The Lubrizol Corporation is a full service supplier of specialty chemicals to customers worldwide. The company applies chemical, mechanical and biological technologies to create high performance products used in diverse markets.

Founded in 1928 in Cleveland, Ohio, the company now operates plants, laboratories and offices staffed by more than 5,000 employees around the globe. Business operations are technologybased, market-oriented and are comprised of two principal business segments-Specialty Chemicals and Agribusiness.

The Specialty Chemicals segment serves worldwide transportation and industrial markets through its Lubrizol Petroleum Chemicals Company and Lubrizol Performance Products Company. Petroleum Chemicals is the recognized leader in additive systems for oils used in gasoline and diesel engines, automatic transmission fluids, gear oils, marine and tractor lubricants. Performance Products develops and markets specialty products for industrial fluids, fuel additives and specialty chemicals. In addition, this unit supports commercial development to evolving strategic business units within the Corporation.

The Agribusiness segment, through Agrigenetics Company, carries out research and development, production and marketing of specialty vegetable oils and premium crop seeds marketed to the food, agricultural and chemical industries.

## LUBRIZOL'S WORLD


#### Abstract

The Lubrizol Corporation has been conducting global business for nearly 60 years. The company provides product development, testing, manufacturing, marketing and customer services throughout North America, Europe, Asia-Pacific, Latin America and the Middle East.

Lubrizol's specialty chemical products provide essential performance needed in transportation and industrial markets around the world. They enable engines to operate longer with less maintenance and with better fuel efficiency while performing over a wide range of temperatures and climates. Lubrizol's products are used in a variety of gear and transmission systems to provide smooth, quiet and efficient performance. The company's product development efforts worldwide support environmental initiatives aimed at conserving energy, controlling emissions and designing environmentally compatible fluids and lubricants.

The narrative section of this report discusses Lubrizol's global focus, describing the company's operations by major geographic areas. We invite your attention to this section, beginning on page 4 .


| (In Thousands of Dollars Except Per Share Data) | 1991 | 1990 | Increase <br> (Decrease) |
| :---: | :---: | :---: | :---: |
| Revenues | \$1,476,306 | \$1,452,701 | 2\% |
| Net income | 123,659 | 190,046* | (35)\% |
| Net income per share . | 3.57 | $5.34 *$ | (33)\% |
| Dividends per share . . . . . | 1.54 | 1.46 | 5\% |
| Capital investments | 83,541 | 92,231 | (9)\% |
| Research and development expenses. | 79,964 | 74,424 | 7\% |
| Shareholders' equity . . . . . . | 794,466 | 736,211 | 8\% |
| Return on average shareholders' equity. | 16\% | 27\%* | (41)\% |

*Includes $\$ 62.9$ million or $\$ 1.79$ per share from sale of Genentech stock.

| Common Share Price History |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 1991 |  | 1990 |  |
|  | High | Low | High | Low |
| 1st quarter | \$57/8 | \$443/4 | \$383/4 | \$33 |
| 2nd quarter | 591/2 | 44 | $41^{3 / 8}$ | $35^{1 / 8}$ |
| 3rd quarter | 473/4 | $44^{1 / 2}$ | $43^{3 / 4}$ | 37 |
| 4th quarter | $561 / 2$ | 457/8 | 49 | 39 |

## TO OUR SHAREHOLDERS

The past year has been an unusual one for Lubrizol. War, recession, customer inventory reductions, fluctuating currencies and consolidations in the additive industry have impacted the performance and predictability of our business. Despite these uncertainties, income from operations in 1991 was second only to 1990 in your company's history.

Consolidated revenues for 1991 were
$\$ 1.48$ billion, 2 percent higher than 1990 and a record level. Consolidated net income was $\$ 123.7$ million and income per share was $\$ 3.57$. For the year, additive shipments declined 3 percent. However, product shipments improved during each successive quarter of 1991 and by the fourth quarter were 6 percent above the same period last year.

The first half of 1991 was disappointing. Inventory reductions by our customers caused Specialty Chemicals shipments to fall 8 percent. Product pricing was strong early in 1991 due to price increases implemented in 1990, but weak sales and lower material costs caused us to lower our prices at the end of the first quarter. At the same time, expenses for research, testing and product development were increasing rapidly. For the year, these costs increased by 19 percent.

Customer inventory reductions were completed by the beginning of the second half of 1991 and shipment levels began to improve. Product pricing remained under pressure. The stronger dollar had a negative effect on revenues and income in the second half when compared with the same period in 1990. This reduced earnings per share by $\$ .12$ in the second half
of 1991. Economic recovery in the second half was slow, but we were able to increase market share. For the year, Specialty Chemicals shipments in North America were flat and shipments to international customers were down 5 percent.

Quarterly dividends were increased during the fourth quarter to $\$ .40$ per share from $\$ .38$ per share, yielding an annualized rate of $\$ 1.60$ per share. This is the eighth consecutive year in which dividends were raised. Dividends to shareholders in 1991 totaled $\$ 53$ million.

During the year, the company repurchased 285,000 of its outstanding shares.

