Celanese, ChevronPhillips, Dow, Eastman Chemical Company, ExxonMobil, Formosa Plastics Corporation, Huntsman, Ineos, NOVA Chemicals Corporation, TOTAL and Westlake Polymers. Based on published rated industry capacities, Equistar is the third largest producer of polyethylene in North America. The rated capacity of Equistar's polyethylene units as of December 31, 2005 was approximately 5.8 billion pounds per year, or approximately 13% of total industry capacity in North America. There are many other North American producers of polyethylene, the most significant of which are ChevronPhillips, Dow and ExxonMobil.

**OTHER CHEMICALS**

Millennium also produces fragrance and flavors chemicals. The Brunswick, Georgia and Jacksonville, Florida facilities manufacture terpene-based fragrance ingredients and flavor ingredients, primarily for the oral care markets. These products are also used in a number of other applications, including chemical reaction agents, or initiators, for the rubber industry and solvents and cleaners, such as pine oil, for the hard surface cleaner markets.

**ENVIRONMENTAL CAPITAL EXPENDITURES**

Millennium and its joint ventures (together with the industries in which they operate) are subject to extensive national, state and local environmental laws and regulations concerning, and are required to have permits and licenses regulating, emissions to the air, discharges onto land or waters and the generation, handling, storage, transportation, treatment and disposal of waste materials. In some cases, compliance with environmental, health and safety laws and regulations can only be achieved by capital expenditures. In the years ended December 31, 2005, 2004 and 2003, Millennium spent approximately \$8 million, \$8 million and \$9 million, respectively, for environmentally related capital expenditures at existing facilities. Millennium currently estimates that environmentally related capital expenditures at its facilities will be approximately \$11 million for 2006 and \$6 million for 2007. These amounts include estimated expenditures related to air emission reductions.

In the years ended December 31, 2005, 2004 and 2003, Equistar spent approximately \$62 million, \$44 million and \$38 million, respectively, for environmentally related capital expenditures at existing facilities. The increased capital expenditures relate to air emission reductions and wastewater management. Equistar currently estimates that environmentally related capital expenditures at its facilities will be approximately \$71 million for 2006 and \$27 million for 2007, including estimated expenditures related to air emission reductions and wastewater management.

For additional information regarding environmentally related capital expenditures, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental Matters and Note 19 to the Consolidated Financial Statements.

**RESEARCH AND TECHNOLOGY; INTELLECTUAL PROPERTY**

**Millennium** Millennium conducts research principally at technology centers in Baltimore, Maryland; Stallingborough, United Kingdom; and Jacksonville, Florida. Millennium's research and development expenditures were \$23 million in 2005, \$21 million in 2004 and \$23 million in 2003.

Millennium maintains an extensive patent portfolio and continues to file new patent applications related to its TiO<sub>2</sub>, acetyls and fragrance and flavor businesses. As of December 31, 2005, Millennium owned

**Table of Contents**

**Index to Financial Statements**

approximately 50 United States patents and approximately 95 worldwide patents. Millennium owns globally registered and unregistered trademarks, including the Millennium logo. Millennium does not regard its business as being materially dependent upon any single patent, trademark or license.

**Equistar** Equistar conducts research and development principally at its technology centers in Cincinnati, Ohio and Chocolate Bayou, Texas. Equistar's research and development expenditures were \$33 million in 2005, \$34 million in 2004 and \$38 million in 2003.

Equistar maintains an extensive patent portfolio and continues to file new patent applications related to its businesses. As of December 31, 2005, Equistar owned approximately 240 United States patents and approximately 350 worldwide patents. Equistar owns globally registered and unregistered trademarks, including the Equistar logo. Equistar does not regard its business as being materially dependent upon any single patent, trademark or license.

**EMPLOYEE RELATIONS**

**Millennium** At December 31, 2005, Millennium had approximately 3,325 full-time and part-time employees, approximately 1,195 of whom were located in the United States, approximately 1,065 of whom were located in Europe, approximately 685 of whom were located in Brazil, approximately 360 of whom were located in Australia and approximately 20 of whom were located in Asia. As of December 31, 2005, approximately 26% of the employees located in the U.S., approximately 77% of the employees located in Europe and substantially all of the employees located in Brazil were represented by labor unions. In addition to its own employees, Millennium uses the services of Lyondell and Equistar employees pursuant to shared services and loaned employee arrangements and also uses the services of independent contractors in the routine conduct of its business. Millennium believes that its relations with its employees are good.

**Equistar** At December 31, 2005, Equistar employed approximately 3,195 full-time and part-time employees. Approximately 5% of Equistar's employees are covered by collective bargaining agreements. In addition to its own employees, Equistar uses the services of Lyondell and Millennium employees pursuant to shared services and loaned employee arrangements and also uses the services of independent contractors in the routine conduct of its business. Equistar believes that its relations with its employees are good.

**Item 1A. Risk Factors**

*There are many factors that may affect the businesses and results of operations of Millennium and its joint ventures. For additional discussion regarding factors that may affect the businesses and operating results of Millennium and its joint ventures, see Item 1. Business, Item 3. Legal Proceedings, Forward-Looking Statements, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 7A. Disclosure of Market Risk. If one or more of these risks actually occur, Millennium's business, financial position or results of operations could be materially and adversely affected.*

**Risks Relating to the Businesses**

*Costs of raw materials and energy, as well as reliability of supply, may result in increased operating expenses and reduced results of operations.*

Millennium and its joint ventures purchase large amounts of raw materials and energy for their businesses. The cost of these raw materials and energy, in the aggregate, represents a substantial portion of their operating expenses. The costs of raw materials and energy used for acetyls and Equistar's products, and the energy costs

---

**Table of Contents**

**Index to Financial Statements**

for TiO<sub>2</sub>, generally follow price trends of, and vary with the market conditions for, crude oil and natural gas, which may be highly volatile and cyclical. The costs of energy and certain raw materials increased during 2005 and remain at high levels. There have been in the past, and will likely be in the future, periods of time when Millennium and its joint ventures are unable to pass raw material and energy cost increases on to customers quickly enough to avoid adverse impacts on their results of operations. Customer consolidation also has made it more difficult to pass along cost increases to customers. The results of operations of Millennium and its joint ventures have been, and could be in the future, significantly affected by increases and volatility in these costs. Cost increases also may increase working capital needs, which could reduce liquidity and cash flow for Millennium and its joint ventures. In addition, when raw material and energy costs increase rapidly and are passed along to customers as product price increases, the credit risks associated with certain customers can be compounded. See Millennium and its joint ventures sell commodity products in highly competitive markets and face significant price pressures below.

In addition, higher North American natural gas prices relative to natural gas cost-advantaged regions, such as the Middle East, have diminished the ability of many domestic chemical producers to compete internationally since natural gas prices affect a significant portion of the industry's raw materials and energy sources. This environment has in the past caused and may in the future cause a reduction in Equistar's exports, and has in the past reduced and may in the future reduce the competitiveness of U.S. producers. It also has in the past increased the competition for sales of chemicals in North America, as U.S. production that would otherwise have been sold overseas was instead offered for sale domestically, resulting in excess supply and lower margins in North America, and may do so in the future.

Furthermore, for Millennium and its joint ventures, there are a limited number of suppliers for some of their raw materials and utilities and, in some cases, the number of sources for and availability of raw materials is specific to the particular geographic region in which a facility is located. In addition, for some products of Millennium and its joint ventures, the facilities and/or distribution channels of raw material suppliers and Millennium and its joint ventures form an integrated system. This is especially true in the U.S. Gulf Coast where the infrastructure of the petrochemical industry is tightly integrated such that a major disruption of supply of a given commodity can negatively affect numerous participants, including suppliers of other raw materials. If one or more of Millennium's or its joint ventures' significant suppliers were unable to meet its obligations under present supply arrangements or supplies are otherwise disrupted, Millennium's or its joint ventures' businesses could suffer reduced supplies or be forced to incur increased costs for their raw materials, which would have a direct negative impact on plant operations. For example, Hurricanes Katrina and Rita negatively affected crude oil and natural gas supplies, as well as supplies of some of Millennium's and its joint ventures' other raw materials, contributing to increases in raw material prices during the second half of 2005 and, in some cases, disrupting production. In addition, hurricane-related disruption of rail and pipeline traffic in the U.S. Gulf Coast area negatively affected shipments of raw materials and product.

*The cyclicity of the chemical industry may cause significant fluctuations in Millennium's and its joint ventures' operating results.*

The historical operating results of Millennium and its joint ventures reflect the cyclical and volatile nature of the supply-demand balance in the chemical industry, and their future operating results continue to be affected by this cyclicity and volatility. This cyclical pattern results in volatile profits and cash flow over the business cycles.

Demand for TiO<sub>2</sub> has fluctuated from year to year. The TiO<sub>2</sub> industry also is sensitive to changes in its customers' marketplaces, which are primarily the paint and coatings, plastics and paper industries.

Demand for ethylene and its derivatives, and acetyls, also has fluctuated from year to year. These industries are particularly sensitive to capacity additions. These industries historically have experienced alternating periods of capacity shortages leading to tight supply, causing prices and profit margins to increase, followed by periods





**Table of Contents**

**Index to Financial Statements**

when substantial capacity is added, resulting in oversupply, declining capacity utilization rates and declining prices and profit margins.

The chemical industry has entered a period characterized by tight supply in many product areas and increased demand as the global economy has improved over the past several years. As a result, the industry has seen a return to enhanced profitability, even in a world of volatile raw material and energy costs. However, the sustainability of these positive business conditions remains subject to uncertainty. The global economic and political environment continues to be uncertain, and negative changes could result in a decline in demand and place pressure on Millennium's results of operations. In addition, new capacity additions by some participants in the industry, especially those in the Middle East and Asia that are expected to start up beginning in 2006 and through the latter part of the decade, could lead to another period of oversupply and poor profitability.

Millennium and its joint ventures may reduce production at or idle a facility for an extended period of time or exit a business because of an oversupply of a particular product and/or a lack of demand for that particular product, or high raw material prices, which makes production uneconomical. Any decision to permanently close facilities or exit a business would result in impairment and other charges to earnings. Temporary outages sometimes last for several quarters or, in certain cases, longer, and could cause Millennium and its joint ventures to incur costs, including the expenses of maintaining and restarting these facilities. It is possible that factors such as increases in raw material costs or lower demand in the future will cause Millennium or its joint ventures to reduce operating rates, idle facilities or exit uncompetitive businesses.

***External factors beyond Millennium's or its joint ventures' control can cause fluctuations in demand for their products and in their prices and margins, which may result in lower operating results.***

External factors beyond Millennium's or its joint ventures' control can cause volatility in the price of raw materials and other operating costs, as well as significant fluctuations in demand for their products and can magnify the impact of economic cycles on their businesses. Examples of external factors include:

general economic conditions;

international events and circumstances;

competitor actions;

governmental regulation in the U.S. and abroad; and

severe weather and natural disasters.

Millennium believes that events in the Middle East have had a particularly adverse influence on its acetyls business and Equistar's businesses in recent years and may continue to do so. In addition, a number of Millennium's and its joint ventures' products are highly dependent on durable goods markets, such as the housing and automotive markets, which also are cyclical. Many of Millennium's and its joint ventures' products are components of other chemical products that, in turn, are subject to the supply-demand balance of the chemical industry and general economic

conditions. The global economy has improved, increasing demand for Millennium's and its joint ventures' products. This has occurred even as the volatility and elevated level of prices for crude oil and natural gas have resulted in increased raw material costs. However, the impact of the factors cited above and others may once again cause a slowdown in the business cycle, reducing demand and lowering operating rates and, ultimately, reducing profitability.

*Millennium and its joint ventures sell commodity products in highly competitive markets and face significant price pressures.*

Millennium and its joint ventures sell their products in highly competitive markets. Due to the commodity nature of certain of their products, competition in these markets is based primarily on price and to a lesser extent

---

**Table of Contents****Index to Financial Statements**

on product performance, product quality, product deliverability, reliability of supply and customer service. As a result, Millennium and its joint ventures generally are not able to protect their market position for these products by product differentiation and may not be able to pass on cost increases to their customers. Accordingly, increases in raw material and other costs may not necessarily correlate with changes in prices for these products, either in the direction of the price change or in magnitude. In addition, their ability to increase product sales prices, and the timing of those increases, are affected by the supply-demand balances for their products, as well as the capacity utilization rates for those products. Timing differences in pricing between rising raw material costs, which may change daily, and contract product prices, which in many cases are negotiated only monthly or less often, sometimes with an additional lag in effective dates for increases, have reduced and may continue to reduce profitability. Further, volatility in costs and pricing can result in commercial disputes with customers and suppliers with respect to interpretations of complex contractual arrangements. Significant adverse resolution of any such disputes also could reduce profitability.

***Millennium's international operations are subject to exchange rate fluctuations, exchange controls, political risks and other risks relating to non-U.S. operations.***

Millennium has substantial international operations, which are subject to the risks of doing business abroad, including fluctuations in currency exchange rates, transportation delays and interruptions, political and economic instability and disruptions, restrictions on the transfer of funds, the imposition of duties and tariffs, import and export controls, changes in governmental policies, labor unrest and current and changing regulatory environments. These events could reduce the demand for Millennium's products internationally, decrease the prices at which it can sell its products internationally or disrupt production or other operations internationally, which could reduce its operating results. In addition, Millennium and Equistar obtain a substantial portion of their principal raw materials from sources outside the U.S., which are subject to these same risks. Although Millennium and Equistar have compliance programs and processes intended to ensure compliance with applicable customs, currency exchange control regulations, transfer pricing regulations or any other laws or regulations to which they may be subject, they are subject to the risk that their compliance could be challenged. Furthermore, these laws may be modified, the result of which may be to prevent or limit non-U.S. subsidiaries from transferring cash to Millennium. For geographic data, see Note 23 to the Consolidated Financial Statements.

In addition, Millennium generates revenue from export sales and operations conducted outside the U.S. that may be denominated in currencies other than the relevant functional currency. Exchange rates between these currencies and U.S. dollars in recent years have fluctuated significantly and may do so in the future. Future events, which may significantly increase or decrease the risk of future movement in foreign currencies in which it conducts its business, cannot be predicted. Millennium also may hedge certain revenues and costs using derivative instruments to minimize the impact of changes in the exchange rates of those currencies compared to the respective functional currencies. It is possible that fluctuations in foreign exchange rates will result in reduced operating results.

***Millennium's and its joint ventures' operations and assets are subject to extensive environmental, health and safety and other laws and regulations, which could result in material costs or liabilities.***

Millennium and its joint ventures cannot predict with certainty the extent of future liabilities and costs under environmental, health and safety and other laws and regulations and whether liabilities and costs will be material. Millennium and its joint ventures also may face liability for alleged personal injury or property damage due to exposure to chemicals or other hazardous substances at their facilities or chemicals that they manufacture, handle or own. In addition, because the chemical products of Millennium and its joint ventures are components of a variety of other end-use products, Millennium and its joint ventures, along with other members of the chemical industry, are inherently subject to potential claims related to those end-use products. Although claims of the types described above have not historically had a material impact on Millennium's or its joint ventures' operations, a substantial increase in the success of these types of claims could result in the expenditure of a significant amount of cash by Millennium or its joint ventures to pay claims, and could reduce their operating results.



**Table of Contents****Index to Financial Statements**

Millennium and its joint ventures (together with the industries in which they operate) are subject to extensive national, state and local environmental laws and regulations concerning, and are required to have permits and licenses regulating, emissions to the air, discharges onto land or waters and the generation, handling, storage, transportation, treatment and disposal of waste materials. Many of these laws and regulations provide for substantial fines and potential criminal sanctions for violations. Some of these laws and regulations are subject to varying and conflicting interpretations. In addition, some of these laws and regulations require Millennium and its joint ventures to meet specific financial responsibility requirements. Millennium cannot accurately predict future developments, such as increasingly strict environmental laws, and inspection and enforcement policies, as well as higher compliance costs, which might affect the handling, manufacture, use, emission or disposal of products, other materials or hazardous and non-hazardous waste. Some risk of environmental costs and liabilities is inherent in Millennium's and its joint ventures' operations and products, as it is with other companies engaged in similar businesses, and there is no assurance that material costs and liabilities will not be incurred. In general, however, with respect to the costs and risks described above, Millennium does not expect that it or its joint ventures will be affected differently than the rest of the chemical industry where their facilities are located.

Environmental laws may have a significant effect on the nature and scope of cleanup of contamination at current and former operating facilities, the costs of transportation and storage of raw materials and finished products and the costs of the storage and disposal of wastewater. Also, U.S.

Superfund statutes may impose joint and several liability for the costs of remedial investigations and actions on the entities that generated waste, arranged for disposal of the wastes, transported to or selected the disposal sites and the past and present owners and operators of such sites. All such responsible parties (or any one of them, including Millennium and its joint ventures) may be required to bear all of such costs regardless of fault, the legality of the original disposal or ownership of the disposal site. In addition, similar environmental laws and regulations that have been or may be enacted in countries outside of the U.S. may impose similar liabilities and costs upon Millennium.

