

MILLENNIUM CHEMICALS INC

Form 10-K

March 16, 2005

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

Washington, D.C. 20549

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**FORM 10-K**

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(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, 2004**
- Transition Report Pursuant to Section 13 or 15(D) of the Securities Exchange Act of 1934**

Commission File No. 1-12091

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**MILLENNIUM CHEMICALS INC.**

(Exact name of Registrant as specified in its charter)

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Delaware  
(State or other jurisdiction of

incorporation or organization)

1221 McKinney Street,

22-3436215  
(I.R.S. Employee

Identification No.)

77010

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Suite 700, Houston, Texas  
(Address of principal executive offices)

(Zip Code)

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

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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

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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 an accelerated filer (as defined in Exchange Act Rule 12b-2). Yes  No

There were 65,141,231 shares of the Registrant's common stock issued and outstanding on June 30, 2004, the last business day of the Registrant's most recently completed second fiscal quarter. The aggregate market value of the voting stock held by non-affiliates of the Registrant on June 30, 2004, based on the closing price of the Registrant's common stock on the New York Stock Exchange composite tape on that date, was \$1,120,397,683.

There is no longer an established public trading market for the Registrant's equity securities. All of the Registrant's equity securities are 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.**



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**PART I**

**Items 1 and 2. *Business and Properties***

**MILLENNIUM**

**Overview of the Business**

Millennium Chemicals Inc. ( Millennium ) is a global chemical company, with total 2004 revenues of \$1.9 billion, and assets of \$2.5 billion as of December 31, 2004. 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 (  $TiO_2$  ). The inorganic chemicals segment also produces titanium tetrachloride (  $TiCl_4$  ), titanyl sulfate (  $TiOSO_4$  ), ultra-fine  $TiO_2$  silica gel and cadmium-based pigments. Millennium's ethylene, co-products and derivatives segment comprises its acetyls business and its equity investment in 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 include propylene, butadiene, benzene and toluene. Equistar's derivatives include polyethylene, ethylene oxide ( EO ), ethylene glycol ( EG ), EO derivatives, and ethanol and polypropylene. Equistar also produces 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.

Prior to Lyondell's November 30, 2004 acquisition of Millennium, Millennium reported its results of operations in three segments: titanium dioxide and related products; acetyls; and specialty chemicals. For additional segment information and for geographic information for each of the years in the three-year period ended December 31, 2004, see Note 20 of the Notes 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 1221 McKinney Street, Suite 700, Houston, Texas 77010 (Telephone: (713) 652-7200). Millennium's website address is [www.millenniumchem.com](http://www.millenniumchem.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 Millennium's website 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 now 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

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financial officer, principal accounting officer and controller. Millennium provides a copy of the Business Ethics and Conduct Policy on its website free of charge. In addition, Millennium intends to satisfy the disclosure requirements of Item 5.05 of Form 8-K regarding any 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 on its website.

Information contained on Millennium's website or any other website is not incorporated into this Annual Report and does not constitute a part of this Annual Report.

**Table of Contents****INORGANIC CHEMICALS SEGMENT****Overview**

TiO<sub>2</sub> is the primary product of the inorganic chemicals segment, which accounted for approximately 71% of Millennium's total revenues in 2004, 69% in 2003 and 73% in 2002. 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, 2004, 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 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.

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

TiO<sub>2</sub> is produced in two crystalline forms: rutile and anatase. Rutile TiO<sub>2</sub> has better opacification and tinting strength in many applications, and some rutile TiO<sub>2</sub> products also provide better resistance to the harmful effects of weather. As a result, rutile TiO<sub>2</sub> is the preferred form for use in paint and coatings, ink and plastics. Anatase TiO<sub>2</sub> has a bluer undertone and is less abrasive than rutile and, therefore, is often preferred for use 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.

Once an intermediate TiO<sub>2</sub> pigment has been produced by either the chloride or sulfate process, it is processed into a product with specific performance characteristics for particular end-use applications through proprietary processes involving surface treatment with various chemicals and combinations of milling and micronizing.



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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. The segment also owns a mineral sands mine located at Mataraca, Paraiba, Brazil, which supplies the Brazilian plant with titanium ores. The mine has over two million metric tons of recoverable reserves. The mine produced approximately 114,000 metric tons of ilmenite, a titanium-bearing ore, in 2004. Approximately 103,000 metric tons of ilmenite produced at the mine were used internally by the Salvador TiO<sub>2</sub> plant, while approximately 700 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, substantially 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.

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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 plants and others of which are manufactured at plants 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> silica gel and cadmium-based pigments.

### **Raw Materials**

Naturally occurring titanium-bearing ores such as ilmenite and natural rutile occur as sand or hard rock deposits in many 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, India and Ukraine, generally pursuant to one- to six-year supply contracts expiring between 2005 and 2007. 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 upgraded titaniferous raw materials and accounted for approximately 70% of the titanium ores and upgraded titaniferous raw materials purchased by Millennium in 2004.

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 **Risks and Other Factors That May Affect Millennium, Its Subsidiaries and Its Joint Ventures International Operations and Country Risks**.

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 **Risks and Other Factors That May Affect Millennium, Its Subsidiaries and Its Joint Ventures Raw Materials and Energy Costs**. 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 2004, approximately 63% was sold to customers in the paint and coatings industry, approximately 24% to customers in the plastics industry, approximately 12% 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 contracts that range from two to five years, typically with automatic one-year extension provisions. 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 2004. For geographic data, see Note 20 of Notes to the Consolidated Financial Statements.



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### **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. Certain inorganic chemicals competitors are more vertically integrated than Millennium's inorganic chemicals businesses, producing titanium-bearing ores as well as TiO<sub>2</sub>. Millennium's inorganic chemicals businesses are vertically integrated at the Brazilian facility, which owns the titanium ore mine that supplies that facility. The major competitors in the TiO<sub>2</sub> business are E. I. du Pont de Nemours and Company ( DuPont ), Kerr-McGee Chemical Corporation ( Kerr-McGee Chemicals, a unit of Kerr-McGee Corporation, both directly and through various joint ventures), Huntsman Tioxide ( Huntsman Tioxide, a business segment of Huntsman International LLC), and Kronos Worldwide, Inc. ( Kronos ). Millennium estimates that collectively, as of December 31, 2004, DuPont, Millennium, Kerr-McGee Chemicals, Huntsman Tioxide and Kronos 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, both ground and precipitated forms, 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. Debottlenecking and other capacity expansions at existing plants require substantially less time and capital and can 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, 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.

Trade and related party sales of VAM accounted for approximately 16% of Millennium's total revenues in 2004 and 2003 and 15% in 2002. Trade and related party sales of acetyls collectively accounted for approximately 24% of Millennium's total revenues in 2004, 25% in 2003 and 21% in 2002.



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The following table outlines the acetyls business' primary products, annual processing capacity at December 31, 2004, and the primary uses for such products. Unless otherwise specified, annual processing capacity was calculated by estimating the 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 AG.

**Raw Materials**

The primary raw materials for the production of VAM are acetic acid and ethylene. 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 2004, Millennium used the majority 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 AG (Linde) pursuant to a long-term contract under which pricing is based primarily on cost of production. La Porte Methanol Company, which is 85% owned by Millennium and 15% owned by Linde, supplies all of Millennium's requirements for methanol. Natural gas is the primary raw material required for the production of methanol and carbon monoxide.

**Marketing and Sales**

VAM is sold into domestic and export markets under contracts with terms of one to seven years, and also on a spot basis. Acetic acid that is not consumed internally for the production of VAM is sold into domestic and export markets under contracts with terms of one to five years, and also on a spot basis. Contract pricing 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 a long-term agreement with DuPont to convert 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 not utilized internally by DuPont. The contract expires on December 31, 2006 but may be extended by mutual agreement thereafter from year-to-year. VAM and acetic acid are shipped by barge, ocean-going vessel, pipeline, tank car and tank truck. Millennium has bulk 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.



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The La Porte, Texas methanol facility is owned by La Porte Methanol Company, a partnership owned 85% by Millennium and 15% by Linde. Each party 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 contracts that range in term from one to three years 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 2004. For geographic data, see Note 20 of Notes 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 producers of its products, including BP p.l.c. ( BP ), Celanese AG ( Celanese ), The Dow Chemical Company ( Dow ), Eastman Chemical Company, 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 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. Ethylene co-products include propylene, butadiene, benzene and toluene. Derivatives include polyethylene, EO, EG, EO derivatives, and ethanol and polypropylene. Equistar also produces 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 use crude oil-based liquid raw materials, including naphtha, condensates and gas oils, to produce ethylene. The use of crude oil-based liquid raw materials results in the production of a significant amount of co-products such as propylene, butadiene, benzene and toluene. Based upon independent surveys, management believes that the Channelview facility is one of the lowest cash production cost ethylene facilities in the United States. 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. A comprehensive pipeline system connects Equistar's Gulf Coast plants with major ethylene and co-products customers. Raw materials are sourced both internationally and domestically and are shipped via vessel and pipeline. The Lake Charles, Louisiana ethylene and co-products facility has been idled since the first quarter 2001, pending sustained improvement in market conditions. Trade and related party sales of ethylene accounted for approximately 12% of Equistar's total



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revenues in 2004, 13% in 2003 and 11% in 2002.

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. Trade and related party sales of propylene, which is used to produce polypropylene, acrylonitrile and propylene oxide, accounted for approximately 18% of Equistar's total revenues in 2004, 16% in 2003 and 17% in 2002. Benzene is used to

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produce styrene, phenol and cyclohexane, which are used in the production of nylon, plastics, synthetic rubber and polystyrene. Trade and related party sales of benzene accounted for approximately 10% of Equistar's total revenues in 2004 and less than 10% in 2003 and 2002.

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 14% of Equistar's total revenues in 2004, 15% in 2003 and 16% in 2002, and polyethylene (HDPE, LDPE and LLDPE collectively) accounted for approximately 26% of Equistar's total revenues in 2004, 28% in 2003 and 29% in 2002.

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 are compounded with additive materials at the facilities in La Porte, Texas and Fairport Harbor, Ohio. Automotive compound production was temporarily consolidated at the Fairport Harbor, Ohio facility and the automotive compound production unit at the La Porte, Texas facility was temporarily idled at the end of the first quarter 2004, pending sustained improvement in market conditions. 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.

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The following table outlines Equistar's primary products, annual processing capacity as of December 31, 2004, and the primary uses for such products. Unless otherwise specified, annual processing capacity was calculated by estimating the 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 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.

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<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.
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.

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- (c) Includes up to 44 million gallons/year of capacity processed 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 processed 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 crude oil-based liquids (also referred to as heavy liquids) and NGLs. Crude oil-based liquids generally are delivered by ship or barge, and NGLs generally are delivered via pipeline.

Ethylene and co-products plants with the flexibility to consume a wide range of raw materials historically have had lower variable costs than those that are restricted in their raw material processing capability to NGLs. Crude oil-based liquids have had an historical cost advantage over NGLs such as ethane and propane, assuming the co-products were recovered and sold. Facilities using crude oil-based 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, during the fourth quarter 2003, when co-product values experienced seasonal weakness, the advantage dropped below average. However, the advantage rebounded strongly in 2004 as very strong co-product values overcame record high crude oil pricing to deliver the best annual average advantage in twenty years. Equistar has the capability to realize this margin advantage due to its ability to process crude oil-based 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 crude oil-based liquids to processing a majority of NGLs. The Corpus Christi plant can range from processing predominantly crude oil-based liquids to processing predominantly NGLs. The Chocolate Bayou facility processes 100% crude oil-based 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 crude-oil based 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 crude oil-based liquids requirements from LCR at market-related prices. Equistar obtains 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. The 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.



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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 ethylene, co-products and derivatives has not been an issue. For additional discussion regarding the effects of raw material pricing on recent operating results, see 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 transferred by pipeline to related and unrelated parties. For the year ended December 31, 2004, approximately 90% 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 include significant ethylene sales to Occidental Chemical Corporation (a subsidiary of Occidental Petroleum Corporation, which owns approximately 17% of Lyondell's outstanding common stock) during 2004 pursuant to a long-term ethylene supply agreement.

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.

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 contracts that have initial terms ranging from two to six years and that typically contain automatic one to two year extension provisions. In addition, pursuant to a long-term propylene supply arrangement entered into in 2003 with a subsidiary of Sunoco, Inc., 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. This 15-year supply arrangement replaced a previous contract under which Equistar supplied 400 million pounds of propylene annually to Sunoco at market-related prices. For additional discussion regarding the transactions with Sunoco, see Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations.

Equistar generally sells its butadiene under contracts that have initial terms of three to five years and that typically contain automatic one to two year extension provisions. Equistar sells benzene to Lyondell and toluene to LCR at market-related prices. Equistar's benzene and toluene production that is not sold to related parties generally is sold under contracts that have initial terms ranging from three to five years and that typically contain automatic one-year extension provisions. 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 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.

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

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Most of the ethylene and propylene production of the Channelview, Chocolate Bayou, Corpus Christi, La Porte and Lake Charles facilities is shipped via a 1,430-mile 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



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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 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 the domestic polyethylene product volumes are sold to customers under contracts typically having a term of one to three years. 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 three- to five-year contracts, with market-based pricing. Glycol ethers, ethanolamines 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 2004, no single customer accounted for 10% or more of Equistar's total revenues in 2004. For geographic data, see Note 20 of Notes 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. Equistar's ethylene and co-products compete with other large domestic producers of ethylene and co-products, including BP, Chevron Phillips Chemical Company LP (ChevronPhillips), Enterprise Products Partners L.P., Exxon Mobil Corporation (ExxonMobil), Huntsman Chemical Company (Huntsman) and Shell Chemical Company (Shell). Equistar's derivatives products compete with large producers of derivatives, including BP, Celanese, ChevronPhillips, Dow, Eastman Chemical Company, ExxonMobil, Formosa Plastics Corporation, Huntsman, NOVA Chemicals Corporation, Total and Westlake Polymers. Industry consolidation, including the combinations of British Petroleum and Amoco, Exxon and Mobil, and Dow and Union Carbide and the formation of ChevronPhillips, has brought North American production capacity under the control of fewer, although larger, competitors.

Equistar's ethylene rated capacity at December 31, 2004 was approximately 11.6 billion pounds per year, or approximately 15% of total North American production capacity. Based on published rated production capacities, Equistar is the second largest producer of ethylene in North America. North American ethylene rated capacity at December 31, 2004 was approximately 75 billion pounds per year. Approximately 77% of the total ethylene production capacity in North America is located along the Gulf Coast.

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, 2004 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.

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Profitability is affected not only by supply and demand for ethylene, co-products and derivatives, but also by raw material costs and vigorous price competition among producers, which may intensify due to, among other things, the addition of new capacity. 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 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. 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.

**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 also are 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.

**Table of Contents****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.

<b>Location</b>	<b>Principal Products</b>
<b><i>Inorganic Chemicals Segment</i></b>	
Ashtabula, Ohio (a) *	TiO <sub>2</sub> and TiCl <sub>4</sub>
Baltimore, Maryland (Hawkins Point)	TiO <sub>2</sub>
Baltimore, Maryland (St. Helena)	Cadmium-based pigments and silica gel
Kemerton, Western Australia *	TiO <sub>2</sub>
Le Havre, France (b)	TiO <sub>2</sub>
Mataraca, Paraiba, Brazil (mine) (c)*	Ilmenite (generally consumed in the Salvador TiO <sub>2</sub> plant), zircon and natural rutile titanium ore
Salvador, Bahia, Brazil (c)	TiO <sub>2</sub>
Stallingborough, United Kingdom *	TiO <sub>2</sub>
Thann, France	TiO <sub>2</sub> , TiCl <sub>4</sub> and ultra-fine TiO <sub>2</sub>
<b><i>Ethylene, Co-Products and Derivatives Segment</i></b>	
Bayport (Pasadena), Texas	EO, EG and other EO Derivatives
Bayport (Pasadena), Texas (d)	LDPE
Beaumont, Texas (e)	EG
Channelview, Texas (f)	Ethylene, Propylene, Butadiene, Benzene, Toluene, Alkylate and MTBE
Chocolate Bayou, Texas (g)(b)	Ethylene, Propylene, Butadiene, Benzene, Toluene and MTBE
Chocolate Bayou, Texas (g)	HDPE
Clinton, Iowa	Ethylene, Propylene, LDPE and HDPE
Corpus Christi, Texas	Ethylene, Propylene, Butadiene and Benzene
Fairport Harbor, Ohio (h)(i)	Performance polymers
Lake Charles, Louisiana (j)	Ethylene and Propylene
La Porte, Texas (i)	Ethylene, Propylene, LDPE, LLDPE and performance Polymers
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 (b)	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 land is leased.



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- (c) Unrelated equity investors hold a minority ownership interest in Millennium's Brazilian subsidiary that owns the facility.
- (d) The facility is located on leased land. The facility is owned by Equistar and operated by an unrelated party.
- (e) The Beaumont facility is owned by PD Glycol, a partnership owned 50% Equistar and 50% by an unrelated party.
- (f) 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.
- (g) Millennium and Occidental each contributed to Equistar a facility located at the Chocolate Bayou site. These facilities are not on contiguous property.
- (h) The building and land are leased.
- (i) Automotive compound production was temporarily consolidated at the Fairport Harbor, Ohio facility and the automotive compound production unit at the La Porte, Texas facility was temporarily idled at the end of the first quarter 2004, pending sustained improvement in market conditions.
- (j) The Lake Charles facility has been idled since the first quarter 2001, pending sustained improvement in market conditions. The facilities and land are leased from Occidental Chemical Corporation, a subsidiary of Occidental, under a lease that expires in May 2005 and has a renewal provision for an additional one-year period at either party's option.
- (k) The facility is owned by La Porte Methanol Company, a partnership owned 15% by an unrelated party.

## **Other Locations**

**Millennium** Millennium leases warehouses, offices and its research facility in Baltimore, Maryland. Lyondell provides office space to Millennium for its executive offices and headquarters in downtown Houston, Texas as part of a shared services arrangement. Millennium owns or leases approximately 525 railcars for use in its businesses.

**Equistar** Equistar has 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 owns a barge docking facility near the Channelview facility capable of berthing eight barges and related terminal equipment for loading and unloading raw materials and products. Equistar owns or leases approximately 9,070 railcars for use in its businesses.

Lyondell provides office space to Equistar for its executive offices and headquarters 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.

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**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 \$21 million in 2004, \$23 million in 2003 and \$21 million in 2002, all of which were expensed as incurred.

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, 2004, Millennium owned approximately 50 United States patents and approximately 90 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 \$34 million in 2004, \$38 million in 2003 and \$38 million in 2002, all of which were expensed as incurred.

Equistar maintains an extensive patent portfolio and continues to file new patent applications related to its businesses. As of December 31, 2004, Equistar owned approximately 235 United States patents and approximately 355 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, 2004, Millennium had approximately 3,420 full-time and part-time employees, approximately 1,230 of whom were located in the United States, approximately 1,120 of whom were located in Europe, approximately 695 of whom were located in Brazil, approximately 355 of whom were located in Australia and approximately 20 of whom were located in Asia. As of December 31, 2004, approximately 25% of the employees located in the U.S., approximately 75% of the employees located in Europe and substantially all of the employees located in Brazil were represented by labor unions. With the exception of annual salary negotiations for certain international represented sites, no union contracts need to be renegotiated in 2005. 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** As of December 31, 2004, Equistar employed approximately 3,155 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.

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**RISKS AND OTHER FACTORS THAT MAY AFFECT MILLENNIUM,  
ITS SUBSIDIARIES AND ITS JOINT VENTURES**

There are many factors that may affect the businesses and results of operations of Millennium, its subsidiaries and joint ventures. Some of these factors are discussed below. For additional discussion regarding factors that may affect the businesses and operating results of Millennium and its subsidiaries and joint ventures, see Items 1 and 2. Business and Properties, Forward-Looking Statements, Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations and Item 7A. Disclosure of Market and Regulatory Risk.

**Industry Cyclicity and Overcapacity**

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. For example, in 2003, consolidations and negative business conditions within certain of those customer industries put pressure on prices and margins; however, in the second half of 2004, demand strengthened considerably, resulting in increased TiO<sub>2</sub> prices.

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 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 continues to improve. Product growth has returned to historical levels and, in some cases, has exceeded them. 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. When coupled with new capacity additions by some participants in the industry, especially those in the Middle East and Asia which are expected to startup in the middle to latter part of the decade, the current positive business conditions could be depressed, eventually leading to another period of oversupply and poor profitability.

**Raw Materials and Energy Costs**

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 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. Raw material costs have increased through 2004 and remain at high levels. There have been in



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the past, and will likely be in the future, periods of time when Millennium and its joint ventures are unable to pass raw material cost increases on to customers quickly enough to avoid adverse impacts on their results of operations. In addition, customer consolidation has made it more difficult to pass cost increases along 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 may increase working capital needs, which could reduce liquidity and cash flow for Millennium and its joint ventures. See [Competitive Markets](#) below.

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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. For example, generally Millennium has purchased raw materials for its inorganic chemicals segment pursuant to one-year to six-year supply contracts that expire between 2005 and 2007. In 2004, Millennium purchased approximately 70% of its titanium ores and titaniferous raw materials from two suppliers, Rio Tinto Iron & Titanium Inc. (through its affiliates Richards Bay Iron & Titanium (Proprietary) Limited and QIT-Fer et Titane Inc.) and Iluka Resources Limited, under multiple year contractual commitments. In addition, Millennium obtains chlorine and caustic soda exclusively from one supplier for its Australian operations under a long-term supply agreement. Moreover, Millennium purchases all of its carbon monoxide for its acetyls from Linde AG pursuant to a long-term contract based primarily on the cost of production. Each of Millennium's chloride TiO<sub>2</sub> manufacturing plants has long-term supply agreements for oxygen and nitrogen through either nearby suppliers dedicated to the site or through a direct pipeline arrangement. Each of these contracts is an exclusive supply contract. Accordingly, if one of these suppliers were unable to meet its obligations under present supply arrangements, Millennium could suffer reduced supplies or be forced to incur increased costs for its raw materials, which would have a direct negative impact on plant operations.

## **General Economic Conditions and Other External Factors**

External factors beyond the control of Millennium and its joint ventures 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, and governmental regulation in the U.S. and abroad. 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 continued to improve, increasing demand for Millennium's and its joint ventures' products and resulting in improved operating results as operations begin to approach full capacity. 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 may once again cause a slowdown in the business cycle, reducing demand and lowering operating rates and, ultimately, reducing profitability. Although Millennium's and its joint ventures' access to capital currently is not impeded, these same risks could increase instability in the financial markets and make Millennium's and its joint ventures' ability to access capital more difficult.

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 high raw material prices, an oversupply of a particular product and/or a lack of demand for that particular product, 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

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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.

## **International Operations and Country Risks**

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 its products internationally or decrease the prices at which it can sell its products 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. These laws may be modified, the result of which may be to prevent or limit foreign subsidiaries from transferring cash to Millennium. For geographic data, see Note 20 of Notes to 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.

## **Competitive Markets**

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 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. With respect to Millennium's acetyls business and Equistar's businesses, 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.

## **Environmental and Other Regulatory Matters**

Millennium and its joint ventures cannot predict with certainty the extent of their future liabilities and costs under environmental, health and safety laws and regulations and whether liabilities and costs will be material. In addition, they 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 otherwise manufacture, handle or own. Although these types of claims have not historically had a material impact on their 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.

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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, 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. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental and Legal Matters.

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. 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. Millennium, to the extent appropriate, has accrued amounts (without regard to potential insurance recoveries or other third party reimbursements) believed to be sufficient to cover current estimates of the cost for remedial measures based upon its interpretation of current environmental standards. In the opinion of management, there is no material estimable range of reasonably possible loss in excess of the amount recorded. Based on the establishment of such accruals, and the status of discussions with regulatory agencies, Millennium does not anticipate any material adverse effect upon its financial position or liquidity or competitive position as a result of compliance with the laws and regulations described in this or the preceding paragraphs. See also Item 3. Legal Proceedings Environmental Proceedings and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental and Legal Matters.

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, 2004, 2003 and 2002, Millennium spent approximately

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\$8 million, \$9 million and \$17 million, respectively, for environmentally related capital expenditures at existing facilities. Millennium currently estimates that environmentally related capital expenditures at its facilities will be approximately \$16 million for 2005 and \$13 million for 2006. These amounts include estimated expenditures related to emission control standards for nitrogen oxides ( NOx ) and highly reactive, volatile organic compounds ( HRVOCs ), as discussed below.

**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 ( PCBs ), 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. 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.

As of December 31, 2004, the probable liability associated with the river cannot be determined with certainty. A liability of \$40 million has been recognized, representing Millennium s interim allocation of 55% of the \$73 million estimated cost of bank stabilization, recommended as the preferred remedy in 2000 by the KRSG. 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.

In addition, Millennium has recognized a liability of \$38 million 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. 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. See Item 3. Legal Proceedings Environmental Proceedings.

**Ozone Standard** The eight-county Houston/Galveston region has been designated a severe non-attainment area for ozone by the EPA under a one-hour ozone standard. Emission reduction controls for NOx, which contribute to ozone formation, must be installed at each of Equistar s six facilities and Millennium s two facilities in the Houston/Galveston region prior to a November 2007 compliance deadline for the one-hour ozone standard. In addition, in December 2004, the regulatory agency for the state of Texas, the Texas Commission on Environmental Quality, or TCEQ, finalized controls over HRVOCs. Equistar and Millennium are still assessing the impact of the HRVOC rules. In April 2004, the EPA designated the eight-county Houston/Galveston region a moderate non-attainment area under an eight-hour ozone standard. As a result, the TCEQ must submit a plan to the EPA in 2007 to demonstrate compliance with the eight-hour ozone standard in 2010. Although the one-hour ozone standard expires in 2005, the controls under that standard will not be relaxed under the EPA s new eight-hour transition rules. As a result, Equistar and Millennium still will be required to meet the new emission standards for NOx and HRVOCs. The timing and amount of the estimated expenditures are subject



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to these regulatory and other uncertainties, as well as to obtaining the necessary permits and approvals. The ultimate cost of implementing any plan developed to comply with the final ozone standards cannot be estimated at this time. See Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental Matters.

**Other Regulatory Requirements** In addition to the environmental matters described above, Millennium and its joint ventures are subject to other material regulatory requirements, including those relating to the shipment or exportation of their products. Although they 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.

**Lead Paint** 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 that Millennium and other manufacturers are responsible for personal injury, property damage, and remediation costs allegedly associated with the use of these products. The plaintiffs in these legal proceedings include municipalities, counties, school districts, individuals and the State of Rhode Island, 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, contain general language requesting equitable relief from defendants such as abatement of lead-based paint in buildings. All these legal proceedings are in various pre-trial, post-trial 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. This case is tentatively set to be retried on September 7, 2005. An order is anticipated from the court specifying the additional issues to be considered by the jury in the retrial beyond the public nuisance questions considered by the jury in the first trial. 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 by insurance, have a material impact on Millennium's financial position, results of operations or cash flows. In addition, Millennium has not accrued any liabilities for judgments or settlements resulting from lead-based paint and lead pigment litigation. See Item 3. Legal Proceedings.

## **Operating Hazards**

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 projects on schedule.



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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 hazards include: pipeline leaks and ruptures; explosions; fires; severe weather and natural disasters; mechanical failure; unscheduled downtimes; supplier disruptions; labor difficulties; transportation interruptions; remediation complications; chemical spills; discharges or releases of toxic or hazardous substances or gases; storage tank leaks; other environmental risks; and potential 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 will also 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 is in accordance with customary industry practices, but they are not fully insured against all potential hazards incident to their businesses, including losses resulting from war risks or terrorist acts. As a result of market conditions, premiums and deductibles for certain insurance policies can increase substantially and, in some instances, certain insurance may 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**

Lyondell owns 70.5% of Equistar, and Millennium owns the remaining 29.5% of Equistar. On November 30, 2004, Lyondell acquired Millennium in a stock-for-stock business combination. As a result, Millennium and Equistar are now 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.

## **Related Party Transactions**

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, 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.

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### **Limitations on 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 currently prohibits it from making cash investments in subsidiaries and joint ventures which are not restricted subsidiaries as defined in the indentures, subject to only limited exceptions. Neither Millennium nor Equistar currently is a restricted subsidiary. Millennium's flexibility to make investments in Equistar also is limited by its debt covenants.

Some of Equistar's indentures require additional interest payments to the noteholders if Equistar makes distributions to Lyondell and Millennium when Equistar does not meet a specified fixed charge coverage ratio. Equistar met this ratio as of December 31, 2004. In addition, Equistar's credit facility prohibits distributions during any default under the facility. These provisions may deter or limit the movement of cash from Equistar to Lyondell and Millennium.

Future borrowings by Lyondell or Equistar also may contain restrictions on the payment of distributions by Equistar to Lyondell and Millennium or the cash investment by Lyondell in Equistar and Millennium. Applicable state law 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 "Risks and Other Factors that May Affect Millennium, Its Subsidiaries and Its Joint Ventures" section.

### **Potential Acquisitions, Divestitures and Joint Ventures**

Millennium may purchase or sell assets or enter into contractual arrangements or joint ventures in an effort to generate value. To the extent permitted by applicable debt covenants, some of these transactions may be financed with additional borrowings by Millennium or its joint ventures. Although these transactions are 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. 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.

## **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 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,

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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,

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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),

legal, tax and environmental proceedings,

the cyclical nature of the chemical industry,

competitive products and pricing pressures,

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

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

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, its subsidiaries 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, its subsidiaries or its joint ventures future performance, and Millennium s, its subsidiaries 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 Items 1 and 2. Business and Properties, Risks and Other Factors That May Affect Millennium, Its Subsidiaries and Its Joint Ventures, Item 7. Management s Discussion and Analysis of Financial Condition and Results of Operations and Item 7A. Disclosure of Market and Regulatory Risk for additional information about factors that may affect the businesses and operating results of Millennium, its subsidiaries and its joint ventures. These factors are not necessarily all of the important factors that could affect Millennium, its subsidiaries 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 and the capacity positions of their competitors for certain products, 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 the heading "Risks and Other Factors That May Affect Millennium, Its Subsidiaries and Its Joint Ventures" and "Forward-Looking Statements."

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### **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 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 and 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 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 periodically 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 generally helps investors compare operating performance between two periods. Such adjusted data is always reported with an explanation of the items that are excluded.

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

#### **Litigation Matters**

Millennium, its subsidiaries 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, its subsidiaries 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 condition 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, its subsidiaries 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

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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

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injury, property damage and/or air, noise 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.

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 that Millennium and other manufacturers are responsible for personal injury, property damage, and remediation costs allegedly associated with the use of these products. The plaintiffs in these legal proceedings include municipalities, counties, school districts, individuals and the State of Rhode Island, 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, contain general language requesting equitable relief from defendants such as abatement of lead-based paint in buildings. Legal proceedings relating to lead pigment or paint are in various procedural stages of pre-trial, post-trial and post-dismissal settings. These legal proceedings are described below in groups pursuant to their particular procedural posture.

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; *Jackson, et al. v. The Glidden Co., et al.*, commenced in the Court of Common Pleas, Cuyahoga County, Ohio, on August 12, 1992; *City of St. Louis v. Lead Industries Association, Inc., et al.*, commenced in the St. Louis, Missouri, Circuit Court on January 25, 2000; *Mark Ludwigsen Walters v. NL Industries, Inc., et al.*, commenced on July 18, 2002, in the Supreme Court, County of Kings, New York; *William Russell, et al. v. NL Industries, et al.*, commenced in the Circuit Court of LeFlore County, Mississippi on December 30, 2002; *Will T. Turner v. Sherwin-Williams Company, et al.*, commenced in the Circuit Court of Jefferson County, Mississippi on December 30, 2002; *John Henry Sweeney v. The Sherwin Williams Co., et al.*, commenced in the Circuit Court of Hinds County, Mississippi on December 30, 2002; and *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.