## TECHNOLOGY INVESTMENT

Lubrizol has always maintained a strong commitment to research, testing and product development. This was particularly true in 1991. Our products are designed to improve the performance of lubricants and other fluids used in numerous kinds of equipment for transportation and industry. Changes in equipment design and operating conditions are accelerating, and these changes require new and better lubricants and fluids. In response to these market forces, the company is committing greater resources to the development and testing of new additive products. At the same time, as more customers adopt a Quality Management philosophy and look to Lubrizol as the supplier of choice for their additives, our commitment to application testing has also grown. This year, gasoline and diesel engine oils, automatic transmission fluids and automotive gear oils were all experiencing changes in specification standards or testing procedures.

We are confident that we will be able to provide products to our customers as they are required to meet these changing standards. Our technology centers in the United States, England and Japan are being expanded and upgraded
to meet the demand for faster, more regionally specific product development. This will enable us to maintain the leadership in our industry, which you expect from Lubrizol.

Capital spending in 1991 totaled $\$ 82$ million for manufacturing, research and development and international technical support. Capital spending for 1992 is expected to be $\$ 110$ million.

## OTHER EVENTS IN 1991

In June 1991, Lubrizol and Amoco Chemical Company announced they had signed a letter of intent for Lubrizol to acquire the business of Amoco's worldwide petroleum additives operation. The proposed acquisition is currently under review by the Federal Trade Commission. Additionally, due diligence and definitive agreements must be completed and corporate and other governmental approvals must be obtained.

In 1990, we previously reported that the Federal Court of Canada ruled that Exxon's Canadian affiliate had infringed on one of Lubrizol's important patents. The amount of monetary recovery has not yet been determined, and Exxon's appeal of the judgment is pending. Lubrizol is continuing to pursue additional patent litigation against Exxon in the United States and other countries.

In the Agribusiness, sales of specialty vegetable oils from SVO Enterprises continued to grow in 1991. This year the company sold 85 million pounds of specialty oils, and this volume is expected to grow to 110 million pounds in 1992. The company is now test marketing the retail sale of its TRISUN ${ }^{\star}$ high oleic sunflower oil as a cooking oil in the Northeast Ohio region. The product is already widely used in the commercial food processing industry as a substitute for less stable oils in a variety of products.

W. G. Bares

## GLOBAL PERSPECTIVE

You will note that in the remainder of this Annual Report we are emphasizing Lubrizol's global markets and capabilities. In 1991, 61 percent of our revenues came from customers outside of North America. This has long been a strength of your company and an important reason why we lead our industry. During the 1990s, those companies which are able to operate comfortably and competitively in global markets will be the ones to excel. We are already strategically positioned in Europe, Asia-Pacific, Latin America and the Middle East with extensive facilities and dedicated people. Our ability to provide superior products and service anywhere in the world will continue to set us apart and drive our growth.

## CORPORATE OBJECTIVES AND OUTLOOK

Last year, we reviewed for you our general corporate objectives. Despite a good year in 1991, we failed to achieve earnings growth of 10 percent, and return on average shareholders' equity remains below 20 percent. Also, we did not create the maximum value for our Agribusiness investment despite the improvement in that segment in 1991.

We remain committed to achieving these objectives, and our outlook for 1992 is positive. We believe higher shipment levels, moderating operating expenses and higher Agribusiness income should enable us to resume an earnings growth rate of 10 percent or better. We also expect to make visible progress in 1992 in an effort to obtain maximum value from our Agribusiness investment. Our Specialty Chemicals market share has increased, and we are continuing to grow income from the established business units of Lubrizol Performance Products Company. Our balance sheet is strong, and we are retaining financial resource capacity for new opportunities.

For 1992, we are including additional objectives to become a more customer driven company and to continually meet or exceed our customers' expectations. We also intend to find new methods of measuring our progress in meeting pustomer, employee, owner and community expectations.

## OFFICERS AND DIRECTORS

At the Annual Meeting of Shareholders in April, Ronald A. Mitsch was elected a Director for a three-year term. Dr. Mitsch is Executive Vice President, Industrial and Consumer Sector and Corporate Services of 3M.

In April, J. I. Rue retired as Secretary after 25 years of service with the company. Also in April, K. H. Hopping was elected Vice President and Secretary.

We regret to advise you of the death of Jean-Pol Arzul on February 23, 1992. Mr. Arzul was Vice President of the Corporation and former President, Director General of Lubrizol France and served in various other capacities in France and the United States for 28 years. We will miss his commitment, enthusiasm and friendship.
L. E. Coleman

Chairman of the Board
W. G. Bares

President

March 18, 1992

## LUBRIZOL'S WORLD

The Lubrizol Corporation is the worldwide leader in the development, production and marketing of specialty chemicals used in lubricants, fuel and functional fluids for transportation and industry. The 1991 worldwide revenues were $\$ 1.48$ billion segmented into eight market areas shown in the chart below. Additives for engine oils, driveline oils, viscosity modifiers and lubricant components are managed by the Lubrizol Petroleum Chemicals Company. Additives for fuels, industrial fluids and new ventures are managed by the Lubrizol Performance Products Company, which was formerly the Lubrizol Business Development Company.