Millennium and its joint ventures have on-site solid-waste management units at several facilities. It is anticipated that corrective measures will be necessary to comply with federal and state requirements with respect to these facilities. Millennium and its joint ventures also have liabilities under the Resource Conservation and Recovery Act and various state and non-U.S. government regulations related to several current and former plant sites. Millennium and its joint ventures also are responsible for a portion of the remediation of certain off-site waste disposal facilities. Millennium and its joint ventures are contributing funds to the cleanup of several waste sites throughout the U.S. under the Comprehensive Environmental Response, Compensation and Liability Act ( CERCLA ) and the Superfund Amendments and Reauthorization Act of 1986, including the Kalamazoo River Superfund Site discussed below. Millennium and its joint ventures also have been named as potentially responsible parties at several other sites. Millennium's policy is to accrue remediation expenses when it is probable that such efforts will be required and the related expenses can be reasonably estimated. Estimated costs for future environmental compliance and remediation are necessarily imprecise due to such factors as the continuing evolution of environmental laws and regulatory requirements, the availability and application of technology, the identification of presently unknown remediation sites and the allocation of costs among the potentially responsible parties under applicable statutes. For further discussion regarding Millennium's and its joint ventures' environmental matters and related accruals (including those discussed in this risk factor), and environmentally-related capital expenditures, see also Item 1. Business Environmental Capital Expenditures, Item 3. Legal Proceedings Environmental Matters, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental Matters and Note 19 to the Consolidated Financial Statements. If actual expenditures exceed the amounts accrued, that could have an adverse effect on Millennium's and its joint ventures' results of operations and financial position.

**Kalamazoo River Superfund Site** A Millennium subsidiary has been identified as a Potential Responsible Party ( PRP ) with respect to the Kalamazoo River Superfund Site. The site involves cleanup of river sediments and floodplain soils contaminated with polychlorinated biphenyls, cleanup of former paper mill operations, and cleanup and closure of landfills associated with the former paper mill operations. Litigation concerning the matter commenced in December 1987 but was subsequently stayed and is being addressed under

## Table of Contents

### Index to Financial Statements

CERCLA. In 2000, the Kalamazoo River Study Group (the KRSG), of which the Millennium subsidiary and other PRPs are members, submitted to the State of Michigan a Draft Remedial Investigation and Draft Feasibility Study, which evaluated a number of remedial options for the river. The estimated costs for these remedial options ranged from \$0 to \$2.5 billion.

At the end of 2001, the U.S. Environmental Protection Agency (EPA) took lead responsibility for the river portion of the site at the request of the State of Michigan. In 2004, the EPA initiated a confidential process to facilitate discussions among the agency, the Millennium subsidiary, other PRPs, the Michigan Departments of Environmental Quality and Natural Resources, and certain federal natural resource trustees about the need for additional investigation activities and different possible approaches for addressing the contamination in and along the Kalamazoo River. These discussions are continuing.

As of December 31, 2005, the probable future remediation spending associated with the river cannot be determined with certainty. Although the KRSG study identified a broad range of remedial options, not all of those options would represent reasonably possible outcomes. Management does not believe that it can identify a single remedy among those options that would represent the highest-cost reasonably possible outcome. However, Millennium recognized a liability representing Millennium's interim allocation of 55% of the \$73 million total of estimated cost of bank stabilization, recommended as the preferred remedy in 2000 by the KRSG study, and of certain other costs. At December 31, 2005, the balance of this liability, net of related spending, was \$57 million.

In addition, Millennium recognized a liability primarily related to Millennium's estimated share of remediation costs for two former paper mill sites and associated landfills, which are also part of the Kalamazoo River Superfund Site. At December 31, 2005, the balance of the liability, net of related spending, was \$46 million. Although no final agreement has been reached as to the ultimate remedy for these locations, Millennium has begun remediation activity related to these sites.

Millennium's ultimate liability for the Kalamazoo River Superfund Site will depend on many factors that have not yet been determined, including the ultimate remedy selected, the determination of natural resource damages, the number and financial viability of the other PRPs, and the determination of the final allocation among the PRPs.

**Other Regulatory Requirements** In addition to the matters described above, Millennium and its joint ventures are subject to other material regulatory requirements, including those relating to the shipment or exportation of products. Although Millennium and its joint ventures have compliance programs and other processes intended to ensure compliance with all such regulations, Millennium and its joint ventures are subject to the risk that their compliance with such regulations could be challenged. Non-compliance with certain of these regulations could result in the incurrence of additional costs, penalties or assessments that could be significant.

*Proceedings related to the alleged exposure to lead-based paints and lead pigments could require Millennium to expend material amounts in litigation and settlement costs and judgments.*

Together with alleged past manufacturers of lead-based paint and lead pigments for use in paint, Millennium has been named as a defendant in various legal proceedings alleging personal injury, property damage, and remediation costs allegedly associated with the use of these products. The plaintiffs include individuals and governmental entities, and seek recovery under a variety of theories, including negligence, failure to warn, breach of warranty, conspiracy, market share liability, fraud, misrepresentation and nuisance. The majority of these legal proceedings assert unspecified monetary damages in excess of the statutory minimum and, in certain cases, equitable relief such as abatement of lead-based paint in

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

buildings. These legal proceedings are in various trial stages and post-dismissal settings, some of which are on appeal. One legal proceeding relating to lead pigment or paint was tried in 2002. On October 29, 2002, the judge in that case declared a mistrial after the jury declared itself deadlocked. The sole issue before the jury was whether lead pigment in paint in and on Rhode Island buildings constituted a public nuisance. The re-trial of this case began on November 1, 2005. On

**Table of Contents**

**Index to Financial Statements**

February 22, 2006, a jury returned a verdict in favor of the State of Rhode Island finding that the cumulative presence of lead pigments in paints and coatings on buildings in the state constitutes a public nuisance; that a Millennium subsidiary and other defendants either caused or substantially contributed to the creation of the public nuisance; and that those defendants, including the Millennium subsidiary, should be ordered to abate the public nuisance. On February 28, 2006, the judge held that the state could not proceed with its claim for punitive damages. As a result, the jury was discharged. There will be further proceedings by the judge to determine the scope of any abatement. Millennium is considering its options, including all appropriate appeals.

While Millennium believes that it has valid defenses to all the lead-based paint and lead pigment proceedings and is vigorously defending them, litigation is inherently subject to many uncertainties. Additional lead-based paint and lead pigment litigation may be filed against Millennium in the future asserting similar or different legal theories and seeking similar or different types of damages and relief, and any adverse court rulings or determinations of liability, among other factors, could affect this litigation by encouraging an increase in the number of future claims and proceedings. In addition, from time to time, legislation and administrative regulations have been enacted or proposed to impose obligations on present and former manufacturers of lead-based paint and lead pigment respecting asserted health concerns associated with such products or to overturn successful court decisions. Millennium is unable to predict the outcome of lead-based paint and lead pigment litigation, the number or nature of possible future claims and proceedings, and the effect that any legislation and/or administrative regulations may have on Millennium. In addition, Millennium cannot reasonably estimate the scope or amount of the costs and potential liabilities related to such litigation, or any such legislation and regulations. Thus, any liability Millennium incurs with respect to pending or future lead-based paint or lead pigment litigation, or any legislation or regulations could, to the extent not covered or reduced by insurance or other recoveries, have a material impact on Millennium's results of operations. In addition, Millennium has not accrued any liabilities for judgments or settlements against Millennium resulting from lead-based paint and lead pigment litigation. See Item 3. Legal Proceedings - Litigation Matters for additional discussion regarding lead-based paint and lead pigment litigation.

***Operating problems in the businesses of Millennium and its joint ventures may result in lower operating results.***

The occurrence of material operating problems at facilities owned by Millennium and its joint ventures, including, but not limited to, the events described below, may materially reduce the productivity and profitability of a particular manufacturing facility, or Millennium as a whole, during and after the period of such operational difficulties. Millennium's operating results are dependent on the continued operation of its and its joint ventures' various production facilities and the ability to complete construction and maintenance projects on schedule.

Although Millennium and its joint ventures take precautions to enhance the safety of their operations and minimize the risk of disruptions, their operations, along with the operations of other members of the chemical industry, are subject to hazards inherent in chemical manufacturing and the related storage and transportation of raw materials, products and wastes. These potential hazards include:

pipeline leaks and ruptures;

explosions;

fires;

severe weather and natural disasters;



mechanical failure;

unscheduled downtimes;

supplier disruptions;

labor difficulties;

**Table of Contents**

**Index to Financial Statements**

transportation interruptions;

remediation complications;

chemical spills;

discharges or releases of toxic or hazardous substances or gases;

storage tank leaks;

other environmental risks; and

terrorist acts.

Some of these hazards can cause personal injury and loss of life, severe damage to or destruction of property and equipment and environmental damage, and may result in suspension of operations and the imposition of civil or criminal penalties.

Furthermore, Millennium and its joint ventures also will continue to be subject to present and future claims with respect to workplace exposure, workers' compensation and other matters. Millennium and its joint ventures maintain property, business interruption and casualty insurance that they believe are in accordance with customary industry practices, but they are not fully insured against all potential hazards incident to their businesses, including losses resulting from natural disasters, war risks or terrorist acts. Changes in insurance market conditions have caused, and may in the future cause, premiums and deductibles for certain insurance policies to increase substantially and, in some instances, for certain insurance to become unavailable or available only for reduced amounts of coverage. If Millennium or its joint ventures were to incur a significant liability for which they were not fully insured, that company might not be able to finance the amount of the uninsured liability on terms acceptable to it or at all, and might be obligated to divert a significant portion of its cash flow from normal business operations.

***Conflicts of interest between Lyondell, Equistar and/or Millennium could be resolved in a manner that may be perceived to be adverse to Millennium and/or Equistar.***

Lyondell owns 70.5% of Equistar, and Millennium owns the remaining 29.5% of Equistar. As a result of Lyondell's November 30, 2004 acquisition of Millennium, Millennium and Equistar are wholly owned subsidiaries of Lyondell. All executive officers of Millennium and Equistar and all members of Equistar's Partnership Governance Committee and Millennium's Board of Directors also serve as officers of Lyondell. Conflicts of interest may arise between Lyondell, Equistar and/or Millennium when decisions arise that could have different implications for Lyondell, Equistar and/or Millennium. Their respective debt agreements generally require related party transactions to be on an arm's-length basis; however, because Lyondell owns both Millennium and Equistar, conflicts of interest could be resolved in a manner that may be perceived to be adverse to Millennium and/or Equistar.

*Millennium and Equistar depend to a significant degree on Lyondell for the administration of their businesses, and Equistar has product supply arrangements with its owners and other related parties. If those parties do not fulfill their obligations under the arrangements, Millennium's and/or Equistar's revenues, margins and cash flow could be adversely affected.*

Lyondell and Equistar and parties related to them have various agreements and transactions with Millennium. For example, Millennium is party to shared services, loaned employee and operating arrangements with Lyondell and Equistar pursuant to which Lyondell, Equistar and Millennium provide many administrative and operating services to each other. For example, Lyondell provides to Millennium and Equistar services that are essential to the administration and management of Millennium's and Equistar's businesses, which from time to time may include information technology, human resources, sales and marketing, raw material supply, supply chain, health, safety and environmental, engineering, research and development, facility services, legal,

**Table of Contents**

**Index to Financial Statements**

accounting, treasury, internal audit and tax services. Accordingly, Millennium and Equistar depend to a significant degree on Lyondell for the administration of their businesses. If Lyondell did not fulfill its obligations under the shared services arrangement, it would disrupt Millennium's and Equistar's businesses and could have a material adverse effect on their businesses and results of operations. In addition, Equistar has product supply agreements with Lyondell and Millennium and various other related parties pursuant to which Equistar sells a substantial amount of its products. Equistar expects to continue to derive a significant portion of its business from transactions with these parties. If they are unable or otherwise cease to purchase Equistar's products, Equistar's revenues and margins and, therefore, Millennium's cash flow could be adversely affected.

*Millennium pursues acquisitions, dispositions and joint ventures, which may not yield the expected benefits.*

Millennium may purchase or sell assets or enter into contractual arrangements or joint ventures in an effort to generate value. To the extent permitted under Millennium's credit facility and other debt agreements, some of these transactions may be financed with additional borrowings by Millennium or its joint ventures. Although these transactions may be expected to yield longer-term benefits if the expected efficiencies and synergies of the transactions are realized, they could reduce the operating results of Millennium or its joint ventures in the short term because of the costs associated with such transactions or the benefits of a transaction may not be realized to the extent anticipated. Other transactions may advance future cash flows from some of Millennium's or its joint ventures' businesses, thereby yielding increased short-term liquidity, but consequently resulting in lower cash flows from these operations over the longer term.

**Risks Relating to Debt**

*Millennium's consolidated balance sheet is highly leveraged and Millennium's business and future prospects may be limited by its significant amount of debt and other financial obligations.*

Millennium's consolidated balance sheet is highly leveraged. Millennium's total consolidated debt was approximately \$1.1 billion at December 31, 2005, which is substantially all of its capitalization. In addition, Millennium has contractual commitments and ongoing pension and post-retirement benefit obligations described in Contractual and Other Obligations under Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations that will require cash contributions in 2006 and beyond.

Millennium's level of debt and other obligations could have significant adverse consequences on its business and future prospects, including the following:

Millennium may not be able to obtain financing in the future for working capital, capital expenditures, acquisitions, debt service requirements or other purposes;

less leveraged competitors could have a competitive advantage because they have greater flexibility to utilize their cash flow to improve their operations; and

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

in the event of poor business conditions, Millennium may be less able to take advantage of significant business opportunities and to react to changes in market or industry conditions than its competitors.

See the **Liquidity and Capital Resources** section in **Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations** for discussion regarding Millennium's ability to pay or refinance its debt.

*Millennium and Equistar each require a significant amount of cash to service their indebtedness, and the ability of each of them to generate cash depends on many factors beyond their control.*

Due to debt covenant limitations on transferring cash between the entities discussed below in this **Item 1A. Risk Factors**, the ability of each of Millennium and Equistar to make payments on and to refinance its respective

**Table of Contents****Index to Financial Statements**

indebtedness may depend solely upon its individual ability to generate cash. Each of Millennium and Equistar is separately responsible for its respective outstanding debt (except that \$300 million of Equistar's debt is guaranteed by Lyondell). The businesses of each of Millennium and Equistar may not generate sufficient cash flow from operations to meet their respective debt service obligations, future borrowings may not be available under current or future credit facilities of each entity in an amount sufficient to enable each of them to pay their respective indebtedness at or before maturity, and each entity may not be able to refinance its respective indebtedness on reasonable terms, if at all. Factors beyond the control of Millennium and Equistar affect the ability of each of them to make these payments and refinancings. These factors include those discussed elsewhere in this Item 1A. Risk Factors section and those listed in the Forward-Looking Statements section of this Annual Report on Form 10-K.

Further, the ability of Millennium and Equistar to fund capital expenditures and working capital depends on the ability of each entity to generate cash and depends on the availability of funds under lines of credit and other liquidity facilities. If, in the future, sufficient cash is not generated from their respective operations to meet their respective debt service obligations and sufficient funds are not available under lines of credit or other liquidity facilities, Millennium and Equistar each may need to reduce or delay non-essential expenditures, such as capital expenditures and research and development efforts. In addition, Millennium and Equistar may need to refinance debt, obtain additional financing or sell assets, which they may not be able to do on reasonable terms, if at all.

***Debt and other agreements restrict Millennium's and Equistar's ability to take certain actions and require the maintenance of certain financial ratios; failure to comply with these requirements could result in acceleration of debt.***

**Millennium's Debt** Millennium has a U.S. and an Australian revolving credit facility, an Australian term loan facility and a U.K. revolving credit facility. Millennium's facilities and its indentures contain covenants that, subject to exceptions, restrict, among other things, distributions, debt incurrence, lien incurrence, investments, sale and leaseback transactions, certain other payments, sales of assets, affiliate transactions, mergers, domestic accounts receivable securitization transactions, restrictive agreements and issuances of redeemable stock and preferred stock. Pursuant to these provisions, Millennium is prohibited from making restricted payments, including paying certain dividends. Other than the U.K. facility, Millennium's facilities also contain covenants that require the maintenance of specified financial ratios: (1) the Leverage Ratio (as defined) is required to be less than 4.50 to 1 and (2) the Interest Coverage Ratio (as defined) for any period of four consecutive fiscal quarters is required to be equal to or greater than (a) 1.75 to 1 for any such period ending before September 30, 2006, and (b) 2.25 to 1 for any such period ending on or after September 30, 2006. Millennium's U.K. facility does not require the maintenance of specified financial ratios as long as certain conditions are met.

**Equistar's Debt and Accounts Receivable Facility** Equistar has an inventory-based revolving credit facility and an accounts receivable sales facility. Both of these facilities and Equistar's indentures contain covenants that, subject to exceptions, restrict, among other things, lien incurrence, debt incurrence, sales of assets, investments, capital expenditures, certain other payments, affiliate transactions, restrictive agreements and mergers. Equistar's credit facility does not require the maintenance of specified financial ratios as long as certain conditions are met. Some of Equistar's indentures require additional interest payments to note holders if Equistar makes distributions when Equistar's Fixed Charge Coverage Ratio (as defined) is less than 1.75 to 1. Equistar met this ratio as of December 31, 2005.

**Effects of a Breach** A breach by Millennium or Equistar of any of the covenants or other requirements in their respective debt instruments could (1) permit their respective note holders or lenders to declare the outstanding debt under the breached debt instrument due and payable, (2) permit the lenders under their respective credit facilities to terminate future lending commitments and (3) permit acceleration of the breaching entity's other debt instruments that contain cross-default or cross-acceleration provisions. The respective debt agreements of Millennium and Equistar contain various event of default and cross-default provisions. In particular, certain of the debt agreements include event of default provisions that, under certain circumstances,



---

**Table of Contents**

**Index to Financial Statements**

may be triggered in connection with judgments against the relevant entity unless discharged, stayed or bonded within a specified time period. It is not likely that Millennium or Equistar, as the case may be, would have, or be able to obtain, sufficient funds to make these accelerated payments. In that event, the breaching entity's lenders could proceed against any assets that secure their debt. Similarly, the breach by Equistar of covenants in its accounts receivable sales facility would permit the counterparties under their respective facilities to terminate further purchases of interests in accounts receivable and to receive all collections from previously sold interests until they had collected on their interests in those receivables, thus reducing Equistar's or Millennium's liquidity, respectively.