*Kayla Sabater et al., individually and on behalf of all those similarly situated in the State of New York v. Lead Industries Association, Inc., et al.*, commenced in the Supreme Court of New York, Bronx County, on November 25, 1998, and was dismissed without prejudice in June 2004. On October 29, 2002, after a trial in which the jury deadlocked, the court in the *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. This case is tentatively set to be retried on September 7, 2005. An order is anticipated from the court specifying the additional issues to be considered by the jury in the retrial beyond the public nuisance questions considered by the jury in the first trial.

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: *Steven Thomas, et al. v. Lead Industries Association, Inc., et al.*, commenced in the Milwaukee County, Wisconsin, Circuit Court on September 10, 1999; *Reginald Smith, et al. v. Lead Industries Association, Inc., et al.* commenced in the Baltimore City, Maryland, Circuit Court on September 29, 1999; and *In Re Lead Paint Litigation*, consolidated on February 11, 2002, in the Superior Court of New Jersey, Law Division: Middlesex County, Case Code 702. In addition, on February 7, 2005, the Circuit Court, Cook County, Illinois granted the defendants' motion for summary judgment in *Mary Lewis, Tashswan 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





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for leave to file a third amended complaint. There are two cases in which the court entered summary judgment on behalf of all defendants, and notices of appeal have been filed: *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; and *City of Chicago v. American Cyanamid Company, et al.*, commenced on September 5, 2002, in the Circuit Court, Cook County, Illinois.

Legal proceedings relating to lead pigment or paint that are pending but have been abated under the laws of the State of Texas pending resolution of the appeal of a decision granting summary judgment in favor of one lead pigment defendant in *Spring Branch Independent School District v. Lead Industries Association*, and for which no defense costs will be incurred during the abatement period, are as follows: *Houston Independent School District v. Lead Industries Association, et al.*, commenced in the District Court of Harris County, Texas, on June 30, 2000; *Harris County v. Lead Industries Association, et al.*, commenced in the District Court of Harris County, Texas, on April 23, 2001; *Liberty Independent School District v. Lead Industries Association, et al.*, commenced in the District Court of Liberty County, Texas, on January 22, 2002; and *Brownsville Independent School District v. Lead Industries Association, Inc., et al.*, filed on May 28, 2002, in the District Court, Cameron County, Texas.

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, any of its subsidiaries, 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.

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 the timing of any request for indemnity 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. The insurance carriers may appeal the Ohio decision regarding defense costs, and they have in the past and may in the future attempt to deny indemnity coverage if there is ever a settlement or an adverse judgment in any lead-based paint or lead pigment case.

In 1986, a predecessor of a company that is now a subsidiary of Millennium sold its recently acquired Glidden Paints business. As part of that sale, the seller agreed to indemnify the purchaser against certain claims made during the first eight years after the sale; the purchaser agreed to indemnify the seller against such claims made after the eight-year period. With the exception of the two cases discussed below, all pending lead-based paint and lead pigment litigation involving Millennium and its subsidiaries, 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. Since Millennium's defense costs to date largely have been covered by insurance and there never has been a settlement paid by, nor any judgment rendered against, Millennium (or any other company sued in any lead-based paint or lead pigment litigation), the parties' indemnification claims have not been ruled on by a court.

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A current subsidiary and an alleged predecessor company are parties to the only two remaining cases originally filed within the eight-year period following the 1986 sale of the Glidden Paints business referred to above. In the first of these cases, *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, 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.*, commenced in the Court of Common Pleas, Cuyahoga County, Ohio, on August 12, 1992, includes two minors as plaintiffs. Dispositive motions were filed in that case in late 2002 and have yet to be ruled on by the court.

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 lead-based paint and lead pigment litigation may be filed against Millennium or its subsidiaries 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 or its subsidiaries. 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.

On January 16, 2002, Slidell Inc. ( Slidell ) filed a lawsuit against Millennium Inorganic Chemicals Inc., a wholly-owned operating subsidiary of Millennium, in the United States District Court, District of Minnesota, alleging breach of contract and other related causes of action arising out of a contract between the two parties for the supply of packaging equipment. In the suit, Slidell sought unspecified monetary damages in excess of the statutory minimum. Millennium filed a counterclaim against Slidell for recovery of the money it had already paid for the equipment plus other direct damages arising out of Slidell's breach of its contractual obligations. The trial for this case began on January 11, 2005. On February 24, 2005, the jury returned a verdict in the amount of \$4.8 million in Millennium's favor for Millennium's claim that Slidell breached its contractual obligations. Although the jury did not award Slidell any damages for its claim that Millennium breached its contractual obligations, the jury awarded Slidell \$650,000 in damages for a related promissory estoppel claim by Slidell. The net result of the case is a jury verdict in Millennium's favor in the amount of \$4.2 million.

## **Environmental Proceedings**

From time to time Millennium, its subsidiaries and its joint ventures receive notices 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. Such alleged violations may become the subject of enforcement actions or other legal proceedings and may (individually or in the aggregate) involve monetary sanctions of \$100,000 or more (exclusive of interest and costs). For additional information regarding environmental matters, see Items 1. and 2. Business and Properties Risks and Other Factors that May Affect Millennium, Its Subsidiaries and Its Joint Ventures Environmental and Other Regulatory Matters and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental and Legal Matters.

As of December 31, 2004, Millennium's environmental liability for future remediation costs at all current and former plant sites and Superfund sites totaled \$122 million. The liabilities for individual sites range from \$1 million to \$78 million and are expected to be incurred over a number of years, and not be concentrated in any



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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 Items 1. and 2. Business and Properties Risks and Other Factors that May Affect Millennium, Its Subsidiaries and Its Joint Ventures Environmental and Other Regulatory Matters and Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations Environmental and Legal Matters.

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 PCBs, 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. In 2000, 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.

As of December 31, 2004, the probable liability associated with the river cannot be determined with certainty. A liability of \$40 million has been recognized, representing Millennium's interim allocation of 55% of the \$73 million estimated cost of bank stabilization, recommended as the preferred remedy in 2000 by the KRSG. 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.

In addition, Millennium has recognized a liability of \$38 million 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. 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. For additional information regarding the Kalamazoo River Superfund Site, see Risks and Other Factors That May Affect Millennium, Its Subsidiaries and Its Joint Ventures Environmental and Other Regulatory Matters.

In April 1997, the Illinois Attorney General filed a complaint in Circuit Court in Grundy, Illinois seeking monetary sanctions for releases into the environment at Millennium's former Morris, Illinois facility in alleged violation of state regulations. The Morris, Illinois plant was contributed to Equistar on December 1, 1997 in connection with the formation of Equistar. Equistar has reached a settlement with the State of Illinois, which includes a civil penalty in the amount of \$175,000. Millennium is responsible for paying this amount pursuant to the agreement under which Equistar was formed on December 1, 1997.

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 or financial condition of Equistar.

## **Indemnification**

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Millennium, its subsidiaries and its joint ventures are parties to various indemnification arrangements, including arrangements entered into in connection with acquisitions, divestitures and the formation of joint

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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, its subsidiaries 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, 2004, 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.

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**PART II**

**Item 5. Market for the Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities**

At the effective time of Lyondell's acquisition of Millennium, each issued and outstanding share of common stock, par value \$0.01 per share, of Millennium was converted into the right to receive 0.95 shares of common stock, par value \$1.00 per share, of Lyondell. As a result of the acquisition, Millennium is now a wholly owned subsidiary of Lyondell, does not have a class of equity securities registered pursuant to Section 12 of the Securities Exchange Act of 1934 and does not have a class of equity securities listed on any stock exchange or traded in any public market.

Millennium suspended payment of dividends on its common stock in July 2003, and, therefore, Millennium paid no dividends on its common stock during the remainder of 2003 or in 2004. Millennium paid a dividend of \$0.135 per share of common stock in each of the first two quarters of 2003. During 2003, Millennium paid \$17 million in cash dividends on its common stock.

Millennium's credit agreement 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, please see *Risks and Other Factors That May Affect Millennium, Its Subsidiaries and Its Joint Ventures* Limitations on 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 11 of Notes to the Consolidated Financial Statements. Millennium currently is prohibited from paying any dividends under provisions of the 9.25% senior notes.



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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,				
	2004	2003	2002	2001	2000
<b>Results of Operations Data:</b>					
Sales and other operating revenues	\$ 1,888	\$ 1,687	\$ 1,554	\$ 1,590	\$ 1,793
Income (loss) from equity investment in Equistar	81	(100)	(73)	(83)	45
Income (loss) before cumulative effect of accounting change (a)	(31)	(185)	(39)	(56)	111
Cumulative effect of accounting change (b)		(1)	(305)		
Net income (loss)	(31)	(186)	(344)	(56)	111
Diluted earnings (loss) per share (c)		(2.91)	(5.41)	(0.88)	1.73
Dividends per share (d)		0.27	0.54	0.54	0.54
<b>Balance Sheet Data:</b>					
Total assets	2,497	2,398	2,396	2,965	3,259
Long-term debt	1,398	1,461	1,212	1,172	767
<b>Cash Flow Data:</b>					
<b>Cash provided (used) by</b>					
Operating activities	195	(92)	80	112	29
Investing activities	(41)	(48)	(64)	(78)	(23)
Financing activities	(38)	205	(4)	(22)	(2)

- (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 writedown 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 except that basic earnings per share in 2000 are higher by \$0.01.
- (d) In July 2003, the payment of dividends on common stock was suspended.

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

This discussion should be read in conjunction with the information contained in the Consolidated Financial Statements of Millennium Chemicals Inc. ( 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 2004 operating results to third quarter 2004 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.

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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.

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### OVERVIEW

Millennium is a global manufacturer and marketer of titanium dioxide (  $\text{TiO}_2$  ) and acetyls. Millennium's principal operations are grouped into two business segments: inorganic chemicals, which primarily consists of  $\text{TiO}_2$ ; 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 ( Equistar ), which is accounted for under the equity method. Millennium was acquired by Lyondell Chemical Company ( Lyondell ) on November 30, 2004.

During 2004, the  $\text{TiO}_2$  industry experienced strong demand and reduced capacity that tightened the  $\text{TiO}_2$  market. Demand increased an estimated 6% to 8% compared to 2003, resulting in worldwide industry operating rates of approximately 91%. Millennium's  $\text{TiO}_2$  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.

Millennium's average 2003 selling prices for  $\text{TiO}_2$  were higher than in 2002, and its acetyls 2003 average selling prices were significantly higher than 2002 average selling prices. While acetyls margins improved in 2003, the higher 2003  $\text{TiO}_2$  sales prices were insufficient to offset higher 2003 manufacturing costs, resulting in lower margins and income for the  $\text{TiO}_2$  business segment. In addition, at Equistar, operating losses in 2003 were greater than in 2002. Equistar's results in 2003 reflected lower sales volumes and significantly higher raw material and energy costs than in 2002, which were only partially offset by higher average 2003 selling prices.

### RESULTS OF OPERATIONS

**Revenues** Revenues of \$1,888 million for 2004 increased 12% compared to 2003 primarily due to higher  $\text{TiO}_2$  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.

Revenues of \$1,687 million for 2003 increased 9% compared to 2002 primarily due to higher  $\text{TiO}_2$  and acetyls local currency sales prices and foreign currency strength against the U.S. dollar. Acetyls sales volumes for 2003 were higher than in the prior year, but 2003 sales volumes for  $\text{TiO}_2$  were lower than in 2002.

**Cost of Sales** Costs of sales increased 9% in 2004 compared to 2003 and 12% in 2003 compared to 2002, primarily due to the unfavorable effect of translating local currency manufacturing costs into a weakening U.S. dollar during this three-year period. In addition, rising utility and raw material costs, particularly natural gas and ethylene, during this three-year period contributed to the increasing manufacturing costs. The increases in 2003 compared to 2002 were much more significant than the increases in 2004 compared to 2003.

**SG&A Expenses** Selling, general and administrative ( SG&A ) expenses were \$164 million, \$130 million and \$154 million in 2004, 2003 and 2002, respectively. 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. The decrease in SG&A expenses in 2003 of

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\$24 million, or 16%, compared to 2002 was primarily due to a \$13 million higher accrual in 2002 for estimated environmental remediation costs and, to a lesser extent, Millennium's cost reduction initiatives.

**Business Combination Costs** In connection with Lyondell's November 30, 2004 acquisition of Millennium, Millennium incurred \$71 million of business combination costs, primarily consisting of change-of-control liabilities to officers and key employees and the vesting of certain of their benefits.

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**Asset Impairments** Millennium recorded pretax asset impairment charges of \$14 million after tax in 2004, and \$103 million, or \$101 million after tax, in the fourth quarter of 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. Capital expenditures of \$14 million at this plant during 2004 were included in operating expense as additional impairment charges. See Note 4 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. Cumulative charges for the program of \$21 million included \$20 million for severance-related costs and \$1 million for contractual commitments for ongoing lease costs, net of expected sublease income, associated with the closure of the Red Bank, New Jersey office for the remaining term of the lease agreement. Other costs, net, include a net write-off of \$6 million in 2004 for assets that will not have future value as a result of a jury verdict in the first quarter 2005. See Note 5 to the Consolidated Financial Statements.

**Interest Expense** Interest expense was \$106 million in 2004, \$98 million in 2003 and \$90 million in 2002. Interest costs were higher in 2004 compared to 2003 and in 2003 compared to 2002, respectively, as a result of higher average debt levels and the higher interest rates. 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. Additionally, in November 2003, Millennium terminated its European receivables securitization program.

**Other Income, net** Other income, net, was \$14 million in 2004 and \$58 million in 2003. 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 \$81 million in 2004 and losses of \$100 million and \$73 million in 2003 and 2002, respectively. The \$181 million improvement in 2004 compared to 2003 was primarily due to higher product margins at Equistar as a result of a cyclical turnaround in the chemical industry in 2004.

Millennium's equity losses from Equistar in 2003 included Millennium's 29.5% share of Equistar's financing costs of \$11 million, a loss on the sale of a polypropylene production facility of \$4 million, and severance costs of \$2 million. The remaining increase in equity losses in 2003 compared to 2002 was primarily due to lower sales volumes, higher pension and medical benefit costs, and a higher provision for doubtful accounts, partially offset by higher average product margins at Equistar.

**Income Taxes** The tax provision was \$33 million in 2004 and a benefit of \$11 million and \$59 million in 2003 and 2002, respectively. The \$33 million provision in 2004 exceeds 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. The tax benefit of \$59 million in 2002 was significantly higher than the statutory rate primarily due to favorable settlements of prior year tax items, including a tax refund. In each of the three years, Millennium benefited from non-U.S. tax incentives that reduced taxes.

**Loss Before Cumulative Effect of Accounting Change** Millennium reported a net loss of \$31 million in 2004, a \$185 million loss before the cumulative effect of an accounting change for asset retirement obligations in 2003 and a loss of \$39 million before the cumulative effect of an

accounting change for goodwill in 2002. The

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\$154 million improvement in 2004 compared to 2003 was the result of pretax improvements of \$64 million in Millennium's operating income and \$181 million from Millennium's equity investment in Equistar, partly offset by \$44 million of lower other income, net. The combined pretax improvement of \$201 million would have resulted in an after-tax improvement of approximately \$131 million at statutory tax rates; however, income tax effects resulted in an additional improvement of approximately \$30 million. 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. See *Income Taxes* above. The 2004 period also included pretax business combination costs of \$71 million, Le Havre asset impairment charges of \$14 million, and a net charge of \$6 million for write-off of assets. The 2003 period included pretax Le Havre asset impairment charges of \$103 million, and reorganization costs of \$18 million.

Millennium's pretax results decreased \$99 million in 2003 compared to 2002, primarily due to lower operating results of \$124 million, a \$27 million larger loss from Millennium's equity investment in Equistar, and higher net interest expense of \$6 million, partly offset by the favorable settlement of tax issues of \$55 million. Additional 2003 deferred tax provisions offset the tax benefit of the higher pretax loss.

***Fourth Quarter 2004 versus Third Quarter 2004***

Millennium had a net loss of \$38 million in the fourth quarter 2004 compared to net income of \$27 million in the third quarter 2004. The fourth quarter 2004 included pretax business combination costs of \$66 million. Operationally, the fourth quarter 2004 TiO<sub>2</sub> sales volumes declined by approximately 30,000 metric tons, or 21%, versus the third quarter 2004, consistent with normal historic seasonal declines. On a U.S. dollar basis, sales prices increased by approximately \$100 per metric ton, or 7%, but cost increases of approximately the same magnitude resulted in unchanged margins versus the third quarter 2004.

**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 6 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.

Millions of dollars	For the year ended December 31,		
	2004	2003	2002
<b>Revenues:</b>			
Inorganic chemicals segment	\$ 1,340	\$ 1,172	\$ 1,129
EC&D segment - acetyls business	453	421	334
Operating income (loss)			
Inorganic chemicals segment	51	(53)	64
EC&D segment - acetyls business	59	26	12

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Other operating loss	(103)	(30)	(9)
Income (loss) from equity investment in Equistar	81	(100)	(73)

**Volumes**

Inorganic chemicals			
TiO <sub>2</sub> (metric kilotons)	665	591	627
EC&D Acetyls (volumes in millions):			
Vinyl Acetate Monomer (VAM) (pounds)	856	857	898
Acetic acid (pounds)	520	473	407
Methanol (gallons)	57	77	81



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**Table of Contents*****Inorganic Chemicals Segment***

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

In 2004,  $TiO_2$  markets benefited from stronger demand and reduced capacity. Millennium estimates global  $TiO_2$  demand in 2004 increased approximately 6% to 8% compared to 2003, reflecting improved global economic conditions. Industry operating rates for  $TiO_2$  production increased from the 2003 level of 85% to an average 91% in 2004. In 2004, margins for the Inorganics segment were unchanged as higher manufacturing and other costs of sales offset the benefits of higher sales prices and volumes.

In 2003, demand for  $TiO_2$  decreased from 2002 primarily due to a weak coatings season in most of North America as a result of poor weather conditions as well as weak global economic conditions throughout most of the year. Millennium's average 2003 selling prices for  $TiO_2$  were higher than in 2002. Sales prices measured in U.S. dollars were higher, in part, due to the strengthening of the euro, the British pound and the Australian dollar versus the U.S. dollar. However, the weakening U.S. dollar also increased foreign currency-based manufacturing costs, when measured in U.S. dollars, which substantially offset the associated revenue increases. Measured in local currencies, the higher 2003  $TiO_2$  sales prices were insufficient to offset higher 2003 manufacturing costs, resulting in lower margins and income for the Inorganics segment.

Operating results for the Inorganics segment included pretax asset impairment charges of \$14 million and \$103 million in 2004 and 2003, respectively, associated primarily with the write-down of property, plant and equipment at the Le Havre, France  $TiO_2$  manufacturing facility.

**Revenues** 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  $TiO_2$  increased 13% compared to 2003, reflecting increases in all major markets and geographic regions. Average sales prices in 2004 were 3% lower in local currencies and 1% higher in U.S. dollars compared to 2003. In local currency terms, average 2004 sales prices were lower than in 2003 as sales price increases during the latter half of 2004 failed to offset sales price declines in the first half of 2004.

Revenues for 2003 increased 4%, to \$1,172 million. Average U.S. dollar  $TiO_2$  sales prices for 2003 increased 11% compared to 2002. Average local currency sales prices increased by 5%, while translation of foreign currency-based sales prices to a weaker U.S. dollar increased U.S. dollar sales prices by 6% compared to 2002. During 2003, local currency sales prices increased in all major geographic regions. In 2003,  $TiO_2$  sales volumes decreased 6% from 2002. Sales volumes decreased from the prior year in all major markets and geographic regions, except for Central and South America. Contrary to traditional  $TiO_2$  demand trends, the second half of 2003 was stronger due primarily to the lack of a coatings season in the first half of 2003 as a result of the poor weather conditions in most of North America, as well as weak global economic conditions.

**Cost of Sales** Cost of sales was \$1,140 million in 2004, a 13% increase compared to 2003 cost of sales of \$1,007 million. The increase reflected the 13% increase in sales volumes, and the unfavorable effects of translating manufacturing costs incurred in stronger foreign currencies into a weaker U.S. dollar.

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Cost of sales of \$1,007 million in 2003 increased 7% compared to \$944 million in 2002. Costs increased primarily due to the unfavorable effect of translating foreign currency-based manufacturing costs into a weaker U.S. dollar, higher maintenance and other fixed costs, and higher costs for utilities, including natural gas.

**SG&A Expenses** SG&A costs increased \$13 million, or 13%, compared to the prior year, reflecting higher employee benefit costs and professional service expenses. SG&A costs for 2003 decreased by \$10 million or 8% compared to the prior year primarily due to lower employee-related costs, partially offset by higher expenses for professional services.

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**Operating Income** The Inorganics segment had operating income of \$51 million in 2004 compared to an operating loss of \$53 million in 2003. 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 \$7 million reflected higher sales volume, \$22 million; and higher average sales prices, \$23 million; partially offset by higher manufacturing and other costs of sales, \$25 million; and higher SG&A costs, \$13 million. Operating income for 2004 also included \$14 million of asset impairment charges related to the Le Havre, France manufacturing facility and a net charge of \$6 million for write-off of assets.

The Inorganics segment had an operating loss of \$53 million in 2003 and operating income of \$64 million in 2002. The operating loss for 2003 included asset impairment charges of \$103 million associated primarily with the Le Havre, France manufacturing facility. Operating income in 2003 also decreased by a net \$14 million primarily due to higher manufacturing and other costs of sales, \$106 million; and lower sales volumes, \$7 million; partially offset by higher average sales prices, \$93 million; and lower SG&A costs, \$6 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 2004, the acetyls business 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, the acetyls business generally benefited from higher product margins in 2004 compared to 2003.

Acetyls production costs increased in 2004 compared to 2003 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 \$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.

Revenues for 2003 of \$421 million increased 26% compared to 2002, primarily due to higher average sales prices. In 2003, the aggregate U.S. dollar price for VAM and acetic acid was 23% higher than in 2002. The increased value in U.S. dollar terms of foreign currency-denominated sales also contributed to the increase in net sales due to the weaker U.S. dollar. The aggregate sales volume for VAM and acetic acid for 2003 increased 2% over 2002, primarily due to higher acetic acid sales volumes.

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**Cost of Sales** Acetyl's costs of sales of \$382 million in 2004 was comparable to \$384 million in 2003, and reflected higher raw material and energy costs, particularly ethylene and natural gas. These increases were substantially offset by decreases in costs of sales because of lower methanol sales volumes.

In 2003, cost of sales of \$384 million increased 26% compared to \$305 million in 2002. The increase was primarily due to higher raw material and energy costs, particularly ethylene and natural gas.

**SG&A Expenses** SG&A costs for 2004 were \$11 million compared to \$9 million in 2003, primarily due to higher employee benefit costs and professional service expenses. SG&A costs for 2003 were \$9 million, or

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47%, lower than \$17 million in 2002, primarily due to lower legal expenses and cost savings related to Millennium's cost reduction initiatives.

**Operating Income** 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 \$39 million, partially offset by \$7 million lower sales volumes.

Operating income for 2003 of \$26 million increased by \$14 million from operating income of \$12 million in 2002. The increase was primarily due to \$88 million higher sales prices and \$8 million lower SG&A expenses, partially offset by \$82 million higher manufacturing and other costs of sales.

### *Equity Investment in Equistar*

**Overview** Equistar produces ethylene and its co-products, primarily propylene, butadiene and aromatics, which include benzene and toluene. Equistar also produces derivatives, primarily polyethylene (including high density polyethylene ( HDPE ), low density polyethylene ( LDPE ) and linear-low density polyethylene ( LLDPE )), ethylene glycol, ethylene oxide and its derivatives, and ethanol. Equistar also produces methyl tertiary butyl ether ( MTBE ), alkylate and 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% interest in Equistar. The following discussion of Equistar's operations is on a 100% basis.

During 2004, the chemical industry experienced broad-based improvements as a stronger global economy led to increased demand and tighter chemical industry supply/demand balances compared to 2003. U.S. ethylene demand grew an estimated 9% in 2004 compared to 2003. In this improved business environment, the industry experienced higher sales volumes and generally higher product margins in 2004 compared to 2003.

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 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.

Equistar has the ability to shift its ratio of raw materials used in the production of ethylene and co-products 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 and co-product propylene, which Equistar produces and sells. The benchmark weighted average cost of ethylene production is based on CMAI's estimated ratio of crude-oil based 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**

	<b>2004</b>	<b>Percent Increase</b>	<b>2003</b>	<b>Percent Increase</b>	<b>2002</b>
Crude oil dollars per barrel	41.42	33%	31.12	19%	26.12
Natural gas dollars per million BTUs	5.78	10%	5.24	63%	3.22
Weighted average cost of ethylene production cents per pound	23.60	15%	20.44	33%	15.38
Ethylene cents per pound	33.75	18%	28.50	28%	22.23
Propylene cents per pound	31.96	49%	21.42	19%	18.00

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Equistar was able to implement sales price increases in many products that more than offset the effect of significantly higher raw material and energy costs during 2004 and 2003. In addition to higher sales prices for ethylene and derivatives, Equistar was able to implement significant sales price increases for co-products such as propylene, benzene and fuels. The higher raw material and energy costs in 2004 and 2003 reflected the effect of a significant escalation in crude oil prices and ongoing high natural gas costs compared to 2002.

The magnitude of price increases had a negative effect on product demand in 2003, and contributed to Equistar experiencing lower sales volumes in 2003 compared to 2002. For the year 2003, U.S. industry ethylene demand decreased slightly compared to 2002. In addition, Equistar completed scheduled maintenance turnarounds at its two largest ethylene plants in 2003.

**Revenues** 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 sales prices were 18% higher in 2004 compared to 2003. Benchmark benzene sales prices averaged 87% higher and benchmark propylene sales prices averaged 49% higher in 2004 compared to 2003. Benchmark prices of HDPE averaged 20% higher in 2004 than in 2003. Ethylene and derivatives sales volumes were 10% higher in 2004 compared to 2003.

Revenues of \$6,545 million in 2003 increased 18% compared to revenues of \$5,537 million in 2002 due to higher sales prices, partly offset by a decrease in sales volumes. Benchmark ethylene prices averaged 28% higher in 2003 compared to 2002 in response to significant increases in the cost of ethylene production, while benchmark propylene sales prices averaged 19% higher. Sales volumes were lower in 2003 compared to 2002 due to the negative effect of price increases on product demand and maintenance turnarounds noted above, as well as the sale of the polypropylene production facility in Pasadena, Texas in 2003.

**Cost of Sales** Cost of sales of \$8,587 million in 2004 increased 34% compared to \$6,387 million in 2003 due to higher costs of raw materials and energy in 2004 compared to 2003. The benchmark price of crude oil averaged 33% higher in 2004 than in 2003, while benchmark natural gas prices averaged 10% higher.

Cost of sales of \$6,387 million in 2003 increased 19% compared to \$5,388 million in 2002. Benchmark natural gas prices averaged 63% higher, and the benchmark price of crude oil averaged 19% higher in 2003 than in 2002.

**SG&A Expenses** SG&A expenses were \$197 million in 2004, \$182 million in 2003 and \$155 million in 2002. The \$15 million increase in 2004 compared to 2003 was primarily due to incentive compensation cost increases in 2004, reflecting the effect of Equistar's improved performance. The \$27 million increase in 2003 compared to 2002 was primarily due to higher employee benefit costs, including \$6 million in employee severance costs in 2003.

**Gain (Loss) on Asset Dispositions** Equistar had a gain of \$4 million in 2004 and a loss of \$27 million in 2003 from disposal of assets. The 2003 loss included a \$12 million loss from the sale of Equistar's polypropylene production facility in Pasadena, Texas and an \$11 million charge for the write-off of a research and development ( R&D ) facility for derivatives.

**Interest Expense** Interest expense was \$227 million in 2004, \$215 million in 2003 and \$205 million in 2002. During this three-year period, Equistar refinanced variable rate debt with fixed rate debt that had longer terms to maturity and higher interest rates, which resulted in the higher interest expense.

**Other Income (Expense), Net** Equistar had other expense, net of \$6 million in 2004, and \$43 million in 2003 and other income, net of \$2 million in 2002. The 2003 net expense of \$43 million included \$37 million of refinancing costs.

**Net Income** 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



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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 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 the R&D facility, as well as \$6 million of employee severance costs.

Equistar had a 2003 net loss of \$339 million compared to a 2002 loss of \$246 million before the cumulative effect of an accounting change in 2002. The \$93 million higher loss in 2003 included the \$37 million of refinancing costs, the \$12 million loss on the sale of the polypropylene plant, the \$11 million charge for the write-off of the R&D facility, and the \$6 million of employee severance costs. The 2002 net loss included a \$33 million negative impact of certain fixed price natural gas and NGL purchase contracts entered into in early 2001. The remaining \$60 million decrease in operating results was primarily due to lower sales volumes, which were only partly offset by higher average product margins in 2003. In addition, SG&A expenses in 2003 were \$27 million higher than in 2002, primarily due to higher employee benefit costs.

**Cumulative Effect of Accounting Change** Effective January 1, 2002, Equistar adopted Statement of Financial Accounting Standards ( SFAS ) No. 142, *Goodwill and Other Intangible Assets*. Upon implementation of SFAS No. 142, Equistar reviewed goodwill for impairment and concluded that the entire balance of goodwill was impaired, resulting in a \$1.1 billion charge that was reported as the cumulative effect of an accounting change as of January 1, 2002. As a result of Equistar's impairment of goodwill in 2002, Millennium reduced the carrying value of its investment in Equistar by \$30 million, which was reported as the cumulative effect of an accounting change.

***Other***

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

Other operating losses were \$103 million in 2004, \$30 million in 2003 and \$9 million in 2002. 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. The \$9 million in 2002 consisted of a net increase in accruals for estimated environmental remediation costs.

**FINANCIAL CONDITION**

**Operating Activities** Operating activities provided cash of \$195 million in 2004, used cash of \$92 million in 2003 and provided cash of \$80 million in 2002. 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 - receivables, inventories and payables - provided cash of \$60 million in 2004 compared to 2003 when a net increase in these items used cash of \$120 million.

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As noted, operating activities used cash of \$92 million in 2003 and provided cash of \$80 million in 2002. The use of cash in operating activities during 2003 was primarily due to the cash used by an increase in the main

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components of working capital and lower operating income. The increase in the main components of working capital in 2003 compared to 2002 was primarily due to the termination of Millennium's European receivables securitization program (see "Off-Balance Sheet Arrangements" below), which increased receivables balances, and the timing of vendor payments, which reduced payables balances.

**Investing Activities** Investing activities used cash of \$41 million in 2004, \$48 million in 2003 and \$64 million in 2002. In 2004, Millennium received \$12 million of distributions in excess of earnings from its equity investment in Equistar.

Capital expenditures were \$55 million in 2004, \$48 million in 2003 and \$65 million in 2002. Millennium's capital expenditures in 2004 and 2003 reflected a continued focus on optimization of its capital base. Capital expenditures in these years primarily included replacement capital projects and certain environmental, cost reduction, and yield-improvement projects. Planned capital spending in 2005 is projected to be approximately \$85 million primarily for base asset support and projects to improve manufacturing efficiency.