On a geographic basis, the company's business is divided among North America, Europe and the remainder of the world, which includes Asia-Pacific, Latin America and the Middle East. Lubrizol operates a network of 18 manufacturing plants, three technical centers and 50 sales offices in over 100 countries on five continents.

The company's agricultural business, while primarily based in North America, also serves overseas customers through international affiliates and international export channels.


WORLDWIDE
$\$ 1,476$ Million Revenues


Specialty Chemicals

[^0]The advanced technology and proven performance provided in Lubrizol's specialty chemical products are key factors in the continuing growth of the company's business. World markets for Lubrizol products owe much of their growth to the quest by equipment producers for greater energy efficiency, higher performance, longer operating service life and reduced emissions and other environmental effects.

To achieve these challenging goals, automotive and industrial equipment producers are redesigning and improving many current products. They are conducting research and development on innovative new concepts that promise far-reaching answers to the growing needs for transportation and industrial development.

Basic to the success of these efforts are superior fluids-lubricants, fuels and industrial oils-which new developments require. The company plays an important role as a link between the equipment builder and Lubrizol's own customers so that high performance fluids are successfully developed and made available when needed for new equipment. Lubrizol's Global Engineering group provides this full-time liaison with equipment manufacturers around the world, always seeking to anticipate new product developments months or years in advance.

The company applies its world-class technologies to the development and
production of specialty chemicals which allow customers' products to meet increasingly stringent industry and government specifications.

To accomplish this task, Lubrizol conducts advanced research and testing of new proprietary specialty chemical formulations in technical centers located in the United States, England and Japan. These programs, conducted for our customers, are designed to enable customer products to match the requirements of new equipment designs, alternate fuels, higher lubricant performance and continually more demanding environmental and health standards. In 1991, Lubrizol's technical investment for Specialty Chemicals was $\$ 128$ million, or 9.5 percent of this segment's revenues. These expenditures included $\$ 64$ million for research and product development and \$64 million for product testing.

By strategically placing its technical centers in each geographic region, the company puts service close to the customer. This enables faster response and closer working relationships with Lubrizol's growing customer network. Today, new technical developments are geographically diverse requiring flexibility of invention and supply from Lubrizol facilities throughout the world.

## NORTH AMERICA

Lubrizol's 1991 revenues from customers in North America were $\$ 570$ million segmented as shown below and accounting for 39 percent of worldwide sales. Despite the effects of an economic slowdown and the resulting drop in petroleum product demand, the company was successful in growing its market share and maintaining product margins. Consolidation in the additive industry has focused attention on the large investment in product development and testing that is required to be an effective supplier in today's market. This has increased customers' awareness of the importance of value-added technology, service and testing support and has helped them appreciate the need for pricing levels which can maintain this continuing technology investment.

## SPECIALTY CHEMICALS

Lubrizol Petroleum Chemicals
Company is focused on the core business of developing and marketing specialty additive packages for lubricants, primarily engine and driveline oils. Product segments include additives for oils used in passenger car, heavy-duty diesel, marine, two-cycle and natural gas engines. Driveline

ap used with automotive gears and manual transmissions, automatic and power shift transmissions and farm tractor hydraulic systems. Lubrizol also sells petroleum chemical components and products to control or enhance viscosity, such as viscosity improvers and pour depressants. Lubrizol's most improved market area in 1991 was additives for engine oil in North America. Customers demonstrated a strong interest in quality and certification of performance which helped Lubrizol improve its market share. These gains were achieved by the use of responsive product development rather than lower prices, and prospects for continued growth of engine oil additives are favorable. Volume increases are expected to continue as more customers use Quality Management

practices to selectively consolidate their supplier base. These trends, along with a modest economic recovery and new performance standards and specifications, will help sustain the company's growth.

Today's customers demand faster response times from their suppliers. This is essential to be a world-class competitor. Lubrizol has committed significant resources in order to move technology closer to the customer. The North American technical center in Wickliffe, Ohio, continues to upgrade and expand, and in 1991, the Petroleum Chemicals Company completed the formation of a decentralized technology group to promote customerfocused product development. Rapid product turnover is the result of these efforts. Products introduced within the last five years account for 57 percent of current worldwide production. This trend will continue in 1992 with the introduction of new, cost-effective additive treatments for passenger car engine oils.

## NORTH AMERICA

Specifications and test standard changes continued to influence the additive industry in 1991. The focus of U.S. equipment manufacturers on engine oil quality is leading toward OEM specified bench and engine tests. Lubrizol Petroleum Chemicals Company has participated with industry groups to develop and gain acceptance of a system for monitoring precision and severity of tests, using statistically based methods. Increases in the number of tests and the need to reformulate and retest as industry standards of performance increase will require further investment in technology. During the next two years, the oil specifications for both gasoline and heavy-duty diesel engines will be upgraded to meet higher quality levels and emission standards. These changes will likely affect the composition and quantity of additive treatment levels. At the same time, Japanese and European engine builders are taking a more active role in setting performance requirements for engine oils in the United States which, over time, should lead to more universally formulated oils. Higher quality, value-added lubricants will result from these changes.