***Debt covenants limit transfers of cash between Lyondell, Millennium and Equistar.***

Although Equistar and Millennium are wholly owned subsidiaries of Lyondell, debt covenants limit the ability to transfer cash among Lyondell, Equistar and Millennium. For example, Lyondell's indentures contain a covenant that prohibits it from making investments in subsidiaries and joint ventures that are not restricted subsidiaries as defined in the indentures, subject to limited exceptions. Neither Millennium nor Equistar currently is a restricted subsidiary. Lyondell's credit facility also contains a covenant that places limitations on its ability to make investments in joint ventures. Millennium's flexibility to make investments in Equistar also is limited by its debt covenants. As a result, Lyondell's cash flow may not be available to fund cash needs of Millennium, and the cash flow of Lyondell and Millennium may not be available to fund cash needs of Equistar, such as servicing debt or paying capital expenditures.

Some of Equistar's indentures require additional interest payments to the note holders if Equistar makes distributions when Equistar does not meet a specified fixed charge coverage ratio. Equistar met this ratio as of December 31, 2005. In addition, Equistar's credit facility prohibits the payment of distributions during any default under the facility. These provisions may deter or limit the movement of cash from Equistar to Lyondell and Millennium.

Applicable laws may also limit the amounts Equistar is permitted to pay as distributions to Lyondell and Millennium. The ability of Equistar to distribute cash to Lyondell and Millennium, and the ability of Lyondell to make cash investments in Millennium, also is dependent upon their economic performance, which is dependent on a variety of factors, including factors described elsewhere in this Item 1A. Risks Factors section.

**FORWARD-LOOKING STATEMENTS**

Certain of the statements contained in this report are forward-looking statements within the meaning of the federal securities laws. Forward-looking statements can be identified by words such as estimate, believe, expect, anticipate, plan, budget or other words that convey uncertainty of future events or outcomes. Many of these forward-looking statements have been based on expectations and assumptions about future events that may prove to be inaccurate. While management considers these expectations and assumptions to be reasonable, they are inherently subject to significant business, economic, competitive, regulatory and other risks, contingencies and uncertainties, most of which are difficult to predict and many of which are beyond Millennium's control. Millennium's or its joint ventures' actual results could differ materially from those anticipated in these forward-looking statements as a result of certain factors, including but not limited to:

the availability, cost and price volatility of raw materials and utilities,



## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

the supply/demand balances for Millennium's and its joint ventures' products, and the related effects of industry production capacities and operating rates,

the cyclical nature of the chemical industry,

operating interruptions (including leaks, explosions, fires, weather-related incidents, mechanical failure, unscheduled downtime, supplier disruptions, labor difficulties, transportation interruptions, spills and releases and other environmental risks),

**Table of Contents**

**Index to Financial Statements**

uncertainties associated with the U.S. and worldwide economies, including those due to political tensions in the Middle East and elsewhere,

current and potential governmental regulatory actions in the U.S. and in other countries,

terrorist acts and international political unrest,

competitive products and pricing pressures,

risks of doing business outside the U.S., including foreign currency fluctuations,

legal, tax and environmental proceedings,

access to capital markets,

technological developments, and

Millennium's ability to implement its business strategies.

Any of these factors, or a combination of these factors, could materially affect Millennium's or its joint ventures' future results of operations and the ultimate accuracy of the forward-looking statements. These forward-looking statements are not guarantees of Millennium's or its joint ventures' future performance, and Millennium's or its joint ventures' actual results and future developments may differ materially from those projected in the forward-looking statements. Management cautions against putting undue reliance on forward-looking statements or projecting any future results based on such statements or present or prior earnings levels.

All forward-looking statements in this Form 10-K are qualified in their entirety by the cautionary statements contained in this section and elsewhere in this report. See Item 1. Business, Item 1A. Risk Factors, Item 3. Legal Proceedings, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 7A. Disclosure of Market Risk for additional information about factors that may affect the businesses and operating results of Millennium and its joint ventures. These factors are not necessarily all of the important factors that could affect Millennium and its joint ventures. Use caution and common sense when considering these forward-looking statements. Millennium does not intend to update these statements unless securities laws require it to do so.

In addition, this report contains summaries of contracts and other documents. These summaries may not contain all of the information that is important to an investor, and reference is made to the actual contract or document for a more complete understanding of the contract or document involved.

**INDUSTRY AND OTHER INFORMATION**

The data included or incorporated by reference in this report regarding the chemical industry, product capacity and ranking, including Millennium's and Equistar's respective capacity positions, the capacity positions of their competitors for certain products and expected rates of demand, is based on independent industry publications, reports from government agencies or other published industry sources and estimates of Millennium and/or Equistar. These estimates are based on information obtained from Millennium's and/or Equistar's customers, distributors, suppliers, trade and business organizations and other contacts in the markets in which Millennium and Equistar operate and managements knowledge and experience. These estimates involve risks and uncertainties and are subject to change based on various factors, including those discussed under Item 1A. Risk Factors and Forward-Looking Statements.

#### **NON-GAAP FINANCIAL MEASURES**

The body of generally accepted accounting principles is commonly referred to as GAAP. For this purpose, a non-GAAP financial measure is generally defined by the Securities and Exchange Commission as one that purports to measure historical or future financial performance, financial position or cash flows but excludes or

**Table of Contents****Index to Financial Statements**

includes amounts that would not be so adjusted in the most comparable U.S. GAAP measure. From time to time Millennium discloses so-called non-GAAP financial measures, primarily EBITDA, or earnings before interest, taxes, depreciation and amortization of long-lived assets. The non-GAAP financial measures described herein or in other documents issued by Millennium are not a substitute for the GAAP measures of earnings, for which management has responsibility.

Millennium sometimes uses EBITDA in its communications with investors, financial analysts and the public. This is because EBITDA is perceived as a useful and comparable measure of operating performance and the contribution of operations to liquidity. For example, interest expense is dependent on the capital structure and credit rating of a company. However, debt levels, credit ratings and, therefore, the impact of interest expense on earnings vary in significance between companies. Similarly, the tax positions of individual companies can vary because of their differing abilities to take advantage of tax benefits, with the result that their effective tax rates and tax expense can vary considerably. Finally, companies differ in the age and method of acquisition of productive assets, and thus the relative costs of those assets, as well as in the depreciation (straight-line, accelerated, units of production) method, which can result in considerable variability in depreciation and amortization expense between companies. Thus, for comparison purposes, management believes that EBITDA can be useful as an objective and comparable measure of operating profitability and the contribution of operations to liquidity because it excludes these elements of earnings that do not provide information about the current operations of existing assets. Accordingly, management believes that disclosure of EBITDA can provide useful information to investors, financial analysts and the public in their evaluation of companies' operating performance and the contribution of operations to liquidity.

Millennium also sometimes reports adjusted net income (loss) or adjusted EBITDA, excluding specified items that are unusual in nature or are not comparable from period to period and that are included in GAAP measures of earnings. Management believes that excluding these items may help investors compare operating performance between two periods. Such adjusted data is always reported with an explanation of the items that are excluded.

**Item 2. Properties****Principal Manufacturing Facilities and Mine**

The principal manufacturing facilities and mine are set forth below, and are identified by the principal segment or segments using the facility or mine. The facilities producing fragrance and flavors chemicals also are identified below. The facilities and mine are wholly owned, except as otherwise noted below.

**Location*****Inorganic Chemicals Segment***

Ashtabula, Ohio (a) \*  
 Baltimore, Maryland (Hawkins Point)  
 Baltimore, Maryland (St. Helena)  
 Bunbury, Western Australia (b)\*  
 Le Havre, France (c)  
 Mataraca, Paraiba, Brazil (mine) (d)\*

**Principal Products**

TiO<sub>2</sub> and TiCl<sub>4</sub>  
 TiO<sub>2</sub>  
 Silica gel  
 TiO<sub>2</sub>  
 TiO<sub>2</sub>  
 Ilmenite (generally consumed in the Salvador TiO<sub>2</sub> plant), zircon and natural rutile titanium ore

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Salvador, Bahia, Brazil (d)  
Stallingborough, United Kingdom \*  
Thann, France

TiO<sub>2</sub>  
TiO<sub>2</sub>  
TiO<sub>2</sub>, TiCl<sub>4</sub> and ultra-fine TiO<sub>2</sub>

***Ethylene, Co-Products and Derivatives Segment***

Bayport (Pasadena), Texas  
Bayport (Pasadena), Texas (e)  
Beaumont, Texas (f)

EO, EG and other EO Derivatives  
LDPE  
EG

**Table of Contents****Index to Financial Statements**

<b><u>Location</u></b>	<b><u>Principal Products</u></b>
Channelview, Texas (g)	Ethylene, Propylene, Butadiene, Benzene, Toluene, Alkylate and MTBE
Chocolate Bayou, Texas (h)(c)	Ethylene, Propylene, Butadiene, Benzene, Toluene and MTBE
Chocolate Bayou, Texas (h)	HDPE
Clinton, Iowa	Ethylene, Propylene, LDPE and HDPE
Corpus Christi, Texas	Ethylene, Propylene, Butadiene and Benzene
Fairport Harbor, Ohio (i)	Performance polymers
Lake Charles, Louisiana (j)	Ethylene and Propylene
La Porte, Texas	Ethylene, Propylene, LDPE and LLDPE
La Porte, Texas	VAM and Acetic Acid
La Porte, Texas (k)	Methanol
Matagorda, Texas	HDPE
Morris, Illinois	Ethylene, Propylene, LDPE, LLDPE and Polypropylene
Newark, New Jersey	Denatured Alcohol
Tuscola, Illinois	Ethanol
Victoria, Texas (c)	HDPE
<b><i>Other Chemicals</i></b>	
Brunswick, Georgia	Fragrance and Flavor Chemicals
Jacksonville, Florida	Fragrance and Flavor Chemicals

Facilities which received the OSHA Star Certification, which is the highest safety designation issued by the U.S. Department of Labor.

- \* Facilities which received ISO 14001 Certification of their environmental management systems.
- (a) There are two manufacturing plants at Ashtabula, Ohio.
- (b) The Bunbury site includes the Kemerton plant and the Australind plant. The plants are not on contiguous property.
- (c) The facility is located on leased land.
- (d) Unrelated equity investors hold a minority ownership interest in Millennium's Brazilian subsidiary that owns the facility.
- (e) The facility is located on leased land. The facility is owned by Equistar and operated by an unrelated party.
- (f) The Beaumont facility is owned by PD Glycol, a partnership owned 50% by Equistar and 50% by an unrelated party.
- (g) The Channelview facility has two ethylene processing units owned by Equistar. An unrelated party owns an idled facility at the site on land leased from Equistar. Equistar also operates a styrene maleic anhydride unit and a polybutadiene unit, which are owned by an unrelated party and are located on property leased from Equistar within the Channelview facility.
- (h) Millennium and Occidental each contributed to Equistar a facility located at the Chocolate Bayou site. These facilities are not on contiguous property.
- (i) The building and land are leased.
- (j) The Lake Charles facility has been idled since the first quarter of 2001, pending sustained improvement in market conditions. The facility and land are leased from Occidental under a lease that expires in May 2006. If the Lake Charles lease terminates, Occidental will either (1) allow Lyondell or, at Lyondell's election, Equistar to acquire, operate or receive the benefit of operating the Lake Charles facility, (2) pay Lyondell \$75 million in cash or (3) transfer or pay to Lyondell 5.4 million shares of Lyondell common stock or the sale proceeds from 5.4 million shares of Lyondell common stock or a combination of both if the value is greater than \$75 million. The parties are investigating alternatives to the facility and land.
- (k) The facility is owned by La Porte Methanol Company, a partnership owned 15% by an unrelated party.

## **Table of Contents**

### **Index to Financial Statements**

#### **Other Locations and Properties**

**Millennium** Millennium leases warehouses, offices and its research facility in Maryland. Lyondell provides office space to Millennium in Greenville, Delaware as part of a shared services arrangement. Millennium also has barge docking facilities and related equipment for loading and unloading raw materials and products. Millennium owns or leases railcars for use in its businesses.

**Equistar** Equistar owns storage capacity for up to approximately 13 million barrels of NGLs, ethylene, propylene and other hydrocarbons in caverns within a salt dome in Mont Belvieu, Texas. There are an additional approximately three million barrels of ethylene and propylene storage with related brine facilities operated by Equistar on leased property in Markham, Texas.

Equistar uses an extensive pipeline system, some of which it owns and some of which it leases, extending from Corpus Christi to Mont Belvieu to Port Arthur and around the Lake Charles area. Equistar owns other pipelines in connection with its Chocolate Bayou, Corpus Christi, La Porte, Matagorda and Victoria facilities. Equistar uses a pipeline owned and operated by an unaffiliated party to transport ethylene from its Morris facility to its Tuscola facility. Equistar owns and leases several pipelines connecting the Channelview facility, the LCR refinery and the Mont Belvieu storage facility, which are used to transport raw materials, butylenes, hydrogen, butane, MTBE and unfinished gasolines. Equistar also has barge docking facilities and related terminal equipment for loading and unloading raw materials and products. Equistar owns or leases railcars for use in its businesses.

Lyondell provides office space to Equistar for its executive offices in downtown Houston, Texas as part of a shared services arrangement. In addition, Equistar owns facilities that house its research operations. Equistar also leases various sales facilities and storage facilities, primarily in the Gulf Coast area, for the handling of products.

#### **Item 3. *Legal Proceedings***

##### **Litigation Matters**

Millennium and its joint ventures are, from time to time, defendants in lawsuits, some of which are not covered by insurance. Many of these suits make no specific claim for relief. Although final determination of legal liability and the resulting financial impact with respect to any such litigation cannot be ascertained with any degree of certainty, Millennium does not believe that any ultimate uninsured liability resulting from the legal proceedings in which it or its joint ventures currently are involved (directly or indirectly) will individually, or in the aggregate, have a material adverse effect on the business or financial position of Millennium. However, the adverse resolution in any reporting period of one or more of these suits could have a material impact on Millennium's results of operations for that period, which may be mitigated by contribution or indemnification obligations of co-defendants or others, or by any insurance coverage that may be available.

Although Millennium and its joint ventures are involved in numerous and varied legal proceedings, a significant portion of their outstanding litigation arose in five contexts: (1) claims for personal injury or death allegedly arising out of exposure to the products produced by or located on the premises of the respective entities; (2) claims for personal injury or death, and/or property damage allegedly arising out of the generation and disposal of chemical wastes at Superfund and other waste disposal sites; (3) claims for personal injury, property damage and/or air, noise

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

and water pollution allegedly arising out of operations; (4) employment and benefits related claims; and (5) commercial disputes.

Millennium has received requests from the staff of the Northeast Regional Office of the Securities and Exchange Commission for the voluntary production of documents in connection with an informal inquiry into the previously disclosed restatement of Millennium's financial statements for the years 1998 through 2002 and for the first quarter of 2003. Millennium is complying with all such requests received.



---

**Table of Contents**

**Index to Financial Statements**

Together with alleged past manufacturers of lead-based paint and lead pigments for use in paint, Millennium has been named as a defendant in various legal proceedings alleging personal injury, property damage, and remediation costs allegedly associated with the use of these products. The plaintiffs include individuals and governmental entities, and seek recovery under a variety of theories, including negligence, failure to warn, breach of warranty, conspiracy, market share liability, fraud, misrepresentation and nuisance. The majority of these legal proceedings assert unspecified monetary damages in excess of the statutory minimum and, in certain cases, equitable relief such as abatement of lead-based paint in buildings. Legal proceedings relating to lead pigment or paint are in various trial stages and post-dismissal settings, some of which are on appeal.

Millennium's defense costs to date for lead-based paint and lead pigment litigation largely have been covered by insurance. Millennium has not accrued any liabilities for any lead-based paint and lead pigment litigation. Millennium has insurance policies that potentially provide approximately \$1 billion in indemnity coverage for lead-based paint and lead pigment litigation. Millennium's ability to collect under the indemnity coverage would depend upon, among other things, the resolution of certain potential coverage defenses that the insurers are likely to assert and the solvency of the various insurance carriers that are part of the coverage block at the time of such a request. As a result of insurance coverage litigation initiated by Millennium, an Ohio trial court issued a decision in 2002 effectively requiring certain insurance carriers to resume paying defense costs in the lead-based paint and lead pigment cases. Indemnity coverage was not at issue in the Ohio court's decision. On February 23, 2006, certain Lloyd's, London insurance underwriters filed a declaratory judgment action in the Supreme Court of the State of New York against several of their policyholders, including Millennium, contesting their responsibility to provide insurance coverage for all of the lead-based paint and lead pigment cases, including the Rhode Island case discussed below. In response to this New York action, on March 7, 2006, Millennium filed an amended complaint in the Ohio case referenced above that revived its Ohio state court litigation, seeking, among other relief, a declaratory judgment as to the responsibility of all of its insurance carriers for any judgments or settlements in connection with any lead-based paint and lead pigment litigation involving Millennium. In addition, on March 14, 2006, Millennium filed a motion to dismiss the New York case referenced above in favor of the pre-existing Ohio action. The insurance carriers have in the past and may in the future attempt to deny indemnity coverage if there is ever a settlement or a final, non-appealable adverse judgment in any lead-based paint or lead pigment case.