**Financing Activities** Financing activities used cash of \$38 million in 2004, provided cash of \$205 million in 2003 and used cash of \$4 million in 2002. In 2004 cash was used to prepay \$55 million of debt, and cash proceeds from stock option exercises were \$17 million. During 2003, \$222 million of net debt proceeds were received and cash dividends of \$17 million were paid.

In the fourth quarter of 2003, Millennium received approximately \$150 million in gross proceeds from the sale of \$150 million aggregate principal amount of 4.00% Convertible Senior Debentures. The proceeds were used to repay \$47 million in term loans and \$103 million revolving loans. Millennium used \$4 million of cash to pay the fees relating to the sale of the 4.00% Convertible Senior Debentures.

In April 2003, Millennium received approximately \$107 million in net proceeds from the issuance and sale of an additional \$100 million principal amount of its 9.25% Senior Notes. The proceeds were used to repay \$85 million of revolving loans under its credit facility and for general corporate purposes.

In June 2002, Millennium received approximately \$100 million in net proceeds from the offering of an additional \$100 million principal amount of 9.25% Senior Notes. The net proceeds of the offering were used to repay \$35 million of revolving loans and \$65 million of term loans under its credit facility.

Dividends paid in 2003 totaled \$17 million. In July 2003, Millennium announced the suspension of the payment of dividends on its Common Stock and has not since paid dividends. Millennium is currently 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. As of December 31, 2004, total debt was \$1,405 million. At December 31, 2004 Millennium had \$25 million of outstanding letters of credit and no borrowing under its \$150 million secured revolving credit facility and, accordingly, had \$125 million of unused availability under its five-year credit facility, which matures in June 2006.

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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 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. In addition, Equistar's ability to make distributions to its owners, including Millennium, may be affected by an additional interest requirement in certain of Equistar's indentures. Equistar resumed making cash distributions to its owners, and Millennium received \$93 million from Equistar, during 2004.

Millennium's ability to pay or refinance its debt will depend on future operating performance, which could be affected by general economic, financial, competitive, legislative, regulatory, business and other factors, many

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of which are beyond its control. Millennium believes that conditions will be such that cash balances, cash generated from operating activities, cash distributions from its Equistar joint venture 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.

The credit facility contains various restrictive covenants and requires Millennium to maintain specified financial ratios. Millennium obtained amendments to the credit facility in the fourth quarter of 2001, the second quarters of 2002 and 2003 and the fourth quarter 2003 to provide additional financial flexibility by easing certain financial ratio requirements. The amendment in the second quarter of 2002 was conditioned upon the 2002 offering of \$100 million principal amount of the 9.25% Senior Notes and the use of the proceeds for the repayment of the credit facility debt. The amendment in the fourth quarter of 2003 was conditioned on Millennium obtaining \$110 million of long-term financing, which was satisfied by the sale of \$150 million of the 4.00% Convertible Senior Debentures. The amendment in the fourth quarter of 2003 also reduced the maximum availability under the credit facility from \$175 million to \$150 million. Millennium also obtained an amendment to its credit facility in July 2004 to permit the business combination with Lyondell. On February 2, 2005, Millennium entered into an amendment and waiver to its credit facility, which amended the definition of EBITDA and waived any and all defaults and events of default that may have occurred on or prior to the amendment and waiver as a result of certain adjustments and charges related to a February 2005 restatement of Millennium's financial statements.

Under the terms of its credit facility, Millennium is not permitted: (1) to allow the Senior Secured Leverage Ratio, as defined, for the period of four consecutive fiscal quarters ending on the indicated dates below, to be more than the indicated ratio, or (2) to allow the Interest Coverage Ratio, as defined, for the period of four consecutive fiscal quarters ending on the indicated dates below, to be less than the indicated ratio.

	<b>Senior Secured Leverage Ratio</b>	<b>Interest Coverage Ratio</b>
December 31, 2004	1.25	1.50
March 31, 2005 and thereafter	1.00	1.75

The covenants in the credit facility, the indenture under which the 7.00% and 7.625% Senior Debentures were issued and the indenture under which the 9.25% Senior Notes were issued limit, among other things, the ability of Millennium and/or certain subsidiaries of Millennium to incur debt, create liens, engage in sale/leaseback transactions, declare or pay dividends on, or purchase, Millennium's stock, make restricted payments, engage in transactions with affiliates, engage in mergers or acquisitions, engage in domestic accounts receivable securitization transactions, enter into restrictive agreements, transfer substantially all of their respective assets, issue redeemable stock and preferred stock, sell or otherwise dispose of assets, including capital stock of subsidiaries and enter into arrangements that restrict dividends from subsidiaries. Pursuant to these provisions, Millennium currently is prohibited from making restricted payments, including paying dividends.

Millennium has outstanding \$150 million aggregate principal amount of 4.00% Convertible Senior Debentures, which are due in 2023, unless earlier redeemed, converted or repurchased. On October 1, 2004, based on a quarterly test related to the price of the common stock, the 4.00% Convertible Senior Debentures became convertible into shares of Millennium's common stock. As a result of Lyondell's acquisition of Millennium, Millennium and Lyondell executed a supplemental indenture providing that the holders of the 4.00% Convertible Senior Debentures may convert their debentures into shares of Lyondell's common stock (or equivalent cash or a combination thereof) at a conversion price as of December 31, 2004, subject to adjustment upon certain events, of \$13.63 per share, which is equivalent to a conversion rate of 73.36 Lyondell shares per one thousand dollar principal amount of the debentures. As of December 31, 2004, none of the 4.00% Convertible Senior Debentures were converted into shares of Lyondell common stock.

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The debentures are redeemable at Millennium's option beginning November 15, 2010 at a redemption price equal to 100% of their principal amount. On November 15 in each of 2010, 2013 and 2018, holders of the

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debentures will have the right to require Millennium to repurchase all or some of the debentures they own at a purchase price equal to 100% of their principal amount. Millennium may choose to pay the purchase price in cash or shares of Lyondell's common stock or any combination thereof. In the event of a conversion request as a result of the long-term credit rating assigned to the debentures being either Caa1 or lower, in the case of Moody's Investors Service (Moody's), or B- or lower in the case of Standard & Poor's (S&P) rating service, or if both rating agencies discontinue, withdraw or suspend their ratings, after June 18, 2006, Millennium can deliver cash, or a combination of cash and shares of Lyondell common stock, in lieu of shares of Lyondell common stock. The debentures are currently rated B1 by Moody's and B+ by S&P. Holders of the debentures also have the right to require Millennium to repurchase all or some of the debentures at a cash purchase price equal to 100% of their principal amount, upon the occurrence of certain events constituting a Fundamental Change, as defined. Lyondell's acquisition of Millennium was not considered a Fundamental Change, as defined in the indenture.

The breach of the covenants in Millennium's debt agreements could permit the lenders to declare any outstanding Millennium debt payable and could permit the lenders under Millennium's credit facility to terminate future lending commitments. Millennium was in compliance with all covenants under its debt agreements as of December 31, 2004.

The credit facility is guaranteed by Millennium and Millennium America Inc., a subsidiary of Millennium (Millennium America); the 7.00% Senior Notes, 7.625% Senior Debentures and 9.25% Senior Notes were issued by Millennium America and are fully and unconditionally guaranteed by Millennium; and the 4.00% Convertible Senior Debentures were issued by Millennium and are fully and unconditionally guaranteed by Millennium America.

**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 was a party to the following accounts receivable sales facility that had some of those characteristics.

From March 2002 until November 2003, Millennium sold its interest in certain European trade receivables to an unaffiliated third party under a revolving securitization arrangement with maximum availability of 70 million euros. In November 2003, Millennium terminated this securitization arrangement. There were no balances outstanding at December 31, 2004 or 2003.

**Contractual and Other Obligations** The following table summarizes as of December 31, 2004 Millennium's minimum payments for long-term debt, and contractual and other obligations for the next five years and thereafter:

Millions of dollars	Payment Due By Period						
	Total	2005	2006	2007	2008	2009	Thereafter
<b>Contractual obligations</b>							
Long-term debt	\$ 1,405	\$ 7	\$ 506	\$ 4	\$ 473	\$ 2	\$ 413
Interest payable	763	110	105	72	46	25	405
Pension benefits:							
PBO	983	81	64	63	65	67	643
Assets	(742)						(742)
Funded status	241						
Other postretirement benefits	90	4	4	3	3	3	73

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Other noncurrent obligations	265		45	45	45	45	85
Deferred income taxes	164						164
Other contractual obligations:							
Unconditional purchase obligations	1,845	421	265	204	114	109	732
VAM toll	167	80	87				
Operating leases	136	21	15	14	12	11	63
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Total	\$ 5,076	\$ 724	\$ 1,091	\$ 405	\$ 758	\$ 262	\$ 1,836
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>



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*Long-Term Debt* Millennium's credit facility, 4% Convertible Senior Debentures and the indentures governing its Senior Notes contain various restrictive covenants and require Millennium to maintain specified financial ratios. For additional information on Millennium's long-term debt, see the *Liquidity and Capital Resources* section above and Note 11 to the Consolidated Financial Statements.

*Interest Payable* 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 14 to the Consolidated Financial Statements. At December 31, 2004, the projected benefit obligation for Millennium's pension plans exceeded the fair value of plan assets by \$241 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 \$241 million, with interest, in future years. The minimum required contribution may reach an annual rate of approximately \$24 million by 2007. Millennium's pension contributions were \$15 million, \$12 million and \$9 million for the years 2004, 2003 and 2002, respectively, and are estimated to be approximately \$11 million for 2005. During 2004 and 2002, Millennium recognized increases in its minimum pension liability of \$20 million and \$286 million, respectively, with a charge to other comprehensive income. During 2003 Millennium reduced the minimum pension liability by \$40 million, largely as a result of improved plan asset performance. The \$288 million cumulative minimum pension liability represents accumulated pension benefit obligations in excess of pension plan assets at December 31, 2004.

Pension expense for 2004 and 2003 was \$30 million and \$7 million, respectively and pension income was \$7 million for 2002. The 2004 and 2003 pension expense includes \$13 million and \$3 million 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 2005 is estimated to be approximately \$19 million, comparable to pension expense in 2004, excluding the \$13 million curtailment charge.

*Other Postretirement Benefits* Millennium provides other postretirement benefits, as described in Note 14 to the Consolidated Financial Statements. Other postretirement benefits are unfunded and are paid by Millennium as incurred. Estimates of other postretirement benefit payments through 2009 are included in the table above.

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. Beginning in 2004, this reduction will be recognized ratably over approximately thirteen years through the postretirement net periodic benefit cost.

*Other noncurrent obligations* Other noncurrent obligations primarily include liabilities for environmental remediation, deferred compensation arrangements and advances from customers.

*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.

*Unconditional 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 16 to the Consolidated Financial Statements for a description of Millennium's commitments and contingencies, including these purchase obligations.

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*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 \$167 million at December 31, 2004 market prices for ethylene. See the "Commitments" section of Note 16 to the Consolidated Financial Statements.

*Operating leases* Millennium leases various facilities and equipment under noncancelable lease arrangements for various periods. See Note 12 to the Consolidated Financial Statements for related lease disclosures.

## **CURRENT BUSINESS OUTLOOK**

Overall, Millennium believes that 2005 will be characterized by additional tightening of supply/demand and continued strengthening of product margins. However, volatile and elevated energy prices and their potential impact on the broader global economy continue to be a concern.

## **RELATED PARTY TRANSACTIONS**

Millennium purchases product from Equistar, a joint venture with Lyondell, at market-related prices and, sells product 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 all such related party 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.

## **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 environmental remediation costs, 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 operating facilities and waste disposal 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

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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, 2004, Millennium's environmental liability for future remediation costs at all current and former plant sites and Superfund sites totaled \$122 million. The liabilities for individual sites range from \$1 million to \$78 million and are expected to be incurred over a number of years, and not 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 16 to the Consolidated Financial Statements.

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*Income Taxes* 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 totaling \$182 million 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, which total \$308 million at December 31, 2004, will be realized. Further details on Millennium's income taxes appear in Note 15 to the Consolidated Financial Statements.

*Equity Interest in Equistar* Millennium has evaluated the carrying value of its investment in Equistar at December 31, 2004 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, 2004 was \$457 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 2004 and 2003 for the LeHavre TiO<sub>2</sub> facility.

Due to temporary decreases in demand for Millennium's products, certain facilities may remain idle until market conditions improve. Assets that are temporarily idled are tested for impairment at the time they are temporarily idled.

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 \$18 million at December 31, 2004 and 2003. During 2004, 2003 and 2002, cash expenditures of approximately \$12 million, \$15 million and \$11 million, respectively, were deferred and are being amortized, generally over 18 months to 3 years. Amortization in 2004, 2003 and 2002, of previously deferred turnaround costs was \$12 million, \$9 million and \$7 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 \$114 million, \$126 million and \$110 million in 2004, 2003 and 2002, respectively. If the useful lives of the assets were found to be shorter than originally estimated, depreciation and amortization charges would be accelerated.

Additional information on long-lived assets, deferred turnaround costs and related depreciation and amortization appears in Note 9 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, 2004 was \$104 million, of which, \$56 million and \$48 million was associated with Millennium's inorganic chemicals 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.

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*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, 2004, Millennium lowered its assumed discount rate from 6.00% to 5.75%, reflecting the general decline in market interest rates during 2004. The 5.75% rate will also be used to measure net periodic benefit cost during 2005. A further one percentage point reduction in the assumed discount rate for Millennium would increase Millennium's benefit obligation for pensions and other postretirement benefits by approximately \$120 million, and would reduce Millennium's net income by approximately \$6 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, 2004, the assumed rate of increase was 8.0%, and decreases one-half percent each year to 5.5% in 2010. 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 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, 2004, 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 \$315 million at December 31, 2004. 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 \$10 million per year based on the December 31, 2004 unrecognized amount.

Additional information on the key assumptions underlying these benefit costs appears in Note 14 to the Consolidated Financial Statements.

## **ACCOUNTING AND REPORTING CHANGES**

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On January 1, 2003, Millennium adopted Statement of Financial Accounting Standards ( SFAS ) No. 143, Accounting for Asset Retirement Obligations ( SFAS No. 143 ). SFAS No. 143 applies to legal obligations



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associated with the retirement of long-lived assets. This standard requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred and the associated asset retirement costs be capitalized as part of the carrying amount of the long-lived asset. Accretion expense and depreciation expense related to the liability and capitalized asset retirement costs, respectively, are recorded in subsequent periods. Millennium's asset retirement obligations arise from activities associated with the eventual remediation of sites used for landfills and mining and include estimated liabilities for closure, restoration, and post-closure care. None of Millennium's assets are legally restricted for purposes of settling these obligations. As these liabilities are settled, a gain or loss is recognized for any difference between the settlement amount and the liability recorded. Millennium reported an after-tax transition charge of \$1 million in the first quarter of 2003 as the cumulative effect of this accounting change. The impact of adoption was to increase Millennium's reported assets and liabilities by \$2 million and \$3 million, respectively. The ongoing annual expense resulting from the initial adoption of SFAS No. 143 is expected to be approximately \$1 million. Activity associated with the asset retirement obligations other than the effect of initial adoption of SFAS No. 143 was \$1 million for each of the years ended December 31, 2004 and 2003, respectively. Disclosure on a pro forma basis of net income and related per-share amounts as if SFAS No. 143 had been applied during all periods presented is omitted because the effect on pro forma net income is not significant. The amount of the asset retirement obligation at December 31, 2004 was \$13 million. The pro forma amount of the asset retirement obligation at January 1, 2002 and December 31, 2002, as if SFAS No. 143 had been applied at the beginning of 2002, the earliest year presented, is \$11 million and \$12 million, respectively.

Effective January 1, 2002, Millennium implemented SFAS No. 142, *Goodwill and Other Intangible Assets* (SFAS No. 142). Upon implementation of SFAS No. 142, Millennium reviewed its goodwill for impairment and concluded that goodwill related to its acetyls business was impaired, resulting in a \$275 million charge to Millennium's earnings that was reported as the cumulative effect of an accounting change as of January 1, 2002. Effective January 1, 2002, Equistar also implemented SFAS No. 142. Upon implementation of SFAS No. 142, Equistar reviewed goodwill for impairment and concluded that the entire balance of goodwill was impaired, resulting in a \$1.1 billion charge that was reported as the cumulative effect of an accounting change as of January 1, 2002. As a result of Equistar's impairment of goodwill in 2002, Millennium reduced the carrying value of its investment in Equistar by \$30 million, which was also reported as the cumulative effect of an accounting change. As a result of implementing SFAS No. 142, Millennium's pretax income in 2002 and subsequent years is favorably affected by \$23 million annually because of the elimination of Millennium's goodwill amortization.

**ANTICIPATED ACCOUNTING CHANGES**

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs*. The primary impact of the statement on Millennium will be recognition as period costs of any abnormal amounts of idle facility expense, freight, handling costs, and spoilage. The provisions of SFAS No. 151 will be applied prospectively upon implementation in 2005. Millennium does not expect application of SFAS No. 151 to have a material impact on its financial statements.

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*. The 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. Millennium will be required to apply SFAS No. 123 (revised 2004) no later than the third quarter 2005 and will be required to use the fair-value-based method of accounting for share-based payment transactions with employees on a prospective basis rather than the intrinsic method previously allowed by APB Opinion No. 25, *Accounting for Stock Issued to Employees*. The implementation of SFAS No. 123 (revised 2004) is not expected to be material to Millennium's financial statements.

Also in December 2004, the FASB issued SFAS No. 153, *Exchanges of Nonmonetary Assets*, which amends APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, to eliminate the exception for nonmonetary exchanges of similar productive assets, which is replaced with a general exception for exchanges of nonmonetary assets that do not have commercial substance. A nonmonetary exchange is defined to have commercial substance



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if the future cash flows of the entity are expected to change significantly as a result of the exchange. Millennium will be required to adopt SFAS No. 153 no later than the third quarter 2005 with prospective application. Millennium is currently evaluating the impact, if any, that application of SFAS No. 153 will have on its financial statements.

## **ENVIRONMENTAL AND LEGAL MATTERS**

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 PCBs, cleanup of former paper mill operations, and cleanup and closure of landfills associated with the former paper mill operations. In 2000, the KRSG, of which the 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.

As of December 31, 2004, the probable liability associated with the river cannot be determined with certainty. A liability of \$40 million has been recognized, representing Millennium's interim allocation of 55% of the \$73 million estimated cost of bank stabilization, recommended as the preferred remedy in 2000 by the KRSG. 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.

In addition, Millennium has recognized a liability of \$38 million primarily related to its estimated share of remediation costs for two former paper mill sites and associated landfills which are also part of the Kalamazoo River Superfund Site. 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.

As of December 31, 2004, Millennium's environmental liability for future remediation costs at all current and former plant sites and Superfund sites totaled \$122 million. The liabilities for individual sites range from \$1 million to \$78 million and are expected to be incurred over a number of years, and not 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.

Under the Clean Air Act, the eight-county Houston/Galveston region has been designated a severe non-attainment area for ozone by the U.S. Environmental Protection Agency ( EPA ) under a one-hour ozone standard. Emission reduction controls for nitrogen oxides ( NO<sub>x</sub> ), which

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contribute to ozone formation, must be installed at each of Equistar's six facilities and Millennium's two facilities in the Houston/Galveston region prior to a November 2007 compliance deadline for the one-hour ozone standard. In addition, in December 2004, the regulatory agency for the state of Texas, the Texas Commission on Environmental Quality, or TCEQ, finalized

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controls over highly reactive, volatile organic compounds ( HRVOCs ). Equistar and Millennium are still assessing the impact of the HRVOC rules. In April 2004, the EPA designated the eight-county Houston/Galveston region a moderate non-attainment area under an eight-hour ozone standard. As a result, the TCEQ must submit a plan to the EPA in 2007 to demonstrate compliance with the eight-hour ozone standard in 2010. Although the one-hour ozone standard expires in 2005, the controls under that standard will not be relaxed under the EPA's new eight-hour transition rules. As a result, Equistar and Millennium still will be required to meet the new emission standards for NOx and HRVOCs. The timing and amount of the estimated expenditures are subject to these regulatory and other uncertainties, as well as to obtaining the necessary permits and approvals. The ultimate cost of implementing any plan developed to comply with the final ozone standards cannot be estimated at this time.

Together with alleged past manufacturers of lead-based paint and lead pigments for use in paint, Millennium has been named as defendant in various legal proceedings alleging that it and other manufacturers are responsible for personal injury, property damage, and remediation costs allegedly associated with the use of these products. The plaintiffs in these legal proceedings include municipalities, counties, school districts, individuals and the State of Rhode Island, 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, contain general language requesting equitable relief from defendants such as abatement of lead-based paint in buildings. Legal proceedings relating to lead pigment or paint are in various procedural stages of pre-trial, post-trial and post-dismissal settings.

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 the timing of any request for indemnity 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. The insurance carriers may appeal the Ohio decision regarding defense costs, and they have in the past and may in the future attempt to deny indemnity coverage if there is ever a settlement or an adverse judgment in any lead-based paint or lead pigment case.

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

See Note 13 to the Consolidated Financial Statements for discussion of Millennium's management of foreign currency exposure, commodity price risk and interest rate risk through its use of derivative instruments and hedging activities.

**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, 2003 and 2002 the derivative transactions were not significant compared to Millennium's overall inventory

purchases and product sales. Millennium had no outstanding commodity derivative transactions at December 31, 2004.

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**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 61% of consolidated revenues and 41% of consolidated assets. Millennium selectively utilizes 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, 2004, foreign currency forward and swap contracts in the notional amount of \$104 million were outstanding. Assuming a 10% unfavorable change in foreign exchange rates, the negative impact on earnings would be approximately \$6 million after tax. Sensitivity analysis was used for this purpose.

**Interest Rate Risk**

Millennium selectively uses derivative instruments to manage the ratio of fixed- to variable-rate debt. At December 31, 2004, Millennium had 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 \$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. Assuming a 10% unfavorable change in variable interest rates, the negative impact on the fair value of the obligations would be approximately \$2 million. Sensitivity analysis was used for this purpose.

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

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Board of Directors and Stockholder of

Millennium Chemicals Inc.:

In our opinion, the accompanying consolidated balance sheets and the related consolidated statements of income, cash flows, and changes in stockholders' equity (deficit), present fairly, in all material respects, the financial position of Millennium Chemicals Inc. and its subsidiaries (the Company) at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 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 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.

As discussed in Note 2 to the Consolidated Financial Statements, effective January 1, 2002, the Company adopted Statement of Financial Accounting Standards No. 142, Accounting for Goodwill and Other Intangible Assets.

/s/ PricewaterhouseCoopers LLP

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PricewaterhouseCoopers LLP  
Philadelphia, Pennsylvania

March 16, 2005

**Table of Contents****MILLENNIUM CHEMICALS INC.****CONSOLIDATED STATEMENTS OF INCOME**

<b>Millions of dollars</b>	<b>For the year ended December 31,</b>		
	<b>2004</b>	<b>2003</b>	<b>2002</b>
<b>Sales and other operating revenues</b>	\$ 1,888	\$ 1,687	\$ 1,554
<b>Operating costs and expenses</b>			
Cost of sales	1,602	1,470	1,312
Selling, general and administrative expenses	164	130	154
Research and development expenses	21	23	21
Business combination costs	71		
Asset impairments	14	103	
Reorganization and other costs	9	18	
	<u>7</u>	<u>(57)</u>	<u>67</u>
Operating income (loss)	7	(57)	67
Interest expense	(106)	(98)	(90)
Interest income	12	6	4
Other income, net	14	58	
	<u>(73)</u>	<u>(91)</u>	<u>(19)</u>
Loss before equity investment, minority interest and income taxes	(73)	(91)	(19)
Income (loss) from equity investment in Equistar	81	(100)	(73)
	<u>8</u>	<u>(191)</u>	<u>(92)</u>
Income (loss) before income taxes and minority interest	8	(191)	(92)
Provision for (benefit from) income taxes	33	(11)	(59)
	<u>(25)</u>	<u>(180)</u>	<u>(33)</u>
Loss before minority interest	(25)	(180)	(33)
Minority interest	(6)	(5)	(6)
	<u>(31)</u>	<u>(185)</u>	<u>(39)</u>
Loss before cumulative effect of accounting change	(31)	(185)	(39)
Cumulative effect of accounting change		(1)	(305)
	<u>(31)</u>	<u>(186)</u>	<u>(344)</u>
Net loss	\$ (31)	\$ (186)	\$ (344)

See Notes to the Consolidated Financial Statements.

**Table of Contents****MILLENNIUM CHEMICALS INC.****CONSOLIDATED BALANCE SHEETS**

Millions, except shares and par value data	As of December 31,	
	2004	2003
<b>ASSETS</b>		
Current assets		
Cash and cash equivalents	\$ 344	\$ 209
Accounts receivable, trade	318	277
Inventories	414	457
Other current assets	79	50
Total current assets	1,155	993
Property, plant and equipment, net	707	738
Investment in Equistar Chemicals, LP	457	469
Goodwill	104	104
Other assets	74	94
Total assets	\$ 2,497	\$ 2,398
<b>LIABILITIES AND STOCKHOLDERS DEFICIT</b>		
Current liabilities:		
Current maturities of long-term debt	\$ 7	\$ 6
Accounts payable:		
Trade	250	227
Related parties	37	6
Accrued liabilities	160	134
Total current liabilities	454	373
Long-term debt	1,398	1,461
Other liabilities	503	419
Deferred income taxes	164	209
Commitments and contingencies		
Minority interest	33	27
Stockholders' deficit		
Common stock, \$0.01 par value, 100,000,000 shares and 225,000,000 shares authorized, respectively; 66,135,816 and 77,896,586 shares issued, respectively	1	1
Additional paid in capital	1,169	1,304
Retained deficit	(1,026)	(995)
Accumulated other comprehensive loss	(105)	(141)
Treasury stock, at cost (4,799,694 and 13,905,687 shares, respectively)	(94)	(260)
Total stockholders' deficit	(55)	(91)
Total liabilities and stockholders' deficit	\$ 2,497	\$ 2,398

See Notes to the Consolidated Financial Statements.

**Table of Contents****MILLENNIUM CHEMICALS INC.****CONSOLIDATED STATEMENTS OF CASH FLOWS**

<b>Millions of dollars</b>	<b>For the year ended December 31,</b>		
	<b>2004</b>	<b>2003</b>	<b>2002</b>
<b>Cash flows from operating activities:</b>			
Net loss	\$ (31)	\$ (186)	\$ (344)
Adjustments to reconcile net loss to net cash provided by (used in) operating activities:			
Cumulative effect of accounting change		1	305
Depreciation and amortization	114	126	110
Asset impairments	14	103	
Deferred income taxes	(75)	(23)	(58)
(Income) loss from equity investment in Equistar	(81)	100	73
Distributions of earnings from Equistar	81		
Other, net	11	14	11
Changes in assets and liabilities that provided (used) cash:			
Trade receivables	(33)	(56)	7
Inventories	56	(13)	4
Accounts payable	37	(51)	12
Accrued liabilities and income taxes payable	39	(31)	17
Other assets and liabilities, net	63	(76)	(57)
<b>Net cash provided by (used in) operating activities</b>	<b>195</b>	<b>(92)</b>	<b>80</b>
<b>Cash flows from investing activities:</b>			
Expenditures for property, plant and equipment	(55)	(48)	(65)
Distributions from Equistar in excess of earnings	12		
Proceeds from sales of assets	2		1
<b>Net cash used in investing activities</b>	<b>(41)</b>	<b>(48)</b>	<b>(64)</b>
<b>Cash flows from financing activities:</b>			
Dividends paid		(17)	(35)
Issuance of long-term debt	34	626	303
Repayment of long-term debt	(89)	(404)	(272)
Proceeds from exercise of stock options	17		
<b>Net cash provided by (used in) financing activities</b>	<b>(38)</b>	<b>205</b>	<b>(4)</b>
Effect of exchange rate changes on cash	19	19	(1)
<b>Increase in cash and cash equivalents</b>	<b>135</b>	<b>84</b>	<b>11</b>
Cash and cash equivalents at beginning of period	209	125	114
<b>Cash and cash equivalents at end of period</b>	<b>\$ 344</b>	<b>\$ 209</b>	<b>\$ 125</b>

See Notes to the Consolidated Financial Statements.

**Table of Contents****MILLENNIUM CHEMICALS INC.****CONSOLIDATED STATEMENTS OF CHANGES IN STOCKHOLDERS EQUITY (DEFICIT)**

Millions of dollars	Issued	Treasury	Paid In Capital	Accumulated Deficit	Accumulated Other Comprehensive Loss	Net Stockholders Deficit	Comprehensive Loss
Balance, January 1, 2002	\$ 1	\$ (283)	\$ 1,316	\$ (413)	\$ (136)	\$ 485	
Net loss				(344)		(344)	\$ (344)
Net gains on derivative financial instruments, net of tax of \$2 million					5	5	5
Minimum pension liability, net of tax of \$102 million					(195)	(195)	(195)
Currency translation adjustment					27	27	27
Issuance of shares to fund 401(k) plan		6	(2)			4	
Shares purchased by employee benefit plan trusts		2	(2)				
Current year compensation deferred			2			2	
Dividends to shareholders				(35)		(35)	
Comprehensive loss							\$ (507)
Balance, December 31, 2002	\$ 1	\$ (275)	\$ 1,314	\$ (792)	\$ (299)	\$ (51)	
Net loss				(186)		(186)	\$ (186)
Minimum pension liability, net of tax of \$16 million					29	29	29
Net gains on derivative financial instruments					1	1	1
Currency translation adjustment					128	128	128
Shares issued to fund 401(k) plan		7	(4)			3	
Shares purchased by employee benefit plan trusts		8	(6)			2	
Dividends to shareholders				(17)		(17)	
Comprehensive loss							\$ (28)
Balance, December 31, 2003	\$ 1	\$ (260)	\$ 1,304	\$ (995)	\$ (141)	\$ (91)	
Net loss				(31)		(31)	\$ (31)
Net gains on derivative financial instruments					1	1	1
Minimum pension liability, net of tax of \$7 million					(15)	(15)	(15)
Currency translation adjustment, net of tax of \$7 million					50	50	50
Shares issued to fund 401(k) plan		4	(1)			3	
Shares purchased by employee benefit plan trusts		3	(7)			(4)	
Exercise of stock options		22	(3)			19	
Retirement of treasury shares pursuant to merger		137	(124)			13	
Comprehensive income							\$ 5
Balance, December 31, 2004	\$ 1	\$ (94)	\$ 1,169	\$ (1,026)	\$ (105)	\$ (55)	

See Notes to the Consolidated Financial Statements.



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**MILLENNIUM CHEMICALS INC.**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**1. Description of the Company and Operations**

Millennium Chemicals Inc. ( Millennium ) is a global chemical company. Millennium reports its results of operations in two segments: inorganic chemicals; and ethylene, co-products and derivatives ( EC&D ). Millennium 's inorganic chemicals segment primarily produces titanium dioxide ( TiO<sub>2</sub> ), but also produces titanium tetrachloride ( TiCl<sub>4</sub> ), ultra-fine TiO<sub>2</sub> silica gel and cadmium-based pigments. Millennium 's EC&D segment comprises its acetyls business and its equity investment in Equistar Chemicals, LP ( Equistar ). The acetyls business produces vinyl acetate monomer ( VAM ), acetic acid and methanol. Millennium also produces fragrance and flavor chemicals, which is not a reportable segment.