In 1991, Lubrizol assisted several customers in the development of improved, top-tier engine oils using various synthetic or partial synthetic fluids and new viscosity modifier options. Viscosity modifiers and pour depressants allow the oil to function over a wide range of temperatures and, combined with other additive components and synthetic


Genetic research has led to improved yields from sunflowers, corn and other crops used to produce specialty vegetable oils.


Technology-based products for the mining industry range from additives for emulsion explosives to chemical reagents used to extract metals from ore.

fluids, enable customers to formulate very stable products. It is anticipated that the market will continue to move in the direction of these premium oils, which should result in additional growth in Lubrizol's viscosity modifier segment. The strategy for the Lubrizol Performance Products Company has had two main thrusts-to grow the existing business and to create new externally focused business opportunities using both internal business development and acquisition. This strategy has included the objective of increasing business outside of North America, which is currently the largest geographic market for this business unit.

In the United States, Performance Products already has the dominant market position for additives used in hydraulic fluids and industrial gear oils. This leadership was achieved using a differentiation strategy that offers a range of products from base components for antiwear or rust inhibition to top-tier synthetic hydraulic oils. Despite this leadership, actual sales of industrial additives declined in 1991 due to the general downturn in the industrial economy which began in late 1990. However, Lubrizol was able to solidify and increase its market share for industrial additives during the period. There was strong growth in products for metalworking. This growth resulted from a focused effort initiated in 1989 to become a sup-
plier of technology for water-based products. Environmentally acceptable soluble oils, quenching oils and cutting fluids are a large portion of this market, and the company is well positioned with its patented chemistry to meet the growing demand. Coupled with the technology are added resources needed to provide the full regional service required by this market.

During 1991, the company more than doubled its capacity to produce fuel additives at its Bayport, Texas, plant to meet the growing demand in the United States. Tightening government regulations and environmental concerns are the driving force behind this fuel additives growth. Lubrizol supplies a range of dispersant and detergent additives which, when blended into fuel, help clean and maintain the cleanliness of carburetors, port fuel injectors, intake valves and combustion chambers.

New blends of gasoline, ethanol and methanol represent more challenges for equipment builders and oil refiners. Passenger and commercial vehicles will be introduced having alternative or multifuel capability. At the same time, oil refiners are designing optimum gasoline formulations which will minimize pollutants from combustion. The impact on fuel additive sales from these developments has yet to be determined; however, the technical sophistication of new engines designed to use these fuels will likely require extreme cleanliness in the fuel systems. As a result, the demand for Lubrizol's fuel additives is expected to grow.
lodern industrial automation quires superior working fluids.

## NORTH AMERICA

In the New Ventures area, the company is pursuing the strategy of becoming a total service mining chemicals supplier. This product area provides chemicals for use in the mining of sulfide ores and in emulsion explosives. The 1990 acquisition of RDI in Denver, Colorado, provided an extensive mining chemicals laboratory which is increasing Lubrizol's reputation in this segment. At the same time, Gate City Equipment Company has been successful in developing a new Gate-Pak ${ }^{\circledR}$ system for mining chemicals.

Efforts to grow in the paints and coatings chemicals area have centered in the United States. The staffing of this segment was completed in 1991, and market strategies are being developed for 25 major paint companies. This business is now growing rapidly from a small initial base as customers specify Lubrizol's rheology control agents to allow the use of higher levels of solids and less solvents. Lubrizol is also in the process of exiting the rustproofing and asphalt additive markets and redeploying staff and resources to more promising growth markets.

In other areas, sales of AMPS ${ }^{\circledR}$ monomer have grown as demand has shifted from the fiber industry to oil field and mining applications.

## AGRIBUSINESS

The largest portion of sales for Lubrizol's Agribusiness segment occurs in North America. This segment includes the sale of specialty vegetable oils, crop seeds and strategic research.


The Canadian petroleum industry has been served by the company's Lucan facility at Niagara Falls, Ontario for $\mathbf{4 0}$ years.


Lubrizol performance technology is tested in all types of vehicles under severe service conditions and over millions of operating miles.


Sales of specialty vegetable oils worldwide increased 38 percent in 1991 with an average annual sales growth of 58 percent over the past five years. North American refined oil sales have increased 18 percent as the result of increased needs of food processing companies for oils with nutritional benefits. In addition to sunflower based TRISUN ${ }^{\circledR}$, the SVO division is currently developing new sources of high oleic oils from oilseed crops such as safflower and rapeseed. The Culbertson, Montana, crushing and refining facility is operating at capacity and is currently supplying SVO with nearly half of its production needs.

Environmentally compatible lubricants and specialty chemical products are an area of SVO's projected future growth. A sunflower oil-based chain bar lubricant will be commercialized in early 1992, and


Houston's ship channel is the worldwide link for products from Lubrizol's
largest North American facility at Deer Park, Texas.
research suggests other possible applications as alternatives to petroleum-based products. Finally, in mid-1991, SVO began limited retail marketing of TRISUN as a cooking oil in the Northeast Ohio region.