After owning the Glidden Paints business for six months, in 1986, a predecessor of a current subsidiary of Millennium sold, through a stock sale, its Glidden Paints business. As part of that sale, the seller and purchaser agreed to provide indemnification to each other against certain claims made during the first eight years after the sale, and the purchaser agreed to fully indemnify the seller against such claims made after the eight-year period. With the exception of two cases described below, all pending lead-based paint and lead pigment litigation involving Millennium, including the Rhode Island case, was filed after the eight-year period. Accordingly, Millennium believes that it is entitled to full indemnification from the purchaser against lead-based paint and lead pigment cases filed after the eight-year period. The purchaser disputes that it has such an indemnification obligation, and claims that the seller must indemnify it. To date, Millennium's defense costs largely have been covered by insurance. As Millennium has not paid either a settlement or any judgment, its indemnification claims have not been finally resolved. The only two remaining cases originally filed within the eight-year period following the 1986 sale of the Glidden Paints business include as parties a current Millennium subsidiary and an alleged predecessor company. In the first of these two cases, *The City of New York et al. v. Lead Industries Association, Inc., et al.*, which commenced in the Supreme Court of the State of New York on June 8, 1989, the New York City Housing Authority brought an action relating to tens of thousands of public housing units. All claims in that case have been dropped except for those relating to two housing projects. The other remaining case, *Jackson, et al. v. The Glidden Co., et al.*, which commenced in the Court of Common Pleas, Cuyahoga County, Ohio, on August 12, 1992, includes two minors as plaintiffs, and was dismissed by summary judgment on January 20, 2006.

Millennium believes that it has valid defenses to all pending lead-based paint and lead pigment proceedings and is vigorously defending them. However, litigation is inherently subject to many uncertainties. Additional

---

**Table of Contents**

**Index to Financial Statements**

lead-based paint and lead pigment litigation may be filed against Millennium in the future asserting similar or different legal theories and seeking similar or different types of damages and relief, and any adverse court rulings or determinations of liability, among other factors, could affect the litigation by encouraging an increase in the number of future claims and proceedings. In addition, from time to time, legislation and administrative regulations have been enacted or proposed to impose obligations on present and former manufacturers of lead-based paint and lead pigment respecting asserted health concerns associated with such products or to overturn successful court decisions. Millennium is unable to predict the outcome of lead-based paint and lead pigment litigation, the number or nature of possible future claims and proceedings, or the effect that any legislation and/or administrative regulations may have on Millennium. In addition, management cannot reasonably estimate the scope or amount of the costs and potential liabilities related to such litigation, or any such legislation and regulations. Accordingly, Millennium has not accrued any amounts for such litigation.

Legal proceedings related to lead-based paint and lead pigments are described below in groups pursuant to their general procedural posture:

On October 29, 2002, after a trial in which the jury deadlocked, the court in *State of Rhode Island v. Lead Industries Association, Inc., et al.* (which commenced in the Superior Court of Providence, Rhode Island, on October 13, 1999) declared a mistrial. The sole issue before the jury was whether lead pigment in paint in and on public and private Rhode Island buildings constituted a public nuisance. The new trial in this case began on November 1, 2005. On February 22, 2006, a jury returned a verdict in favor of the State of Rhode Island finding that the cumulative presence of lead pigments in paints and coatings on buildings in the state constitutes a public nuisance; that a Millennium subsidiary and other defendants either caused or substantially contributed to the creation of the public nuisance; and that those defendants, including the Millennium subsidiary, should be ordered to abate the public nuisance. On February 28, 2006, the judge held that the state could not proceed with its claim for punitive damages. As a result, the jury was discharged. There will be further proceedings by the judge to determine the scope of any abatement. Millennium is considering its options, including all appropriate appeals.

*Pre-Trial Cases*

Pending legal proceedings relating to lead pigment or paint in various pre-trial stages are as follows: *The City of New York et al. v. Lead Industries Association, Inc., et al.*, commenced in the Supreme Court of the State of New York on June 8, 1989; *Mark Ludwigsen Walters v. NL Industries, Inc., et al.*, commenced on July 18, 2002, in the Supreme Court, County of Kings, New York; *McCloud v. Millennium Inorganic Chemicals Inc.*, commenced in the Circuit Court for St. Louis City, Missouri, on August 27, 2005; *Angel T. Evans, et al. v. Atlantic Richfield Company, et al.*, commenced in the Milwaukee County, Wisconsin, Circuit Court on October 19, 2005; *Hurkmans v. Salczenko, et al.*, commenced in Marinette County, Wisconsin Circuit Court on November 23, 2005; *Hardison v. Millennium Holdings LLC, et al.*, commenced in the Milwaukee County, Wisconsin, Circuit Court on January 17, 2006; *Roy Lee Merrick v. Phillips Building Supply of Laurel, et al.*, commenced in the Circuit Court of Jones County, Mississippi on January 14, 2002. Although the claims of co-plaintiffs were dismissed without prejudice, Merrick's claims were transferred to the Circuit Court of Claiborne County, Mississippi in January 2005; and *Sifuentes v. Millennium Holdings LLC, et al.*, commenced in the Circuit Court for Milwaukee County on January 10, 2006.

*Dismissed Cases*

Legal proceedings relating to lead pigment or paint which have been dismissed are as follows: *Will T. Turner v. Sherwin-Williams Company, et al.*, commenced in the Circuit Court of Jefferson County, Mississippi on December 30, 2002, and was dismissed without prejudice on March 16, 2005. *William Russell, et al. v. NL Industries, et al.*, commenced in the Circuit Court of LeFlore County, Mississippi on December 30, 2002, and was dismissed by summary judgment on May 6, 2005. *John Henry Sweeney v. The Sherwin Williams Co., et al.*, commenced in the Circuit Court of Hinds County, Mississippi on December 30, 2002, and was dismissed without



**Table of Contents**

**Index to Financial Statements**

prejudice on June 30, 2005. *Herman Frederick Jackson, Billye Raye Ishee, Gaiey Ducksworth, Jr. and Roy Lee Merrick v. Phillips Building Supply of Laurel, et al.*, commenced in the Circuit Court of Jones County, Mississippi on January 14, 2002. Claims of all plaintiffs except Roy Lee Merrick were dismissed without prejudice. Merrick's claims were transferred to the Circuit Court of Claiborne County, Mississippi in January 2005. *City of Chicago v. American Cyanamid Company, et al.*, commenced on September 5, 2002, in the Circuit Court, Cook County, Illinois and the court entered summary judgment on behalf of all defendants. Plaintiffs filed a notice of appeal, and on May 25, 2005, the Illinois Supreme Court denied the City of Chicago's petition for leave to appeal.

On June 24, 2004, the Texas Court of Appeals affirmed the trial court's order granting the defense motion for summary judgment in *Spring Branch Independent School District v. NL Industries, Inc.* Millennium has received plaintiffs' notices of non-suit for the following cases which had been held in abeyance pending resolution of the *Spring Branch Independent School District* appeal: *Houston Independent School District v. Lead Industries Association, et al.*, commenced in the District Court of Harris County, Texas, on June 30, 2000 and notice of non-suit received in March 2005; *Harris County v. Lead Industries Association, et al.*, commenced in the District Court of Harris County, Texas, on April 23, 2001 and notice of non-suit received in May 2005; *Liberty Independent School District v. Lead Industries Association, et al.*, commenced in the District Court of Liberty County, Texas, on January 22, 2002 and notice of non-suit received in July 2005; and *Brownsville Independent School District v. Lead Industries Association, Inc., et al.*, filed on May 28, 2002, in the District Court, Cameron County, Texas and notice of non-suit filed on November 1, 2005.

*Dismissed Cases But Pending Appeal*

Legal proceedings relating to lead pigment or paint dismissed after motions to dismiss or for summary judgment were granted by the court in favor of the defendants, but pending appeal are as follows: On February 7, 2005, the Circuit Court, Cook County, Illinois granted the defendants motion for summary judgment in *Mary Lewis, Tashwan Banks and Jacqueline Nye v. Lead Industries Association, Inc., et al.*, which case was filed on March 14, 2002. On March 11, 2005, the plaintiffs filed a motion for reconsideration of the order granting summary judgment to the defendants and, on March 15, 2005, the plaintiffs served a motion for leave to file a third amended complaint. On March 18, 2005, both motions were denied. On March 23, 2005, the plaintiffs filed a notice of appeal, which was argued before the Illinois Appellate Court on January 11, 2006. On February 1, 2006, the Illinois Court of Appeals reversed the trial court's decision and remanded the case to the trial court for further proceedings. On February 21, 2006, defendants filed a joint affidavit of intent to petition for leave to appeal. In *The County of Santa Clara, a political subdivision of the State of California, individually and on behalf of all those similarly situated v. Atlantic Richfield et al.*, commenced in the Santa Clara County, California, Superior Court on March 23, 2000, the court entered summary judgment on behalf of all defendants, and plaintiffs filed an appeal. Plaintiffs' appeal was argued before the California Court of Appeals on December 6, 2005. On March 3, 2006, the California Court of Appeals reversed portions of the Superior Court's decision and reinstated the plaintiffs' claims alleging public nuisance, strict liability, negligence and fraud. The Court of Appeals affirmed the dismissal of plaintiffs' claims for unfair business practices and the denial of plaintiffs' motion to amend the complaint to include a trespass claim. *City of St. Louis v. Lead Industries Association, Inc., et al.*, commenced in the St. Louis, Missouri, Circuit Court on January 25, 2000, and was dismissed by summary judgment on January 18, 2006. The City filed a notice of appeal on January 24, 2006. *Jackson, et al. v. The Glidden Co., et al.*, commenced in the Court of Common Pleas, Cuyahoga County, Ohio, on August 12, 1992, and was dismissed by summary judgment on January 20, 2006. Plaintiffs have filed a notice of appeal.

*Other Pending Cases*

Other pending legal proceedings relating to lead pigment or paint are as follow: *Steven Thomas, et al. v. Lead Industries Association, Inc., et al.*, commenced in the Milwaukee County, Wisconsin, Circuit Court on September 10, 1999. On July 15, 2005, the Wisconsin Supreme Court in *Steven Thomas, et al.* reversed the trial



---

**Table of Contents**

**Index to Financial Statements**

and appellate courts and ruled that the plaintiff could proceed against the defendants on a risk-contribution theory. The court affirmed the lower courts' decisions dismissing the plaintiff's claims of civil conspiracy and enterprise liability. *In Re Lead Paint Litigation* was consolidated on February 11, 2002, in the Superior Court of New Jersey, Law Division: Middlesex County, Case Code 702. On August 17, 2005, the Superior Court of New Jersey, Appellate Division upheld the lower court's dismissal of plaintiffs' claims except for the public nuisance claim. On September 16, 2005, Millennium and the other defendants filed a joint petition to the New Jersey Supreme Court seeking review of the Appellate Division's decision regarding the public nuisance claim, and the petition was granted on November 18, 2005.

*Reginald Smith, et al. v. Lead Industries Association, Inc., et al.*, commenced in the Baltimore City, Maryland, Circuit Court on September 29, 1999, and on April 4, 2005, the Maryland Court of Appeals dismissed the plaintiffs' appeal. The *Reginald Smith* case was remanded to the lower court for further proceedings. On February 6, 2006, the Circuit Court granted the Smith family plaintiffs' motion to sever their claims, severed the claims against bankrupt defendants, and issued a stay as to the remaining plaintiffs' claims against defendants.

*Cases Not Formally Served On Millennium*

Legal proceedings relating to lead pigment or paint that have been filed with a court, are pending, but have yet to be formally served on Millennium or alleged predecessor companies, are as follows: *Hall, et al. v. Lead Industries Association, et al.*, commenced in the Baltimore City, Maryland, Circuit Court on June 19, 2000; *Hart, et al. v. Lead Industries Association, et al.*, commenced in the Baltimore City, Maryland, Circuit Court on June 26, 2000; *Johnson, et al. v. Clinton, et al.*, commenced in the Baltimore City, Maryland, Circuit Court on October 10, 2000; *Randle, et al. v. Lead Industries Association, et al.*, commenced in the Baltimore City, Maryland, Circuit Court on August 10, 2000; *Williams, et al. v. Lead Industries Association, et al.*, commenced in the Baltimore City, Maryland, Circuit Court on July 7, 2000; *Myreona Stewart, et al. v. NL Industries, et al.*, commenced in the Circuit Court of LeFlore County, Mississippi on December 31, 2002; and *Moran v. Atlantic Richfield Co., et al.*, commenced in the San Francisco County, California, Superior Court on December 9, 2004. On January 18, 2006, the plaintiff in *Moran* filed an amended complaint, which dismissed alleged former manufacturers of lead pigment and lead paint, including Millennium.

**Environmental Matters**

From time to time Millennium and its joint ventures receive notices or inquiries from federal, state or local governmental entities of alleged violations of environmental laws and regulations pertaining to, among other things, the disposal, emission and storage of chemical and petroleum substances, including hazardous wastes. Any such alleged violations may become the subject of enforcement actions, settlement negotiations or other legal proceedings and may (individually or in the aggregate) involve monetary sanctions of \$100,000 or more (exclusive of interest and costs).

Millennium's accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled \$168 million as of December 31, 2005. The remediation expenditures are expected to occur over a number of years, and not to be concentrated in any single year. In the opinion of management, there is no material estimable range of reasonably possible loss in excess of the liabilities recorded for environmental remediation. However, it is possible that new information about the sites for which the accrual has been established, new technology or future developments such as involvement in investigations by regulatory agencies, could require Millennium to reassess its potential exposure related to environmental matters. The liabilities for individual sites range from less than \$1 million to \$103 million. The \$103 million liability relates to the Kalamazoo River Superfund Site. For additional information regarding environmental matters, including the liability related to the Kalamazoo River Superfund Site, see Item 1A. Risk Factors - Risks Relating to the Businesses - Millennium's and its joint ventures' operations and assets are subject to extensive environmental, health and safety and other laws and regulations, which could result in

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

material costs or liabilities, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental Matters and Note 19 to the Consolidated Financial Statements.

**Table of Contents**

**Index to Financial Statements**

A Millennium subsidiary has been identified as a PRP with respect to the Kalamazoo River Superfund Site. The site involves cleanup of river sediments and floodplain soils contaminated with polychlorinated biphenyls, cleanup of former paper mill operations, and cleanup and closure of landfills associated with the former paper mill operations. Litigation concerning the matter commenced in December 1987 but was subsequently stayed and is being addressed under CERCLA. Millennium's ultimate liability for the Kalamazoo River Superfund Site will depend on many factors that have not yet been determined, including the ultimate remedy selected, the determination of natural resource damages, the number and financial viability of the other PRPs, and the determination of the final allocation among the PRPs.

In November 2005, the Texas Commission on Environmental Quality ( TCEQ ) notified Millennium that it is seeking a civil penalty of \$179,520 in connection with alleged noncompliance of emissions monitoring requirements at Millennium's La Porte plant. Millennium does not believe that the ultimate resolution of this matter will have a material adverse effect on the business, financial position, liquidity or results of operations of Millennium.

In May 2003, the TCEQ notified Millennium's Equistar joint venture that it is seeking a civil penalty of \$167,000 in connection with alleged exceedances of permitted emissions at certain cooling towers at Equistar's Channelview plant. Equistar does not believe that the ultimate resolution of this matter will have a material adverse effect on the business, financial position, liquidity or results of operations of Equistar.

**Indemnification**

Millennium and its joint ventures are parties to various indemnification arrangements, including arrangements entered into in connection with acquisitions, divestitures and the formation of joint ventures. For example, Millennium entered into indemnification arrangements in connection with its demerger from Hanson plc, and Equistar and its owner companies (including Millennium) entered into indemnification arrangements in connection with the formation of Equistar. Pursuant to these arrangements, Millennium and its joint ventures provide indemnification to and/or receive indemnification from other parties in connection with liabilities that may arise in connection with the transactions and in connection with activities prior to completion of the transactions. These indemnification arrangements typically include provisions pertaining to third party claims relating to environmental and tax matters and various types of litigation. As of December 31, 2005, Millennium has not accrued any significant amounts for such indemnification obligations, other than amounts under tax sharing agreements that have been reflected in the provision for income taxes, and is not aware of other circumstances that would be likely to lead to significant future indemnification claims against Millennium. Millennium cannot determine with certainty the potential amount of future payments under the indemnification arrangements until events arise that would trigger a liability under the arrangements.

**Item 4. *Submission of Matters to a Vote of Security Holders***

Omitted pursuant to General Instruction I of Form 10-K.



**Table of Contents****Index to Financial Statements****PART II****Item 5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

Millennium does not have a class of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934. There is no established public trading market for the common stock of Millennium. As a result of Lyondell's acquisition of Millennium, Millennium is a wholly owned subsidiary of Lyondell.

Millennium did not pay dividends on its common stock during 2004 and 2005. Millennium's credit facility and the indenture under which the 9.25% Senior Notes due June 15, 2008 were issued contain certain restrictions on Millennium's ability to pay dividends on its common stock. For a description of those restrictions, see Item 1A. Risk Factors - Risks Relating to Debt - Debt covenants limit transfers of cash between Lyondell, Millennium and Equistar, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations - Financial Condition - Liquidity and Capital Resources and Note 14 to the Consolidated Financial Statements. Millennium is prohibited from paying any dividends under provisions of the 9.25% Senior Notes.