Millennium owns 29.5% of Equistar, which is a joint venture with Lyondell Chemical Company ( Lyondell ). Equistar produces ethylene and its co-products, primarily propylene, butadiene and aromatics. Equistar also produces derivatives, primarily ethylene oxide, ethylene glycol and polyethylene. Millennium accounts for its interest in Equistar using the equity method.

On November 30, 2004, Lyondell acquired Millennium in a stock-for-stock business combination. As a result of the business combination, Millennium is a wholly owned subsidiary of Lyondell. The consolidated financial statements of Millennium reflect its historical cost basis, and, accordingly, do not reflect any purchase accounting adjustments related to the acquisition by Lyondell.

**2. Summary of Significant Accounting Policies**

*Basis of Presentation* The consolidated financial statements include the accounts of Millennium Chemicals Inc. Investments in joint ventures where Millennium exerts a certain level of management control, but lacks full decision making ability over all major issues, are accounted for using the equity method of accounting.

*Revenue recognition* Revenue from product sales is recognized at the time of transfer of title and risk of loss to the customer, which usually occurs at the time of shipment. Revenue is recognized at the time of delivery if Millennium retains the risk of loss during shipment. For products that are shipped on a consignment basis, revenue is recognized when the customer uses the product. Costs incurred in shipping products sold are included in cost of sales. Billings to customers for shipping costs are included in sales revenue.

*Cash and Cash Equivalents* Cash equivalents consist of highly liquid debt instruments such as certificates of deposit, commercial paper and money market accounts. Cash equivalents include instruments with maturities of three months or less when acquired. Cash equivalents are stated at cost, which approximates fair value. Millennium 's policy is to invest cash in conservative, highly rated instruments and to limit the amount of credit exposure to any one institution.

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Millennium has no requirements for compensating balances in a specific amount at a specific point in time. Millennium does maintain compensating balances for some of its banking services and products. Such balances are maintained on an average basis and are solely at Millennium's discretion.

*Allowance for Doubtful Accounts* Millennium establishes provisions for doubtful accounts receivable based on management's estimates of amounts that it believes are unlikely to be collected. Collectability of receivables is reviewed and the allowance for doubtful accounts is adjusted at least quarterly, based on aging of specific accounts and other available information about the associated customers.

*Inventories* Inventories are stated at the lower of cost or market. Cost is determined using the first-in, first-out ( FIFO ) method for substantially all inventories, except for materials and supplies, which are valued using the average cost method.

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**MILLENNIUM CHEMICALS INC.**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Inventory exchange transactions, which involve fungible commodities and do not involve the payment or receipt of cash, are not accounted for as purchases and sales. Any resulting volumetric exchange balances are accounted for as inventory in accordance with the normal FIFO valuation policy.

*Property, Plant and Equipment* Property, plant and equipment are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful lives of the assets, generally 20 to 40 years for buildings and 5 to 25 years for machinery and equipment. Upon retirement or sale, Millennium removes the cost of the asset and the related accumulated depreciation from the accounts and reflects any resulting gain or loss in the Consolidated Statements of Income.

*Long-Lived Asset Impairment* Millennium evaluates long-lived assets, including identifiable intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When it is probable that undiscounted future cash flows will not be sufficient to recover an asset's carrying amount, the asset is written down to its estimated fair value. Long-lived assets to be disposed of are reported at the lower of carrying amount or estimated fair value less costs to sell the assets.

*Goodwill* Goodwill represents the excess of the purchase price over the fair value assigned to the net tangible and identifiable intangible assets of an acquired business. Goodwill is reviewed for impairment at least annually.

*Turnaround Maintenance and Repair Costs* Costs of major maintenance and repairs incurred in connection with substantial overhauls or maintenance turnarounds at Millennium's manufacturing facilities are deferred and amortized using the straight-line method over the period until the next planned turnaround, generally 18 months to 3 years. These costs are necessary to maintain, extend and improve the operating capacity and efficiency rates of the production units.

*Identifiable Intangible Assets* Costs to purchase and to develop software for internal use are deferred and amortized on a straight-line basis over periods of 3 to 7 years.

Other intangible assets are carried at amortized cost and primarily consist of deferred debt issuance costs, patents and license costs. These assets are amortized using the straight-line method over their estimated useful lives or the term of the related agreement, if shorter.

*Environmental Remediation Costs* Anticipated expenditures related to investigation and remediation of contaminated sites, which include operating facilities and waste disposal sites, are accrued when it is probable a liability has been incurred and the amount of the liability can reasonably be estimated. Estimated expenditures have not been discounted to present value. Future legal costs associated with such matters, which generally are not estimable, are not included in these liabilities.

*Income Taxes* Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes and the amounts used for income tax purposes, as well as the net tax effects of net operating loss carryforwards. Valuation allowances are provided against deferred tax assets when it is more likely than not that some portion or all of the deferred tax asset will not be realized.

*Minority Interest* Minority interest represents the interests of unaffiliated investors in a partnership that owns the LaPorte Methanol Company plant in LaPorte, Texas, and in Millennium's  $TiO_2$  Operations in Brazil.

*Foreign Currency Translation* Millennium operates primarily in three functional currencies: the euro for operations in Europe, the real for operations in Brazil, and the U.S. dollar for the United States and other

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**MILLENNIUM CHEMICALS INC.**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

locations, including manufacturing and marketing operations in Australia, where product sales are generally in U.S. dollars.

*Derivative Instruments* Gains and losses on derivative instruments are classified in the same category as the item being hedged.

*Use of Estimates* The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

*Reclassification* Certain previously reported amounts have been reclassified to conform to classifications adopted in 2004.

*Accounting and Reporting Changes* In December 2003, the Financial Accounting Standards Board ( FASB ) issued FASB Interpretation No. 46 (Revised December 2003), *Consolidation of Variable Interest Entities* ( FIN 46R ), primarily to clarify the required accounting for interests in variable interest entities ( VIEs ). This standard replaces FASB Financial Interpretation No. 46, *Consolidation of Variable Interest Entities*, which was issued in January 2003 to address certain situations in which a company should include in its financial statements the assets, liabilities and activities of another entity. Millennium evaluated its long-term obligations with one entity that may be a VIE. Millennium has no equity interest in this entity and has confirmed that the entity is consolidated by an equity owner. Millennium has not been able to obtain the financial information from the entity necessary to determine whether Millennium is the primary beneficiary of the entity. Management of the entity cited confidentiality considerations with regard to the decision not to provide certain financial information to Millennium. Millennium pays approximately \$3 million in plant and equipment rental charges on an annual basis to this entity.

On January 1, 2003, Millennium adopted Statement of Financial Accounting Standards ( SFAS ) No. 143, *Accounting for Asset Retirement Obligations* ( SFAS No. 143 ). SFAS No. 143 applies to legal obligations associated with the retirement of long-lived assets. This standard requires that the fair value of a liability for an asset retirement obligation be recognized in the period in which it is incurred and the associated asset retirement costs be capitalized as part of the carrying amount of the long-lived asset. Accretion expense and depreciation expense related to the liability and capitalized asset retirement costs, respectively, are recorded in subsequent periods. Millennium's asset retirement obligations arise from activities associated with the eventual remediation of sites used for landfills and mining and include estimated liabilities for closure, restoration, and post-closure care. None of Millennium's assets are legally restricted for purposes of settling these obligations. As these liabilities are settled, a gain or loss is recognized for any difference between the settlement amount and the liability recorded. Millennium reported an after-tax transition charge of \$1 million in the first quarter of 2003 as the cumulative effect of this accounting change. The impact of adoption was to increase Millennium's reported assets and liabilities by \$2 million and \$3 million, respectively. The ongoing annual expense resulting from the initial adoption of SFAS No. 143 is expected to be approximately \$1 million. Activity associated with the asset retirement obligations other than the effect of initial adoption of SFAS No. 143 was \$1 million for each of the years ended December 31, 2004 and 2003, respectively. Disclosure on a pro forma basis of net income and related per-share amounts as if SFAS No. 143 had been applied during all periods presented is omitted because the effect on pro forma net income is not significant. The amount of the asset retirement obligation at December 31, 2004 was \$13 million. The pro forma amount of the asset retirement obligation at January 1, 2002 and December 31, 2002, as if SFAS No. 143 had been applied at the beginning of 2002, the earliest year presented, is \$11 million and \$12 million, respectively.



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**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Effective January 1, 2002, Millennium implemented SFAS No. 142, *Goodwill and Other Intangible Assets* ( SFAS No. 142 ). Upon implementation of SFAS No. 142, Millennium reviewed its goodwill for impairment and concluded that goodwill related to its acetyls business was impaired, resulting in a \$275 million charge to Millennium's earnings that was reported as the cumulative effect of an accounting change as of January 1, 2002. Effective January 1, 2002, Equistar also implemented SFAS No. 142. Upon implementation of SFAS No. 142, Equistar reviewed goodwill for impairment and concluded that the entire balance of goodwill was impaired, resulting in a \$1.1 billion charge that was reported as the cumulative effect of an accounting change as of January 1, 2002. As a result of Equistar's impairment of goodwill in 2002, Millennium reduced the carrying value of its investment in Equistar by \$30 million, which was also reported as the cumulative effect of an accounting change. As a result of implementing SFAS No. 142, Millennium's pretax income in 2002 and subsequent years is favorably affected by \$23 million annually because of the elimination of Millennium's goodwill amortization.

*Anticipated Accounting Changes* In November 2004, the FASB issued SFAS No. 151, *Inventory Costs*. The primary impact of the statement on Millennium will be recognition as period costs of any abnormal amounts of idle facility expense, freight, handling costs, and spoilage. The provisions of SFAS No. 151 will be applied prospectively upon implementation in 2005. Millennium does not expect application of SFAS No. 151 to have a material impact on its financial statements.

In December 2004, the FASB issued SFAS No. 123 (revised 2004), *Share-Based Payment*. The 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. Millennium will be required to apply SFAS No. 123 (revised 2004) no later than the third quarter 2005 and will be required to use the fair-value-based method of accounting for share-based payment transactions with employees on a prospective basis rather than the intrinsic method previously allowed by APB Opinion No. 25, *Accounting for Stock Issued to Employees*. The implementation of SFAS No. 123 (revised 2004) is not expected to be material to Millennium's financial statements.

Also in December 2004, the FASB issued SFAS No. 153, *Exchanges of Nonmonetary Assets*, which amends APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, to eliminate the exception for nonmonetary exchanges of similar productive assets, which is replaced with a general exception for exchanges of nonmonetary assets that do not have commercial substance. A nonmonetary exchange is defined to have commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. Millennium will be required to adopt SFAS No. 153 no later than the third quarter 2005 with prospective application. Millennium is currently evaluating the impact, if any, that application of SFAS No. 153 will have on its financial statements.

**3. Acquisition by Lyondell Chemical Company**

On November 30, 2004, Millennium was acquired by Lyondell in a stock-for-stock business combination (the Acquisition ). As a result of the Acquisition, each share of Millennium's common stock outstanding immediately prior to the Acquisition was converted into the right to receive 0.95 shares of Lyondell common stock, and Millennium became a wholly owned subsidiary of Lyondell. Millennium incurred approximately \$71 million of costs in connection with the Acquisition. The consolidated financial statements of Millennium reflect its historical cost basis, and, accordingly, do not reflect any purchase accounting adjustments related to the acquisition by Lyondell. As a result of the Acquisition, Lyondell and Millennium entered into an agreement for the provision of administrative services, at cost, by Lyondell and a tax sharing agreement. See Note 15. Lyondell billed Millennium less than \$1 million for administrative services in 2004. See Note 6 for transactions between Millennium

and Equistar.



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**MILLENNIUM CHEMICALS INC.**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**4. Asset Impairments**

In the fourth quarter of 2003, Millennium recorded a pre-tax asset impairment charge of \$103 million (\$101 million after tax) associated primarily with the writedown of property, plant and equipment at Millennium's Le Havre, France TiO<sub>2</sub> manufacturing plant. At December 31, 2003, after the impairment charge, the carrying value of the property, plant and equipment at the Le Havre manufacturing plant was zero. Capital expenditures of \$14 million at this plant during 2004 were included in operating expense as additional impairment charges.

**5. Reorganization and Other Costs**

In July 2003, Millennium announced the implementation of a program to reduce costs. This program included a reduction of approximately 5% in the number of Millennium's employees worldwide and, effective September 1, 2003, the closure of Millennium's executive offices in Red Bank, New Jersey and relocation of its headquarters to Millennium's offices in Baltimore, Maryland. Millennium recorded charges related to this program of \$3 million and \$18 million, respectively, for the years ended December 31, 2004 and 2003. Total cumulative charges of \$21 million included severance-related costs of \$20 million and contractual commitments of \$1 million for ongoing lease costs, net of expected sublease income. Severance-related cash payments for the implementation of this program of \$9 million and \$12 million were made during the years ended December 31, 2004 and 2003, respectively.

Other costs, net, include a net write-off of \$6 million in 2004 for assets that will not have future value as a result of a jury verdict in the first quarter 2005.

**6. Investment in Equistar Chemicals, LP**

Prior to August 22, 2002, Equistar was owned 41% by Lyondell, 29.5% by Millennium and 29.5% by Occidental Petroleum Corporation (together with its subsidiaries and affiliates, collectively "Occidental"). On August 22, 2002, Lyondell purchased Occidental's interest in Equistar and, as a result, Equistar is now owned 70.5% by Lyondell and 29.5% by Millennium. As a result of Lyondell's November 30, 2004 acquisition of Millennium, Millennium and Equistar are wholly owned subsidiaries of Lyondell. See Note 3.

The partners jointly control certain key management decisions, including approval of Equistar's strategic plan, capital expenditures and annual budget, issuance of debt and the appointment of executive management of the partnership. Millennium accounts for its investment in Equistar using the equity method of accounting. As a partnership, Equistar is not subject to federal income taxes.



**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Summarized financial information for Equistar follows:

<u>Millions of dollars</u>	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
<b>BALANCE SHEETS</b>		
Total current assets	\$ 1,490	\$ 1,261
Property, plant and equipment, net	3,167	3,334
Investments and other assets, net	417	433
<b>Total assets</b>	<b>\$ 5,074</b>	<b>\$ 5,028</b>
Current maturities of long-term debt	\$ 1	\$
Other current liabilities	805	754
Long-term debt	2,312	2,314
Other liabilities and deferred revenues	395	359
Partners' capital	1,561	1,601
<b>Total liabilities and partners' capital</b>	<b>\$ 5,074</b>	<b>\$ 5,028</b>

<u>Millions of dollars</u>	<u>For the years ended</u> <u>December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
<b>STATEMENTS OF INCOME</b>			
Sales and other operating revenues	\$ 9,316	\$ 6,545	\$ 5,537
Cost of sales	8,587	6,387	5,388
Selling, general and administrative expenses	197	182	155
Research and development expenses	34	38	38
(Gain) loss on asset dispositions	(4)	27	
<b>Operating income (loss)</b>	<b>502</b>	<b>(89)</b>	<b>(44)</b>
Interest expense, net	(220)	(207)	(204)
Other income (expense), net	(6)	(43)	2
<b>Income (loss) before cumulative effect of accounting change</b>	<b>276</b>	<b>(339)</b>	<b>(246)</b>
Cumulative effect of accounting change			(1,053)
<b>Net income (loss)</b>	<b>\$ 276</b>	<b>\$ (339)</b>	<b>\$ (1,299)</b>

**OTHER INFORMATION**

Depreciation and amortization	\$ 313	\$ 307	\$ 298
Expenditures for property, plant and equipment	101	106	118

Millennium purchases ethylene from Equistar at market-related prices pursuant to an agreement made in connection with the formation of Equistar. Under this agreement, Millennium is required to purchase 100% of its ethylene requirements for its La Porte, Texas facility from Equistar. The initial term of the contract expired December 1, 2000. It continues thereafter for one-year periods unless either party gives twelve months advance notice. Millennium purchased \$52 million, \$46 million and \$43 million of ethylene from Equistar in 2004, 2003 and 2002, respectively, under this contract.

Millennium sells VAM to Equistar at market-based prices. Millennium sales to Equistar were \$10 million in each of 2004, 2003 and 2002.

Millennium and Equistar have entered into various operating, manufacturing and technical service agreements. Under these agreements, Millennium billed Equistar \$2 million in 2004, \$15 million in 2003 and

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

\$16 million in 2002 for certain operational services, including utilities, plant related transportation and other services, and Equistar billed Millennium \$19 million, \$8 million and \$9 million for utilities and fuel streams in 2004, 2003 and 2002, respectively.

**7. Accounts Receivable**

Millennium sells its products primarily to other industrial concerns in the petrochemicals and coatings industries. Millennium performs ongoing credit evaluations of its customers financial condition and, in certain circumstances, requires letters of credit from them. Millennium's allowance for doubtful accounts receivable, which is reflected in the Consolidated Balance Sheets as a reduction of accounts receivable, totaled \$7 million and \$9 million at December 31, 2004 and 2003, respectively. The Consolidated Statements of Income for 2004, 2003 and 2002 included provisions for doubtful accounts of \$2 million, \$1 million and less than \$1 million, respectively.

From March 2002 until November 2003, Millennium sold its interests in certain European trade receivables to an unaffiliated third party under a revolving securitization arrangement with maximum availability of 70 million euros. In November 2003, Millennium terminated this securitization arrangement. There were no balances outstanding at December 31, 2003. Increases and decreases in the amount sold were reflected as operating activities in the Consolidated Statements of Cash Flows.

**8. Inventories**

Inventories consisted of the following components at December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Finished products	\$ 234	\$ 258
Work-in-process	31	38
Raw materials	80	96
Materials and supplies	69	65
Total inventories	<u>\$ 414</u>	<u>\$ 457</u>

**9. Property, Plant and Equipment and Other Assets**

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The components of property, plant and equipment, at cost, and the related accumulated depreciation were as follows at December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Land	\$ 86	\$ 83
Manufacturing facilities and equipment	1,498	1,466
Construction in progress	76	77
	<u>1,660</u>	<u>1,626</u>
Total property, plant and equipment	1,660	1,626
Less accumulated depreciation	(953)	(888)
	<u>707</u>	<u>738</u>
Property, plant and equipment, net	\$ 707	\$ 738

Repair and maintenance expenses were \$160 million, \$136 million and \$121 million for the years ended December 31, 2004, 2003 and 2002, respectively.

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

The components of other assets, at cost, and the related accumulated amortization were as follows at December 31:

Millions of dollars	2004			2003		
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
<b>Intangible assets:</b>						
Turnaround costs	\$ 34	\$ (16)	\$ 18	\$ 22	\$ (4)	\$ 18
Software costs	86	(71)	15	85	(56)	29
Debt issuance costs	23	(13)	10	22	(10)	12
Catalyst costs	13	(8)	5	6	(2)	4
<b>Total intangible assets</b>	<b>\$ 156</b>	<b>\$ (108)</b>	<b>48</b>	<b>\$ 135</b>	<b>\$ (72)</b>	<b>63</b>
Precious metals			9			10
Other			17			21
<b>Total other assets</b>			<b>\$ 74</b>			<b>\$ 94</b>

Scheduled amortization of these intangible assets for the next five years is estimated to be \$30 million in 2005, \$12 million in 2006, \$3 million in 2007, \$1 million in 2008 and \$1 million in 2009.

Depreciation and amortization expense is summarized as follows:

Millions of dollars	For the year ended December 31,		
	2004	2003	2002
Property, plant and equipment	\$ 82	\$ 99	\$ 88
Turnaround costs	12	9	7
Software costs	15	14	14
Other	5	4	1
<b>Total depreciation and amortization</b>	<b>\$ 114</b>	<b>\$ 126</b>	<b>\$ 110</b>

In addition to the depreciation and amortization shown above, amortization of debt issuance costs of \$3 million, \$3 million and \$2 million in 2004, 2003 and 2002, respectively, is included in interest expense in the Consolidated Statements of Income.

#### 10. Accrued Expenses and Other Liabilities

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Payroll and benefits	\$ 43	\$ 40
Product sales rebates	40	31
Taxes other than income	17	8
Environmental and legal expense	15	15
Accrued interest	10	9
Income taxes	4	5
Other	31	26
	<u>          </u>	<u>          </u>
Total accrued expenses and other liabilities	\$ 160	\$ 134
	<u>          </u>	<u>          </u>



**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****11. Long-Term Debt**

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Revolving Credit Facility due 2006	\$	\$ 52
Other debt obligations:		
7.00% Senior Notes due 2006	500	500
7.625% Senior Debentures due 2026	250	250
9.25% Senior Notes due 2008	471	475
4.00% Convertible Senior Debentures due 2023	150	150
Debt payable through 2011 at interest rates ranging from 0% to 9.5%	26	23
Other	4	10
Unamortized premium, net	4	7
	<u>          </u>	<u>          </u>
Total	1,405	1,467
Less current maturities of long-term debt	(7)	(6)
	<u>          </u>	<u>          </u>
Long-term debt	\$ 1,398	\$ 1,461
	<u>          </u>	<u>          </u>

Aggregate maturities of all long-term debt during the next five years are \$7 million in 2005, \$506 million in 2006, \$4 million in 2007, \$473 million in 2008, \$2 million in 2009 and \$413 million thereafter.

Millennium s has a \$150 million credit facility, which expires June 18, 2006, and which previously included a \$125 million term loan facility. The term loans were entirely prepaid in November 2003, which effectively retired the term loan portion of the credit facility. Borrowing under the facility is available in U.S. dollars, British pounds and euros. Amounts available under the revolving credit facility, which was undrawn as of December 31, 2004, are reduced to the extent of certain outstanding letters of credit, which totaled \$25 million at December 31, 2004. In addition to letters of credit outstanding under the credit facility, Millennium had other outstanding letters of credit and bank guarantees under other arrangements of \$6 million at December 31, 2004.

Millennium s revolving credit facility bears interest between LIBOR plus 1.00% and LIBOR plus 2.25%, based upon a Leverage Ratio, as defined. Borrowing under the revolving credit facility had a weighted-average interest rate, excluding facility fees, of 5.6%, 3.3% and 3.9% during 2004, 2003, and 2002, respectively. Borrowing under the term loans had a weighted average interest rate of 4.2% and 4.9% during 2003 and 2002, respectively.

The revolving credit facility contains various restrictive covenants and requires Millennium to maintain specified financial ratios. Millennium obtained amendments to its revolving credit facility in 2001, 2002 and 2003 to provide additional financial flexibility by easing certain financial

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ratio requirements. The amendment in the second quarter of 2002 was conditioned upon the 2002 offering of \$100 million principal amount of the 9.25% Senior Notes and the use of the proceeds for the repayment of the credit facility debt. The amendment in the fourth quarter of 2003 was conditioned on Millennium obtaining \$110 million of long-term financing, which was satisfied by the sale of \$150 million of the 4.00% Convertible Senior Debentures. The amendment in the fourth quarter of 2003 also reduced the maximum availability under the credit facility from \$175 million to \$150 million. Millennium also obtained an amendment to its revolving credit facility in July 2004 to permit Lyondell's acquisition of Millennium. On February 2, 2005, Millennium entered into an amendment and waiver to its credit facility, which amended the definition of EBITDA and waived any and all defaults and events of default that may have occurred on or prior to the amendment and waiver as a result of certain adjustments and charges related to a February 2005 restatement of Millennium's financial statements.

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Under the terms of the credit facility, Millennium is not permitted: (1) to allow the Senior Secured Leverage Ratio, as defined, for the period of four consecutive fiscal quarters ending on the indicated dates below, to be more than the indicated ratio or (2) to allow the Interest Coverage Ratio, as defined, for the period of four consecutive fiscal quarters ending on the indicated dates below, to be less than the indicated ratio.

	<b>Senior Secured Leverage Ratio</b>	<b>Interest Coverage Ratio</b>
December 31, 2004	1.25	1.50
March 31, 2005 and thereafter	1.00	1.75

The obligations under the revolving credit facility are collateralized by: (1) a pledge of 100% of the stock of the Millennium's existing and future domestic subsidiaries and 65% of the stock of certain of Millennium's existing and future foreign subsidiaries; (2) all the equity interests held by Millennium's subsidiaries in Equistar and the La Porte Methanol Company, which pledges are limited to the right to receive distributions made by Equistar and the La Porte Methanol Company; and (3) all present and future accounts receivable, intercompany indebtedness and inventory of Millennium's domestic subsidiaries.

Millennium has outstanding \$471 million principal amount of 9.25% Senior Notes due June 15, 2008. The indenture governing the 9.25% Senior Notes gives the holders the right to require Millennium to purchase all or any part of each holder's 9.25% Senior Notes at a purchase price in cash equal to 101% of the principal amount upon a change in control of Millennium. As a result of Lyondell's acquisition of Millennium on November 30, 2004, Millennium was required to purchase approximately \$4 million principal amount of its 9.25% Senior Notes and pay the 1% premium. The repurchase period has expired.

The covenants in Millennium's credit facility, the indenture under which Millennium's 7.00% and 7.625% Senior Debentures were issued and the indenture under which Millennium's 9.25% Senior Notes were issued limit, among other things, the ability of Millennium and/or certain subsidiaries of Millennium to incur debt, create liens, engage in sale/leaseback transactions, declare or pay dividends on, or purchase, Millennium's stock, make restricted payments, engage in transactions with affiliates, engage in mergers or acquisitions, engage in domestic accounts receivable securitization transactions, enter into restrictive agreements, transfer substantially all of their respective assets, issue redeemable stock and preferred stock, sell or otherwise dispose of assets, including capital stock of subsidiaries and enter into arrangements that restrict dividends from subsidiaries. Pursuant to these provisions, Millennium currently is prohibited from making restricted payments, including paying dividends.

Millennium has outstanding \$150 million aggregate principal amount of 4.00% Convertible Senior Debentures, which are due in 2023, unless earlier redeemed, converted or repurchased. On October 1, 2004, based on a quarterly test related to the price of the common stock, the 4.00% Convertible Senior Debentures became convertible into shares of Millennium's common stock. As a result of Lyondell's acquisition of Millennium, Millennium and Lyondell executed a supplemental indenture providing that the holders of the 4.00% Convertible Senior Debentures may convert their debentures into shares of Lyondell's common stock (or equivalent cash or a combination thereof) at a conversion price as of December 31, 2004, subject to adjustment upon certain events, of \$13.63 per share, which is equivalent to a conversion rate of 73.36 Lyondell shares per one thousand dollar principal amount of the debentures. As of December 31, 2004, none of the 4.00% Convertible Senior Debentures were 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. On November 15 in each of 2010, 2013 and 2018, holders of the debentures will have the right to require Millennium to repurchase all or some of the debentures they own at a

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purchase price equal to 100% of their principal amount. Millennium may choose to pay the purchase price in cash or shares of Lyondell's common stock or any combination thereof. In the event of a conversion request as a result of the long-term credit rating assigned to the debentures being either Caa1 or lower, in the case of Moody's Investors Service (Moody's), or B- or lower in the case of Standard & Poor's (S&P) rating service, or if both rating agencies discontinue, withdraw or suspend their ratings, after June 18, 2006, Millennium can deliver cash, or a combination of cash and shares of Lyondell common stock, in lieu of shares of Lyondell common stock. The debentures are currently rated B1 by Moody's and B+ by S&P. Holders of the debentures also have the right to require Millennium to repurchase all or some of the debentures at a cash purchase price equal to 100% of their principal amount, upon the occurrence of certain events constituting a Fundamental Change, as defined. Lyondell's acquisition of Millennium was not considered a Fundamental Change, as defined in the indenture.

The breach of the covenants in Millennium's debt agreements could permit the lenders to declare any outstanding Millennium debt payable and could permit the lenders under Millennium's credit facility to terminate future lending commitments. Millennium was in compliance with all covenants under its debt agreements as of December 31, 2004.

The credit facility is guaranteed by Millennium and Millennium America Inc., a subsidiary of Millennium (Millennium America); the 7.00% Senior Notes, 7.625% Senior Debentures and 9.25% Senior Notes were issued by Millennium America and are fully and unconditionally guaranteed by Millennium; and the 4.00% Convertible Senior Debentures were issued by Millennium and are fully and unconditionally guaranteed by Millennium America.

**12. Lease Commitments**

Millennium leases various facilities and equipment under non-cancelable operating lease arrangements for varying periods. As of December 31, 2004, future minimum lease payments for the next five years and thereafter, relating to non-cancelable operating leases with terms in excess of one year, were as follows:

<b>Millions of dollars</b>	
2005	\$ 21
2006	15
2007	14
2008	12
2009	11
Thereafter	63
<b>Total minimum lease payments</b>	<b>\$ 136</b>

Net rental expense was \$24 million for 2004 and \$22 million for each of 2003 and 2002.

### **13. Financial Instruments and Derivatives**

Millennium is exposed to market risk, such as changes in commodity pricing, currency exchange rates and interest rates. To manage the volatility related to these exposures, Millennium selectively enters into derivative transactions pursuant to Millennium's policies. Designation of the derivatives as fair-value or cash-flow hedges is performed on a specific exposure basis. Hedge accounting may not be elected with respect to short-term exposures. The changes in fair value of these hedging instruments are offset in part or in whole by corresponding changes in the fair value or cash flows of the underlying exposures being hedged. Millennium does not hold or issue derivative financial instruments for speculative or trading purposes.

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*Foreign Currency Exposure Management* 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 utilizes 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. The gains and losses on both the derivatives and the foreign currency denominated trade receivables and payables are recorded in earnings. Net gains and losses on forward exchange contracts included in earnings, which offset similar amounts from foreign currency denominated trade receivables and payables, were less than \$1 million in 2004 and gains of \$10 million and \$2 million, respectively, in 2003 and 2002. As of December 31, 2004, Millennium had outstanding contracts with a notional amount of \$104 million.

In addition, Millennium utilizes forward exchange contracts that qualify as cash flow hedges. These are intended to offset the effect of exchange rate fluctuations on forecasted sales and purchases. Gains and losses on these instruments are deferred in accumulated other comprehensive income ( OCI ) until the underlying transaction is recognized in earnings. The earnings impact is reported either in sales and other operating revenues or cost of sales to match the underlying transaction being hedged. Net losses of \$1 million in 2004 and \$5 million in 2003, and net gains of \$4 million in 2002 related to forward exchange contracts designated as cash-flow hedges were reclassified to earnings to match the gain or loss on the underlying transaction being hedged. At December 31, 2004, there were no amounts deferred in OCI related to foreign exchange cash-flow hedges.

*Interest Rate Risk Management* Millennium selectively uses derivative instruments to manage the ratio of fixed- to variable-rate debt. At December 31, 2004, Millennium had 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 \$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. The net gains and losses resulting from adjustment of both the interest rate swaps and the hedged portion of the underlying debt to fair value are recorded in interest expense. In July 2002 and September 2004, Millennium terminated all of the interest rate swap agreements that were in effect at that time and received proceeds of approximately \$12 million and \$3 million, respectively. The carrying value of long-term debt was increased in July 2002 and September 2004, by gains of approximately \$10 million and \$2 million, respectively, that were deferred. These deferred gains will be recognized as a reduction of interest expense ratably over the remaining term of the underlying fixed-rate obligations previously hedged.