The Agrigenetics crop seed business performed well in 1991, despite another year of abnormal weather conditions. Adequate supplies of high quality corn and other seeds are available for the 1992 growing season. Unit sales gains were achieved in corn, soybeans and sunflowers. In an effort to better position the seed groups strategically and to maximize profitability, Agrigenetics reorganized its three Texas divisions into a single centralized management group while maintaining individual brand identities.

Agrigenetics plant breeding programs continue to provide a selection of new planting seed products for the marketing divisions. These include higher yield corn and soybean hybrids. A new 80 percent high oleic safflower and an 88 percent "super" high oleic sunflower variety will be added for use in specialty oil production by SVO.

Through its centralized laboratory in Madison, Wisconsin, Agrigenetics continues genetic research aimed at producing new products using molecular biology for the agricultural, food and chemical industries. Projects being pursued include nitrate tolerant soybeans, maize dwarf mosaic virus resistance, European corn borer resistance, insect resistance derived from a gene from the bacterium Bacillus thuringiensis and a DNA markerbased gene mapping system.

## EUROPE

## Western Europe, Eastern

 Europe and the former Soviet Union accounted for 33 percent of Lubrizol's sales in 1991. Revenues from this geographic area were $\$ 494$ million segmented as shown below.Europe has been a major contributor to Lubrizol's success with recent growth being driven by increased environmental concerns and efforts to improve vehicle efficiency and performance. New opportunities also are arising from the opening of Eastern Europe to Western technology. Soviet markets, even in the face of political turmoil, have remained strong, with solid prospects for future growth. To meet the needs of expanding European markets, Lubrizol is increasing both its people and facilities in the region.

SPECIALTY CHEMICALS Recession effects in Europe started later than in the United States and continued throughout 1991. By aggressively responding to customer needs during this difficult period, the Lubrizol Petroleum Chemicals Company successfully maintained its European market share. As in the


United States, a significant effort was directed toward moving technology closer to the customer, thus achieving faster product development response times.

The company's major technical center at Hazelwood, England, has been expanded over the past three years to be more regionally focused. Certain product development activities have been decentralized from North America to give the Hazelwood technical center more flexibility in tailoring additives for regional needs. In addition, the physical facilities have been upgraded for improved testing of fuels and lubricants, improved technical service and expanded market communications capabilities.

Maintaining and expanding its supply position to the former Soviet Union and Eastern Europe is a longterm growth objective for Petroleum Chemicals. In 1991, a sales office was opened in Moscow under a contract agreement with the Soviet Ministry of Automotive, and the

EUROPE
\$494 Million Revenues


Specialty Chemicals
45\% Engine Oil Additives 3\% Fuel Products
20\% Driveline Oil Additives $8 \%$ Industrial Products
$10 \%$ Additive Components $3 \%$ New Ventures
7\% Viscosity Modifiers
4\% Agribusiness

Vienna sales office staffing was increased to better serve the growing Eastern European market. The new joint venture SoLub Laboratory at the Ryazan refinery is in operation. Discussions regarding possible joint ventures for terminals and additive production are progressing. Despite the political problems, Petroleum Chemicals sales have continued to do well in the region.

A new sulfur intermediate production unit was brought on-stream in France in 1991. Used in additives for automotive gear oils, the product is now being supplied to customers, and appropriate equipment builder approvals have been obtained.

A new additive concept for Total Driveline Lubricants (TDL) was launched in 1991, bringing a higher level of performance to the European driveline market. This product is the result of a joint development effort between Lubrizol's technical centers in America and Europe and is an example of marketresponsive technology. Another new driveline development is a synthetic automatic transmission fluid for transit buses in Europe.

## EUROPE

Interest in environmentally compatible lubricants is particularly strong in northern and central Europe and has led to the formation of a market group within Petroleum Chemicals to coordinate development projects for this area. This coordinated effort involves the Performance Products and Agribusiness units. The groups will define and develop new products to meet the growing environmental and health concerns of Western Europe.

The Lubrizol Performance Products Company is successfully expanding beyond North America into world markets. In 1991, industrial additive sales in Europe exceeded those in the United States, and sales of fuel additives have likewise been increasing.

The Hazelwood technical center has expanded its ability to provide development and testing for Performance Products, and local formulation expertise now exists. Yet, the real key to growth in Europe has been the effort to put more Lubrizol people in front of customers. Sales staff has been or will be increased in Spain, France, Germany and England for industrial and fuel products. A strong, effective European commercial organization is now in place.

Environmental concerns about industrial metalworking fluids are as strong in Europe as in the United States. This has given Lubrizol the opportunity to


Extreme temperatures and rugged terrain encountered in Alpine driving test the limits of engine oils and driveline lubricants.


Sustained high speed driving on superhighways, like the Autobahn, increases stress on vehicle components and lubricants.

expand its water-based additive business in that region. A dedicated unit to produce these additives was brought on-stream at the company's Bromborough, England, plant in 1991 specifically to serve this European metalworking market.

The move from leaded to unleaded gasoline in Europe is affecting the composition and use of gasoline and diesel fuels. Problems with injector fouling and intake valve deposits are increasing the demand for Lubrizol's dispersant and detergent chemistry.