**Item 6. Selected Financial Data**

The following selected financial data should be read in conjunction with the Consolidated Financial Statements and the notes thereto and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Millions of dollars, except per share data	For the year ended December 31,				
	2005	2004	2003	2002	2001
<b>Results of Operations Data:</b>					
Sales and other operating revenues	\$ 1,959	\$ 1,888	\$ 1,687	\$ 1,554	\$ 1,590
Income (loss) from equity investment in Equistar	221	81	(100)	(73)	(83)
Income (loss) before cumulative effect of accounting change (a)	28	(31)	(185)	(39)	(56)
Cumulative effect of accounting change (b)			(1)	(305)	
Net income (loss)	28	(31)	(186)	(344)	(56)
Diluted earnings (loss) per share (c)			(2.91)	(5.41)	(0.88)
Dividends per share (d)			0.27	0.54	0.54
<b>Balance Sheet Data:</b>					
Total assets	2,473	2,530	2,398	2,396	2,965
Long-term debt	966	1,398	1,461	1,212	1,172
<b>Cash Flow Data:</b>					
<b>Cash provided (used) by</b>					
Operating activities	275	195	(92)	80	112
Investing activities	(60)	(41)	(48)	(64)	(78)
Financing activities	(272)	(38)	205	(4)	(22)

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

- (a) The 2004 and 2003 losses before cumulative effect of accounting change include after-tax business combination costs of \$46 million in 2004 and after-tax impairment charges of \$101 million in 2003. The 2003 charges were the result of the write down of property, plant and equipment at Millennium's Le Havre, France TiO<sub>2</sub> facility.
- (b) Cumulative effect of accounting change in 2003 reflects change in accounting for asset retirement obligations, and cumulative effect of accounting change in 2002 reflects change in accounting for goodwill.
- (c) Basic and diluted earnings (loss) per share are the same in all years.
- (d) In July 2003, the payment of dividends on common stock was suspended.

---

**Table of Contents**

**Index to Financial Statements**

**Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations**

This discussion should be read in conjunction with information contained in the Consolidated Financial Statements of Millennium Chemicals Inc. (together with its consolidated subsidiaries, Millennium) and the notes thereto.

In addition to comparisons of annual operating results, Millennium has included, as additional disclosure, certain trailing quarter comparisons of fourth quarter 2005 operating results to third quarter 2005 operating results. Millennium's acetyls business and its joint ventures' businesses are highly cyclical, in addition to experiencing some seasonal effects. Trailing quarter comparisons may offer important insight into the current business direction of Millennium and its joint ventures.

References to industry benchmark prices or costs, including the weighted average cost of ethylene production, are generally to industry prices and costs reported by Chemical Marketing Associates, Incorporated (CMAI), except that crude oil and natural gas benchmark price references are to industry prices reported by Platts, a reporting service of The McGraw-Hill Companies.

**OVERVIEW**

**General** Millennium, a global manufacturer and marketer of chemicals, primarily titanium dioxide (TiO<sub>2</sub>) and acetyls, is a wholly owned subsidiary of Lyondell Chemical Company (Lyondell). Millennium was acquired by Lyondell on November 30, 2004. Millennium's principal operations are part of two Lyondell business segments: inorganic chemicals, which primarily consist of TiO<sub>2</sub>; and ethylene, co-products and derivatives (EC&D). The EC&D segment includes Millennium's acetyls business and Millennium's 29.5% interest in Equistar Chemicals, LP (together with its consolidated subsidiaries, Equistar), which is accounted for by Millennium using the equity method. Other subsidiaries of Lyondell hold the remaining interest in Equistar.

**2005 versus 2004** The TiO<sub>2</sub> market experienced weaker demand in 2005 compared to 2004. However, in 2005, the chemical industry generally experienced improved profitability compared to 2004, despite higher crude oil and natural gas prices that pushed up raw material costs for most of the year and the disruptive effects of two major U.S. Gulf Coast hurricanes.

The U.S. Gulf Coast hurricanes, Katrina and Rita, negatively affected crude oil and natural gas supplies, as well as supplies of other raw materials, contributing to the increases in raw material prices in 2005. In addition, hurricane-related disruption of rail and pipeline traffic in the Gulf Coast area negatively affected shipments of raw materials and products. Supply/demand balances and prices were affected beginning in September 2005 as most Gulf Coast refiners and producers of chemicals suspended operations in preparation for the hurricanes, with some sustaining major damage as a result of the hurricanes. Millennium's and Equistar's Gulf Coast plants experienced only minor hurricane damage; however, Millennium and Equistar suspended plant operations in preparation for Hurricane Rita, resulting in lost production and higher costs during 2005. These higher costs, including Millennium's share of costs incurred by Equistar, consisted of \$12 million of charges, representing Millennium's exposure to industry losses expected to be underwritten by industry insurance consortia and \$6 million of costs incurred in conjunction with suspending and restoring operations. Neither Millennium nor Equistar has recognized, in 2005, any benefits of expected insurance reimbursements. See Note 3 to the Consolidated Financial Statements.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Operating results for the inorganic chemicals segment in 2005, compared to conditions in 2004, benefited from higher sales prices. However, the benefits of the higher sales prices were substantially offset by the negative effects of weaker demand for TiO<sub>2</sub>, which resulted in lower sales volumes, and also by inventory reduction efforts, including reduced 2005 plant operating rates that lowered earnings by approximately \$20 million.

---

**Table of Contents**

**Index to Financial Statements**

The acetyls business was negatively affected in 2005 by higher raw material and energy costs, due to higher ethylene and natural gas prices, and lower sales volumes, resulting from weaker demand. These negative effects were only partly offset by the benefits of higher average product sales prices.

Additionally, Millennium's equity investment in Equistar resulted in 2005 income of \$221 million compared to 2004 income of \$81 million as Equistar's average product margins improved. The benefit of the higher average product margins was partly offset by the negative effects of hurricane-related costs and lower sales volumes.

**2004 versus 2003** During 2004, the TiO<sub>2</sub> industry experienced strong demand and reduced capacity that tightened the TiO<sub>2</sub> market. Demand increased an estimated 6% to 8% compared to 2003, resulting in worldwide industry operating rates of approximately 91%. Millennium's TiO<sub>2</sub> products benefited from higher 2004 sales prices; however, these were more than offset by higher costs and selling, general and administrative (SG&A) expenses.

The acetyls business and Equistar benefited from a cyclical turnaround in the chemical industry as a stronger global economy led to increased demand and tighter chemical industry supply/demand balances compared to 2003. In this improved business environment, acetyls generally benefited from higher product margins in 2004 compared to 2003. Millennium's equity investment in Equistar resulted in 2004 income compared to a 2003 loss as Equistar's product margins improved.

**RESULTS OF OPERATIONS**

**Revenues** Revenues of \$1,959 million for 2005 increased 4% compared to \$1,888 million in 2004 due to higher acetyls and TiO<sub>2</sub> sales prices, partly offset by lower sales volumes. Acetyls sales volumes decreased due primarily to a 17% decrease in VAM sales, while TiO<sub>2</sub> sales volumes were 7% lower.

Revenues of \$1,888 million for 2004 increased 12% compared to \$1,687 million in 2003 primarily due to higher TiO<sub>2</sub> sales volumes coupled with higher local currency sales prices and the favorable effect of translating sales denominated in stronger local currencies into U.S. dollars. Higher average 2004 acetyls sales prices were partly offset by lower sales volumes.

**Cost of Sales** Cost of sales of \$1,715 million in 2005 increased 7% compared to \$1,602 million in 2004 and 9% in 2004 compared to \$1,470 in 2003, primarily due to rising energy and raw material costs, particularly natural gas, during this three-year period. In 2005, reduced plant operating rates resulting from the inventory reduction program also affected cost of sales negatively. These effects were partly offset by the effect of lower sales volumes in 2005 compared to 2004. Higher TiO<sub>2</sub> sales volumes in 2004 compared to 2003 contributed to the increase in cost of sales in 2004.

**SG&A Expenses** SG&A expenses were \$194 million, \$164 million and \$130 million in 2005, 2004 and 2003, respectively. The 18% increase in SG&A expenses in 2005 compared to 2004 was primarily due to legal services and estimated environmental remediation costs. The 26% increase in SG&A expenses in 2004 compared to 2003 reflected a \$31 million higher accrual in 2004 for estimated environmental remediation

costs and higher costs for outside consultants and employee benefits.

**Business Combination Costs** The decrease of \$69 million in business combination costs from 2004 to 2005 was the result of Millennium incurring \$71 million of business combination costs in connection with Lyondell's November 30, 2004 acquisition of Millennium, which costs primarily consisted of change-of-control liabilities to officers and key employees of Millennium and the vesting of certain of their benefits in 2004, compared to only \$2 million in 2005.

---

**Table of Contents****Index to Financial Statements**

**Asset Impairments** Asset impairment charges were \$15 million in 2005, \$14 million in 2004 and \$103 million in 2003, related to Millennium's Le Havre, France TiO<sub>2</sub> manufacturing facility. At December 31, 2003, after the impairment charge, the carrying value of the property, plant and equipment at the Le Havre TiO<sub>2</sub> manufacturing facility was zero. Subsequent capital expenditures at this plant were included in operating expense as additional impairment charges. See Note 5 to the Consolidated Financial Statements.

**Reorganization and Other Costs** In July 2003, Millennium announced a program to reduce costs, including a reduction of approximately 5% in the number of Millennium employees worldwide. Millennium closed its executive offices in Red Bank, New Jersey, effective September 1, 2003, and relocated its headquarters to Baltimore, Maryland, where Millennium had existing administrative offices. Millennium recorded related charges of \$3 million and \$18 million in 2004 and 2003, respectively. In 2004, other costs, net, include a net write-off of \$6 million for assets that will not have future value as a result of a jury verdict in the first quarter 2005. See Note 7 to the Consolidated Financial Statements.

**Interest Expense** Interest expense was \$130 million in 2005, \$106 million in 2004 and \$98 million in 2003. Interest expense in 2005 includes \$29 million of interest associated with income tax issues. Interest expense was higher in 2004 compared to 2003, as a result of higher average debt levels. Millennium issued, in April 2003, an additional \$100 million principal amount of 9.25% Senior Notes and, in November 2003, \$150 million of 4% Convertible Senior Debentures.

**Other Income (Expense), net** Millennium had \$19 million of other expense, net in 2005 and other income, net of \$14 million and \$58 million in 2004 and 2003, respectively. Other expense, net in 2005 included \$10 million of debt prepayment premiums and \$9 million of charges related to other investments. Other income, net in 2004 and 2003 included \$6 million and \$55 million, respectively, related to the reversal of interest expense accruals as a result of the favorable settlement of tax issues.

**Income from Equity Investment in Equistar** Millennium's equity investment in Equistar resulted in income of \$221 million and \$81 million in 2005 and 2004, respectively, and a loss of \$100 million in 2003. See Note 8 to the Consolidated Financial Statements. Equistar's operating results are reviewed in the discussion of the EC&D segment below.

**Income Taxes** The tax provision was \$67 million and \$33 million in 2005 and 2004, respectively, and a benefit of \$11 million in 2003. The \$67 million provision in 2005 exceeded the U.S. statutory rate due primarily to a \$13 million increase in estimates of taxes for prior years and a \$16 million increase in the valuation reserve for tax assets of French subsidiaries. The \$33 million provision in 2004 exceeded the U.S. statutory rate, reflecting an increase of \$28 million in estimates of taxes for prior years and a \$20 million increase in the valuation reserve for tax assets of French subsidiaries. The \$11 million tax benefit from a pretax loss in 2003 was less than the statutory rate due to a \$56 million increase in the valuation allowance provided for net deferred tax assets of French subsidiaries and a \$19 million deferred tax provision for the planned repatriation of approximately \$100 million of earnings of Australian and European subsidiaries. In each 2004 and 2003, Millennium benefited from non-U.S. tax incentives that reduced taxes.

**Net Income** Millennium reported net income of \$28 million in 2005 and net losses of \$31 million and \$186 million in 2004 and 2003, respectively. The \$59 million improvement in 2005 compared to 2004 was primarily the result of the increase in income from Millennium's equity investment in Equistar of \$91 million after tax and a decrease in business combination costs of \$45 million after tax. These improvements were partly offset by the increases in SG&A, interest expense and other expense, net, noted above, totaling \$45 million after tax, and the after-tax effect of lower sales volumes of approximately \$30 million in 2005 compared to 2004.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

The \$155 million improvement in 2004 compared to 2003 was primarily the result of an improvement in income from Millennium's equity investment in Equistar of \$118 million after tax and in Millennium's operations, resulting from higher sales volumes and product margins, of approximately \$45 million after tax.



**Table of Contents****Index to Financial Statements**

These improvements were partly offset by the increase in SG&A and the decrease in other income, net, noted above, totaling \$51 million after tax. In addition, 2004 included business combination costs of \$46 million after tax, while 2003 included asset impairment charges of \$67 million after tax. Additionally, the 2004 tax provision included \$48 million that was unrelated to 2004 pretax earnings, while the 2003 provision included \$75 million that was unrelated to 2003 pretax earnings.

**Fourth Quarter 2005 versus Third Quarter 2005** Millennium had a net loss of \$2 million in the fourth quarter 2005 compared to a net loss of \$72 million in the third quarter 2005. The improvement in the fourth quarter 2005 reflected an after tax increase of \$63 million in income from the equity investment in Equistar and a \$30 million after tax decrease in SG&A expenses, partly offset by additional income tax provisions of \$24 million in the fourth quarter 2005. Equistar benefited from significantly higher product margins in the fourth quarter 2005 compared to the third quarter 2005. Higher SG&A expenses in the third quarter 2005 primarily reflected higher provision for environmental remediation costs. The additional tax provision in the fourth quarter 2005 was due to changes in estimates for prior year items. Fourth quarter 2005 operating results were relatively comparable to the third quarter as higher raw material and energy costs were offset by higher product selling prices.

**Segment Analysis**

Millennium's principal operations are grouped into two business segments: inorganic chemicals; and EC&D. The EC&D segment includes Millennium's acetyls business and Millennium's 29.5% interest in Equistar, which is accounted for under the equity method. See Note 8 to the Consolidated Financial Statements. Operating income and expense not identified with the two businesses, including certain of Millennium's SG&A expenses, business combination costs, employee-related costs from predecessor businesses and costs associated with Millennium's 2003 cost reduction program are grouped under the heading, Other operating loss.

The following table reflects summarized financial information for Millennium.

<b>Millions of dollars</b>	<b>For the year ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>Revenues:</b>			
Inorganic chemicals segment	\$ 1,360	\$ 1,340	\$ 1,172
EC&D segment - acetyls business	504	453	421
<b>Operating income (loss):</b>			
Inorganic chemicals segment	24	51	(53)
EC&D segment - acetyls business	45	59	26
Other operating loss	(59)	(103)	(30)
Income (loss) from equity investment in Equistar	221	81	(100)
<b>Volumes</b>			
<b>Inorganic chemicals:</b>			
TiO <sub>2</sub> (metric kilotons)	618	665	591
<b>EC&amp;D - Acetyls (volumes in millions):</b>			
Vinyl Acetate Monomer (VAM) (pounds)	712	856	857
Acetic acid (pounds)	546	520	473

Methanol (gallons)

64

57

77

***Inorganic Chemicals Segment***

**Overview** The Inorganic Chemicals ( Inorganics ) segment primarily produces  $TiO_2$ . It also produces titanium tetrachloride (  $TiCl_4$  ), titanyl sulfate (  $TiSO_4$  ), ultra-fine  $TiO_2$  and silica gel.

**Table of Contents**

**Index to Financial Statements**

Operating results for the Inorganics segment included pretax asset impairment charges of \$15 million in 2005, \$14 million in 2004 and \$103 million in 2003 associated primarily with the write-down of property, plant and equipment at the Le Havre, France TiO<sub>2</sub> manufacturing facility.

**Revenues** Revenues of \$1,360 million in 2005 were comparable to revenues of \$1,340 million in 2004 as higher sales prices were substantially offset by the negative effects of lower sales volumes. Average sales prices in 2005 were 9% higher compared to 2004. Sales volumes in 2005 for TiO<sub>2</sub> decreased 7% compared to 2004, reflecting weaker 2005 demand and Millennium's 2004 efforts to reduce inventory levels through a strong volume push.

Revenues of \$1,340 million in 2004 increased 14% compared to revenues of \$1,172 million in 2003, primarily due to higher sales volumes and the favorable effect of translating sales denominated in stronger foreign currencies into weaker U.S. dollars. Sales volumes in 2004 for TiO<sub>2</sub> increased 13% compared to 2003, reflecting increases in all major markets and geographic regions. Average sales prices in 2004 were comparable to 2003.

**Operating Income** The Inorganics segment had operating income of \$24 million in 2005 compared to \$51 million in 2004. The decrease in operating income reflected the negative effect of lower sales volumes of approximately \$15 million and a \$15 million provision for estimated environmental remediation costs. Product margins were relatively unchanged as higher product sales prices substantially offset the negative effects of lower sales volumes. Operating income for 2005 and 2004 included \$15 million and \$14 million, respectively, of asset impairment charges related to the Le Havre, France manufacturing facility.

The Inorganics segment had operating income of \$51 million in 2004 compared to an operating loss of \$53 million in 2003. Operating income for 2004 included \$14 million of asset impairment charges related to the Le Havre, France manufacturing facility. The operating loss in 2003 included asset impairment charges of \$103 million related primarily to the Le Havre, France manufacturing facility. The remaining improvement of \$21 million reflected the benefits of higher sales volumes of approximately \$20 million and higher average sales prices of approximately \$25 million, partially offset by higher manufacturing and other cost of sales of approximately \$25 million and higher SG&A costs of approximately \$13 million.

***Ethylene, Co-products and Derivatives Segment***

Millennium's EC&D segment comprises its wholly owned acetyls business and its equity investment in Equistar.