*Commodity Price Risk Management* Millennium is exposed to commodity price volatility related to anticipated purchases of natural gas and certain other commodities. Millennium selectively uses commodity swap, options and futures contracts with various terms to manage the volatility related to purchases of natural gas and raw materials, as well as product sales. Cash flow hedge accounting is normally elected for these derivative transactions, however, in some cases, when the duration of a derivative is short, hedge accounting is not elected. When hedge accounting is not elected, gains and losses on these instruments are recorded in earnings. When hedge accounting is elected, gains and losses are deferred in OCI until the underlying transaction is recognized in earnings. Net losses included in earnings were less than \$1 million in 2004 and \$2 million in 2003. Net gains of \$1 million were included in earnings in 2002. As of December 31, 2004, there were no commodity derivative instruments outstanding and no amounts deferred in OCI.

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The net carrying value and estimated fair value of Millennium's non-current, non-derivative financial instruments as of December 31, 2004 and 2003 are shown in the table below:

Millions of dollars	2004		2003	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Investment in Equistar Chemicals, LP	\$ 457	\$ 1,319	\$ 469	\$ 613
Long-term debt:				
Amount outstanding under Revolving Loans			52	52
Senior Notes due 2006, 7.00%	500	520	500	513
Senior Debentures due 2026, 7.625%	250	246	249	233
Senior Notes due 2008, 9.25%	478	536	485	518
Convertible Senior Debentures due 2023, 4.00%	150	344	150	189

The fair value of all non-derivative financial instruments included in current assets and current liabilities, including cash and cash equivalents, other short-term investments, accounts receivable, accounts payable and notes payable approximated their carrying value due to their short maturity. The Investment in Equistar Chemicals, LP, was valued using current financial and other available information. Long-term debt, including debt amounts due within one year, was valued based upon the borrowing rates currently available to Millennium for debt with terms and average maturities similar to Millennium's debt portfolio.

Financial instruments that potentially subject Millennium to significant concentrations of credit risk consist principally of temporary cash investments, foreign currency, interest rate and natural gas derivative contracts and accounts receivable. Millennium maintains its investments and enters contracts with major institutions that it deems credit worthy, generally financial institutions that provide Millennium with debt financing.

Millennium sells a broad range of commodity, industrial, performance and specialty chemicals to a diverse group of customers operating throughout the world. Accordingly, there is no significant concentration of risk in any one particular country. The sales revenues of the inorganic chemicals segment in 2004, 2003 and 2002 were from customers in the global paint and coatings industry. The leading U.S. economic indicator for this industry is new and existing home sales, which has remained relatively strong in recent years. Credit limits, ongoing credit evaluation, and account-monitoring procedures are utilized to minimize credit risk. Collateral is generally not required, but may be used under certain circumstances or in certain markets, particularly in lesser-developed countries of the world. Credit losses to customers operating in this industry have not been material.

**14. Pension and Other Postretirement Benefits**



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Millennium has defined benefit pension plans, which cover employees in the U.S. and a number of other countries. Retirement benefits are generally based on years of credited service and average compensation as defined under the respective plan provisions. Millennium funds the plans through periodic contributions to pension trust funds as provided by applicable law. In addition, Millennium sponsors postretirement benefit plans other than pensions, which provide medical and life insurance to most employees and their dependents.

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The measurement date for all of the Company's benefit obligations and plan assets is December 31. The following table provides a reconciliation of benefit obligations, plan assets and the funded status of Millennium's domestic and non-U.S. pension plans:

The following table provides a reconciliation of benefit obligations, plan assets and the funded status of Millennium's U.S. and Non-U.S. pension plans.

<u>Millions of dollars</u>	<u>2004</u>		<u>2003</u>	
	<u>U.S.</u>	<u>Non-U.S.</u>	<u>U.S.</u>	<u>Non-U.S.</u>
<b>Change in benefit obligation:</b>				
Benefit obligation, January 1	\$ 712	\$ 181	\$ 702	\$ 149
Service cost	8	6	7	6
Interest cost	42	10	42	10
Plan amendments	1			
Actuarial loss	64	25	32	4
Benefits paid	(68)	(14)	(70)	(10)
Other	3		(1)	
Foreign exchange effects		13		22
Benefit obligation, December 31	<u>762</u>	<u>221</u>	<u>712</u>	<u>181</u>
<b>Change in plan assets:</b>				
Fair value of plan assets, January 1	599	122	533	96
Actual return on plan assets	67	13	128	15
Company contributions	7	8	8	4
Benefits paid	(68)	(14)	(70)	(10)
Foreign exchange effects		8		17
Fair value of plan assets, December 31	<u>605</u>	<u>137</u>	<u>599</u>	<u>122</u>
Funded status	(157)	(84)	(113)	(59)
Unrecognized actuarial and investment loss	315	92	278	70
Unrecognized prior service cost	7		12	
Unrecognized net asset		(1)		(3)
Additional minimum liabilities	(242)	(46)	(231)	(38)
Intangible asset	7		12	
Net amount recognized	<u>\$ (70)</u>	<u>\$ (39)</u>	<u>\$ (42)</u>	<u>\$ (30)</u>
<b>Amounts recognized in the Consolidated Balance Sheet consist of:</b>				
Prepaid benefit cost	\$ 24	\$ 8	\$ 22	\$ 7

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Accrued benefit liability	(101)	(47)	(76)	(37)
Intangible asset	7		12	
	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
Net accrued benefit cost	\$ (70)	\$ (39)	\$ (42)	\$ (30)
	<u>      </u>	<u>      </u>	<u>      </u>	<u>      </u>
<b>Additional Information:</b>				
Accumulated benefit obligation for defined benefit plans, December 31	\$ 687	\$ 182	\$ 657	\$ 158
Increase in minimum liability included in other comprehensive loss	11	3	22	4

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The following table provides a reconciliation of benefit obligations, plan assets and the funded status of Millennium's other postretirement benefit plans.

<u>Millions of dollars</u>	<b>Other Postretirement Benefits</b>	
	<b>2004</b>	<b>2003</b>
<b>Change in benefit obligation:</b>		
Benefit obligation, January 1	\$ 80	\$ 76
Interest cost	3	6
Plan amendments	(48)	3
Actuarial loss	7	7
Benefits paid	(9)	(12)
Other	1	
	<u>34</u>	<u>80</u>
Benefit obligation, December 31	34	80
<b>Change in plan assets:</b>		
Company contributions	9	12
Benefits paid	(9)	(12)
	<u>—</u>	<u>—</u>
Fair value of plan assets, December 31	—	—
Funded status	(34)	(80)
Unrecognized actuarial and investment loss (gain)	3	(3)
Unrecognized prior service cost (benefit)	(59)	(23)
	<u>—</u>	<u>—</u>
Net amount recognized	\$ (90)	\$ (106)
	<u>—</u>	<u>—</u>
<b>Accrued benefit liability recognized in the Consolidated Balance Sheet</b>	<b>\$ (90)</b>	<b>\$ (106)</b>
	<u>—</u>	<u>—</u>

The accrued benefit liability for pension and other postretirement benefits is included in Other Liabilities in the Consolidated Balance Sheets.

Pension plans with projected benefit obligations in excess of the fair value of plan assets are summarized as follows at December 31:

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<u>Millions of dollars</u>	<u>2004</u>		<u>2003</u>	
	<u>U.S.</u>	<u>Non-U.S.</u>	<u>U.S.</u>	<u>Non-U.S.</u>
Projected benefit obligations	\$ 747	\$ 187	\$ 698	\$ 181
Fair value of assets	571	101	568	122

Pension plans with accumulated benefit obligations in excess of the fair value of plan assets are summarized as follows at December 31:

<u>Millions of dollars</u>	<u>2004</u>		<u>2003</u>	
	<u>U.S.</u>	<u>Non-U.S.</u>	<u>U.S.</u>	<u>Non-U.S.</u>
Accumulated benefit obligations	\$ 672	\$ 146	\$ 643	\$ 124
Fair value of assets	571	101	568	88

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Net periodic pension costs included the following components for the year ended December 31:

Millions of dollars	Pension Benefits					
	2004		2003		2002	
	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
Components of net periodic benefit cost:						
Service cost	\$ 8	\$ 6	\$ 7	\$ 6	\$ 8	\$ 4
Interest cost	42	10	42	10	44	8
Actual gain on plan assets	(67)	(13)	(128)	(15)	(76)	(15)
Less-unrecognized gain	12	5	69	6	10	6
Recognized gain on plan assets	(55)	(8)	(59)	(9)	(66)	(9)
Unrecognized net loss amortization	10	3	5	1		1
Prior service cost amortization	1		1		1	
Net effect of curtailments, settlements and special termination benefits	13		3		2	
Net periodic benefit cost (income)	\$ 19	\$ 11	\$ (1)	\$ 8	\$ (11)	\$ 4

Net periodic other postretirement benefit costs included the following components for the year ended December 31:

Millions of dollars	Other Postretirement Benefits		
	2004	2003	2002
Components of net periodic benefit cost:			
Interest cost	\$ 3	\$ 6	\$ 6
Unrecognized net loss (gain) amortization	1	(1)	(2)
Prior service cost amortization	(7)	(2)	(2)
Net effect of curtailments, settlements and special termination benefits	(4)	(1)	
Net periodic benefit cost (income)	\$ (7)	\$ 2	\$ 2

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The assumptions used in the determining the net benefit liability were as follows at December 31:

	2004		2003	
	U.S.	Non-U.S.	U.S.	Non-U.S.
<b>Weighted average assumptions as of December 31:</b>				
Discount rate	5.75%	5.41%	6.00%	5.66%
Rate of compensation increase	4.50%	4.31%	3.50%	3.90%

The assumptions used in determining net periodic pension cost were as follows for the years ended December 31:

	2004		2003		2002	
	U.S.	Non-U.S.	U.S.	Non-U.S.	U.S.	Non-U.S.
<b>Weighted average assumptions for the year:</b>						
Discount rate	6.00%	5.66%	6.00%	5.66%	7.50%	5.98%
Expected return on plan assets	8.50%	7.38%	8.50%	7.28%	9.00%	8.00%
Rate of compensation increase	3.50%	3.90%	3.50%	3.82%	4.25%	3.89%

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The discount rates used in determining net postretirement benefit cost were 5.75% for 2004, 6.50% for 2003 and 7.50% for 2002.

Management's goal is to manage pension investments over the long term to achieve optimal returns with an acceptable level of risk and volatility. Investment policies limit the concentration of investments in one industry to 20% and in one company to 5%. Pension investments at December 31, 2004 and 2003, included Lyondell's common stock and Millennium's common stock, respectively. Lyondell's common stock was approximately 1% of total plan assets at December 31, 2004 and Millennium's common stock was less than 1% of total plan assets at December 31, 2003. The investments are marketable securities that provide sufficient liquidity to pay benefits as required.

As a part of the Lyondell consolidated group, management has reviewed its asset allocation and expected long-term rate of return assumptions, based on an asset allocation study from an independent pension investment advisor, including updated expectations for long-term market earnings rates for various classes of investments. Based on this review, management reduced its expected long-term rate of return on plan assets to 8% beginning December 1, 2004.

Millennium's pension plan weighted-average asset allocations by asset category for its pension plans generally are as follows at December 31:

Asset Category:	Policy	2004		2003	
		U.S.	Non-U.S.	U.S.	Non-U.S.
U.S. equity securities	35% - 60%	51%	11%	56%	9%
Non-U.S. equity securities	15% - 25%	20%	60%	16%	61%
Fixed income securities	20% - 40%	28%	29%	27%	30%
Cash equivalents	1% - 5%	1%		1%	
		100%	100%	100%	100%

Millennium expects to contribute approximately \$11 million to its pension plans in 2005.

The *Medicare Prescription Drug, Improvement and Modernization Act of 2003* (the Act) was enacted in December 2003. In January 2004, the Financial Accounting Standards Board (FASB) issued FASB Staff Position (FSP) FAS 106-1, *Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003*. As permitted by FSP FAS 106-1, Millennium elected to defer recognition of the effects of the Act in accounting for its plans until the FASB developed and issued authoritative guidance on accounting for subsidies provided by the Act. In May 2004, the FASB issued FSP FAS 106-2 of the same title, which gave final guidance on accounting for subsidies under the Act and required Millennium to implement its provisions no later than the third quarter 2004, if the effects were significant.



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The effect of the Act was not significant to Millennium's financial statements and was recognized in the December 31, 2004 accumulated other postretirement benefit obligation.

As of December 31, 2004, future expected benefit payments, which reflect expected future service, as appropriate, were as follows:

<u>Millions of dollars</u>	<u>Pension</u> <u>Benefits</u>	<u>Other</u> <u>Benefits</u>
2005	\$ 81	\$ 4
2006	64	4
2007	63	3
2008	65	3
2009	67	3
2010 through 2014	336	13

Millennium also maintains defined contribution savings plans for eligible employees. Contributions to the plans by Millennium were \$4 million in each of the years ended December 31, 2004, 2003 and 2002.

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Assumed healthcare cost trend rates have a significant effect on the amounts reported for the healthcare plans. The assumed annual rate of increase in the per capita cost of covered health care benefits as of December 31, 2004 was 8% for 2005, declining gradually to 5.5% for 2010 and thereafter. A 1% increase or decrease in assumed health care cost trend rates in each year would change the accumulated postretirement benefit liability as of December 31, 2004 by \$1 million and would not have a material effect on the aggregate service and interest components of the net periodic postretirement benefit cost for the year then ended.

In April 2004, Millennium reduced the level of retiree medical benefits provided to essentially all of its retirees by offering a monthly subsidy to retirees that enroll in designated preferred provider organization plans or Medicare supplement insurance plans. This reduction in benefits is expected to reduce Millennium's accumulated postretirement benefit obligation by approximately \$47 million. Beginning in 2004, this reduction is being recognized ratably over approximately thirteen years through net periodic benefit cost for other postretirement benefits. As a result of Millennium's transition to the subsidy plan, cash payments for retiree medical and insurance benefits decreased from \$12 million in 2003 to \$9 million in 2004. Cash payments in subsequent years are expected to be less than 2004.

**15. Income Taxes**

Under a tax-sharing agreement between Millennium and Lyondell, Millennium's U.S. federal income tax is substantially the same as it would have been if Millennium were not part of Lyondell's consolidated U.S. income tax return, with any resulting net amount settled with Lyondell. The agreement provides for the calculation of the current U.S. tax considering all statutory limitations on the utilization of carryforward benefits resulting from the acquisition transaction itself. In addition, any current cash benefit resulting from utilization of certain carryforward attributes with respect to which benefits have not been recognized for financial reporting purposes is deferred until related issues have been resolved with the appropriate taxing authority. The same principles apply to tax sharing for unitary, consolidated and combined state income taxes.

The significant components of the provision for income taxes were as follows for the years ended December 31:

Millions of dollars	2004	2003	2002
	_____	_____	_____
<b>Current:</b>			
Federal	\$ 5	\$	\$ (19)
Non-U.S.	100	12	16
State and local	3		2
	_____	_____	_____
<b>Total current</b>	<b>108</b>	<b>12</b>	<b>(1)</b>
	_____	_____	_____
<b>Deferred:</b>			
Federal	(22)	(46)	(58)
Non-U.S.	(48)	6	
Unremitted earnings of non-U.S. subsidiaries	(1)	19	

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State and local	(4)	(2)	
	<u>          </u>	<u>          </u>	<u>          </u>
Total deferred	(75)	(23)	(58)
	<u>          </u>	<u>          </u>	<u>          </u>
Provision for (benefit from) income taxes before the tax effects of other comprehensive income	33	(11)	(59)
Tax effects of elements of comprehensive income:			
Minimum pension liability	(7)	(16)	(102)
Other	(1)		2
	<u>          </u>	<u>          </u>	<u>          </u>
Total income tax expense (benefit) on comprehensive income	\$ 25	\$ (27)	\$ (159)
	<u>          </u>	<u>          </u>	<u>          </u>

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Deferred income taxes reflect the net tax effects of temporary differences between the carrying amounts of assets and liabilities for financial reporting purposes, and the amounts for income tax purposes as well as the net tax effects of operating loss carryforwards. Significant components of Millennium's deferred tax liabilities and assets were as follows as of December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Deferred tax liabilities:		
Accelerated tax depreciation	\$ 80	\$ 68
Investment in Equistar	369	397
Accrual for taxes on unremitted earnings of non-U.S. subsidiaries	11	19
	<u>          </u>	<u>          </u>
Total deferred tax liabilities	460	484
	<u>          </u>	<u>          </u>
Deferred tax assets:		
Net operating loss carryforwards	88	152
Employee benefit plans	83	67
Environmental and legal obligations	34	35
AMT credits	112	97
Other	89	21
	<u>          </u>	<u>          </u>
Total deferred tax assets	406	372
Deferred tax asset valuation allowance	(98)	(97)
	<u>          </u>	<u>          </u>
Net deferred tax assets	308	275
	<u>          </u>	<u>          </u>
Net deferred tax liabilities	152	209
Add current portion of deferred tax assets	12	—
	<u>          </u>	<u>          </u>
Long-term deferred income taxes	\$ 164	\$ 209
	<u>          </u>	<u>          </u>

Certain of Millennium's subsidiaries have U.S. federal and non-U.S. tax loss carryforwards, the tax benefit of which would be \$88 million at current statutory rates. The federal loss carryforward benefits of \$12 million will begin expiring in 2022, and the non-U.S. tax loss carryforward benefits have no expiration date. However, tax loss carryforward benefits generated in the United Kingdom ( U.K. ) are subject to certain limitations. Federal AMT credits of \$112 million have no expiration date.

As a result of Millennium's assessment of its net deferred tax assets, valuation allowances of \$88 million and \$69 million were recognized for the net deferred tax assets of its French subsidiaries at December 31, 2004 and 2003, respectively. No income tax benefits were recognized with respect to 2004 and 2003 operating losses of Millennium's French subsidiaries. Additionally, valuation allowances totaling \$10 million and \$28 million were recognized at December 31, 2004 and 2003, respectively, due to the uncertainty of the realization of deferred tax assets for certain state net operating loss carryforwards and federal capital loss carryforwards.

Certain income tax returns for Millennium's domestic and foreign subsidiaries are currently under examination by the Internal Revenue Service ( IRS ), Inland Revenue of the U.K. and various other non-U.S. and state tax authorities. In many cases, these audits result in proposed assessments by the tax authority. Millennium believes that its tax positions comply with applicable tax law and intends to defend its position through the IRS appeals process. Accrued liabilities for the resolution of probable tax assessments that are expected to result in the reduction of tax attributes recognized in deferred tax assets, rather than a cash payment to the taxing authorities, are included as a component of deferred tax liabilities. Other accrued liabilities for the resolution of probable tax assessments, which are expected to result in cash payments in future years are included

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**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

in Other liabilities. If the position raised by the IRS on certain issues ultimately were upheld, it could have a material adverse effect on Millennium's consolidated financial statements. However, Millennium believes it has adequately provided for any probable outcome related to these matters, and does not anticipate any material adverse effect from their ultimate settlement or resolution. In 2003, the IRS began its audit of Millennium's tax returns for the years 1997 through 2001. The IRS has yet to issue any material proposed assessments related to this audit cycle.

Millennium has entered into tax-sharing and indemnification agreements with Hanson plc (Hanson) in which Millennium generally agreed to indemnify Hanson for income tax liabilities attributable to periods when certain operations of Hanson were included in Millennium's consolidated federal tax return. The terms of these indemnification agreements do not limit the maximum potential future payments to the indemnified parties. The maximum amount of future indemnification payments is dependent upon the results of future tax audits and is not practicable to estimate with certainty.

Deferred tax expense on certain unremitted earnings of non-U.S. subsidiaries of \$19 million was recognized in 2003 due to Millennium's plan to repatriate approximately \$100 million from its Australian and European businesses to the U.S. by implementing certain intercompany financing strategies. The planned taxable distributions were deferred from 2004 to 2005 in order to take full advantage of the American Jobs Creation Act (the Jobs Act), discussed below, and the tax provision was adjusted accordingly.

Millennium has determined that the undistributed earnings of foreign subsidiaries, exclusive of those earnings expected to be repatriated under the Jobs Act (see discussion below) will be permanently reinvested. As a result of this determination, no U.S. tax has been provided for the earnings of certain of Millennium's foreign subsidiaries. Due to the complexity of foreign tax law and structure, Millennium has not quantified the potential tax expense that would be associated with a full repatriation of these earnings.

The American Jobs Creation Act of 2004 (the Jobs Act) enacted on October 22, 2004, provides a tax deduction for qualified production activities. Millennium has significant federal tax loss carryforwards and, as a result, it is not clear whether the tax deduction for qualified production activities under the Act will provide a significant benefit to Millennium until the tax loss carryforwards have been fully utilized.

The Act also provides benefits with respect to repatriation of foreign earnings. The deduction can result in an effective tax rate of 5.25 percent on the repatriation of certain foreign earnings during a one year period. During the fourth quarter 2004, Millennium performed an analysis of the potential beneficial effect of the one time deduction for qualifying repatriations of foreign earnings under the Jobs Act on its current and future repatriation plans. As a result of that analysis, Millennium concluded that the election would be made for the tax year beginning January 1, 2005 with respect to certain foreign earnings that had previously been designated for repatriation, as well as additional earnings associated with similar activities. The total amount of earnings designated for repatriation during 2005 was approximately \$160 million, and the associated tax provision was a net benefit of approximately \$1 million after taking into effect the deferred tax provision previously recorded with respect to deferred foreign earnings.

During 2005, Millennium is continuing to perform further analysis of potential additional repatriation to determine what, if any, the effects of the one time benefit will be. Millennium expects to complete this analysis in the second or third quarter of 2005, and does not expect any additional

tax provision associated with the potential repatriation to be material.

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The domestic and non-U.S. components of income (loss) before income taxes and a reconciliation of the income tax provision to theoretical income tax computed by applying the U.S. federal statutory tax rate are as follows as well as tax benefits of net operating loss carryforwards:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
Income (loss) before income taxes:			
Domestic	\$ (45)	\$ (154)	\$ (173)
Non-U.S.	51	(37)	81
<b>Total</b>	<b>\$ 6</b>	<b>\$ (191)</b>	<b>\$ (92)</b>
Theoretical income tax at U.S. statutory rate	\$ 2	\$ (67)	\$ (32)
Increase (reduction) resulting from:			
Benefit of non-U.S. tax incentives, net of rate differences for non-U.S. taxes	(16)	(23)	(16)
Changes in estimates for prior year items	28	(1)	(19)
Valuation allowance for French deferred tax assets	20	56	10
Provision for unremitted earnings of non-U.S. subsidiaries	(1)	19	
Other, net		5	(2)
<b>Provision for (benefit from) income taxes</b>	<b>\$ 33</b>	<b>\$ (11)</b>	<b>\$ (59)</b>
<b>Effective income tax rate</b>	<b>567.7%</b>	<b>(5.8)%</b>	<b>(64.1)%</b>

Millennium recorded tax expense of \$28 million in 2004 and tax benefits of \$1 million and \$19 million in 2003 and 2002, respectively, which were unrelated to transactions for those years. During 2004 Millennium reached an agreement with the IRS concerning tax issues relating to the years 1993 through 1996. In connection with this agreement, Millennium recorded net tax expense of \$7 million, including the effect of the U.S. audit settlement upon U.K. tax liabilities related to Millennium's tax-sharing agreement with Hanson. In 2002, the tax benefit primarily related to an \$18 million refund of tax originating from claims filed with the IRS in 2002, which carried back expenses incurred in 1993 and 1994 to earlier tax years. Millennium recorded associated reversals of interest expense accruals of \$6 million, \$55 million and \$4 million in 2004, 2003, and 2002, respectively, which have been included in pre-tax income as other income (expense), net.

**16. Commitments and Contingencies**

*Commitments* The Company has various agreements for the purchase of ore used in the production of TiO<sub>2</sub> and certain other agreements to purchase raw materials, utilities and services with various terms extending through 2020. The fixed and determinable portion of obligations under purchase commitments at December 31, 2004 (at current exchange rates, where applicable) is as follows:



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<u>Millions of dollars</u>	<u>Ore</u>	<u>Other</u>	<u>Total</u>
2005	\$ 248	\$ 173	\$ 421
2006	153	112	265
2007	91	113	204
2008		114	114
2009		109	109
Thereafter		732	732
<b>Total</b>	<b>\$ 492</b>	<b>\$ 1,353</b>	<b>\$ 1,845</b>

In 2004, Millennium's total purchases under these agreements was \$276 million.

Under an agreement with an unrelated party to process acetic acid through that party's VAM plant, Millennium will purchase all VAM production at such plant not utilized by the unrelated party through December 31, 2006. The total commitment over the remaining term of the contract is expected to be \$167 million.

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*Legal* 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 that Millennium and other manufacturers are responsible for personal injury, property damage, and remediation costs allegedly associated with the use of these products. The plaintiffs in these legal proceedings include municipalities, counties, school districts, individuals and the State of Rhode Island, 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, contain general language requesting equitable relief from defendants such as abatement of lead-based paint in buildings. Legal proceedings relating to lead pigment or paint are in various procedural stages of pre-trial, post-trial and post-dismissal settings.

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 the timing of any request for indemnity 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. The insurance carriers may appeal the Ohio decision regarding defense costs, and they have in the past and may in the future attempt to deny indemnity coverage if there is ever a settlement or an adverse judgment in any lead-based paint or lead pigment case.

*Environmental Remediation* 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.

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 ( PCBs ), cleanup of former paper mill operations, and cleanup and closure of landfills associated with the former paper mill operations. In 2000, the Kalamazoo River Study Group (the KRSRG ), 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.

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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

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**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

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.

As of December 31, 2004, the probable liability associated with the river cannot be determined with certainty. A liability of \$40 million has been recognized, representing Millennium's interim allocation of 55% of the \$73 million estimated cost of bank stabilization, recommended as the preferred remedy in 2000 by the KRSG. 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.

In addition, Millennium has recognized a liability of \$38 million 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. 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.

As of December 31, 2004, Millennium's environmental liability for future remediation costs at all current and former plant sites and Superfund sites totaled \$122 million. The liabilities for individual sites range from \$1 million to \$78 million and are expected to be incurred over a number of years and not 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.

Millennium also makes capital expenditures to comply with environmental regulations. For the years ended December 31, 2004, 2003 and 2002, Millennium made \$8 million, \$9 million and \$17 million, respectively, of environmentally related capital expenditures at existing facilities. Millennium currently estimates that environmentally related capital expenditures at its facilities will be approximately \$16 million for 2005 and \$13 million for 2006. These amounts include estimated expenditures related to emission control standards for nitrogen oxides ( NOx ) and highly reactive, volatile organic compounds ( HRVOCs ), as discussed below.

*Clean Air Act* Under the Clean Air Act, the eight-county Houston/Galveston region has been designated a severe non-attainment area for ozone by the EPA under a one-hour ozone standard. Emission reduction controls for NOx, which contribute to ozone formation, must be installed at each of Equistar's six facilities and Millennium's two facilities in the Houston/Galveston region prior to a November 2007 compliance deadline for the one-hour ozone standard. In addition, in December 2004, the regulatory agency for the state of Texas, the Texas Commission on Environmental Quality, or TCEQ, finalized controls over HRVOCs. Equistar and Millennium are still assessing the impact of the HRVOC rules.

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In April 2004, the EPA designated the eight-county Houston/Galveston region a moderate non-attainment area under an eight-hour ozone standard. As a result, the TCEQ must submit a plan to the EPA in 2007 to demonstrate compliance with the eight-hour ozone standard in 2010. Although the one-hour ozone standard expires in 2005, the controls under that standard will not be relaxed under the EPA's new eight-hour transition rules. As a result, Equistar and Millennium still will be required to meet the new emission standards for NO<sub>x</sub> and HRVOCs. The timing and amount of the estimated

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expenditures are subject to these regulatory and other uncertainties, as well as to obtaining the necessary permits and approvals. The ultimate cost of implementing any plan developed to comply with the final ozone standards cannot be estimated at this time.

*Other Contingencies* Millennium is organized under the laws of Delaware and is subject to United States Federal income taxation of corporations. However, in order to obtain clearance from the United Kingdom Inland Revenue as to the tax-free treatment of the demerger stock dividend for United Kingdom tax purposes for Hanson and Hanson's shareholders, Hanson agreed with the United Kingdom Inland Revenue that Millennium would continue to be centrally managed and controlled in the United Kingdom at least until September 30, 2001. Millennium agreed with Hanson not to take, or fail to take, during such five-year period, any action that would result in a breach of, or constitute non-compliance with, any of the representations and undertakings made by Hanson in its agreement with the United Kingdom Inland Revenue. Effective February 4, 2002, Millennium ceased being centrally managed and controlled in the United Kingdom. Millennium believes that it has satisfied all obligations that it be managed and controlled in the United Kingdom for the requisite five-year period.

*Indemnification* Millennium, its subsidiaries 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, its subsidiaries 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, 2004, 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.

*General* Millennium, its subsidiaries 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, its subsidiaries or its joint ventures currently are involved (directly or indirectly) will individually, or in the aggregate, have a material adverse effect on the financial position, liquidity or results of operations of Millennium.

In the opinion of management, any liability arising from the matters discussed in this note is not expected to have a material adverse effect on the financial position or liquidity of Millennium. However, the adverse resolution in any reporting period of one or more of these matters discussed in this note could have a material impact on Millennium results of operations for that period, which may be mitigated by contribution or indemnification obligations of others, or by any insurance coverage that may be available.

**17. Stockholders Equity**

*Preferred Stock* Millennium had authorized 1,000 shares and 25,000,000 shares of \$0.01 par value preferred stock at December 31, 2004 and 2003, respectively. As of December 31, 2004 and 2003, none was issued and outstanding.

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*Common Stock* As a result of Lyondell's acquisition of Millennium on November 30, 2004, each issued and outstanding share of Millennium's common stock, excluding shares held directly by Lyondell and Millennium, was converted to a right to receive 0.95 shares of Lyondell common stock in return for the cancellation of such shares. Substantially all of the approximately 66 million shares of the Millennium common stock outstanding immediately prior to the acquisition, were converted to Lyondell common stock. As of December 31, 2004, approximately 5 million shares of Millennium common stock were held by Millennium America and were reflected as treasury stock in the Consolidated Balance Sheet.

*Accumulated Other Comprehensive Loss* The components of accumulated other comprehensive loss were as follows at December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Foreign currency translation adjustment	\$ 79	\$ 29
Minimum pension liabilities	(184)	(166)
Other	(4)	(4)
<b>Balance as of December 31</b>	<b>\$ (105)</b>	<b>\$ (141)</b>

*Omnibus Incentive Compensation Plan* Millennium's Incentive Compensation Plan (the Omnibus Incentive Plan) provided for awards to employee and non-employee directors in the form of (i) stock options, including incentive stock options and non-qualified stock options, (ii) stock appreciation rights, (iii) restricted shares, (iv) performance units, (v) performance shares, (vi) stock awards, and (vii) cash-based awards. During 2003 and 2002, Millennium granted non-qualified stock option awards for 445,800 shares and 957,000 shares, respectively, to a limited number of Millennium's executive officers and key employees. No compensation expense was recognized in 2004, 2003 and 2002 for such equity-related awards under this plan. In addition, in 2004 and 2003, Millennium granted 91,500 shares and 122,100 shares, respectively, of restricted stock and performance units to a limited number of Millennium's officers and key employees. Compensation expense related to these grants was \$2 million in 2004 and was less than \$1 million in each of 2003 and 2002.