Performance Products also is evaluating opportunities to expand mining chemi-
cal sales into other regions, including Eastern Europe and the former Soviet Union.

## AGRIBUSINESS

Agrigenetics is currently producing sunflower oil in France, Italy and Czechoslovakia and is pursuing production opportunities in the Ukraine. Its marketing group is actively shifting sales efforts from crude oils to higher value-added refined and specialty oils. In 1991, Agrigenetics acquired the remaining 49 percent of Eurograin, its joint venture partner in France. To market products in Italy, Agrigenetics formed a new subsidiary, Agrigenetics SRL.


European research and development, testing and marketing are based at this Lubrizol facility in Hazelwood, England.


## Products from Lubrizol's facilities in France serve customers throughout the

 EC, Eastern Europe and the former Soviet Union.
## ASIA-PACIFIC, LATIN AMERICA, MIDDLE EAST

Sales in remaining world markets were $\$ 412$ million in 1991, or 28 percent of total revenues. These key marketing areas include the Pacific Rim, Latin America, India and the Middle East. The greatest portion of sales in these areas belongs to Petroleum Chemicals as segmented in the chart below.

## SPECIALTY CHEMICALS

The Far East is the Lubrizol Petroleum Chemicals Company's fastest growing geographic market. Growth is occurring in the already highly industrial areas of the region as well as in the newly developing national economies.

Faster product development remains a common theme across all geographic areas, and the Far East is no exception. The company's technology center in Atsugi, Japan, is becoming a major resource for the region in terms of product formulation, testing and customer service. To meet these new demands, the Corporation in 1991 approved plans for a $\$ 12$ million expansion of the


Atsugi laboratory. Most of the expansion is being directed toward improving the company's testing capacity for driveline additives and lubricants. Construction will begin in 1992 with incremental expansion to be phased in over three years. Staffing will also be increased.

Development work with Japanese equipment builders is much more far-reaching than simply in Japan itself, where Lubrizol has operated for over 30 years. Because of Japan's position in worldwide automotive markets, it is expected to have growing influence on international lubricant and fuel standards. Lubrizol is now working with several Japanese equipment builders on new development projects for driveline and engine applications. Additional testing capacity for Japanese equipment is being added at the Wickliffe and Hazelwood testing centers as well as in Atsugi.

## ASIA-PACIFIC, LATIN AMERICA, MIDDLE EAST

\$412 Million Revenues


Lubrizol continues to expand its manufacturing facilities in Singapore where new patented dispersant capacity was added in late 1990. The plant began operations over nine years ago. For 1992, a new product support laboratory is planned, along with expansion of the existing administrative offices. Opportunities in Korea have grown, and a technical service office was opened there in 1991. Market share likewise has increased in Australia, where Lubrizol has operated for over 30 years. Efforts to consolidate resources and reduce costs have been very effective.

Latin America, still hindered by economic problems, represents a huge market opportunity in transportation and industrial application in the years ahead. Lubrizol has joint venture facilities in Mexico and Venezuela and a wholly owned operation in Brazil. Fuel quality as it relates to the environment is pushing the need for new lubricants able to perform in vehicles operating on alcoholgasoline mixtures. In Mexico, sales are strong for dispersants and detergents for fuels and lubes which help reduce vehicle emissions.

## ASIA-PACIFIC, LATIN AMERICA, MIDDLEEAST

Venezuela is growing in importance, and Lubrizol is successfully improving its share of the market. Economic uncertainty in Brazil continues to complicate business in the region, but Lubrizol remains committed to prospects for future growth in this important area.

The company's joint venture operation in Saudi Arabia is profitable and continues to grow. It performed well during the Persian Gulf crisis. In the Middle East, the same requirements and environmental needs found elsewhere also apply to growing markets for transportation and industrial products.

Lubrizol has participated in a joint venture in India for 25 years and is in the process of adding several new petroleum chemical production units at its facility. As part of a general energy conservation effort, India has been upgrading standards for lubricants, favorably impacting the quality and quantity of lubricant additive sales.

Staffing for marketing and customer service is the first priority for the Lubrizol Performance Products Company in these regions of the world. The manufacturing and technical support resources which already exist for Petroleum Chemicals provide the base for expansion into other industrial and fuel additive markets. Performance Products has or will add local staffing in Japan, Singapore, Korea, Australia, Mexico, Brazil, Argentina and Chile. A portion of


Throughout Latin America, Lubrizol supplies additives that improve performance of gasoline, diesel and alcohol fueled vehicles.


Lubrizol operates a modern blending operation near Sydney to serve Australian markets.

the Atsugi laboratory expansion will be committed to the Performance Products Company, and additional product support may also be required in Singapore. In India, Performance Products is now selling AMPS monomer and a crude oil flow improver, and industrial additive sales to the Middle East are good.

These are modest markets for Performance Products but are expected to represent an increasing portion of future revenues.

## AGRIBUSINESS

SVO manages production in Argentina of TRISUN planting seed and TRISUN oil for export to Europe and the Far East. Expanded production of this oil in the Far East and South America is expected.