**Acetyls Business**

**Overview** The acetyls business produces and markets vinyl acetate monomer ( VAM ), acetic acid and methanol. During 2005, the acetyls business was negatively affected by higher raw material and energy costs, due to higher ethylene and natural gas prices, and lower sales volumes, resulting from weaker demand. These negative effects were only partly offset by the benefits of higher average product sales prices.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Acetyls production costs increased in 2005 compared to 2004, primarily due to higher raw material and energy costs, particularly natural gas and ethylene. However, the increases in production costs were more than offset by higher average selling prices, contributing to higher margins in the acetyls business.

**Revenues** Acetyls revenues of \$504 million in 2005 increased by \$51 million, or 11%, compared to revenues of \$453 million in 2004 primarily due to higher average sales prices, which were partly offset by lower sales volumes. In 2005, the aggregate sales price for VAM and acetic acid was 17% higher than in 2004 as price increases were implemented in response to higher raw material and energy costs. The sales volume decrease in 2005 compared to 2004 primarily reflected lower VAM sales volumes.

## Table of Contents

### Index to Financial Statements

Acetyls revenues of \$453 million in 2004 increased by \$32 million, or 8%, compared to revenues of \$421 million in 2003 primarily due to higher average sales prices, which were partly offset by lower sales volumes. In 2004, the aggregate U.S. dollar price for VAM and acetic acid was 13% higher than in 2003. Average 2004 sales prices were higher than in 2003 as a result of sales price increases and the favorable effect of translating foreign currency-denominated sales into U.S. dollars. The price increases were implemented in response to higher raw material and energy costs. The sales volume decrease in 2004 compared to 2003 primarily reflected lower methanol sales volumes.

**Operating Income** The acetyls business had operating income of \$45 million in 2005 compared to operating income of \$59 million in 2004. The \$14 million decrease was primarily due to higher raw material and energy costs of approximately \$90 million and the effect of lower sales volumes of approximately \$10 million, partially offset by approximately \$85 million of higher sales prices.

The acetyls business had operating income of \$59 million in 2004 compared to operating income of \$26 million in 2003. The \$33 million increase was primarily due to higher sales prices of approximately \$40 million, partially offset by the negative effect of lower sales volumes of approximately \$5 million.

### Equity Investment in Equistar

**Overview** Equistar manufactures and markets ethylene and its co-products, primarily propylene, butadiene and aromatics, which include benzene and toluene. Equistar also manufactures and markets ethylene derivatives, primarily polyethylene (including high density polyethylene ( HDPE ), low density polyethylene ( LDPE ) and linear-low density polyethylene ( LLDPE )), ethylene glycol, ethylene oxide and its other derivatives, and ethanol. Equistar also manufactures and markets fuels, such as methyl tertiary butyl ether ( MTBE ) and alkylate, as well as polypropylene. As a result of the acquisition of Millennium by Lyondell on November 30, 2004, Equistar became a wholly owned subsidiary of Lyondell. Millennium continues to hold a 29.5% equity interest in Equistar. The following discussion of Equistar's operations is on a 100% basis.

In 2005, the chemical industry experienced improved profitability compared to 2004, despite higher crude oil and natural gas prices that pushed up raw material costs for most of the year and the disruptive effects of two major U.S. Gulf Coast hurricanes. Tight gasoline markets in 2005 resulted in higher sales prices and margins for fuel-related products compared to the already high levels experienced in 2004. U.S. ethylene industry demand decreased an estimated 6% in 2005 compared to 2004, due primarily to the effects of the U.S. Gulf Coast hurricanes. U.S. ethylene demand grew 11% in 2004 compared to 2003.

**Benchmark Indicators** Benchmark crude oil and natural gas prices generally have been indicators of the level and direction of movement of raw material and energy costs for Equistar. Ethylene and its co-products are produced from two major raw material groups:

crude oil-based liquids ( liquids or heavy liquids ), including naphthas, condensates, and gas oils, the prices of which are generally related to crude oil prices; and

natural gas liquids ( NGLs ), principally ethane and propane, the prices of which are generally affected by natural gas prices.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Equistar has the ability to shift its ratio of raw materials used in ethylene production to take advantage of the relative costs of liquids and NGLs.

The following table shows the average benchmark prices for crude oil and natural gas for the applicable three-year period, as well as benchmark sales prices for ethylene, propylene, benzene and HDPE, which Equistar

**Table of Contents****Index to Financial Statements**

produces and sells. The benchmark weighted average cost of ethylene production is based on CMAI's estimated ratio of heavy liquid raw materials and NGLs used in U.S. ethylene production and is subject to revision.

	Average Benchmark Price for the Year and				
	Percent Change Versus Prior Year Average				
	2005	Percent Increase	2004	Percent Increase	2003
Crude oil dollars per barrel	56.44	36%	41.42	33%	31.12
Natural gas dollars per million BTUs	7.58	31%	5.78	10%	5.24
Weighted average cost of ethylene production cents per pound	29.41	25%	23.55	15%	20.44
Ethylene cents per pound	44.21	31%	33.75	18%	28.50
Propylene cents per pound	40.75	28%	31.96	49%	21.42
Benzene cents per gallon	289.88	1%	287.96	87%	154.00
HDPE cents per pound	72.13	21%	59.58	20%	49.54

As indicated in the table above, benchmark crude oil prices and natural gas prices continued to increase from 2003 to 2005, resulting in successively higher average raw material and energy costs each year. Benchmark sales prices for ethylene and propylene increased in response to the higher raw material and energy costs in 2004 and 2005, as well as the improving market conditions.

**Revenues** Equistar revenues of \$11,686 million in 2005 increased 25% compared to revenues of \$9,316 million in 2004. The increase in 2005 reflected higher average sales prices, partially offset by lower sales volumes. As noted in the table above, benchmark sales prices for ethylene, propylene and HDPE averaged significantly higher in 2005 compared to 2004, while benzene average sales prices in 2005 were comparable to 2004. Ethylene and derivative sales volumes were 5% lower in 2005 compared to 2004.

Revenues of \$9,316 million in 2004 increased 42% compared to revenues of \$6,545 million in 2003, reflecting higher average sales prices and volumes. Benchmark ethylene, propylene and HDPE sales prices averaged significantly higher in 2004 compared to 2003, while average benchmark benzene sales prices nearly doubled in 2004 compared to 2003. Ethylene and derivative sales volumes were 10% higher in 2004 compared to 2003.

**Net Income** Equistar had net income of \$748 million in 2005 compared to \$276 million in 2004. The \$472 million improvement was primarily the result of higher average product margins. The benefit of the higher 2005 average product margins was partly offset by the negative effects of hurricane-related costs and lower sales volumes. Hurricane-related costs included \$20 million of charges representing Equistar's exposure to industry losses expected to be underwritten by industry insurance consortia.

Equistar's net income was \$276 million in 2004, compared to a net loss of \$339 million in 2003. The \$615 million improvement in 2004 was primarily due to higher product margins and higher sales volumes in 2004 due to improved supply/demand fundamentals compared to 2003. The higher sales prices more than offset the effect of significantly higher raw material and energy costs compared to 2003. In addition to higher sales prices for ethylene and derivatives, Equistar benefited from significantly higher prices for co-products such as propylene, benzene and fuels compared to 2003. The higher raw material and energy costs during 2004 reflected the effect of 33% higher average benchmark crude oil prices in 2004, as well as ongoing high natural gas prices compared to 2003. Also, ethylene and derivative sales volumes in 2004 were 11% higher

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

compared to 2003. The net loss in 2003 included the \$37 million of refinancing costs, the \$12 million loss from the sale of the polypropylene production facility, the \$11 million charge for the write-off of a R&D facility, as well as \$6 million of employee severance costs.

### *Other*

Other operations include Millennium's flavors and fragrances business, and unallocated operating expenses that are not identified with the reportable business segments.



## Table of Contents

### Index to Financial Statements

Other operating losses were \$59 million in 2005, \$103 million in 2004 and \$30 million in 2003. The 2005 amount included \$43 million of accruals for estimated environmental remediation costs and \$13 million of charges related to other investments. The 2004 amount included \$71 million of business combination costs, \$31 million of accruals for estimated environmental remediation costs and \$3 million of reorganization costs. The \$30 million in 2003 primarily included \$18 million in reorganization and office closure charges and accruals for estimated environmental remediation costs of \$3 million.

## FINANCIAL CONDITION

**Operating Activities** Operating activities provided cash of \$275 million in 2005 and \$195 million in 2004, respectively, and used cash of \$92 million in 2003. The \$80 million improvement in operating cash flow in 2005 compared to 2004 was primarily due to \$133 million of higher distributions of earnings from Equistar and reductions in the main components of working capital—accounts receivable, inventories and accounts payable, partly offset by the effects of lower 2005 earnings at Millennium.

The main components of working capital decreased, providing cash of \$29 million in 2005. The net decrease of \$29 million in 2005 was primarily due to a \$77 million increase in accounts payable, which reflected higher raw materials and energy prices in December 2005.

The \$287 million improvement in operating cash flow in 2004 compared to 2003 was primarily due to earnings of \$81 million from Millennium's investment in Equistar, which were distributed to Millennium, and a reduction of \$56 million in inventories. A net decrease in the main components of working capital provided cash of \$85 million in 2004 compared to 2003 when a net increase in these items used cash of \$106 million.

**Investing Activities** Investing activities used cash of \$60 million in 2005, \$41 million in 2004 and \$48 million in 2003, primarily reflecting Millennium's capital expenditures. In addition, in 2004, Millennium received \$12 million of distributions in excess of earnings from Equistar. Capital expenditures were \$60 million in 2005, \$55 million in 2004 and \$48 million in 2003. Millennium's capital expenditures in these years primarily included replacement capital projects and certain environmental, cost reduction, and yield-improvement projects. Planned capital spending in 2006 is projected to be approximately \$97 million primarily for base asset support and projects to improve manufacturing efficiency.

**Financing Activities** Financing activities used cash of \$272 million in 2005 and \$38 million in 2004 and provided cash of \$205 million in 2003.

In August 2005, Millennium amended and restated its \$150 million credit facility, replacing it with a \$125 million U.S. revolving credit facility, a \$25 million Australian revolving credit facility, and a \$100 million Australian senior term loan, all of which mature in August 2010. See [Liquidity and Capital Resources](#) below for a description of the new credit facilities. The U.S. revolving credit facility and the Australian revolving credit facility will be used for liquidity and general corporate purposes. The Australian term loan facilitated the repatriation of non-U.S. earnings and returns of investment that were primarily used to reduce Millennium indebtedness as discussed below.

In 2005, Millennium purchased \$281 million principal amount of its 7% Senior Notes due 2006 pursuant to a cash tender offer at 102.622 percent of par. During 2005, Millennium also purchased an additional \$61 million of the 7% Senior Notes due 2006, \$13 million of the 9.25% Senior Notes due 2008 and \$1 million of the 7.625% Senior Debentures due 2026. See [Liquidity and Capital Resources](#) below regarding the

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

May 2005 credit facility amendment, which permitted the purchases, and other amendments to the Millennium credit facility.

Millennium paid a cash dividend totaling \$6 million to minority interests during 2005 and received a contribution of \$6 million from Lyondell.

## Table of Contents

### Index to Financial Statements

In January 2006, a U.K subsidiary of Millennium entered into a new \$60 million, five-year, revolving credit facility. See **Liquidity and Capital Resources** below for a description of the facility. In addition, on February 28, 2006, Millennium completed a cash tender offer for its 7% Senior Notes due 2006, purchasing \$149 million principal amount of the notes at 101.256 percent of par. Millennium intends to continue to reduce its indebtedness as market conditions permit.

Pursuant to the indenture governing the 9.25% Senior Notes, Millennium was required to purchase \$4 million principal amount of its 9.25% Senior Notes and pay a 1% premium as a result of Lyondell's acquisition of Millennium on November 30, 2004.

In 2004 cash was used to prepay \$55 million of debt, and cash proceeds from stock option exercises were \$17 million.

In 2003, \$222 million of net debt proceeds were received and cash dividends of \$17 million were paid. Dividends paid in 2003 totaled \$17 million. In June 2003, Millennium announced the suspension of the payment of dividends on its common stock and has not since paid dividends. Millennium is prohibited from paying dividends pursuant to a covenant under Millennium's 9.25% Senior Notes.

**Liquidity and Capital Resources** Millennium's balance sheet remains highly leveraged. Total debt as of December 31, 2005 was \$1,135 million. Current maturities of long-term debt at December 31, 2005 included \$158 million of 7% Senior Notes and other debt of \$11 million.

Historically, Millennium has financed its operations primarily through cash generated from its operations, cash distributions from Equistar, and debt financing. Cash generated from operations is, to a large extent, dependent on economic, financial, competitive and other factors affecting Millennium's and Equistar's businesses. The amount of cash distributions received from Equistar is affected by Equistar's results of operations and current and expected future cash flow requirements. Some of Equistar's indentures require additional interest payments to the note holders if Equistar makes distributions when its Fixed Charge Coverage Ratio, as defined, is less than 1.75 to 1. Millennium received \$214 million and \$93 million, respectively, of distributions from Equistar during 2005 and 2004.

Millennium's ability to pay or refinance its debt also may depend on future operating performance, which could be affected by general economic, financial, competitive, legislative, regulatory, business and other factors, many of which are beyond its control. However, Millennium believes that conditions will be such that cash balances, cash generated from operating activities, cash distributions from Equistar and funds from lines of credit will be adequate to meet anticipated future cash requirements, including scheduled debt repayments, necessary capital expenditures and ongoing operations. In the first quarter 2005, Standard & Poors (S&P) upgraded Millennium's debt rating from B+ to BB- and gave Millennium a positive outlook. However, on February 23, 2006, S&P placed its ratings on Millennium on Credit Watch with negative implications, following a jury verdict against Millennium and other defendants in Rhode Island. See the **Litigation** section of Note 19 to the Consolidated Financial Statements for information regarding the jury verdict.

At December 31, 2005, Millennium had cash on hand of \$279 million. Millennium's total unused availability under the \$125 million U.S. and \$25 million Australian revolving credit facilities was \$123 million. Availability under the revolving credit facilities is reduced to the extent of outstanding letters of credit provided under the facilities. There were \$27 million of outstanding letters of credit under the U.S. revolving credit facility and none outstanding under the Australian revolving credit facility as of December 31, 2005. There was no outstanding borrowing under either revolving credit facility as of December 31, 2005.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

In addition to letters of credit outstanding under the U.S. revolving credit facility, Millennium had other outstanding letters of credit and bank guarantees under other arrangements of \$4 million at December 31, 2005.

---

**Table of Contents****Index to Financial Statements**

In January 2006, a U.K. subsidiary of Millennium entered into a new \$60 million, five-year, revolving credit facility, which, subject to permitted liens, is generally secured by the subsidiary's inventory, accounts receivable and certain other assets. Availability under the U.K. facility, which was \$44 million, or approximately \$53 million, at March 14, 2006, gives effect to the borrowing base as determined using a formula applied to accounts receivable and inventory balances and is reduced to the extent of outstanding borrowing and letters of credit provided under the facility.

In August 2005, Millennium amended and restated its \$150 million credit facility, replacing it with a \$125 million U.S. revolving credit facility, a \$25 million Australian revolving credit facility, and a \$100 million Australian senior term loan, all of which mature in August 2010. In May 2005, Millennium obtained an amendment to its previous \$150 million credit facility to allow for the unrestricted repurchase of indebtedness in the form of bonds, debentures, notes, or similar instruments. On February 2, 2005, as a result of certain adjustments and charges related to the February 2005 restatement of Millennium's financial statements, Millennium entered into an amendment and waiver to its previous \$150 million credit facility, which amended the credit facility definition of EBITDA and waived any and all defaults or events of default that may have occurred on or prior to the amendment and waiver. Millennium also obtained amendments to its previous credit facility in 2003 to provide additional financial flexibility by easing certain financial ratio requirements. One of the 2003 amendments was conditioned on Millennium obtaining \$110 million of long-term financing, which was satisfied by the sale of \$150 million of the 4% Convertible Senior Debentures. The same 2003 amendment also reduced the maximum availability under the credit facility from \$175 million to \$150 million. Millennium also obtained an amendment to its previous credit facility in July 2004 to permit Lyondell's acquisition of Millennium.

Millennium's facilities and its indentures contain restrictive covenants. Pursuant to these provisions, Millennium is prohibited from making restricted payments, including paying certain dividends. Other than the U.K. facility, Millennium's facilities also contain covenants that require the maintenance of specified financial ratios. These covenants, as well as debt guarantees, are described in Note 14 to the Consolidated Financial Statements. Millennium's U.K. facility does not require the maintenance of specified financial ratios as long as certain conditions are met.

A breach by Millennium of any of the covenants or other requirements in its debt instruments could (1) permit the note holders or lenders to declare the outstanding debt under the breached debt instrument due and payable, (2) permit the lenders under that credit facility to terminate future lending commitments and (3) permit acceleration of Millennium's other debt instruments that contain cross-default or cross-acceleration provisions. The debt agreements of Millennium contain various event of default and cross-default provisions. In particular, certain of the debt agreements include event of default provisions that, under certain circumstances, may be triggered in connection with judgments against the relevant entity unless discharged, stayed or bonded within a specified time period. If Millennium was unable to obtain sufficient funds to make these accelerated payments, Millennium's lenders could proceed against any assets that secure their debt.