Millennium's Long Term Incentive Plan and Executive Long Term Incentive Plan provided for the award of shares of Millennium common stock to certain management personnel and senior executives, respectively, if certain performance targets were achieved. The Executive Long Term Incentive Plan also provided for a cash award based on the total shareholder return of Millennium's common stock when compared to total shareholder return of Millennium's peer group (companies in the Standard & Poor's Chemical Composite Index) over a three-year period. Beginning in 2001, these awards were granted under the Omnibus Incentive Plan by reference to the Long Term Incentive Plan. The obligations under these plans were funded by shares of Millennium's common stock that were held in trusts established for that purpose. No shares remained in the trusts at December 31, 2004 and 2003. Unvested shares will be forfeited. Compensation expense related to these plans for 2004, 2003 and 2002 was \$12 million, \$3 million and \$2 million, respectively.

*Long Term Stock Incentive Plan* Millennium's Long Term Stock Incentive Plan (Stock Incentive Plan) provided for the following types of awards to its employees: (i) stock options, including incentive stock options and non-qualified stock options, (ii) stock appreciation rights, (iii) restricted shares, (iv) performance units and (v) performance shares. All stock options awarded under this plan were granted at exercise prices equal to the



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market price of Millennium's common stock. The market value of all unvested restricted shares at each balance sheet date is included as a separate component of Stockholders' deficit, and is amortized over the restricted period. Compensation expense related to this plan was \$2 million in 2004 and less than \$1 million in each of 2003 and 2002.

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As a result of Lyondell's acquisition of Millennium on November 30, 2004, each outstanding option under the Omnibus Incentive Compensation Plan and the Long Term Stock Incentive Plan to acquire Millennium common stock was converted into an option to acquire 0.95 shares of Lyondell common stock. The exercise price of the converted option will be the exercise price of the original Millennium option divided by the exchange ratio. All converted options vested immediately pursuant to the change in control provisions of the plan.

The following table summarizes activity, in thousands of shares and the weighted-average exercise price per share, relating to restricted stock and stock options for all employees, including executive officers and key employees, under the Omnibus Incentive Plan and the Stock Incentive Plan. As of November 30, 2004, the date of acquisition by Lyondell, all outstanding options vested and were converted into options to purchase Lyondell common stock. As of December 31, 2004, there were no options to purchase Millennium common stock outstanding.

	<b>Restricted Shares</b>	<b>Weighted- Average Grant Price</b>	<b>Stock Options</b>	<b>Weighted- Average Exercise Price</b>
Balance at January 1, 2002	639	\$ 23.69	1,301	\$ 18.73
Vested and issued	(63)	\$ 24.22		
Cancelled	(510)	\$ 23.94	(103)	\$ 20.67
Granted			999	\$ 12.33
<b>Balance at December 31, 2002</b>	<b>66</b>	<b>\$ 21.19</b>	<b>2,197</b>	<b>\$ 15.73</b>
Vested and issued	(50)	\$ 24.63		
Exercised			(8)	\$ 11.68
Cancelled			(44)	\$ 18.31
Granted	122	\$ 10.02	486	\$ 11.65
<b>Balance at December 31, 2003</b>	<b>138</b>	<b>\$ 10.07</b>	<b>2,631</b>	<b>\$ 14.94</b>
Vested and issued	(226)	\$ 12.95		
Exercised			(1,162)	\$ 14.23
Cancelled	(4)	\$ 10.02	(1,469)	\$ 15.50
Granted	92	\$ 12.85		
<b>Balance at December 31, 2004</b>	<b>—</b>	<b>—</b>	<b>—</b>	<b>—</b>

*Stock-Based Compensation* SFAS No. 123 *Accounting for Stock-Based Compensation* ( SFAS No. 123 ), 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 Accounting Principles Board ( APB ) Opinion No. 25 and related interpretations, and therefore has adopted the disclosure-only provisions of SFAS No. 123, as amended. 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.



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The pro forma effect on net loss and loss per share before cumulative effect of accounting change of measuring compensation expense for such grants in the manner prescribed in SFAS No. 123 is summarized in the table below:

<u>Millions of dollars</u>	<b>For the years Ended December 31,</b>		
	<b>2004</b>	<b>2003</b>	<b>2002</b>
Net loss before cumulative effect of accounting change	\$ (31)	\$ (185)	\$ (39)
Deduct: Stock-based compensation using fair-value method for all options awarded, net of tax	(1)	(2)	(2)
Pro forma net loss before cumulative effect of accounting change	<u>\$ (32)</u>	<u>\$ (187)</u>	<u>\$ (41)</u>
<b>Basic and diluted loss per share before cumulative effect of accounting change:</b>			
Reported		\$ (2.89)	\$ (0.61)
Pro forma		<u>\$ (2.91)</u>	<u>\$ (0.64)</u>
<b>Assumptions:</b>			
Fair value per share of options granted		\$ 4.06	\$ 4.04
Fair value assumptions:			
Dividend yield		4.6%	4.1%
Expected volatility		49.3%	51.0%
Risk-free interest rate		3.8%	4.1%
Maturity, in years		10	10

As of November 30, 2004, the date of acquisition by Lyondell, all outstanding options vested and were converted into options to purchase Lyondell common stock. There were no option grants in 2004. Earnings per share data for 2004 is not meaningful since Lyondell owns 100% of the shares.

*Salary and Bonus Deferral Plan* Millennium had a deferred compensation plan under which officers and certain management employees had deferred a portion of their compensation on a pre-tax basis in the form of the share of Millennium's common stock. A rabbi trust (the "Trust") was established to hold shares of Millennium's common stock purchased in open market transactions to fund this obligation. Shares purchased by the Trust were reflected as Treasury stock, at cost, and, along with the related obligation for this plan, were included in Stockholders' deficit. At November 30, 2004, the plan was no longer active; however, the Trust held 228,543 shares at a total cost of approximately \$5 million. As a result of Lyondell's acquisition of Millennium on November 30, 2004, the shares of Millennium common stock held by the Trust were converted to shares of Lyondell common stock based on the exchange ratio of 0.95, and paid out.

**18. Per Share Data**

Basic loss per share for the periods presented is computed based upon the weighted average number of shares of common stock outstanding during the periods. Diluted loss per share also includes the effect of outstanding stock options and restricted stock. Outstanding stock options and restricted stock had no effect on the calculation of diluted loss per share for 2003 and 2002.

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Loss per share data were as follows:

<u>Millions of dollars, except per share data</u>	<u>2003</u>	<u>2002</u>
Loss before cumulative effect of accounting change	\$ (185)	\$ (39)
Cumulative effect of accounting change	(1)	(305)
Net loss available for common shareholders basic and diluted	<u>\$ (186)</u>	<u>\$ (344)</u>
Weighted average shares, in millions:		
Basic	64.0	63.6
Diluted	64.0	63.6
Basic and diluted loss per share:		
Loss before cumulative effect of accounting change	\$ (2.89)	\$ (0.61)
Cumulative effect of accounting change	(0.02)	(4.80)
Net loss	<u>\$ (2.91)</u>	<u>\$ (5.41)</u>

As a result of the November 30, 2004 acquisition of Millennium by Lyondell, Lyondell owns all of Millennium's outstanding stock; therefore per share data for 2004 has been omitted.

**19. Supplemental Cash Flow Information**

Supplemental cash flow information is summarized as follows for the years ended December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
Cash paid (received) for interest and taxes:			
Interest, net	\$ 96	\$ 95	\$ 86
Taxes, net	5	38	(1)

**20. Segment and Related Information**

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Millennium sells its products on a global basis primarily to other industrial concerns in the coatings and petrochemicals industries. Millennium has identified two reportable segments:

Inorganic chemicals, primarily TiO<sub>2</sub> and related products.

EC&D, including Millennium's acetyls business, which produces VAM, acetic acid and methanol; and Millennium's equity investment in Equistar, which produces primarily ethylene, co-products such as propylene, butadiene and aromatics, and derivatives such as ethylene oxide, ethylene glycol and polyethylene.

At the time of Lyondell's acquisition of Millennium, Millennium reassessed segment reporting based on the current management structure, including the impact of the integration of Millennium's businesses into the Lyondell portfolio of businesses. Based on this analysis, Millennium concluded that management is focused on the two segments listed previously.

The accounting policies of the segments are the same as those described in Summary of Significant Accounting Policies (see Note 2). No customer accounted for more 10% or more of consolidated sales during any year in the three-year period ended December 31, 2004.

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Summarized financial information concerning reportable segments is shown in the following table.

<u>Millions of dollars</u>	<u>Inorganic Chemicals</u>	<u>EC&amp;D</u>	<u>Other</u>	<u>Total</u>
<b>2004</b>				
Sales and other operating revenues	\$ 1,340	\$ 453	\$ 95	\$ 1,888
Operating income (loss)	51	59	(103)	7
Equity income		81		81
Goodwill	56	48		104
Total assets	1,249	769	479	2,497
Capital expenditures	51	1	3	55
Depreciation and amortization expense	87	18	9	114
<b>2003</b>				
Sales and other operating revenues	\$ 1,172	\$ 421	\$ 94	\$ 1,687
Operating income (loss)	(53)	26	(30)	(57)
Equity loss		(100)		(100)
Goodwill	56	48		104
Total assets	1,318	749	331	2,398
Capital expenditures	42	3	3	48
Depreciation and amortization expense	101	17	8	126
<b>2002</b>				
Sales and other operating revenues	\$ 1,129	\$ 334	\$ 91	\$ 1,554
Operating income (loss)	64	12	(9)	67
Equity loss		(73)		(73)
Goodwill	58	48		106
Total assets	1,286	851	259	2,396
Capital expenditures	55	1	9	65
Depreciation and amortization expense	88	14	8	110

Operating income (loss) in the Other column above includes costs not allocated to Millennium's business segments, including costs from predecessor businesses, costs associated with Millennium's cost reduction program and businesses that are not reportable segments. Business combination costs of approximately \$71 million related to Lyondell's acquisition of Millennium in a stock-for-stock business combination on November 30, 2004 are reflected in 2004.

The following table presents details of Total assets presented above in the Other column for the years ended December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
----------------------------	-------------	-------------	-------------



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Millennium items not allocated to segments			
Cash	\$ 344	\$ 209	\$ 125
Specialty Chemicals assets	84	94	98
All other	51	28	36
	<u>          </u>	<u>          </u>	<u>          </u>
Total Other assets	\$ 479	\$ 331	\$ 259
	<u>          </u>	<u>          </u>	<u>          </u>

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

Millennium's foreign operations are primarily conducted by subsidiaries in the United Kingdom, France, Brazil and Australia. Sales between Millennium's operations are made on terms similar to those of its third-party distributors. The following Revenues by country data are based upon the delivery location of the product.

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
United States	\$ 730	\$ 667	\$ 672
Non-U.S.	1,158	1,020	882
<b>Total</b>	<b>\$ 1,888</b>	<b>\$ 1,687</b>	<b>\$ 1,554</b>

The following Long-lived assets by country data are based upon the location of the assets.

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
United States	\$ 341	\$ 370	\$ 395
Non-U.S.:			
United Kingdom	190	191	188
France	66	66	149
Asia/Pacific	33	36	30
Brazil	77	75	58
All other			
Total Non-U.S.	366	368	425
<b>Total</b>	<b>\$ 707</b>	<b>\$ 738</b>	<b>\$ 820</b>

**21. Supplemental Guarantor Information**

Millennium America, a 100% owned indirect subsidiary of Millennium, is a holding company for all of Millennium's operating subsidiaries other than its operations in the United Kingdom, France, Brazil and Australia. Millennium America is the issuer of the 7% Senior Notes, the 7.625% Senior Debentures, and the 9.25% Senior Notes, and is the principal borrower under the credit agreement. Millennium is the issuer of the 4% Convertible Senior Debentures. Millennium America fully and unconditionally guarantees all obligations under the credit agreement and the 4% Convertible Senior Debentures. The 7% Senior Notes, the 7.625% Senior Debentures and the 9.25% Senior Notes, as well as outstanding amounts under the credit agreement, are fully and unconditionally guaranteed by Millennium. The following Condensed Consolidating Balance Sheets at December 31, 2004 and 2003, and the Condensed Consolidating Statements of Operations and Cash Flows for each of the three years in the period ended December 31, 2004.



**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****CONDENSED CONSOLIDATING FINANCIAL INFORMATION**

As of and for the year ended December 31, 2004

Millions of dollars	Millennium Chemicals Inc.	Millennium America Inc.	Non-Guarantor Subsidiaries	Eliminations	Millennium Chemicals Inc. and Subsidiaries
<b>BALANCE SHEET</b>					
Inventories	\$	\$	\$ 414	\$	\$ 414
Other current assets		94	647		741
Property, plant and equipment, net			707		707
Investment in Equistar Chemicals, LP			457		457
Investment in subsidiaries	99	352		(451)	
Goodwill			104		104
Other assets	3	7	64		74
Due from parent and affiliates, net		773		(773)	
<b>Total assets</b>	<b>\$ 102</b>	<b>\$ 1,226</b>	<b>\$ 2,393</b>	<b>\$ (1,224)</b>	<b>\$ 2,497</b>
Current maturities of long-term debt	\$	\$	\$ 7	\$	\$ 7
Other current liabilities	1	9	437		447
Long-term debt	150	1,232	16		1,398
Other liabilities		1	502		503
Deferred income taxes			164		164
Due to parent and affiliates, net	6		767	(773)	
<b>Total liabilities</b>	<b>157</b>	<b>1,242</b>	<b>1,893</b>	<b>(773)</b>	<b>2,519</b>
Minority interest			33		33
Stockholders' (deficit) equity	(55)	(16)	467	(451)	(55)
<b>Total liabilities and stockholders' (deficit) equity</b>	<b>\$ 102</b>	<b>\$ 1,226</b>	<b>\$ 2,393</b>	<b>\$ (1,224)</b>	<b>\$ 2,497</b>
<b>STATEMENT OF INCOME</b>					
Sales and other operating revenues	\$	\$	\$ 1,888	\$	\$ 1,888
Cost of sales			1,602		1,602
Selling, general and administrative expenses	1	1	162		164
Research and development expenses			21		21
Business combination costs			71		71
Asset impairments			14		14
Reorganization and other costs			9		9
<b>Operating income (loss)</b>	<b>(1)</b>	<b>(1)</b>	<b>9</b>		<b>7</b>
Interest income (expense), net	(7)	(95)	8		(94)

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Intercompany interest income (expense), net	(1)	102	(101)		
Income from equity investment in Equistar			81		81
Equity loss in subsidiaries	(23)	(21)		44	
Other income, net			8		8
(Provision for) benefit from income taxes	1	(2)	(32)		(33)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Net loss	\$ (31)	\$ (17)	\$ (27)	\$ 44	\$ (31)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****CONDENSED CONSOLIDATING FINANCIAL INFORMATION**

As of and for the year ended December 31, 2004

<u>Millions of dollars</u>	<u>Millennium Chemicals Inc.</u>	<u>Millennium America Inc.</u>	<u>Non-Guarantor Subsidiaries</u>	<u>Eliminations</u>	<u>Millennium Chemicals Inc. and Subsidiaries</u>
<b>STATEMENT OF CASH FLOWS</b>					
Net cash provided by (used in) operating activities	\$ (5)	\$ 3	\$ 197	\$	\$ 195
Expenditures for property, plant and equipment			(55)		(55)
Distributions from Equistar in excess of earnings			12		12
Proceeds from sales of assets			2		2
Net cash used in investing activities			(41)		(41)
Issuance of long-term debt		27	7		34
Repayment of long-term debt		(83)	(6)		(89)
Intercompany	(12)	123	(111)		
Proceeds from exercise of stock options	17				17
Net cash provided by (used in) financing activities	5	67	(110)		(38)
Effect of exchange rate change on cash			19		19
Increase in cash and cash equivalents	\$	\$ 70	\$ 65	\$	\$ 135

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## MILLENNIUM CHEMICALS INC.

## NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)

## CONDENSED CONSOLIDATING FINANCIAL INFORMATION

As of and for the year ended December 31, 2003

Millions of dollars	Millennium Chemicals Inc.	Millennium America Inc.	Non-Guarantor Subsidiaries	Eliminations	Millennium Chemicals Inc. and Subsidiaries
<b>BALANCE SHEET</b>					
Inventories	\$	\$	\$ 457	\$	\$ 457
Other current assets	1	24	511		536
Property, plant and equipment, net			738		738
Investment in Equistar Chemicals, LP			469		469
Investment in subsidiaries	62	336		(398)	
Goodwill			104		104
Other assets	3	12	79		94
Due from parent and affiliates, net		733		(733)	
<b>Total assets</b>	<b>\$ 66</b>	<b>\$ 1,105</b>	<b>\$ 2,358</b>	<b>\$ (1,131)</b>	<b>\$ 2,398</b>
Current maturities of long-term debt	\$	\$	\$ 6	\$	\$ 6
Other current liabilities	1	9	357		367
Long-term debt	150	1,295	16		1,461
Other liabilities			419		419
Deferred income taxes			209		209
Due to parent and affiliates, net	6		727	(733)	
<b>Total liabilities</b>	<b>157</b>	<b>1,304</b>	<b>1,734</b>	<b>(733)</b>	<b>2,462</b>
Minority interest			27		27
Stockholders' (deficit) equity	(91)	(199)	597	(398)	(91)
<b>Total liabilities and stockholders' (deficit) equity</b>	<b>\$ 66</b>	<b>\$ 1,105</b>	<b>\$ 2,358</b>	<b>\$ (1,131)</b>	<b>\$ 2,398</b>
<b>STATEMENT OF INCOME</b>					
Sales and other operating revenues	\$	\$	\$ 1,687	\$	\$ 1,687
Cost of sales			1,470		1,470
Selling, general and administrative expenses	1		129		130
Research and development expenses			23		23
Asset impairments			103		103
Reorganization and other costs			18		18
<b>Operating loss</b>	<b>(1)</b>		<b>(56)</b>		<b>(57)</b>
Interest income (expense), net		(94)	2		(92)

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Intercompany interest income (expense), net	(3)	98	(95)		
Loss from equity investment in Equistar			(100)		(100)
Equity loss in subsidiaries	(182)	(112)		294	
Other income (expense), net		(1)	54		53
(Provision for) benefit from income taxes	1	(1)	11		11
Cumulative effect of accounting change	(1)	1	(1)		(1)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>
Net loss	\$ (186)	\$ (109)	\$ (185)	\$ 294	\$ (186)
	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>	<u>          </u>



**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****CONDENSED CONSOLIDATING FINANCIAL INFORMATION**

As of and for the year ended December 31, 2003

<u>Millions of dollars</u>	<u>Millennium Chemicals Inc.</u>	<u>Millennium America Inc.</u>	<u>Non-Guarantor Subsidiaries</u>	<u>Eliminations</u>	<u>Millennium Chemicals Inc. and Subsidiaries</u>
<b>STATEMENT OF CASH FLOWS</b>					
Net cash provided by (used in) operating activities	\$ (2)	\$ 7	\$ (97)	\$	\$ (92)
Expenditures for property, plant and equipment			(48)		(48)
Net cash used in investing activities			(48)		(48)
Dividends paid	(17)				(17)
Issuance of long-term debt	146	478	2		626
Repayment of long-term debt		(378)	(26)		(404)
Intercompany	(127)	(93)	220		
Net cash provided by financing activities	2	7	196		205
Effect of exchange rate change on cash			19		19
Increase in cash and cash equivalents	\$	\$ 14	\$ 70	\$	\$ 84

**Table of Contents****MILLENNIUM CHEMICALS INC.****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****(Dollars in millions, except share data)****CONDENSED CONSOLIDATING FINANCIAL INFORMATION****For the Year Ended December 31, 2002**

Millions of dollars	Millennium Chemicals Inc.	Millennium America Inc.	Non-Guarantor Subsidiaries	Eliminations	Millennium Chemicals Inc. and Subsidiaries
<b>STATEMENT OF INCOME</b>					
Sales and other operating revenues	\$	\$	\$ 1,554	\$	\$ 1,554
Cost of sales			1,312		1,312
Selling, general and administrative expenses	1	1	152		154
Research and development expenses			21		21
Operating income (loss)	(1)	(1)	69		67
Interest expense, net		(86)			(86)
Intercompany interest income (expense), net	(5)	103	(98)		
Loss on equity investment in Equistar			(73)		(73)
Equity loss in subsidiaries	(34)	(108)		142	
Other expense, net			(6)		(6)
(Provision for) benefit from income taxes	1	(6)	64		59
Cumulative effect of accounting change	(305)	(305)	(305)	610	(305)
Net loss	\$ (344)	\$ (403)	\$ (349)	\$ 752	\$ (344)
<b>STATEMENT OF CASH FLOWS</b>					
Net cash provided by (used in) operating activities	\$ (6)	\$ 18	\$ 68	\$	\$ 80
Expenditures for property, plant and equipment			(65)		(65)
Proceeds from sales of assets			1		1
Net cash used in investing activities			(64)		(64)
Issuance of long-term debt		290	13		303
Repayment of long-term debt		(264)	(8)		(272)
Dividends paid	(35)				(35)
Intercompany	41	(43)	2		
Net cash provided by (used in) financing activities	6	(17)	7		(4)

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Effect of exchange rate change on cash			(1)		(1)
Increase in cash and cash equivalents	\$	\$ 1	\$ 10	\$	\$ 11

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### **Item 9. Changes in and Disagreements With Accountants on Accounting and Financial Disclosure**

None.

### **Item 9A. Controls and Procedures**

Millennium maintains disclosure controls and procedures that are designed to provide reasonable assurance that information required to be disclosed in Millennium's filings under the Securities Exchange Act of 1934 is recorded, processed, summarized and reported within the periods specified in the rules and forms of the Securities and Exchange Commission and that such information is accumulated and communicated to Millennium's management, including its principal executive officer and principal financial officer, as appropriate, to allow timely decisions regarding required disclosure.

On November 30, 2004, Millennium became a wholly owned subsidiary of Lyondell. As a result of the acquisition of Millennium by Lyondell, Millennium's Board of Directors and executive management were replaced with a new Board of Directors and a new executive management team. Lyondell and Millennium are in the process of integrating Millennium's internal control over financial reporting into the Lyondell control processes. During the integration process, key Millennium controls that have been in place historically are being maintained, while supplementing such controls with key elements of the Lyondell control framework.

#### **Material Weakness in Controls over Accounting for Deferred Income Taxes**

As a result of tax integration activities that began in the second quarter of 2004 with respect to the acquisition of Millennium by Lyondell, Millennium determined at the beginning of July 2004 that it had made errors in the computation of its tax basis in Equistar, which in turn had been used to compute Millennium's deferred income taxes. In response to the determination that errors had been made, Millennium performed an analysis and re-computation of Millennium's tax basis in Equistar. In late July 2004, Millennium completed the analysis and re-computation necessary to verify and quantify the errors and prepare a restatement (the August 2004 Restatement) to correct the errors, which August 2004 Restatement was reflected in Amendment No. 2 to Millennium's Annual Report on Form 10-K for the fiscal year ended December 31, 2003; Amendment No. 1 to Millennium's Quarterly Report on Form 10-Q for the period ended March 31, 2004; and Millennium's Quarterly Report on Form 10-Q for the quarterly period ended June 30, 2004, all of which were filed with the SEC on August 9, 2004.

The August 2004 Restatement of prior periods' financial statements that resulted from the analysis and re-computation discussed above decreased Millennium's liability for deferred income taxes and shareholders' deficit at June 30, 2004, March 31, 2004, and December 31, 2003 and 2002 by \$15 million. The August 2004 Restatement similarly decreased liabilities for deferred income taxes and increased shareholders' equity at December 31, 2001 and 2000 by \$15 million. The August 2004 Restatement did not affect Millennium's cash flow or operating income in any period.

The errors corrected in the August 2004 Restatement were the result of (1) an incorrect computation by Millennium in 1998 of Millennium's original tax basis in the net assets it contributed to Equistar upon the joint venture's formation in December 1997 and (2) incorrect computations by Millennium for 1998 and 1999 of changes in the amount of such tax basis. Millennium also discovered a de minimis error made in 2001. Millennium believes that the errors were attributable to a material weakness in internal control over financial reporting relating to the computation by Millennium of deferred income taxes for Millennium's investment in Equistar (the First Material Weakness). The First Material

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Weakness consisted of (1) inadequate review and verification by Millennium in 1998 of tax basis data relating to net assets contributed by Millennium to Equistar in December 1997 and (2) incorrect interpretation by Millennium of Equistar tax return information provided by the tax matters partner of Equistar and used by Millennium to compute changes in its tax basis in Equistar for 1998 and 1999. Under Equistar's partnership agreement, Lyondell serves as the tax matters partner and, as such, prepares and files Equistar's tax returns.

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In order to remediate the First Material Weakness, in the third quarter of 2004, Millennium documented the procedures that were used to analyze and re-compute Millennium's tax basis in Equistar during July 2004. Millennium utilized these documented procedures in preparing the financial statements contained in the Quarterly Report on Form 10-Q filed on November 9, 2004 (the Third Quarter 2004 Form 10-Q). These procedures documented in the third quarter of 2004 included (1) the detailed review by Millennium's Director Tax and its Vice President Tax of estimates of tax return data provided quarterly by Equistar's tax matters partner, (2) followed by discussions of the results of such review with the tax matters partner to confirm the correctness of Millennium's interpretation of the estimated tax return data provided by the tax matters partner and (3) thereafter, review of the results of these procedures by Millennium's Corporate Controller and Chief Financial Officer (Millennium's Principal Accounting Officer).

After the November 30, 2004 acquisition of Millennium by Lyondell, the new management team reviewed Millennium's deferred tax accounts in conjunction with the preparation of the financial statements of Lyondell and Millennium as of December 31, 2004 utilizing the existing Lyondell internal control over financial reporting related to deferred income taxes. The Lyondell tax controls and procedures were implemented at Millennium in the fourth quarter of 2004 and the first quarter of 2005 to complete the remediation of the First Material Weakness. These Lyondell controls and procedures include (1) detailed review by the Lyondell Director Worldwide Tax Reporting of the tax and book bases associated with Millennium's and Lyondell's investments in Lyondell's wholly-owned indirect subsidiary, Equistar, and the related deferred tax assets and liabilities, using both information available to Lyondell as the Equistar tax matters partner and information previously available to Millennium; and (2) review and concurrence with that detailed review by Lyondell's Vice President Tax, Lyondell's Senior Tax Counsel, and Millennium's Vice President Tax, as well as Millennium's Vice President and Controller (Millennium's Principal Accounting Officer, who is also the Lyondell Vice President and Controller and Principal Accounting Officer) and the Lyondell Assistant Controller. These procedures were utilized by the new Millennium management to confirm the deferred taxes related to Millennium's investment in Equistar reflected in the financial statements included in this Annual Report on Form 10-K.

**Material Weakness in Controls over Accounting for Contingencies**

Also subsequent to the November 30, 2004 acquisition date, the new Millennium management re-examined Millennium's environmental remediation liabilities in conjunction with the preparation of the financial statements of Lyondell and Millennium as of and for the year ended December 31, 2004, following procedures that are part of the Lyondell internal control over financial reporting. In late January of 2005, Millennium concluded, with the concurrence of Millennium's Board of Directors, that Millennium's financial statements for the three-year period ended December 31, 2003 and the first three quarters of 2004 should no longer be relied upon because of errors in such financial statements. Accordingly, in February 2005, Millennium restated its financial statements for those periods to recognize an increase of \$52 million in its recorded liabilities for environmental remediation as of September 30, 2004 to record additional amounts for estimated future environmental remediation spending that were not recorded previously (the February 2005 Restatement). This increase in environmental remediation liabilities resulted, as of September 30, 2004, in a decrease in deferred tax liabilities of \$17 million, and an increase in accumulated deficit of \$35 million, of which \$18 million relates to years prior to 1999. The February 2005 Restatement is reflected in Amendment No. 5 to Millennium's Annual Report on Form 10-K for the fiscal year ended December 31, 2003; Amendment No. 4 to Millennium's Quarterly Report on Form 10-Q for the period ended March 31, 2004; Amendment No. 4 to Millennium's Quarterly Report on Form 10-Q for the period ended June 30, 2004; and Amendment No. 1 to Millennium's Quarterly Report on Form 10-Q for the period ended September 30, 2004, all of which were filed with the SEC on February 14, 2005.

The errors corrected in the February 2005 Restatement were the result of failure to increase the probable liabilities for future remediation spending related to past environmental contamination when the reasonably estimable amounts of such probable future spending increased. Millennium believes that the errors were attributable to a material weakness in internal control over financial reporting relating to the recording by Millennium of the probable liabilities related to contingencies, including environmental remediation obligations

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(the Second Material Weakness ). The Second Material Weakness consisted of (1) inadequate procedures to verify the appropriateness of period-end balances of recorded liabilities reflecting Millennium's best estimate of probable future spending associated with contingent liabilities and (2) ineffective communication among the corporate functions with knowledge and accountability relating to environmental remediation, legal contingencies, accounting, and disclosure.

In order to remediate the Second Material Weakness, Millennium documented, in the first quarter of 2005, the procedures that were used to reevaluate Millennium's environmental remediation liabilities, which include application of Lyondell control processes to Millennium. These Lyondell controls and procedures include:

relating to liability for environmental remediation:

1. detailed review by the Lyondell General Manager HS&E, the Lyondell Senior Corporate Counsel Environmental, the Lyondell Manager Environmental Affairs and the Lyondell Manager Environmental Issues of the current status of previously existing, new and potential remediation projects, including spending estimates,
2. detailed review and discussion of each project and related estimates with the above parties and Millennium's Vice President and Controller (who is also the Lyondell Vice President and Controller), the Lyondell Senior Manager of Accounting Policy, and the Lyondell Assistant Controller, and
3. detailed assessment of the appropriate accounting for those estimates by Millennium's Vice President and Controller, the Lyondell Senior Manager of Accounting Policy, and the Lyondell Assistant Controller; and

relating to legal contingencies:

1. detailed review and assessment of all existing and known potential litigation by the Lyondell Associate General Counsel Litigation, the Lyondell Corporate and Securities Counsel, and the Lyondell Litigation department,
2. detailed review and discussion of those matters that may have accounting or financial disclosure impacts by the Lyondell Associate General Counsel Litigation, the Lyondell Corporate and Securities Counsel and the Lyondell Assistant Controller, and
3. detailed assessment of the appropriate accounting and financial disclosure for legal contingencies by Millennium's Vice President and Controller, the Lyondell Senior Manager of Accounting Policy and the Lyondell Assistant Controller.

Millennium utilized these documented procedures in preparing the financial statements contained in this Annual Report on Form 10-K.

**Evaluation of Disclosure Controls and Procedures**

Millennium completed an evaluation under the supervision and with the participation of Millennium's management team, including Millennium's principal executive officer and principal financial officer, of the effectiveness of the design and operation of Millennium's disclosure controls and procedures as of December 31, 2004. As the procedures with respect to the First Material Weakness and the Second Material Weakness are

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applied in connection with the preparation of period-end financial statements, the application of these procedures was not complete until after December 31, 2004. Therefore, based on the evaluation, the principal executive officer and principal financial officer of Millennium concluded that Millennium's disclosure controls and procedures were not effective at the reasonable assurance level on December 31, 2004 due to the First Material Weakness and Second Material Weakness. As a result of completion of the remediation of these material weaknesses through application of Lyondell control processes to Millennium, subsequent to December 31, 2004 but prior to the preparation of Millennium's financial statements, the disclosure controls and procedures applied in the preparation of Millennium's financial statements as of and for the year ended December 31, 2004 were effective.