SVO has increased its sales of TRISUN to food processors in Japan and Korea. Sales of crop seeds have also been expanded through licensing and distributor sales in South America and the Far East.


From its modern production facility adjacent to Singapore Harbor, Lubrizol is expanding service to Pacific Rim customers.


The Saudi desert presents challenges to lubricant performance typical of this geographic region.


Two-cycle additive technology helps reduce emissions from vehicles commonly seen in Korea and other Asian nations.


Cash Provided from Operating Activities (millions)


- Patent Settlement

Return on Equity
(percent)


Capitalization
(millions)


## Management's Discussion and Analysis of Financial Condition and Results of Operations

Lubrizol is a specialty chemical company using chemical, mechanical and biological technologies to develop products for world markets in transportation, industry and agriculture. The company's business segments are Specialty Chemicals and Agribusiness. The Specialty Chemicals segment develops, produces and sells chemical additives for transportation and industrial lubricants and functional fluids, fuel additives and diversified specialty chemical products. The Agribusiness segment includes the traditional operations which develop, produce and market planting seeds for agricultural and oilseed crops, and develop, produce and market specialty vegetable oils. Agribusiness also includes strategic activities, which consist of biotechnology research and development directed toward developing new products for the agricultural, food and chemical industries.

## Results of Operations

In 1991, consolidated revenues increased $\$ 24$ million or $2 \%$ compared to 1990 with both of the company's business segments achieving record revenues. Gross profit (Sales less Cost of Sales) increased $\$ 37$ million or $8 \%$ over 1990 primarily due to higher average selling prices in Specialty Chemicals. As a percentage of sales, gross profit was $32 \%$ in 1991 compared to $30 \%$ in 1990 and $29 \%$ in 1989. Selling, testing, administrative and research expenses, predominantly in the Specialty Chemicals segment, increased $\$ 34$ million or $12 \%$ in 1991 and largely offset the higher gross profit.

Other income-net increased $\$ 9$ million in 1991 primarily because 1990 included an asset write-off of $\$ 9.7$ million in the Agribusiness segment. Net interest income decreased by $\$ 3.5$ million in 1991 due to lower interest rates and lower average investment balances during the year.
Income before income taxes increased $\$ 3.7$ million or $2 \%$ in 1991 , after excluding the 1990 gain on the Genentech transaction net of $\$ 5.1$ million of related expenses. However, the company had a higher effective income tax rate in 1991 compared to 1990 because of benefits in 1990 from settlements of tax audits. As a result, net income in 1991 decreased $\$ 3.4$ million or $3 \%$ from 1990, after excluding the effects of the Genentech transaction.

In 1990, consolidated revenues increased $\$ 225$ million or $18 \%$ compared to 1989. The Specialty Chemicals segment accounted for $94 \%$ of this increase. Gross profit increased $\$ 83$ million or $23 \%$ over 1989. Increased selling, testing, administrative and research expenses in the Specialty Chemicals segment partially offset the increased gross profit. Thus, in 1990 , the increase in revenues was $\$ 46.1$ million more than the increase in total cost and expenses.
In 1990, the company recorded a pre-tax gain of $\$ 101.9$ million from the exchange of its Genentech stock as a result of a merger between

Genentech and Roche Holdings, Inc. This gain, after taxes and $\$ 5.1$ million of related expenses, contributed $\$ 62.9$ million or $\$ 1.79$ per share to net income. Other income-net decreased $\$ 7.8$ million in 1990 primarily due to an asset write-off of $\$ 9.7$ million in the Agribusiness segment. Net interest income decreased by $\$ 6.7$ million in 1990 primarily due to lower interest accrued on federal income tax refunds and lower average funds invested.

Income before income taxes increased $\$ 133.5$ million in 1990 . Excluding the gain on the Genentech transaction net of related expenses, the increase in income before taxes was $27 \%$ over 1989. In addition, the company had a lower effective income tax rate in 1990, primarily due to settlements of several income tax audits with U.S. and foreign tax authorities covering the years 1981 through 1988. As a result, net income before the Genentech transaction increased $35 \%$ in 1990 over 1989.

In 1989, consolidated revenues increased $\$ 102$ million or $9 \%$ compared to 1988 due to increases in both of the company's business segments. Gross profit increased $\$ 21$ million or $6 \%$ over 1988 , but was substantially offset by increased selling and administrative expenses in both segments and higher research expenses in the Specialty Chemicals segment. As a result, total revenues increased $\$ 2.4$ million or $2 \%$ more than total cost and expenses.
0ther income-net decreased $\$ 9.0$ million in 1989 primarily due to lower net investment gains. Net interest income increased $\$ 8.6$ million primarily from interest recorded on estimated federal income tax refunds.
In 1989 , net income decreased $\$ 46$ million to $\$ 94$ million or $\$ 2.52$ per share. Net income for 1989 was less due to a significant patent litigation settlement in 1988, which after deducting related expenses and income taxes, added $\$ 53.2$ million ( $\$ 1.37$ per share) to 1988 income, and due to special charges and an accounting change recorded in 1988. Excluding these 1988 factors and the change in net investment gains, net income increased $\$ 5.3$ million in 1989.