Millennium has outstanding \$150 million aggregate principal amount of 4% Convertible Senior Debentures, which are due in 2023, unless earlier redeemed, converted or repurchased. As a result of Lyondell's acquisition of Millennium, the Debentures are convertible into shares of Lyondell's common stock or, at Lyondell's discretion, equivalent cash or a combination thereof. As of December 31, 2005, based on a quarterly test related to the price of Lyondell common stock, the Debentures were convertible at a conversion rate of 72.0183 Lyondell shares per one thousand dollar principal amount of the Debentures. As of December 31, 2005, none of the Debentures had been converted into shares of Lyondell common stock. The Debentures are redeemable at Millennium's option beginning November 15, 2010 at a redemption price equal to 100% of their principal amount or at the option of the Debenture holders under certain circumstances. The Debenture redemption terms are described in Note 14 to the Consolidated Financial Statements.

*Future Tax Obligations* Certain income tax returns for Millennium's U.S. and non-U.S. subsidiaries are currently under examination by the Internal Revenue Service (IRS), Revenue and Customs (formerly Inland Revenue) of the U.K. and various other tax authorities. In many cases, these audits result in proposed



**Table of Contents****Index to Financial Statements**

assessments by the tax authority. Millennium believes that its tax positions comply with applicable tax law and intends to defend its positions through appropriate administrative and judicial processes. Millennium believes it has adequately provided for any probable outcome related to these matters, and does not anticipate any material adverse effect on its financial position or results of operations from their ultimate resolution. However, the settlement of one or more of these matters could require substantial cash payments during 2006.

**Off-Balance Sheet Arrangements** The Securities and Exchange Commission ( SEC ) has described various characteristics to identify contractual arrangements that would fall within the SEC 's definition of off-balance sheet arrangements. Millennium is not a party to any such contractual arrangements.

Other obligations that do not give rise to liabilities that would be reflected in Millennium 's balance sheet are described below under Purchase Obligations and Operating Leases .

**Contractual and Other Obligations** The following table summarizes as of December 31, 2005, Millennium 's minimum payments for long-term debt, and contractual and other obligations for the next five years and thereafter.

Millions of dollars	Payments Due By Period						
	Total	2006	2007	2008	2009	2010	Thereafter
Long-term debt	\$ 1,135	\$ 169	\$ 7	\$ 463	\$ 5	\$ 79	\$ 412
Interest on long-term debt	618	77	68	45	25	25	378
Pension benefits:							
PBO	970	62	61	62	64	62	659
Assets	(731)						(731)
Funded status	239						
Other postretirement benefits	82	3	3	3	3	3	67
Other	323	2	53	50	47	47	124
Deferred income taxes	167	17	19	21	23	23	64
Other obligations:							
Purchase obligations	2,164	382	304	198	174	150	956
VAM toll	87	87					
Operating leases	165	23	20	16	13	11	82
<b>Total</b>	<b>\$ 4,980</b>	<b>\$ 822</b>	<b>\$ 535</b>	<b>\$ 858</b>	<b>\$ 354</b>	<b>\$ 400</b>	<b>\$ 2,011</b>

*Long-Term Debt* Millennium 's long term debt includes credit facilities and debt obligations. See Note 14 to the Consolidated Financial Statements for a discussion of covenant requirements under the credit facilities and indentures and additional information regarding long-term debt.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

*Interest* The long-term debt agreements contain provisions for the payment of either monthly or semi-annual interest at a stated rate of interest over the term of the debt. These payment obligations are reflected in the table above.

*Pension Benefits* Millennium maintains several defined benefit pension plans as described in Note 17 to the Consolidated Financial Statements. At December 31, 2005, the projected benefit obligation for Millennium's pension plans exceeded the fair value of plan assets by \$239 million. Subject to future actuarial gains and losses, as well as actual asset earnings, Millennium, together with its consolidated subsidiaries, will be required to fund the \$239 million, with interest, in future years. Millennium's pension contributions were \$28 million, \$15 million and \$12 million for the years 2005, 2004 and 2003, respectively, and are expected to be approximately \$14 million for 2006.



**Table of Contents**

**Index to Financial Statements**

Pension expense for 2005, 2004 and 2003 was \$32 million, \$30 million and \$7 million, respectively. The 2004 and 2003 pension expense includes \$13 million and \$3 million of curtailment charges, respectively, resulting from severances subsequent to Lyondell's acquisition of Millennium in 2004 and the 2003 cost reduction program. Due to a reduction in the discount rate assumption related to Millennium's pension plans and the amortized recognition of pension fund investment losses in the financial markets in recent years prior to 2003, pension expense for 2006 is estimated to be approximately \$39 million.

*Other Postretirement Benefits* Millennium provides other postretirement benefits, as described in Note 17 to the Consolidated Financial Statements. Other postretirement benefits are unfunded and are paid by Millennium as incurred.

As a result of rising medical benefit costs and competitive business conditions, effective April 1, 2004 Millennium reduced the level of retiree medical benefits provided to essentially all of its retirees by offering a monthly subsidy in 2004 to retirees that enrolled in designated preferred provider organization plans or Medicare supplement insurance plans. This change reduced Millennium's accumulated postretirement benefit obligation by approximately \$48 million. This reduction will be recognized ratably over approximately thirteen years through the postretirement net periodic benefit cost.

*Other* Other primarily consists of liabilities for environmental remediation, deferred compensation arrangements and accrued liabilities for the resolution of probable tax assessments. The timing of payments of the latter is subject to considerable uncertainty.

*Deferred Income Taxes* The scheduled settlement of the deferred tax liabilities shown in the table is based on the scheduled reversal of the underlying temporary differences, all of which would be fully offset during the first five years by Millennium's tax loss carry forwards. Actual cash tax payments will vary dependent upon future taxable income.

*Purchase Obligations* In the ordinary course of business, Millennium enters into contractual obligations to purchase raw materials, utilities and services for fixed or minimum amounts. See the *Commitments* section of Note 19 to the Consolidated Financial Statements for a description of Millennium's commitments and contingencies, including these purchase obligations.

*VAM Toll* Millennium has entered into an agreement with an unrelated party to process acetic acid through that party's VAM plant. Under the agreement, Millennium will purchase all VAM production at such plant not utilized by the unrelated party through December 31, 2006. The processing fee is based on the market price of ethylene plus a processing charge. The total commitment over the remaining term is approximately \$87 million at December 31, 2005 market prices for ethylene. See the *Commitments* section of Note 19 to the Consolidated Financial Statements.

*Operating Leases* Millennium leases various facilities and equipment under noncancelable lease arrangements for various periods. See Note 15 to the Consolidated Financial Statements for related lease disclosures.

**Equistar Liquidity and Capital Resources** At December 31, 2005, Equistar's long-term debt, including current maturities, totaled \$2.3 billion, or approximately 60% of its total capitalization. Current maturities included \$150 million of 6.5% Notes due in February 2006. At December 31, 2005, Equistar had cash on hand of \$215 million. In addition, the total amount available at December 31, 2005 under both Equistar's

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

\$400 million inventory-based revolving credit facility and \$600 million accounts receivable sales facility was approximately \$734 million.

The available amount of \$734 million under Equistar's inventory-based revolving credit facility and accounts receivable sales facility at December 31, 2005 gave effect to the borrowing base net of a \$50 million unused availability requirement, the \$200 million outstanding amount of accounts receivable sold under the

## **Table of Contents**

### **Index to Financial Statements**

accounts receivable sales facility at December 31, 2005, and \$16 million of outstanding letters of credit under the revolving credit facility as of December 31, 2005. The borrowing base is determined using a formula applied to accounts receivable and inventory balances. The revolving credit facility requires that the unused available amounts under that facility and the \$600 million accounts receivable sales facility equal or exceed \$50 million, or \$100 million if the Interest Coverage Ratio, as defined, at the end of any period of four consecutive fiscal quarters is less than 2:1. There was no outstanding borrowing under the revolving credit facility at December 31, 2005.

Equistar's inventory-based revolving credit facility, accounts receivable sales facility and indentures contain restrictive covenants that, subject to certain exceptions, restrict, among other things, lien incurrence, debt incurrence, sales of assets, investments, capital expenditures, certain other payments, affiliate transactions, restrictive agreements and mergers. The credit facility does not require the maintenance of specified financial ratios as long as certain conditions are met. Some of Equistar's indentures require additional interest payments to the note holders if Equistar makes distributions when its Fixed Charge Coverage Ratio, as defined, is less than 1.75 to 1.

A breach by Equistar of any of the covenants or other requirements in its debt instruments could (1) permit its note holders or lenders to declare the outstanding debt under the breached debt instrument due and payable, (2) permit its lenders under the credit facility to terminate future lending commitments and (3) permit acceleration of Equistar's other debt instruments that contain cross-default or cross-acceleration provisions. The debt agreements of Equistar contain various event of default and cross-default provisions. In particular, certain of the debt agreements include event of default provisions that, under certain circumstances, may be triggered in connection with judgments against the relevant entity unless discharged, stayed or bonded within a specified time period. If Equistar was unable to obtain sufficient funds to make these accelerated payments, Equistar's lenders could proceed against any assets that secure their debt. Similarly, the breach by Equistar of covenants in its accounts receivable sales facility would permit the counterparty under the facility to terminate further purchases of interests in accounts receivable and to receive all collections from previously sold interests until they had collected on their interests in those receivables, thus reducing Equistar's liquidity.

## **CURRENT BUSINESS OUTLOOK**

At this time, TiO<sub>2</sub> sales volumes are strong, and Millennium believes that the inorganic chemicals segment is positioned for a strong 2006. In the EC&D segment, Equistar's global economic outlook for 2006 is positive. Chemical industry operations have largely recovered from the disruptions of the 2005 hurricane season. In the ethylene markets, demand has improved, and Equistar has seen a return of positive price momentum in a number of product areas. Equistar expects strong business conditions for its products in 2006. The acetyls business continues to be negatively affected by high natural gas prices in the U.S., and 2006 results will be influenced by the trend in such prices.

## **RELATED PARTY TRANSACTIONS**

Millennium purchases products from Equistar, a joint venture with Lyondell, at market-related prices and, sells products to Equistar and Lyondell at market-based prices. As a result of the acquisition of Millennium by Lyondell on November 30, 2004, Millennium and Lyondell entered into an agreement for the provision of administrative services by Lyondell to Millennium, as well as a tax-sharing agreement.

Millennium believes that such transactions are effected on terms substantially no more or less favorable than those that would have been agreed upon by unrelated parties on an arm's length basis. See Note 6 to the Consolidated Financial Statements for further discussion of related party transactions involving Lyondell, Equistar and Millennium.



---

**Table of Contents**

**Index to Financial Statements**

**CRITICAL ACCOUNTING POLICIES**

Millennium applies those accounting policies that management believes best reflect the underlying business and economic events, consistent with accounting principles generally accepted in the U.S. Millennium's more critical accounting policies include those related to liabilities for anticipated expenditures to comply with environmental regulations, accruals for taxes based on income, the equity interest in Equistar, long-lived assets, the valuation of goodwill, and accruals for long-term employee benefit costs such as pension and postretirement costs. Inherent in such policies are certain key assumptions and estimates made by management. Management periodically updates its estimates used in the preparation of the financial statements based on its latest assessment of the current and projected business and general economic environment. These critical accounting policies have been discussed with Millennium's Board of Directors. Millennium's significant accounting policies are summarized in Note 2 to the Consolidated Financial Statements.

*Liabilities for Environmental Remediation Costs* Anticipated expenditures related to investigation and remediation of contaminated sites, which include current and former plant sites and other remediation sites, are accrued when it is probable a liability has been incurred and the amount of the liability can be reasonably estimated. Only ongoing operating and monitoring costs, the timing of which can be determined with reasonable certainty are discounted to present value. Future legal costs associated with such matters, which generally are not estimable, are not included in these liabilities.

As of December 31, 2005, Millennium's accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled \$168 million. The liabilities for individual sites range from less than \$1 million to \$103 million, and remediation expenditures are expected to occur over a number of years, and not to be concentrated in any single year. In the opinion of management, there is no material estimable range of reasonably possible loss in excess of the liabilities recorded for environmental remediation. However, it is possible that new information about the sites for which the accrual has been established, new technology or future developments such as involvement in investigations by regulatory agencies, could require Millennium to reassess its potential exposure related to environmental matters. See Note 19 to the Consolidated Financial Statements for further discussion of environmental remediation matters.

*Accruals for Taxes Based on Income* Uncertainties exist with respect to interpretation of complex U.S. federal and non-U.S. tax regulations. Management expects that Millennium's interpretations will prevail. Also, Millennium has recognized deferred tax benefits relating to its future utilization of past operating losses. Millennium believes it is more likely than not that the amounts of deferred tax assets in excess of the related valuation reserves will be realized. Further details on Millennium's income taxes appear in Note 18 to the Consolidated Financial Statements.

*Equity Interest in Equistar* Millennium has evaluated the carrying value of its investment in Equistar at December 31, 2005 using fair value estimates prepared by Lyondell in connection with Lyondell's accounting for its acquisition of Millennium, and by third parties. Based on those estimates, Millennium has determined that the fair value exceeded Millennium's carrying value for its Equistar investment. The carrying value of Millennium's investment in Equistar at December 31, 2005 was \$464 million. If future valuation estimates for Millennium's interest in Equistar are lower than Millennium's carrying value for its interest in Equistar, an adjustment to write down the investment would be required.

*Long-Lived Assets* With respect to long-lived assets, key assumptions include the estimates of useful asset lives and the recoverability of carrying values of fixed assets, and other intangible assets, as well as the existence of any obligations associated with the retirement of fixed assets. Such estimates could be significantly modified and/or the carrying values of the assets could be impaired by such factors as new technological developments, new chemical industry entrants with significant raw material or other cost advantages, uncertainties associated with the U.S. and world economies, the cyclical nature of the chemical and refining industries, and uncertainties associated with governmental actions. Impairments were recorded in each of the years 2005, 2004 and 2003 for the LeHavre TiO<sub>2</sub> facility.



---

**Table of Contents**

**Index to Financial Statements**

Millennium defers the costs of major periodic maintenance and repair activities (turnarounds) amortizing such costs over the period until the next expected major turnaround of the affected unit. The balances of such deferred costs totaled \$14 million and \$15 million at December 31, 2005 and 2004. During 2005, 2004 and 2003, cash expenditures of approximately \$11 million, \$12 million and \$15 million, respectively, were deferred and are being amortized, generally over 18 months to 3 years. Amortization in 2005, 2004 and 2003, of previously deferred turnaround costs was \$8 million, \$12 million and \$9 million, respectively.

The estimated useful lives of long-lived assets range from 5 to 40 years. Depreciation and amortization of these assets, including amortization of deferred turnaround costs, under the straight-line method over their estimated useful lives totaled \$90 million, \$94 million and \$99 million in 2005, 2004 and 2003, respectively. If the useful lives of the assets were found to be shorter than originally estimated, depreciation and amortization charges would be accelerated over the revised useful life.

Additional information on long-lived assets, deferred turnaround costs and related depreciation and amortization appears in Note 11 to the Consolidated Financial Statements.

*Goodwill* Goodwill represents the excess of the purchase price over the fair value of net tangible and identifiable intangible assets and liabilities of acquired businesses. Millennium evaluates the carrying value of goodwill annually or more frequently if events or changes in circumstances indicate that the carrying amount may exceed fair value. Recoverability is determined by comparing the estimated fair value of the reporting unit to which the goodwill applies to the carrying value, including goodwill, of that reporting unit. The carrying value of goodwill at December 31, 2005 was \$104 million, of which \$56 million and \$48 million was associated with Millennium's inorganics segment and acetyls business, respectively. The recoverability of Millennium's goodwill is dependent upon the future valuations associated with these businesses, which could change significantly based upon business performance or other factors.

*Long-Term Employee Benefit Costs* The costs to Millennium of long-term employee benefits, particularly pension and postretirement medical and life insurance benefits, are incurred over long periods of time, and involve many uncertainties over those periods. The net periodic benefit cost attributable to current periods is based on several assumptions about such future uncertainties, and is sensitive to changes in those assumptions. It is management's responsibility, often with the assistance of independent experts, to select assumptions that in its judgment represent its best estimates of the future effects of those uncertainties. It also is management's responsibility to review those assumptions periodically to reflect changes in economic or other factors that affect those assumptions.

The current benefit service costs, as well as the existing liabilities, for pensions and other postretirement benefits are measured on a discounted present value basis. The discount rate is a current rate, related to the rate at which the liabilities could be settled. Millennium's assumed discount rate is based on average rates published by Moody's and Merrill Lynch for high-quality (Aa rating) ten-year fixed income securities. For the purpose of measuring the U.S. benefit obligations at December 31, 2005, Millennium lowered its assumed discount rate from 5.75% to 5.5%, reflecting market interest rates at December 31, 2005. The 5.5% rate also will be used to measure net periodic benefit cost during 2006. A further one percentage point reduction in the assumed discount rate would increase Millennium's benefit obligation for pensions and other postretirement benefits by approximately \$108 million, and would reduce Millennium's net income by approximately \$5 million.

The benefit obligation and the periodic cost of postretirement medical benefits also are measured based on assumed rates of future increase in the per capita cost of covered health care benefits. As of December 31, 2005, the assumed rate of increase was 10%, decreasing 1% per year to 5% in 2011 and thereafter. A one percentage point change in the health care cost trend rate assumption would have no significant effect on either the benefit liability or the net periodic cost.

The net periodic cost of pension benefits included in expense also is affected by the expected long-term rate of return on plan assets assumption. Investment returns that are recognized currently in net income represent the



**Table of Contents**

**Index to Financial Statements**

expected rate of return on plan assets rate applied to a market-related value of plan assets which, for Millennium, is defined as the market value of assets. The expected rate of return on plan assets rate is a longer term rate, and is expected to change less frequently than the current assumed discount rate, reflecting long-term market expectations, rather than current fluctuations in market conditions.