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As a result of the acquisition of Millennium by Lyondell, Millennium's Board of Directors and executive management were replaced with a new Board of Directors and a new executive management team. Other than the procedures described above that were implemented by the current management team of Millennium to remediate the First Material Weakness and the Second Material Weakness, there were no changes in Millennium's internal control over financial reporting that occurred during the most recent fiscal quarter covered by this Annual Report on Form 10-K that have materially affected, or are reasonably likely to materially affect, Millennium's internal control over financial reporting. However, as discussed above, Lyondell and Millennium continue to integrate Millennium's internal control over financial reporting into the Lyondell control processes. During the integration process, key Millennium controls that have been in place historically are being maintained, while supplementing such controls with key elements of the Lyondell control framework.

Millennium will be required to include in its Annual Report on Form 10-K for the year ending December 31, 2005 a report on management's assessment of the effectiveness of Millennium's internal control over financial reporting (an Internal Control Report) pursuant to Section 404 of the Sarbanes-Oxley Act of 2002. As part of the process of preparing to include an Internal Control Report, Millennium initiated in 2003 a review of its internal control over financial reporting. This review now is being conducted under the direction of Millennium's new management team. As a result, the new management team has made improvements, as described above, to Millennium's internal control through the date of the filing of this Annual Report on Form 10-K as part of this review. Millennium anticipates that improvements will continue to be made as part of the ongoing review.

**Item 9B. Other Information**

None.

**Table of Contents****PART III****Item 10. *Directors and Executive Officers of the Registrant***

Omitted pursuant to General Instruction I of Form 10-K. See [Additional Information Available](#) for information regarding Millennium's code of ethics.

**Item 11. *Executive Compensation***

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

**Item 12. *Security Ownership of Certain Beneficial Owners and Management and Related Stockholder Matters***

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

**Item 13. *Certain Relationships and Related Transactions***

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

**Item 14. *Principal Accountant Fees and Services*****Audit and Non-Audit Fees**

The following table presents fees for audit services rendered by PricewaterhouseCoopers LLP ( PricewaterhouseCoopers ) for the audit of Millennium's annual financial statements for the years ended December 31, 2004 and 2003, and fees billed or expected to be billed for audit-related, tax and all other services rendered by PricewaterhouseCoopers during those periods.

<u>Thousands of dollars</u>	<u>2004</u>	<u>2003</u>
Audit fees (a)	\$ 5,391	\$ 2,134

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Audit-related fees (b)	89	81
Tax fees (c)	437	1,027
All other fees (d)	3	3
<b>Total</b>	<b>\$ 5,920</b>	<b>\$ 3,245</b>

- 
- (a) Audit fees consist of the aggregate fees billed or expected to be billed for professional services rendered by PricewaterhouseCoopers for the audit of Millennium's annual financial statements, the review of financial statements included in Millennium's Form 10-Qs or for services that are normally provided by the independent auditors in connection with statutory and regulatory filings or engagements for those fiscal years. The 2004 audit fees include \$2,850,000 for services related to Section 404 of the Sarbanes-Oxley Act of 2002. Of the 2004 audit fees shown in the table, \$102,000 represents fees expected to be billed in 2005 related to 2004 audit services.
- (b) Audit-related fees consist of the aggregate fees billed for assurance and related services by PricewaterhouseCoopers that are reasonably related to the performance of the audit or review of Millennium's financial statements. This category includes fees related to: the performance of audits of Millennium's benefit plans; agreed-upon or expanded audit procedures relating to accounting records required to respond to or comply with financial, accounting or regulatory reporting matters; and consultations as to the accounting or disclosure treatment of transactions or events and/or the actual or potential impact of final or proposed rules, standards or interpretations by regulatory or standard setting bodies.
- (c) Tax fees consist of the aggregate fees billed for professional services rendered by PricewaterhouseCoopers for federal, state and international tax compliance, advice and planning.
- (d) All other fees consist of the aggregate fees billed for products and services provided by PricewaterhouseCoopers, other than the services described in notes (a) through (c) above. In both of 2003 and 2004, these fees reflected the cost of an on-line reference service provided by PricewaterhouseCoopers.

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### **Pre-Approval Policy**

In November 2004, Lyondell acquired Millennium in a stock-for-stock business combination, and Millennium became a wholly owned subsidiary of Lyondell. Millennium no longer has a separately designated Audit Committee. Generally, the Board of Directors of Millennium serves as Millennium's Audit Committee, and is directly responsible for overseeing the work of the independent registered public accounting firm.

In 2003, Millennium had a separately designated Audit Committee and, in 2003, Millennium's Audit Committee and Board of Directors established a policy requiring the Audit Committee to pre-approve all audit and non-audit services to be performed for Millennium by Millennium's independent registered public accounting firm (including affiliates or related member firms) to ensure that the provision of such services does not impair the independent registered public accounting firm's independence. Millennium is now a wholly owned, consolidated subsidiary of Lyondell. Therefore, to protect the independence of Millennium's independent registered public accounting firm and to ensure that services provided by the independent registered public accounting firm are pre-approved by an independent governing body, on December 1, 2004, Millennium's Board of Directors approved a new pre-approval policy. Under the new pre-approval policy, Millennium's Board of Directors has delegated to Lyondell's Audit Committee, which is comprised entirely of independent directors, the responsibility for reviewing and pre-approving services to be provided for Millennium by Millennium's independent registered public accounting firm (including affiliates or related member firms).

Under the new policy, a centralized service request procedure is used for all requests for the independent registered public accounting firm to provide services to Millennium. Under this procedure, all requests for the independent registered public accounting firm to provide services to Millennium initially are submitted to Lyondell's Vice President and Controller. Each such request must include a detailed description of the services to be rendered. If the proposed services have not already been pre-approved by Lyondell's Audit Committee, Lyondell's Vice President and Controller will submit the request and a detailed description of the proposed services to Lyondell's Audit Committee. Requests to provide services that require pre-approval by Lyondell's Audit Committee also must include a statement as to whether, in the view of Lyondell's Vice President and Controller, the request is consistent with the SEC's rules on independent registered public accounting firm independence.

Pursuant to the new policy, Millennium's Board of Directors has designated Lyondell's Senior Vice President and Chief Financial Officer to review compliance with the pre-approval policy. Lyondell's Senior Vice President and Chief Financial Officer will report to Lyondell's Audit Committee periodically on the results of the monitoring.

Other than the delegation to Lyondell's Audit Committee and the roles provided for Lyondell's Senior Vice President and Chief Financial Officer and Lyondell's Vice President and Controller, the new pre-approval policy is substantially the same as the one originally adopted by Millennium's Board of Directors and Audit Committee in 2003.

**Table of Contents****PART IV****Item 15. Exhibits and Financial Statement Schedules**

(a) The Following Documents are Filed as Part of This Report:

1. Supplemental Financial Information.

The Supplemental Financial Information relating to Equistar, which is contained in the Annual Report on Form 10-K, consists of the following:

	<b>Page of The Report</b>
Financial Statements of Equistar:	
<u>Management's Report on Internal Control Over Financial Reporting</u>	F-1
<u>Report of Independent Registered Public Accounting Firm</u>	F-2
<u>Consolidated Statements of Income Years Ended December 31, 2004, 2003, and 2002</u>	F-4
<u>Consolidated Balance Sheets December 31, 2004 and 2003</u>	F-5
<u>Consolidated Statements of Cash Flows Years Ended December 31, 2004, 2003 and 2002</u>	F-6
<u>Consolidated Statements of Partners' Capital Years Ended December 31, 2004, 2003 and 2002</u>	F-7
<u>Notes to Consolidated Financial Statements</u>	F-8 to F-24

2. Schedules None

3. Exhibits

<b>Exhibit Number</b>	<b>Description of Document</b>
2.1	Agreement and Plan of Merger, dated March 28, 2004, by and among Lyondell Chemical Company, the Registrant and Millennium Subsidiary LLC (14)
3.1	Restated Certificate of Incorporation of the Registrant (16)
3.2	Amended and Restated By-laws of the Registrant
4.1	Form of Indenture, dated as of November 27, 1996, among Millennium America Inc. (formerly named Hanson America Inc.), the Registrant and The Bank of New York, as Trustee, in respect of the 7% Senior Notes due November 15, 2006 and the 7.625% Senior Debentures due November 15, 2026 (2)
4.1(a)	First Supplemental Indenture dated as of November 21, 1997 among Millennium America Inc., the Registrant and The Bank of New York, as Trustee (5)
4.2	Indenture, dated as of June 18, 2001, among Millennium America Inc., as Issuer, the Registrant, as Guarantor, and The Bank of New York, as Trustee (including the form of 9 1/4% Senior Notes due 2008 and the Note Guarantee) (7)
4.3	Indenture, dated as of November 25, 2003, among the Registrant, as Issuer, Millennium America Inc., as Guarantor, and the Bank of New York, as Trustee, in respect to the 4% Convertible Senior Debentures due November 15, 2023

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(13)

- 4.3(a) First Supplemental Indenture, dated as of November 30, 2004, among Lyondell Chemical Company, the Registrant, Millennium America Inc. and the Bank of New York, as Trustee (16)
- 4.4 Credit Agreement, dated June 18, 2001, among Millennium America Inc., as Borrower, Millennium Inorganic Chemicals Limited, as Borrower, certain borrowing subsidiaries of the Registrant, from time to time party thereto, the Registrant, as Guarantor, the lenders from time to time party thereto, Bank of America, N.A., as Syndication Agent and The Chase Manhattan Bank as Administrative Agent and collateral agent (7)

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- 4.4(a) First Amendment, dated as of December 14, 2001, to the Credit Agreement dated as of June 18, 2001, with Bank of America, N.A. and JP Morgan Chase Bank and the lenders party thereto (9)
- 4.4(b) Second Amendment, dated as of June 19, 2002, to the Credit Agreement dated as of June 18, 2001, with the Bank of America, N.A. and JP Morgan Chase Bank and the lenders party thereto (10)
- 4.4(c) Third Amendment, dated as of April 25, 2003, to the Credit Agreement dated as of June 18, 2001, with the Bank of America, N.A. and JP Morgan Chase Bank and the lenders party thereto (12)
- 4.4(d) Fourth Amendment, dated as of November 18, 2003, to the Credit Agreement dated as of June 18, 2001, with the Bank of America, N.A. and JP Morgan Chase Bank and the lenders party thereto (13)
- 4.4(e) Fifth Amendment, dated as of July 7, 2004, to the Credit Agreement dated as of June 18, 2001, with the Bank of America, N.A., and JP Morgan Chase Bank and the lenders party thereto (15)
- 4.4(f) Sixth Amendment and Waiver, dated as of February 2, 2005, to the Credit Agreement dated as of June 18, 2001, with the Bank of America, N.A., and JP Morgan Chase Bank and the lenders party thereto (17)

The Registrant is a party to several long-term debt instruments under which the total amount of long-term debt securities authorized does not exceed 10% of the total assets of the Registrant and its subsidiaries on a consolidated basis. Pursuant to paragraph 4(iii)(A) of Item 601(b) of Registration S-K, the Registrant agrees to furnish a copy of such instruments to the Commission upon request.

- 10.1 Form of Indemnification Agreement, dated as of September 30, 1996, between Hanson and the Registrant (1)
- 10.2 Form of Tax Sharing and Indemnification Agreement, dated as of September 30, 1996, between Hanson, Millennium Overseas Holdings Ltd., Millennium America Holdings Inc. (formerly HM Anglo American Ltd.), Hanson North America Inc. and the Registrant (1)
- 10.3 Form of Deed of Tax Covenant, dated as of September 30, 1996, between Hanson, Millennium Overseas Holdings Ltd., Millennium Inorganic Chemicals Limited (formerly SCM Chemicals Limited), SCMC Holdings B.V. (formerly Hanson SCMC B.V.), Millennium Inorganic Chemicals Ltd. (formerly SCM Chemicals Ltd.), and the Registrant (the Deed of Tax Covenant ) (1)
- 10.3(a) Amendment to the Deed of Tax Covenant dated January 28, 1997 (3)
- 10.4 Amended and Restated Limited Partnership Agreement of Equistar Chemicals, LP dated as of November 29, 2004 (16)
- 10.5 Asset Contribution Agreement (the Millennium Asset Contribution Agreement ) among Millennium Petrochemicals, Millennium Petrochemicals LP LLC and Equistar Chemicals, LP (4)
- 10.5(a) First Amendment to the Millennium Asset Contribution Agreement dated as of May 15, 1998 (6)
- 10.5(b) Second Amendment to the Millennium Asset Contribution Agreement among the Registrant, Millennium Petrochemicals LP LLC, and Equistar Chemicals, LP (8)
- 10.6 Amended and Restated Parent Agreement among Lyondell Chemical Company, the Registrant and Equistar Chemicals, LP, dated as of November 6, 2002 (11)

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The Registrant is party to several compensatory plans, contracts or arrangements that the Registrant has not included herein based on paragraph 10(iii)(C)(6) of Item 601(b) of Regulation S-K since the Registrant is a wholly owned subsidiary of Lyondell Chemical Company, a company that has a class of securities registered pursuant to section 12 or files reports pursuant to section 15(d) of the Exchange Act and is filing a report on Form 10-K.

12	Statement Setting Forth Detail for Computation of Ratio of Earnings to Fixed Charges
23.1	Consent of PricewaterhouseCoopers LLP
23.2	Consent of PricewaterhouseCoopers LLP
31.1	Rule 13a 14(a)/15d 14(a) Certification of Principal Executive Officer
31.2	Rule 13a 14(a)/15d 14(a) Certification of Principal Financial Officer
32.1	Section 1350 Certification of Principal Executive Officer
32.2	Section 1350 Certification of Principal Financial Officer

- 
- (1) Filed as an exhibit to the Registrant's Registration Statement on Form 10 (No. 1-12091) and incorporated herein by reference.
  - (2) Filed as an exhibit to the Registrant's Registration Statement on Form S-1 (No. 333-15975) and incorporated herein by reference.
  - (3) Filed as an exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1996 and incorporated herein by reference.
  - (4) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of December 10, 1997 and incorporated herein by reference.
  - (5) Filed as an exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1997 and incorporated herein by reference.
  - (6) Filed as an exhibit to the Registrant's Annual Report on Form 10-K for the year ended December 31, 1999 and incorporated herein by reference.
  - (7) Filed as an exhibit to the Registrant's Registration Statement on Form S-4 (No. 333-65650-1) and incorporated herein by reference.
  - (8) Filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended September 30, 2001 and incorporated herein by reference.
  - (9) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of December 18, 2001 and incorporated herein by reference.
  - (10) Filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended June 30, 2002 and incorporated herein by reference.
  - (11) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of November 26, 2002 and incorporated herein by reference.
  - (12) Filed as an exhibit to the Registrant's Quarterly Report on Form 10-Q for the quarter ended March 31, 2003 and incorporated herein by reference.
  - (13) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of November 25, 2003 and incorporated herein by reference.
  - (14) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of March 28, 2004 and incorporated herein by reference.
  - (15) Filed as an exhibit to the Registrant's Amendment No. 1 to Quarterly Report on Form 10-Q/A for the quarter ended June 30, 2004 and incorporated herein by reference.
  - (16) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of November 30, 2004 and incorporated herein by reference.
  - (17) Filed as an exhibit to the Registrant's Current Report on Form 8-K dated as of February 4, 2005 and incorporated herein by reference.

Copies of exhibits will be furnished upon prepayment of 25 cents per page.

Requests should be addressed to the Secretary.



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(b) Consolidated Financial Statements and Financial Statement Schedules

(1) Consolidated Financial Statements

Consolidated Financial Statements filed as part of this Annual Report on Form 10-K are listed in the Index to Financial Statements on page 53.

(2) Financial Statement Schedules

Financial statement schedules are omitted because they are not applicable or the required information is contained in the Financial Statements or notes thereto.



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

The management of Equistar is responsible for establishing and maintaining adequate internal control over financial reporting. Equistar'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 reporting in accordance with generally accepted accounting principles.

Equistar management assessed the effectiveness of Equistar's internal control over financial reporting as of December 31, 2004. 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, Equistar's management has concluded that Equistar's internal control over financial reporting was effective as of December 31, 2004 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 Equistar's internal control over financial reporting as of December 31, 2004, as stated in their report that appears on the following page.

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**REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM**

To the Partnership Governance Committee

of Equistar Chemicals, LP

We have completed an integrated audit of Equistar Chemicals, LP's 2004 consolidated financial statements and of its internal control over financial reporting as of December 31, 2004 and audits of its 2003 and 2002 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 consolidated financial statements listed in the accompanying index present fairly, in all material respects, the financial position of Equistar Chemicals, LP (the Partnership) and its subsidiaries at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 in conformity with accounting principles generally accepted in the United States of America. These financial statements are the responsibility of the Partnership'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.

As discussed in Note 2 to the consolidated financial statements, effective January 1, 2002, the Company adopted Statement of Financial Accounting Standards No. 142, Accounting for Goodwill and Other Intangible Assets.

*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 Partnership maintained effective internal control over financial reporting as of December 31, 2004 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 Partnership maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on criteria established in *Internal Control - Integrated Framework* issued by the COSO. The Partnership'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 Partnership'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.

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

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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 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 16, 2005

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**Table of Contents****EQUISTAR CHEMICALS, LP****CONSOLIDATED STATEMENTS OF INCOME**

Millions of dollars	For the year ended December 31,		
	2004	2003	2002
<b>Sales and other operating revenues</b>			
Trade	\$ 6,960	\$ 4,920	\$ 4,295
Related parties	2,356	1,625	1,242
	<u>9,316</u>	<u>6,545</u>	<u>5,537</u>
<b>Operating costs and expenses</b>			
Cost of sales	8,587	6,387	5,388
Selling, general and administrative expenses	197	182	155
Research and development expenses	34	38	38
(Gain) loss on asset dispositions	(4)	27	
	<u>8,814</u>	<u>6,634</u>	<u>5,581</u>
Operating income (loss)	502	(89)	(44)
Interest expense	(227)	(215)	(205)
Interest income	7	8	1
Other income (expense), net	(6)	(43)	2
	<u>276</u>	<u>(339)</u>	<u>(246)</u>
Income (loss) before cumulative effect of accounting change	276	(339)	(246)
Cumulative effect of accounting change			(1,053)
<b>Net income (loss)</b>	<u>\$ 276</u>	<u>\$ (339)</u>	<u>\$ (1,299)</u>

See Notes to the Consolidated Financial Statements.

**Table of Contents****EQUISTAR CHEMICALS, LP****CONSOLIDATED BALANCE SHEETS**

<u>Millions of dollars</u>	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents	\$ 39	\$ 199
Accounts receivable:		
Trade, net	615	471
Related parties	211	137
Inventories	582	408
Prepaid expenses and other current assets	43	46
	<u>          </u>	<u>          </u>
Total current assets	1,490	1,261
Property, plant and equipment, net	3,167	3,334
Investments	60	60
Other assets, net	357	373
	<u>          </u>	<u>          </u>
Total assets	<u>\$ 5,074</u>	<u>\$ 5,028</u>
<b>LIABILITIES AND PARTNERS' CAPITAL</b>		
Current liabilities:		
Accounts payable:		
Trade	\$ 447	\$ 462
Related parties	85	51
Current maturities of long-term debt	1	
Accrued liabilities	273	241
	<u>          </u>	<u>          </u>
Total current liabilities	806	754
Long-term debt	2,312	2,314
Other liabilities and deferred revenues	395	359
Commitments and contingencies		
Partners' capital:		
Partners' accounts	1,580	1,619
Accumulated other comprehensive loss	(19)	(18)
	<u>          </u>	<u>          </u>
Total partners' capital	1,561	1,601
	<u>          </u>	<u>          </u>
Total liabilities and partners' capital	<u>\$ 5,074</u>	<u>\$ 5,028</u>

See Notes to the Consolidated Financial Statements.





**Table of Contents****EQUISTAR CHEMICALS, LP****CONSOLIDATED STATEMENTS OF CASH FLOWS**

Millions of dollars	For the year ended December 31,		
	2004	2003	2002
<b>Cash flows from operating activities:</b>			
Net income (loss)	\$ 276	\$ (339)	\$ (1,299)
Adjustments to reconcile net income (loss) to cash provided by operating activities:			
Cumulative effect of accounting change			1,053
Depreciation and amortization	313	307	298
Deferred revenues		159	23
Deferred maintenance turnaround expenditures	(55)	(97)	(49)
Debt prepayment premiums and charges		30	
Net (gains) losses on asset dispositions	(4)	27	
Changes in assets and liabilities that provided (used) cash:			
Accounts receivable	(216)	26	(54)
Inventories	(174)	4	24
Accounts payable	30	40	99
Other assets and liabilities, net	45	7	(40)
Cash provided by operating activities	215	164	55
<b>Cash flows from investing activities:</b>			
Expenditures for property, plant and equipment	(101)	(106)	(118)
Proceeds from sales of assets	41	69	
Other			(6)
Cash used in investing activities	(60)	(37)	(124)
<b>Cash flows from financing activities:</b>			
Distributions to owners	(315)		
Issuance of long-term debt		695	
Repayment of long-term debt		(642)	(104)
Other		(8)	(2)
Cash (used in) provided by financing activities	(315)	45	(106)
<b>(Decrease) increase in cash and cash equivalents</b>	<b>(160)</b>	<b>172</b>	<b>(175)</b>
Cash and cash equivalents at beginning of period	199	27	202
Cash and cash equivalents at end of period	\$ 39	\$ 199	\$ 27

See Notes to the Consolidated Financial Statements.



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## EQUISTAR CHEMICALS, LP

## CONSOLIDATED STATEMENTS OF PARTNERS' CAPITAL

Millions of dollars	Lyondell	Millennium	Occidental	Total	Accumulated Other Comprehensive Income (Loss)	Net Partners Capital	Comprehensive Income (Loss)
<b>Balance at January 1, 2002</b>	\$ 361	\$ 1,433	\$ 1,463	\$ 3,257	\$ (20)	\$ 3,237	
Net loss	(569)	(383)	(347)	(1,299)		(1,299)	\$ (1,299)
Lyondell purchase of Occidental interest	1,116		(1,116)				
Other comprehensive loss - minimum pension liability					(17)	(17)	(17)
Comprehensive loss							\$ (1,316)
<b>Balance at December 31, 2002</b>	\$ 908	\$ 1,050	\$ 1,958	\$ 1,958	\$ (37)	\$ 1,921	
Net loss	(239)	(100)	(339)	(339)		(339)	\$ (339)
Other comprehensive income - minimum pension liability					16	16	16
Other					3	3	3
Comprehensive loss							\$ (320)
<b>Balance at December 31, 2003</b>	\$ 669	\$ 950	\$ 1,619	\$ 1,619	\$ (18)	\$ 1,601	
Net income	195	81	276	276		276	\$ 276
Other comprehensive loss - minimum pension liability					(1)	(1)	(1)
Distributions to partners	(222)	(93)	(315)	(315)		(315)	
Comprehensive income							\$ 275
<b>Balance at December 31, 2004</b>	\$ 642	\$ 938	\$ 1,580	\$ 1,580	\$ (19)	\$ 1,561	

See Notes to the Consolidated Financial Statements.

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**EQUISTAR CHEMICALS, LP**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS**

**1. Formation of the Partnership and Operations**

Equistar Chemicals, LP ( Equistar or the Partnership ), a Delaware limited partnership which commenced operations on December 1, 1997, was formed by Lyondell Chemical Company and subsidiaries ( Lyondell ) and Millennium Chemicals Inc. and subsidiaries ( Millennium ). On May 15, 1998, Equistar was expanded with the contribution of certain assets from Occidental Petroleum Corporation and subsidiaries ( Occidental ). Prior to August 22, 2002, Equistar was owned 41% by Lyondell, 29.5% by Millennium and 29.5% by Occidental. On August 22, 2002, Lyondell purchased Occidental s interest in Equistar and, as a result, Lyondell s ownership interest in Equistar increased to 70.5%. Equistar became a wholly owned subsidiary of Lyondell as a result of Lyondell s acquisition of Millennium on November 30, 2004. The consolidated financial statements of Equistar reflect its historical cost basis, and, accordingly, do not reflect any purchase accounting adjustments related to the acquisition by Lyondell of Millennium and Millennium s interest in Equistar.

Equistar manufactures and markets ethylene and its co-products, primarily propylene, butadiene, fuels and aromatics. Equistar also manufactures and markets derivatives, primarily ethylene oxide, ethylene glycol and polyethylene.

**2. Summary of Significant Accounting Policies**

*Basis of Presentation* The consolidated financial statements include the accounts of Equistar and its subsidiaries.

*Revenue recognition* Revenue from product sales is recognized at the time of transfer of title and risk of loss to the customer, which usually occurs at the time of shipment. Revenue is recognized at the time of delivery if Equistar retains the risk of loss during shipment. For products that are shipped on a consignment basis, revenue is recognized when the customer uses the product. Costs incurred in shipping products sold are included in cost of sales. Billings to customers for shipping costs are included in sales revenue.

*Cash and Cash Equivalents* Cash equivalents consist of highly liquid debt instruments such as certificates of deposit, commercial paper and money market accounts. Cash equivalents include instruments with maturities of three months or less when acquired. Cash equivalents are stated at cost, which approximates fair value. Equistar s policy is to invest cash in conservative, highly rated instruments and to limit the amount of credit exposure to any one institution.

Equistar has no requirements for compensating balances in a specific amount at a specific point in time. The Partnership does maintain compensating balances for some of its banking services and products. Such balances are maintained on an average basis and are solely at Equistar s discretion. As a result, none of Equistar s cash is restricted.

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*Allowance for Doubtful Accounts* Equistar establishes provisions for doubtful accounts receivable based on management's estimates of amounts that it believes are unlikely to be collected. Collectibility of receivables is reviewed and the allowance for doubtful accounts is adjusted at least quarterly, based on aging of specific accounts and other available information about the associated customers.

*Inventories* Inventories are stated at the lower of cost or market. Cost is determined using the last-in, first-out ( LIFO ) method for substantially all inventories, except for materials and supplies, which are valued using the average cost method.

Inventory exchange transactions, which involve fungible commodities and do not involve the payment or receipt of cash, are not accounted for as purchases and sales. Any resulting volumetric exchange balances are accounted for as inventory in accordance with the normal LIFO valuation policy.

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**EQUISTAR CHEMICALS, LP**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**2. Summary of Significant Accounting Policies (Continued)**

*Property, Plant and Equipment* Property, plant and equipment are recorded at cost. Depreciation is computed using the straight-line method over the estimated useful asset lives, generally 25 years for major manufacturing equipment, 30 years for buildings, 5 to 15 years for light equipment and instrumentation, 15 years for office furniture and 3 to 5 years for information systems equipment. Upon retirement or sale, Equistar removes the cost of the assets and the related accumulated depreciation from the accounts and reflects any resulting gains or losses in the Consolidated Statements of Income. Equistar's policy is to capitalize interest cost incurred on debt during the construction of major projects exceeding one year.

*Long-Lived Asset Impairment* Equistar evaluates long-lived assets, including identifiable intangible assets, for impairment whenever events or changes in circumstances indicate that the carrying amount of an asset may not be recoverable. When it is probable that undiscounted future cash flows will not be sufficient to recover an asset's carrying amount, the asset is written down to its estimated fair value. Long-lived assets to be disposed of are reported at the lower of carrying amount or estimated fair value less costs to sell the assets.

*Investments* Equistar's investments primarily consist of a 50% interest in a joint venture that owns an ethylene glycol facility in Beaumont, Texas ( PD Glycol ). The investment in PD Glycol is accounted for using the equity method of accounting.

*Turnaround Maintenance and Repair Costs* Costs of maintenance and repairs exceeding \$5 million incurred in connection with turnarounds of major units at Equistar's manufacturing facilities are deferred and amortized using the straight-line method over the period until the next planned turnaround, generally 5 to 7 years. These costs are necessary to maintain, extend and improve the operating capacity and efficiency rates of the production units.

*Identifiable Intangible Assets* Costs to purchase and to develop software for internal use are deferred and amortized on a straight-line basis over periods of 3 to 10 years.

Other intangible assets are carried at amortized cost and primarily consist of deferred debt issuance costs, patents and license costs, capacity reservation fees and other long-term processing rights and costs. These assets are amortized using the straight-line method over their estimated useful lives or the term of the related agreement, if shorter.

*Environmental Remediation Costs* Anticipated expenditures related to investigation and remediation of contaminated sites, which include operating facilities and waste disposal sites, are accrued when it is probable that a liability has been incurred and the amount of the liability can

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be reasonably estimated. Only ongoing operations 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.

*Income Taxes* The Partnership is not subject to federal income taxes as income is reportable directly by the individual partners; therefore, there is no provision for income taxes in the accompanying financial statements.

*Use of Estimates* The preparation of financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements and the reported amount of revenues and expenses during the reporting period. Actual results could differ from those estimates.

*Accounting and Reporting Changes* Effective January 1, 2002, Equistar implemented SFAS No. 142, *Goodwill and Other Intangible Assets*. Upon implementation of SFAS No. 142, Equistar reviewed goodwill for



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**EQUISTAR CHEMICALS, LP**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**2. Summary of Significant Accounting Policies (Continued)**

impairment and concluded that the entire balance of goodwill was impaired, resulting in a \$1.1 billion charge to earnings that was reported as the cumulative effect of an accounting change as of January 1, 2002. The conclusion was based on a comparison to Equistar's indicated fair value, using multiples of EBITDA (earnings before interest, taxes, depreciation and amortization) for comparable companies as an indicator of fair value. As a result of implementing SFAS No. 142, income in 2002 and subsequent years is favorably affected by \$33 million annually because of the elimination of goodwill amortization.

*Anticipated Accounting Changes* In December 2004, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) No. 153, *Exchanges of Nonmonetary Assets*, which amends APB Opinion No. 29, *Accounting for Nonmonetary Transactions*, to eliminate the exception for nonmonetary exchanges of similar productive assets, which is replaced with a general exception for exchanges of nonmonetary assets that do not have commercial substance. A nonmonetary exchange is defined to have commercial substance if the future cash flows of the entity are expected to change significantly as a result of the exchange. Equistar will be required to adopt SFAS No. 153 no later than the third quarter 2005 with prospective application. Equistar is currently evaluating the impact, if any, that application of SFAS No. 153 will have on its financial statements.

In November 2004, the FASB issued SFAS No. 151, *Inventory Costs*. The primary impact of the statement on Equistar will be recognition as period costs of any abnormal amounts of idle facility expense, freight, handling costs and spoilage. The provisions of SFAS No. 151 will be applied prospectively upon implementation, which is required no later than the first quarter 2006. Equistar does not expect application of SFAS No. 151 to have a material impact on its financial statements.

**3. Related Party Transactions**

Equistar is a wholly owned subsidiary of Lyondell. As of December 31, 2004, Occidental owns approximately 17% of Lyondell, and has two representatives on the Lyondell Board of Directors. Lyondell owns 58.75% of Lyondell-CITGO Refining, LP (LCR) and 100% of Millennium. All of the above companies are considered related parties of Equistar.

*Product Transactions with Lyondell* Lyondell purchases ethylene, propylene and benzene at market-related prices from Equistar under various agreements expiring in 2013 and 2014. With the exception of one pre-existing third-party product supply agreement expiring in 2015, Lyondell is required, under the agreements, to purchase 100% of its ethylene, propylene and benzene requirements for its Channelview and Bayport, Texas facilities from Equistar. Lyondell licenses methyl tertiary butyl ether (MTBE) technology to Equistar, and purchases a significant portion of the MTBE produced by Equistar at market-related prices.

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Through December 31, 2004, Equistar acted as sales agent for the methanol products of Lyondell. Equistar also provided operating and other services for Lyondell including the lease to Lyondell by Equistar of the real property on which the methanol plant was located. Pursuant to the terms of those agreements, Lyondell paid Equistar a management fee and reimbursed certain expenses of Equistar at cost.

*Product Transactions with Millennium* Equistar sells ethylene to Millennium at market-related prices pursuant to an agreement entered into in connection with the formation of Equistar. Under this agreement, Millennium is required to purchase 100% of its ethylene requirements for its LaPorte, Texas facility from Equistar. The initial term of the contract expired December 31, 2000 and it continues thereafter for one-year periods unless either party serves notice twelve months in advance.

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**EQUISTAR CHEMICALS, LP**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**3. Related Party Transactions (Continued)**

Also Equistar is required to purchase 100% of its vinyl acetate monomer raw material requirements at market-related prices from Millennium for the production of ethylene vinyl acetate products at its LaPorte, Texas; Clinton, Iowa and Morris, Illinois plants, and 100% of its glacial acetic acid requirements at market-related prices from Millennium for the production of glycol ether acetate as its Bayport, Texas plant. These agreements expire December 31, 2005 and continue year to year thereafter unless terminated by either party.

*Product Transactions with Occidental* Equistar and Occidental entered into an ethylene sales agreement on May 15, 1998, which was amended effective April 1, 2004, pursuant to which Occidental agreed to purchase a substantial amount of its ethylene raw material requirements from Equistar. Either party has the option to phase down volumes over time. However, a phase down cannot begin until January 1, 2014 and the annual minimum requirements cannot decline to zero prior to December 31, 2018, unless certain specified force majeure events occur. In addition to the sales of ethylene, from time to time Equistar has made sales of ethers and glycols to Occidental, and Equistar has purchased various other products from Occidental, all at market-related prices.

*Product Transactions with LYONDELL-CITGO Refining LP* Equistar has product sales and raw material purchase agreements with LCR, a joint venture investment of Lyondell. Certain ethylene co-products and MTBE are sold by Equistar to LCR for processing into gasoline and certain refined products are sold by LCR to Equistar as raw materials. Equistar also has processing and storage arrangements with LCR and provides certain marketing services for LCR. All of the agreements between LCR and Equistar are on terms generally representative of prevailing market prices.

*Shared Services Agreement with Lyondell* Under a shared services agreement, Lyondell provides office space and various services to Equistar including information technology, human resources, sales and marketing, raw material supply, supply chain, health, safety and environmental, engineering, research and development, facility services, legal, accounting, treasury, internal audit and tax. Lyondell charges Equistar for Equistar's share of the cost of such services. Direct costs, incurred exclusively for Equistar, also are charged to Equistar. Costs related to a limited number of shared services, primarily engineering, continue to be incurred by Equistar. In such cases, Equistar charges Lyondell for its share of such costs.

*Shared Services and Shared-Site Agreements with Millennium* Equistar and Millennium provide operating services, utilities and raw materials to each other at common locations. Millennium and Equistar have entered into various operating, manufacturing and technical service agreements under which, Millennium billed Equistar for certain operational services, including utilities, plant related transportation and other services, and Equistar billed Millennium for utilities and fuel streams.

*Lease Agreements with Occidental* Equistar subleases certain railcars from Occidental. In addition, Equistar leases its Lake Charles facility and the land related thereto from Occidental see Leased Facility section of Note 13.

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**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****3. Related Party Transactions (Continued)**

Related party transactions are summarized as follows:

<u>Millions of dollars</u>	<u>For the year ended December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
<b><u>Equistar billed related parties for:</u></b>			
Sales of products and processing services:			
Lyondell	\$ 923	\$ 610	\$ 459
Occidental	634	503	400
LCR	747	467	340
Millennium	52	46	43
Shared services and shared site agreements:			
LCR	4	3	4
Lyondell	22	18	16
Millennium	19	8	9
Natural gas purchased for Lyondell	81	98	76
<b><u>Related parties billed Equistar for:</u></b>			
Purchases of products:			
LCR	\$ 425	\$ 227	\$ 218
Millennium	10	10	10
Lyondell	54	5	1
Occidental	3	1	1
Shared services, transition and lease agreements:			
Lyondell	182	154	134
Millennium	2	15	16
Occidental	9	7	7
LCR	1		1

**4. Accounts Receivable**

Equistar sells its products primarily to other chemical manufacturers in the petrochemical industry. Equistar performs ongoing credit evaluations of its customers' financial condition and, in certain circumstances, requires letters of credit from them. The Partnership's allowance for doubtful

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accounts, which is reflected in the accompanying Consolidated Balance Sheets as a reduction of accounts receivable, totaled \$8 million and \$12 million at December 31, 2004 and 2003, respectively. The Consolidated Statements of Income for 2004, 2003 and 2002 included provisions for doubtful accounts of less than \$1 million, \$9 million and \$5 million, respectively.

In December 2003, Equistar entered into a \$450 million, four-year, accounts receivable sales facility to replace Equistar's previous \$100 million accounts receivable sales facility. Pursuant to the facility, Equistar sells, through a wholly owned bankruptcy remote subsidiary, on an ongoing basis and without recourse, an interest in a pool of accounts receivable to financial institutions participating in the facility. Equistar is responsible for servicing the receivables.

At December 31, 2004 and 2003, the balance of Equistar's accounts receivable sold under the facility was \$200 million and \$102 million, respectively. Accounts receivable in the Consolidated Balance Sheets are reduced

**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****4. Accounts Receivable (Continued)**

by the sales of interests in the pool. Upon termination of the facility, cash collections related to accounts receivable then in the pool would first be applied to the outstanding interest sold. Increases and decreases in the amount sold are reflected in operating activities in the Consolidated Statements of Cash Flows. Fees related to the sales are included in Other income (expense), net in the Consolidated Statements of Income. The \$450 million accounts receivable sales facility is subject to substantially the same minimum unused availability requirements and covenant requirements as the \$250 million inventory-based revolving credit facility, which also is secured by a pledge of accounts receivable. See Note 9.

**5. Inventories**

Inventories consisted of the following components at December 31:

Millions of dollars	2004	2003
Finished goods	\$ 355	\$ 223
Work-in-process	13	12
Raw materials	117	83
Materials and supplies	97	90
Total inventories	\$ 582	\$ 408

At December 31, 2004, all of Equistar's inventories, excluding materials and supplies, were valued using the LIFO method.

The excess of the current cost of inventories valued using the LIFO method over book value was approximately \$305 million at December 31, 2004. In December 2003, Equistar entered into a \$250 million, four-year, inventory-based revolving credit facility, which was undrawn at December 31, 2004. See Note 9.

**6. Property, Plant and Equipment and Other Assets**

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The components of property, plant and equipment, at cost, and the related accumulated depreciation were as follows at December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Land	\$ 77	\$ 76
Manufacturing facilities and equipment	6,079	6,015
Construction in progress	64	63
	<u>6,220</u>	<u>6,154</u>
Total property, plant and equipment	6,220	6,154
Less accumulated depreciation	(3,053)	(2,820)
	<u>\$ 3,167</u>	<u>\$ 3,334</u>
Property, plant and equipment, net	<u>\$ 3,167</u>	<u>\$ 3,334</u>

In 2004, Equistar sold certain railcars for \$37 million and leased the railcars from the buyer under an operating lease agreement. The sale resulted in a book gain of \$7 million that is being recognized over the 10 year term of the lease as a reduction in monthly lease rent expense. In addition, in January 2004, Equistar sold its alcohol-blending plant located in Anaheim, California for a gain of \$4 million. The effects of these transactions were included in gains (loss) on asset dispositions in the Consolidated Statements of Income.

Equistar did not capitalize any interest during 2004, 2003 and 2002 with respect to construction projects.



**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****6. Property, Plant and Equipment and Other Assets (Continued)**

The components of other assets, at cost, and the related accumulated amortization were as follows at December 31:

Millions of dollars	2004			2003		
	Cost	Accumulated Amortization	Net	Cost	Accumulated Amortization	Net
<b>Intangible assets:</b>						
Turnaround costs	\$ 297	\$ (113)	\$ 184	\$ 249	\$ (77)	\$ 172
Software costs	72	(20)	52	153	(85)	68
Debt issuance costs	45	(16)	29	45	(11)	34
Catalyst costs	25	(17)	8	34	(20)	14
Other	73	(18)	55	70	(16)	54
<b>Total intangible assets</b>	<b>\$ 512</b>	<b>\$ (184)</b>	<b>328</b>	<b>\$ 551</b>	<b>\$ (209)</b>	<b>342</b>
Pension asset			17			18
Other			12			13
<b>Total other assets</b>			<b>\$ 357</b>			<b>\$ 373</b>

Scheduled amortization of these intangible assets for the next five years is estimated to be \$65 million in 2005, \$61 million in 2006, \$53 million in 2007, \$41 million in 2008 and \$28 million in 2009.

Depreciation and amortization expense is summarized as follows:

Millions of dollars	For the year ended December 31,		
	2004	2003	2002

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Property, plant and equipment	\$ 248	\$ 246	\$ 242
Turnaround costs	38	30	24
Software costs	16	16	15
Other	11	15	17
	<u>          </u>	<u>          </u>	<u>          </u>
Total depreciation and amortization	\$ 313	\$ 307	\$ 298
	<u>          </u>	<u>          </u>	<u>          </u>

In addition, amortization of debt issuance costs of \$6 million, \$7 million and \$7 million in 2004, 2003 and 2002, respectively, is included in interest expense in the Consolidated Statements of Income.

**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****7. Accrued Liabilities**

Accrued liabilities consisted of the following components at December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
Taxes other than income	\$ 72	\$ 74
Interest	64	64
Product sales rebates	38	30
Payroll and benefits	70	27
Deferred revenues	24	14
Other	5	32
Total accrued liabilities	<u>\$ 273</u>	<u>\$ 241</u>

**8. Deferred Revenues**

Deferred revenues at December 31, 2004 of \$139 million represent advances from customers for partial prepayments for products to be delivered under long-term product supply contracts. Trade sales and other operating revenues include \$17 million, \$12 million and \$2 million in 2004, 2003 and 2002 respectively, of such previously deferred revenues.

In March 2003, Equistar received an advance of \$159 million, representing a partial prepayment for product to be delivered under a long-term product supply arrangement, primarily at cost-based prices. Equistar is recognizing this deferred revenue over 15 years, as the associated product is delivered.

**9. Long-Term Debt**

Long-term debt consisted of the following at December 31:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>
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Inventory-based revolving credit facility	\$	\$
Other debt obligations:		
Notes due 2006, 6.50%	150	150
Senior Notes due 2008, 10.125%	700	700
Notes due 2009, 8.75%	600	600
Senior Notes due 2011, 10.625%	700	700
Debentures due 2026, 7.55%	150	150
Other	4	4
Unamortized premium, net	9	10
	<hr/>	<hr/>
Total long-term debt	2,313	2,314
Less current maturities	1	
	<hr/>	<hr/>
Total long-term debt, net	\$ 2,312	\$ 2,314
	<hr/>	<hr/>

Lyondell remains a guarantor of \$300 million of Equistar debt, consisting of the 6.5% notes due 2006 and the 7.55% debentures due 2026. The consolidated financial statements of Lyondell are filed as an exhibit to Equistar's Annual Report on Form 10-K for the year ended December 31, 2004.

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**EQUISTAR CHEMICALS, LP**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**9. Long-Term Debt (Continued)**

Aggregate maturities of long-term debt during the next five years are \$1 million, \$150 million, \$700 million and \$600 million in 2005, 2006, 2008 and 2009, respectively, and \$862 million thereafter.

In December 2003, Equistar entered into a \$250 million, four-year, inventory-based revolving credit facility, which replaced Equistar's previous \$354 million revolving credit facility. The total amount available at December 31, 2004 under both the \$250 million inventory-based revolving credit facility and the \$450 million accounts receivable sales facility (see Note 4) was approximately \$394 million, which gives effect to the borrowing base less a \$75 million unused availability requirement and is net of the \$200 million sold under the accounts receivable facility and \$31 million of outstanding letters of credit under the revolving credit facility as of December 31, 2004. 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 \$450 million accounts receivable sales facility equal or exceed \$75 million through March 30, 2005 and \$50 million thereafter or \$100 million thereafter if the interest coverage ratio, as defined, is less than 2:1. At December 31, 2004, the interest rate under the inventory-based revolving credit facility was LIBOR plus 2.25%. The revolving credit facility is secured by a lien on all inventory and certain personal property, including a pledge of accounts receivable. There was no outstanding borrowing under the revolving credit facility at December 31, 2004.

In November 2003, Equistar issued \$250 million of 10.625% senior unsecured notes due in 2011. The proceeds, net of related fees, were used to prepay in full \$173 million of the outstanding term loan under Equistar's previous credit facility and to repay borrowing under that \$354 million revolving credit facility. In September 2003, \$29 million of Equistar's medium term notes matured and were repaid using funds borrowed under Equistar's revolving credit facility. In April 2003, Equistar issued \$450 million of 10.625% senior unsecured notes due in 2011. The proceeds, net of related fees, were used to prepay \$300 million of 8.5% notes due in the first quarter 2004, approximately \$122 million of term loans under Equistar's previous \$354 million revolving credit facility and prepayment premiums of approximately \$17 million.

The Equistar credit facility was amended in June 2004 to clarify certain provisions. In March 2003, Equistar obtained amendments to its previous \$354 million revolving credit facility that provided additional financial flexibility by generally making certain financial ratio requirements less restrictive.

The \$250 million revolving credit facility and the indentures governing Equistar's senior notes contain covenants that, subject to certain exceptions, restrict lien incurrence, debt incurrence, sales of assets, investments, capital expenditures, certain other payments, and mergers. The credit facility does not require Equistar to maintain specified financial ratios. The breach of the covenants could permit the lenders or noteholders to declare any outstanding debt payable, and could permit the lenders under Equistar's credit facility to terminate future lending commitments. In addition, some of Equistar's indentures require additional interest payments to the noteholders if Equistar makes distributions when Equistar does not meet a specified fixed charge coverage ratio. Equistar met this ratio and was in compliance with all covenants under these agreements as of December 31, 2004.



**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****10. Lease Commitments**

Equistar leases various facilities and equipment under noncancelable operating lease arrangements for various periods. Operating leases include leases of railcars used in the distribution of products in Equistar's business.

At December 31, 2004, future minimum lease payments relating to noncancelable operating leases with lease terms in excess of one year were as follows:

<u>Millions of dollars</u>	<u>Minimum Lease Payments</u>
2005	\$ 84
2006	76
2007	69
2008	61
2009	59
Thereafter	380
<b>Total minimum lease payments</b>	<b>\$ 729</b>

Net rental expense was \$94 million, \$106 million and \$125 million for the years ending December 31, 2004, 2003 and 2002, respectively. Net rental expense in 2002 included \$21 million of amortization of lease prepayments related to certain railcar leases that were terminated as of December 31, 2003.

**11. Financial Instruments and Derivatives**

The fair value of all nonderivative financial instruments included in current assets and current liabilities, including cash and cash equivalents, accounts receivable, accounts payable and accrued liabilities, approximated their carrying value due to their short maturity. Based on the borrowing rates currently available to Equistar for debt with terms and average maturities similar to Equistar's debt portfolio, the fair value of Equistar's long-term debt, including amounts due within one year, was approximately \$2,597 million and \$2,459 million at December 31, 2004 and 2003, respectively.

Equistar is exposed to credit risk with respect to accounts receivable. Equistar performs ongoing credit evaluations of its customers and, in certain circumstances, requires letters of credit from the customers. See Note 4.

## **12. Pension and Other Postretirement Benefits**

All full-time regular employees are covered by defined benefit pension plans sponsored by Equistar. In connection with the formation of Equistar, no pension assets or obligations were contributed to Equistar, with the exception of union represented plans contributed by Occidental and Millennium.

Retirement benefits are based upon years of service and the employee's highest three consecutive years of compensation during the last ten years of service. Equistar funds the plans through periodic contributions to pension trust funds. Equistar also has unfunded supplemental nonqualified retirement plans, which provide pension benefits for certain employees in excess of the U.S. tax-qualified plans' limits. In addition, Equistar sponsors unfunded postretirement benefit plans other than pensions, which provide medical and life insurance benefits. The postretirement medical plans are contributory while the life insurance plans are, generally, noncontributory. The life insurance benefits are provided to employees who retired before July 1, 2002. The measurement date for Equistar's pension and other postretirement benefit plans is December 31, 2004.



**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****12. Pension and Other Postretirement Benefits (Continued)**

The following table provides a reconciliation of benefit obligations, plan assets and the funded status of these plans:

<u>Millions of dollars</u>	<u>Pension Benefits</u>		<u>Other Postretirement Benefits</u>	
	<u>2004</u>	<u>2003</u>	<u>2004</u>	<u>2003</u>
<b>Change in benefit obligation:</b>				
Benefit obligation, January 1	\$ 190	\$ 170	\$ 119	\$ 108
Service cost	18	17	3	3
Interest cost	12	10	7	7
Actuarial loss (gain)	14	1	(8)	5
Benefits paid	(11)	(8)	(4)	(4)
Benefit obligation, December 31	<u>223</u>	<u>190</u>	<u>117</u>	<u>119</u>
<b>Change in plan assets:</b>				
Fair value of plan assets, January 1	132	102		
Actual return on plan assets	15	23		
Partnership contributions	16	15		
Benefits paid	(11)	(8)		
Fair value of plan assets, December 31	<u>152</u>	<u>132</u>		
Funded status	(71)	(58)	(117)	(119)
Unrecognized actuarial and investment loss	61	56	4	12
Unrecognized prior service cost	(2)	(2)	10	12
Net amount recognized	<u>\$ (12)</u>	<u>\$ (4)</u>	<u>\$ (103)</u>	<u>\$ (95)</u>
<b>Amounts recognized in the Consolidated Balance Sheet consist of:</b>				
Prepaid benefit cost	\$ 17	\$ 18	\$	\$
Accrued benefit liability	(50)	(42)	(103)	(95)
Accumulated other comprehensive income	21	20		
Net amount recognized	<u>\$ (12)</u>	<u>\$ (4)</u>	<u>\$ (103)</u>	<u>\$ (95)</u>

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### Additional Information:

Accumulated benefit obligation for defined benefit plans, December 31	\$ 184	\$ 158
Increase (decrease) in minimum liability included in other comprehensive income	1	(16)

The accrued benefit liability for pension and other postretirement benefits is included in Other Liabilities in the Consolidated Balance Sheets.

Pension plans with projected benefit obligations and accumulated benefit obligations in excess of the fair value of assets are summarized as follows at December 31:

Millions of dollars	2004	2003
Projected benefit obligation	\$ 203	\$ 171
Accumulated benefit obligations	164	139
Fair value of assets	129	109

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**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****12. Pension and Other Postretirement Benefits (Continued)**

Net periodic pension and other postretirement benefit costs included the following components:

Millions of dollars	Pension Benefits			Other Postretirement Benefits		
	2004	2003	2002	2004	2003	2002
<b>Components of net periodic benefit cost:</b>						
Service cost	\$ 18	\$ 17	\$ 16	\$ 3	\$ 3	\$ 2
Interest cost	12	10	11	7	7	7
Actual (gain) loss on plan assets	(15)	(23)	13			
Less-unrecognized gain (loss)	5	15	(24)			
Recognized gain on plan assets	(10)	(8)	(11)			
Amortization of actuarial and investment loss	5	7	4			
Prior service cost				2	2	2
Net periodic benefit cost	\$ 25	\$ 26	\$ 20	\$ 12	\$ 12	\$ 11

The assumptions used in determining the net benefit liability were as follows at December 31:

	Pension Benefits		Other Postretirement Benefits	
	2004	2003	2004	2003
<b>Weighted-average assumptions as of December 31:</b>				
Discount rate	5.75%	6.25%	5.75%	6.25%
Rate of compensation increase	4.50%	4.50%		

The assumptions used in determining net benefit cost were as follows for the year ended December 31:

	Pension Benefits			Other Postretirement Benefits		
	2004	2003	2002	2004	2003	2002
<b>Weighted-average assumptions for the year:</b>						
Discount rate	6.25%	6.50%	7.00%	6.25%	6.50%	7.00%
Expected return on plan assets	8.00%	8.00%	9.50%			
Rate of compensation increase	4.50%	4.50%	4.50%			

Management's goal is to manage pension investments over the long term to achieve optimal returns with an acceptable level of risk and volatility. Targeted asset allocations of 55% U.S. equity securities, 15% non-U.S. equity securities, and 30% fixed income securities were adopted in 2003 for the plans based on recommendations by its independent pension investment advisor. Investment policies prohibit investments in securities issued by Equistar or an affiliate, such as Lyondell or Millennium, or investment in speculative derivative instruments. The investments are marketable securities that provide sufficient liquidity to meet expected benefit obligation payments.

The expected rate of return on plan assets 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. Prior to 2003, Equistar's expected long-term rate of return on plan assets of 9.5% had been based on the average level of earnings that its independent pension investment advisor had advised could be expected to be earned over time, using the expected returns for the above-noted asset allocations that had been recommended by the advisor, and had been adopted for the plans. Over the three-year period ended

**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****12. Pension and Other Postretirement Benefits (Continued)**

December 31, 2003, Equistar's actual return on plan assets was a gain averaging 0.9% per year. In 2003, Equistar reviewed its asset allocation and expected long-term rate of return assumptions, and obtained an updated asset allocation study from the independent pension investment advisor, including updated expectations for long-term market earnings rates for various classes of investments. Based on this review, in 2003 Equistar reduced its expected long-term rate of return on plan assets to 8%, and did not significantly change its plan asset allocations in 2004.

Equistar's pension plan weighted-average asset allocations by asset category were as follows at December 31:

	<b>2004 Policy</b>	<b>2004</b>	<b>2003</b>
	—	—	—
<b>Asset Category:</b>			
U.S. equity securities	55%	57%	53%
Non-U.S. equity securities	15%	15%	18%
Fixed income securities	30%	28%	29%
	—	—	—
<b>Total</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
	—	—	—

Equistar expects to contribute approximately \$25 million to its pension plan in 2005.

The *Medicare Prescription Drug, Improvement and Modernization Act of 2003* (the Act) was enacted in December 2003. In January 2004, the Financial Accounting Standards Board (FASB) issued FASB Staff Position (FSP) FAS 106-1, *Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003*. As permitted by FSP FAS 106-1, Equistar elected to defer recognition of the effects of the Act in accounting for its plans until the FASB developed and issued authoritative guidance on accounting for subsidies provided by the Act. In May 2004, the FASB issued FSP FAS 106-2 of the same title, which gave final guidance on accounting for subsidies under the Act and required Equistar to implement its provisions no later than the third quarter 2004, if the effects were significant. The effect of the Act was not significant to Equistar's financial statements and was recognized in the accumulated postretirement benefit obligation as of December 31, 2004.

As of December 31, 2004, future expected benefit payments, which reflect expected future service, as appropriate, were as follows:

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<u>Millions of dollars</u>	<u>Pension Benefits</u>	<u>Other Benefits</u>
2005	\$ 12	\$ 7
2006	13	8
2007	15	8
2008	15	9
2009	17	9
2010 through 2014	100	48

The assumed annual rate of increase in the per capita cost of covered health care benefits as of December 31, 2004 was 10% for 2005, 7% for 2006 through 2008 and 5% thereafter. The health care cost trend rate assumption does not have a significant effect on the amounts reported due to limits on Equistar's maximum contribution level under the medical plan. To illustrate, increasing or decreasing the assumed health care cost

**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****12. Pension and Other Postretirement Benefits (Continued)**

trend rates by one percentage point in each year would change the accumulated postretirement benefit liability as of December 31, 2004 by less than \$1 million and would not have a material effect on the aggregate service and interest cost components of the net periodic postretirement benefit cost for the year then ended.

Equistar also maintains voluntary defined contribution savings plans for eligible employees. Contributions to the plans by Equistar were \$12 million, \$12 million and \$13 million for the years ended December 31, 2004, 2003 and 2002, respectively.

**13. Commitments and Contingencies**

*Commitments* Equistar is a party to various unconditional obligations to purchase products and services, principally for steam and power from a co-generation facility. See also Note 3, describing related party transactions. At December 31, 2004, future minimum payments under those contracts with noncancelable contract terms in excess of one year and fixed minimum payments were as follows:

**Millions of dollars**

2005	\$ 236
2006	232
2007	223
2008	219
2009	215
Thereafter through 2024	2,246
<b>Total minimum contract payments</b>	<b>\$ 3,371</b>

Equistar's total purchases under these agreements were \$378 million, \$317 million and \$230 million for the years ended December 31, 2004, 2003 and 2002, respectively.

*Leased Facility* Equistar's Lake Charles facility has been idled since the first quarter of 2001, pending sustained improvement in market conditions. The facility and land, which are included in property, plant and equipment at a net book value of \$145 million, are leased from

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Occidental. In May 2003, Equistar and Occidental entered into a new one-year lease, which has renewal provisions for two additional one-year periods at either party's option. Equistar exercised its first one-year renewal option in April 2004.

*Environmental Remediation* Equistar's accrued liability for environmental matters as of December 31, 2004 was \$1 million and primarily related to the Port Arthur facility, which was permanently shut down in February 2001. In the opinion of management, there is currently no material estimable range of possible loss in excess of the liability recorded for environmental remediation.

*Clean Air Act* The eight-county Houston/Galveston region has been designated a severe non-attainment area for ozone by the U.S. Environmental Protection Agency (EPA) under a one-hour ozone standard. Emission reduction controls for NO<sub>x</sub>, which contribute to ozone formation, must be installed at each of Equistar's six plants located in the Houston/Galveston region prior to a November 2007 compliance deadline for the one-hour ozone standard. In addition, in December 2004, the regulatory agency for the state of Texas, the Texas Commission on Environmental Quality, or TCEQ, finalized controls over highly reactive, volatile organic compounds (HRVOCs). Equistar is still assessing the impact of the HRVOC rules. In April 2004, the EPA designated the eight-county Houston/Galveston region a moderate non-attainment area under an eight-



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**EQUISTAR CHEMICALS, LP**

**NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)**

**13. Commitments and Contingencies (Continued)**

hour ozone standard. As a result, the TCEQ must submit a plan to the EPA in 2007 to demonstrate compliance with the eight-hour ozone standard in 2010. Although the one-hour ozone standard expires in 2005, the controls under that standard will not be relaxed under the EPA's new eight-hour transition rules. As a result, Equistar still will be required to meet the new emission standards for NOx and HRVOCs. The timing and amount of these expenditures are subject to regulatory and other uncertainties, as well as obtaining the necessary permits and approvals. The ultimate cost of implementing any plan developed to comply with the final ozone standards cannot be estimated at this time.

*Indemnification* In connection with the formation of Equistar, Lyondell, Millennium and Occidental each agreed to provide certain indemnifications or guarantees thereof to Equistar with respect to the businesses they each contributed to Equistar. In addition, Equistar agreed to assume third party claims related to certain contingent liabilities arising prior to the contribution transactions that were filed prior to December 1, 2004 as to Lyondell and Millennium, and are filed prior to May 15, 2005 as to Occidental, to the extent the aggregate thereof did not exceed \$7 million for each entity, subject to certain terms of the respective asset contribution agreements. As of December 31, 2004, Equistar had incurred substantially all of the \$21 million assumed for these claims and liabilities. Lyondell, Millennium, Occidental and Equistar remain liable under these indemnifications or guarantee arrangements to the same extent as they were before Lyondell's August 2002 acquisition of Occidental's interest in Equistar and Lyondell's November 2004 acquisition of Millennium.

*General* Equistar is, from time to time, a defendant 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, Equistar does not believe that any ultimate uninsured liability resulting from the legal proceedings in which it currently is involved (directly or indirectly) will individually, or in the aggregate, have a material adverse effect on its financial position, liquidity or results of operation.

In the opinion of management, any liability arising from the matters discussed in this note is not expected to have a material adverse effect on the financial position or liquidity of Equistar. However, the adverse resolution in any reporting period of one or more of these matters discussed in this note could have a material impact on Equistar results of operations for that period, which may be mitigated by contribution or indemnification obligations of others, or by any insurance coverage that may be available.

**14. Supplemental Cash Flow Information**

Supplemental cash flow information is summarized as follows for the periods presented:

Millions of dollars	For the year ended December 31,		
	2004	2003	2002
Cash paid for interest	\$ 220	\$ 208	\$ 200

## 15. Segment and Related Information

Equistar operates in one reportable segment, ethylene, co-products and derivatives, which includes: the ethylene and co-products product group, including primarily ethylene, propylene, butadiene, fuels and aromatics; and the derivatives product group, including primarily ethylene oxide, ethylene glycol and polyethylene (see Note 1). The accounting policies of the segment are the same as those described in Summary of Significant Accounting Policies (see Note 2). No trade customer accounted for 10% or more of sales during any year in the three-year period ended December 31, 2004; however, sales to Lyondell were approximately 10% in 2004.

**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****15. Segment and Related Information (Continued)**

Although Equistar operates in one integrated reportable segment, Equistar has chosen to provide certain additional data, as shown below, for two product groups: the ethylene and co-product group, reflecting the products of the core ethylene manufacturing processes, and the derivative products group.

Millions of dollars	Ethylene, Co-Products and Derivatives			Eliminations	Consolidated
	Ethylene & co-products	Derivatives	Other		
<b>For the year ended December 31, 2004:</b>					
Sales and other operating revenues:					
Customers	\$ 6,059	\$ 3,257	\$	\$ (2,077)	\$ 7,239
Inter-product group	2,077				2,077
	<u>8,136</u>	<u>3,257</u>		<u>(2,077)</u>	<u>9,316</u>
Operating income	482	20			502
Total assets	3,095	1,808	171		5,074
Capital expenditures	79	22			101
Depreciation and amortization expense	225	88			313
<b>For the year ended December 31, 2003:</b>					
Sales and other operating revenues:					
Customers	\$ 4,023	\$ 2,522	\$	\$	\$ 6,545
Inter-product group	1,514			(1,514)	
	<u>5,537</u>	<u>2,522</u>		<u>(1,514)</u>	<u>6,545</u>
Operating income (loss)	62	(151)			(89)
Total assets	2,950	1,721	357		5,028
Capital expenditures	71	35			106
Depreciation and amortization expense	216	91			307
<b>For the year ended December 31, 2002:</b>					
Sales and other operating revenues:					
Customers	\$ 3,256	\$ 2,281	\$	\$	\$ 5,537
Inter-product group	1,288			(1,288)	
	<u>4,544</u>	<u>2,281</u>		<u>(1,288)</u>	<u>5,537</u>
Operating income (loss)	95	(139)			(44)
Total assets	2,981	1,867	204		5,052

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Capital expenditures	57	60	1	118
Depreciation and amortization expense	205	93		298

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**Table of Contents****EQUISTAR CHEMICALS, LP****NOTES TO THE CONSOLIDATED FINANCIAL STATEMENTS (Continued)****15. Segment and Related Information (Continued)**

The following table presents the details of Total assets as presented above in the Other column as of December 31, for the years indicated:

<u>Millions of dollars</u>	<u>2004</u>	<u>2003</u>	<u>2002</u>
Cash and cash equivalents	\$ 39	\$ 199	\$ 27
Accounts receivable trade and related parties	11	2	
Prepaid expenses and other current assets	7	17	22
Property, plant and equipment, net	9	13	18
Other assets, net	105	126	137
Total assets	<u>\$ 171</u>	<u>\$ 357</u>	<u>\$ 204</u>