The actual rate of return on plan assets may differ from the expected rate due to the volatility normally experienced in capital markets. Management's goal is to manage the investments over the long term to achieve optimal returns with an acceptable level of risk and volatility. Based on the market value of plan assets at December 31, 2005, a one percentage point decrease in this assumption for Millennium would decrease Millennium's net income by approximately \$5 million.

Net periodic pension cost recognized each year includes the expected asset earnings, rather than the actual earnings or loss. As a result of asset earnings significantly below the expected return on plan assets rate over the last several years, the level of unrecognized investment losses, together with the net actuarial gains and losses, is \$400 million at December 31, 2005. This unrecognized amount, to the extent it exceeds ten percent of the projected benefit obligation for the respective plan, will be recognized as additional net periodic benefit cost over the average remaining service period of the participants in each plan. This annual amortization charge will be approximately \$33 million per year based on the December 31, 2005 unrecognized amount.

Additional information on the key assumptions underlying these benefit costs appears in Note 17 to the Consolidated Financial Statements.

**ACCOUNTING AND REPORTING CHANGES**

Effective October 1, 2005, Millennium implemented Financial Accounting Standards Board ( FASB ) Interpretation ( FIN ) No. 47, *Accounting for Conditional Asset Retirement Obligations*, which clarifies the term *conditional asset retirement obligation* as used in Statement of Financial Accounting Standard ( SFAS ) No. 143, *Accounting for Conditional Asset Retirement Obligations*, as an obligation that is conditional only as to timing or amount. Millennium's application of this interpretation had no material effect on its consolidated financial statements.

Effective July 1, 2005, Millennium implemented SFAS No. 153, *Exchanges of Nonmonetary Assets*, which amends Accounting Principles Board ( APB ) Opinion No. 29, *Accounting for Nonmonetary Transactions*, to replace the exception to fair value recognition for nonmonetary exchanges of similar productive assets, with a general exception for exchanges of nonmonetary assets that do not have commercial substance. Millennium's application of SFAS No. 153 had no material effect on its consolidated financial statements.

SFAS No. 123 *Accounting for Stock-Based Compensation*, as amended by SFAS No. 148, *Accounting for Stock-Based Compensation Transition and Disclosure*, encourages, but does not require, a fair-value based method of accounting for employee stock options and similar equity instruments, which generally would result in the recording of additional compensation expense in Millennium's financial statements. Millennium accounts for stock-based employee compensation using the intrinsic value method prescribed in APB Opinion No. 25 and related interpretations. Accordingly, no compensation cost was recognized for the stock option plans in the accompanying financial statements as all options granted had an exercise price equal to the market value of the underlying common stock on the date of grant. Pro forma compensation expense related to stock options was \$1 million and \$2 million, respectively, for 2004 and 2003.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*. A primary focus of this Statement is accounting for transactions in which an entity obtains employee services in share-based payment transactions, such as by the granting of stock options and phantom stock options. Millennium does not expect application of these provisions to have a material effect on its consolidated financial statements.

**Table of Contents**

**Index to Financial Statements**

In September 2005, the Emerging Issues Task Force ( EITF ) of the FASB reached consensus on one issue of EITF Issue No. 04-13, *Accounting for Purchases and Sales of Inventory with the Same Counterparty*, that inventory purchase and sales transactions with the same counterparty that are entered into in contemplation of one another should be combined for purposes of applying APB Opinion No. 29, *Accounting for Nonmonetary Transactions*. The effect would be to reduce reported revenues and cost of sales for affected transactions. The consensus on this issue would apply to transactions entered into beginning in the second quarter 2006. Millennium is evaluating the effect of EITF 04-13 on its consolidated financial statements.

**ENVIRONMENTAL MATTERS**

Various environmental laws and regulations impose substantial requirements upon the operations of Millennium. Millennium's policy is to be in compliance with such laws and regulations, which include, among others, the Comprehensive Environmental Response, Compensation and Liability Act ( CERCLA or Superfund ) as amended, the Resource Conservation and Recovery Act ( RCRA ) and the Clean Air Act Amendments ( Clean Air Act ). Millennium does not specifically track all recurring costs associated with managing hazardous substances and pollution in ongoing operations. Such costs are included in cost of sales.

Millennium's accrued liability for future environmental remediation costs at current and former plant sites and other remediation sites totaled \$168 million as of December 31, 2005. The remediation expenditures are expected to occur over a number of years, and not to be concentrated in any single year. In the opinion of management, there is no material estimable range of reasonably possible loss in excess of the liabilities recorded for environmental remediation. However, it is possible that new information about the sites for which the accrual has been established, new technology or future developments such as involvement in investigations by regulatory agencies, could require Millennium to reassess its potential exposure related to environmental matters. The liabilities for individual sites range from less than \$1 million to \$103 million. The \$103 million liability relates to the Kalamazoo River Superfund Site. See *Critical Accounting Policies* above and the *Environmental Remediation* section of Note 19 to the Consolidated Financial Statements for additional discussion of Millennium's liabilities for environmental remediation, including the liability related to the Kalamazoo River Superfund Site.

Millennium also makes capital expenditures to comply with environmental regulations. Capital expenditures for regulatory compliance in 2005, 2004 and 2003 totaled approximately \$8 million, \$8 million and \$9 million, respectively. Millennium currently estimates environmentally-related capital expenditures at its facilities will be approximately \$11 million in 2006 and \$6 million in 2007.

**Item 7A. Disclosure of Market Risk**

See Note 16 to the Consolidated Financial Statements for discussion of Millennium's management of commodity price risk, foreign currency exposure and interest rate risk through its use of derivative instruments and hedging activities.

**Table of Contents**

**Index to Financial Statements**

**COMMODITY PRICE RISK**

A substantial portion of Millennium's products and raw materials are commodities whose prices fluctuate as market supply and demand fundamentals change. Accordingly, product margins and the level of Millennium's profitability tend to fluctuate with changes in the business cycle.

Millennium selectively entered into commodity derivative hedging transactions, primarily price swaps, options, and futures, to help manage the exposure to commodity price risk with respect to purchases of raw materials and product sales. The net gain recognized in earnings in 2004 was less than \$1 million. During 2004 and 2003, the derivative transactions were not significant compared to Millennium's overall inventory purchases and product sales; there were no derivative transactions in 2005. Millennium had no outstanding commodity derivative transactions at December 31, 2005 and 2004.

**FOREIGN EXCHANGE RISK**

Millennium manufactures and markets its products in a number of countries throughout the world and, as a result, is exposed to changes in foreign currency exchange rates. Costs in some countries are incurred, in part, in currencies other than the applicable functional currency. Millennium's non-U.S. operations account for approximately 55% of consolidated revenues and 50% of consolidated assets. Millennium has selectively utilized forward, swap and option derivative contracts with terms normally lasting less than three months to protect against the adverse effect that exchange rate fluctuations may have on foreign currency denominated trade receivables and trade payables. These derivatives generally are not designated as hedges for accounting purposes. At December 31, 2005, there were no outstanding foreign currency forward, swap and option contracts and at December 31, 2004, \$104 million were outstanding.

**INTEREST RATE RISK**

Derivative instruments have been used selectively to manage the ratio of fixed- to variable-rate debt at Millennium. At December 31, 2005 and 2004, there were outstanding interest rate swap agreements in the notional amount of \$175 million, which were designated as fair-value hedges of underlying fixed-rate obligations. The fair value of these interest rate swap agreements was an obligation of \$4 million at December 31, 2005 and \$1 million at December 31, 2004, resulting in a decrease in the carrying value of long-term debt and the recognition of a corresponding liability. Using sensitivity analysis, the negative impact on the fair value of the obligation at December 31, 2005 would be approximately \$2 million assuming a 10% unfavorable change in variable interest rates.

**Table of Contents**

**Index to Financial Statements**

**Item 8. *Financial Statements and Supplementary Data***

**Index to the Consolidated Financial Statements**

	<b>Page</b>
<b>MILLENNIUM CHEMICALS INC.</b>	
<u>Management's Report on Internal Controls Over Financial Reporting</u>	54
<u>Report of Independent Registered Public Accounting Firm</u>	55
Consolidated Financial Statements:	
<u>Consolidated Statements of Income</u>	57
<u>Consolidated Balance Sheets</u>	58
<u>Consolidated Statements of Cash Flows</u>	59
<u>Consolidated Statements of Stockholder's Equity</u>	60
<u>Notes to the Consolidated Financial Statements</u>	61

**Table of Contents**

**Index to Financial Statements**

**MANAGEMENT'S REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING**

The management of Millennium is responsible for establishing and maintaining adequate internal control over financial reporting. Millennium's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles.

Millennium management assessed the effectiveness of Millennium's internal control over financial reporting as of December 31, 2005. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission in *Internal Control - Integrated Framework*. Based on its assessment, Millennium's management has concluded that Millennium's internal control over financial reporting was effective as of December 31, 2005 based on those criteria.

PricewaterhouseCoopers LLP, the independent registered public accounting firm that audited the financial statements included in this Annual Report on Form 10-K, has audited management's assessment of the effectiveness of Millennium's internal control over financial reporting as of December 31, 2005, as stated in their report that appears on the following page.

**Table of Contents**

**Index to Financial Statements**

**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholder of

Millennium Chemicals Inc.:

We have completed an integrated audit of Millennium Chemicals Inc.'s 2005 consolidated financial statements and of its internal control over financial reporting as of December 31, 2005 and audits of its 2004 and 2003 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

**Consolidated financial statements**

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, of stockholder's equity and of cash flows present fairly, in all material respects, the financial position of Millennium Chemicals Inc. and its subsidiaries at December 31, 2005 and 2004, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2005 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements based on our audits. We conducted our audits 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 of financial statements 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.

**Internal control over financial reporting**

Also, in our opinion, management's assessment, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 8, that the Company maintained effective internal control over financial reporting as of December 31, 2005 based on criteria established in *Internal Control - Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2005, based on criteria established in *Internal Control - Integrated Framework* issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting 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 effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

## Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable



**Table of Contents**

**Index to Financial Statements**

assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

Because of its inherent limitations, internal control over financial reporting may not prevent or detect misstatements. Also, projections of any evaluation of effectiveness to future periods are subject to the risk that controls may become inadequate because of changes in conditions, or that the degree of compliance with the policies or procedures may deteriorate.

/s/ PricewaterhouseCoopers LLP

PRICEWATERHOUSECOOPERS LLP

Houston, Texas

March 14, 2006

Table of ContentsIndex to Financial Statements

## MILLENNIUM CHEMICALS INC.

## CONSOLIDATED STATEMENTS OF INCOME

Millions of dollars	For the year ended December 31,		
	2005	2004	2003
<b>Sales and other operating revenues:</b>			
Trade	\$ 1,914	\$ 1,878	\$ 1,677
Related parties	45	10	10
	<u>1,959</u>	<u>1,888</u>	<u>1,687</u>
<b>Operating costs and expenses:</b>			
Cost of sales	1,715	1,602	1,470
Selling, general and administrative expenses	194	164	130
Research and development expenses	23	21	23
Business combination costs	2	71	
Asset impairments	15	14	103
Reorganization and other costs		9	18
	<u>1,949</u>	<u>1,881</u>	<u>1,744</u>
Operating income (loss)	10	7	(57)
Interest expense	(130)	(106)	(98)
Interest income	18	12	6
Other income (expense), net	(19)	14	58
	<u>(121)</u>	<u>(73)</u>	<u>(91)</u>
Loss before equity investments, minority interests and income taxes			
Income (loss) from equity investment in Equistar	221	81	(100)
	<u>100</u>	<u>8</u>	<u>(191)</u>
Income (loss) before income taxes and minority interests			
Provision for (benefit from) income taxes	67	33	(11)
	<u>33</u>	<u>(25)</u>	<u>(180)</u>
Income (loss) before minority interests			
Minority interests	(5)	(6)	(5)
	<u>28</u>	<u>(31)</u>	<u>(185)</u>
Income (loss) before cumulative effect of accounting change			
Cumulative effect of accounting change			(1)
	<u>\$ 28</u>	<u>\$ (31)</u>	<u>\$ (186)</u>
<b>Net income (loss)</b>			

See Notes to the Consolidated Financial Statements.



**Table of Contents****Index to Financial Statements****MILLENNIUM CHEMICALS INC.****CONSOLIDATED BALANCE SHEETS**

<u>Millions of dollars</u>	<u>December 31,</u>	
	<u>2005</u>	<u>2004</u>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 279	\$ 344
Accounts receivable:		
Trade, net	331	336
Related parties	30	
Inventories	429	414
Prepaid expenses and other current assets	79	61
	<u>          </u>	<u>          </u>
Total current assets	1,148	1,155
Property, plant and equipment, net	647	707
Investments in Equistar Chemicals, LP	464	457
Goodwill, net	104	104
Other assets, net	110	107
	<u>          </u>	<u>          </u>
Total assets	\$ 2,473	\$ 2,530
<b>LIABILITIES AND STOCKHOLDER S DEFICIT</b>		
Current liabilities:		
Current maturities of long-term debt	\$ 169	\$ 7
Accounts payable:		
Trade	305	265
Related parties	62	29
Accrued liabilities	156	153
	<u>          </u>	<u>          </u>
Total current liabilities	692	454
Long-term debt	966	1,398
Other liabilities	644	536
Deferred income taxes	167	164
Commitments and contingencies		
Minority interests	42	33
Stockholder s deficit:		
Common stock, \$0.01 par value, 100,000,000 shares authorized, 66,135,816 shares issued	1	1
Additional paid-in capital	1,175	1,169
Retained deficit	(999)	(1,026)
Accumulated other comprehensive loss	(125)	(105)
Treasury stock, at cost, (4,799,694 shares issued)	(90)	(94)
	<u>          </u>	<u>          </u>

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Total stockholder's deficit	(38)	(55)
Total liabilities and stockholder's deficit	\$ 2,473	\$ 2,530

See Notes to the Consolidated Financial Statements.

**Table of Contents****Index to Financial Statements****MILLENNIUM CHEMICALS INC.****CONSOLIDATED STATEMENTS OF CASH FLOWS**

<b>Millions of dollars</b>	<b>For the year ended December 31,</b>		
	<b>2005</b>	<b>2004</b>	<b>2003</b>
<b>Cash flows from operating activities:</b>			
Net income (loss)	\$ 28	\$ (31)	\$ (186)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Depreciation and amortization	107	114	126
Asset impairments	15	14	103
Equity investment in Equistar			
Amount included in net (income) loss	(221)	(81)	100
Distributions of earnings	214	81	
Deferred income taxes	(4)	(75)	(23)
Debt prepayment premiums and charges	11		
Changes in assets and liabilities that provided (used) cash:			
Accounts receivable	(28)	(15)	(45)
Inventories	(20)	56	(13)
Accounts payable	77	44	(48)
Other, net	96	88	(106)
<b>Net cash provided by (used in) operating activities</b>	<b>275</b>	<b>195</b>	<b>(92)</b>
<b>Cash flows from investing activities:</b>			
Expenditures for property, plant and equipment	(60)	(55)	(48)
Distributions from affiliates in excess of earnings		12	
Proceeds from sale of assets		2	
<b>Net cash used in investing activities</b>	<b>(60)</b>	<b>(41)</b>	<b>(48)</b>
<b>Cash flows from financing activities:</b>			
Repayment of long-term debt	(374)	(89)	(404)
Issuance of long-term debt	100	34	626
Proceeds from exercise of stock options		17	
Contribution from affiliate	6		
Distributions to minority interests	(6)		
Dividends paid			(17)
Other	2		
<b>Net cash provided by (used in) financing activities</b>	<b>(272)</b>	<b>(38)</b>	<b>205</b>
Effect of exchange rate changes on cash	(8)	19	19
<b>Increase (decrease) in cash and cash equivalents</b>	<b>(65)</b>	<b>135</b>	<b>84</b>

Edgar Filing: MILLENNIUM CHEMICALS INC - Form 10-K

Cash and cash equivalents at beginning of period	344	209	125
Cash and cash equivalents at end of period	\$ 279	\$ 344	\$ 209

See Notes to the Consolidated Financial Statements.

Table of ContentsIndex to Financial Statements

## MILLENNIUM CHEMICALS INC.

## CONSOLIDATED STATEMENTS OF STOCKHOLDER S EQUITY

Millions of dollars	Common Stock		Paid In Capital	Retained Deficit	Accumulated Other Comprehensive Loss	Total Stockholder s Deficit	Comprehensive Income (Loss)
	Issued	Treasury					
<b>Balance, January 1, 2003</b>	\$ 1	\$ (275)	\$ 1,314	\$ (792)	\$ (299)	\$ (51)	
Net loss				(186)		(186)	\$ (186)
Foreign currency translation					128	128	128
Minimum pension liability, net of tax of \$16 million					29	29	29
Dividends to shareholders				(17)		(17)	
Shares purchased by employee benefit plan trusts		8	(6)			2	
Shares issued to fund 401(k) plan		7	(4)			3	
Net gains on derivative financial instruments					1	1	1
<b>Comprehensive loss</b>							\$ (28)
<b>Balance, December 31, 2003</b>	\$ 1	\$ (260)	\$ 1,304	\$ (995)	\$ (141)	\$ (91)	
Net loss				(31)		(31)	\$ (31)
Retirement of treasury shares pursuant to merger		137	(124)			13	
Foreign currency translation, net of tax of \$7 million					50	50	50
Minimum pension liability, net of tax of \$7 million							