Return on average shareholders' equity was $16 \%$ in 1991, $27 \%$ in 1990 ( $18 \%$ excluding the Genentech gain) and $14 \%$ in 1989.

## Specialty Chemicals Segment

In 1991, the Specialty Chemicals segment accounted for $91 \%$ consolidated revenues. This segment's revenues increased $1 \%$ in 199 ds higher average selling prices (net of mix and currency effects) of $4 \%$ were partially offset by volume decreases of $3 \%$. The volume decreases were solely in international markets as shipments in North America for 1991 were at the same level as 1990. The worldwide recession weakened product demand and, during the first half of the year, customers reduced

## The Lubrizol Corporation

inventory levels which had been built up in the last half of 1990 during the Middle East crisis. Volume improved during each successive quarter of 1991 and in the fourth quarter was $6 \%$ above the same period last year. Selling prices were higher during the first part of the year as a result of price increases implemented during 1990 in response to higher raw material costs associated with the Middle East crisis. Prices were reduced at the end of the first quarter of 1991 in response to lower material costs.

Gross profit increased $\$ 31.7$ million or $8 \%$ because of higher selling prices, lower cost of sales due to the volume decrease and a $\$ 5.0$ million provision in 1990 for the closure of a manufacturing facility in Spain. As a percentage of sales, gross profit improved to $32 \%$ in 1991 from $30 \%$ in 1990.

Selling and administrative expenses increased $\$ 12.7$ million or $10 \%$ primarily due to increases in personnel, higher international selling expenses and legal expenses associated with protection of proprietary

## Operating Results By Business Segment

Revenues:


Segment income is before interest and income taxes and, in 1990, the gain on sale of Genentech.
technology and potential acquisitions. Testing, research and development expenses increased $\$ 20.2$ million or $19 \%$. This was a result of increases in testing and new product development costs relating to changing lubricant standards and testing procedures as well as customer programs related to new business opportunities.

This segment's results are impacted by the strengthening or the weakening of the U.S. dollar against other currencies in which the company transacts business. In 1991, foreign currencies weakened slightly against the U.S. dollar resulting in a net unfavorable effect on the company due to decreased revenues and expenses when international transactions were translated into U.S. dollars.

Increased gross profit was offset by the higher expenses discussed previously, with the result that Specialty Chemicals segment income was approximately the same as 1990 .

In 1990, Specialty Chemicals segment revenues increased $19 \%$ and volume increased $6 \%$. Higher shipments to international customers, part of which was due to the effect of consolidating the Brazilian affiliate, contributed approximately $40 \%$ of the revenue increase. Uncertainty about the crisis in the Middle East, coupled with the increasing prices for all lubricant components, caused some inventory build-up by customers and partially explained the increase in the volume of shipments. The remainder of the revenue increase was due to favorable currency effects and higher selling prices, which were increased during 1990 to recover increased costs related to research and performance testing and in response to higher raw material costs associated with the Middle East crisis.

In 1990, gross profit increased $24 \%$ due to higher volume and the ability to maintain gross profit percentages during periods of escalating costs. The gross profit percentage increased slightly to $30 \%$ from $29 \%$ in 1989. Selling and administrative expenses increased $26 \%$ primarily due to planned increases in personnel because of new business development, increased legal expenses associated with protection of proprietary technology and increased international sales activities. Testing, research and development expenses increased $14 \%$ in 1990. Most of this increase related to additional activity with respect to engine oils, gear oils and fuel products. Specialty Chemicals segment income was $\$ 179.4$ million, which was a $27 \%$ increase over 1989 .

In 1989, Specialty Chemicals revenues increased $8 \%$ on a $7 \%$ increase in volume. Both domestic and international markets contributed to the increase in volume. Price increases were substantially offset by unfavorable currency effects. In 1989, the gross profit percentage declined slightly to $29 \%$ from $30 \%$ in 1988 because of raw material and manufacturing cost increases. The company was unable to implement selling price increases early enough in the year to maintain margins due to the strong competition throughout the company's worldwide markets. Selling and administrative expenses increased $8 \%$ in 1989 primarily because of efforts to create new business units and markets. Research
and development expenses increased $19 \%$ due to increased new product development and foreign patent application activity.
Specialty Chemicals segment income in 1989 was $\$ 141.2$ million, which was $\$ 82.1$ million lower than 1988. After adjusting for a patent litigation settlement and special charges in 1988 and lower net investment gains in 1989, segment income decreased $\$ 5.8$ million in 1989.

## Agribusiness Segment

In 1991, Agribusiness revenues increased $9 \%$ to $\$ 128$ million due to increased specialty vegetable oil volume. Gross profit increased $14 \%$ to $\$ 46$ million due to higher revenues and improved margins. Gross profit as a percentage of sales was $36 \%$ in 1991 compared to $34 \%$ in 1990 and 1989. Higher gross profit was partially offset by a $3 \%$ increase in expenses, primarily marketing.
Traditional operations in the Agribusiness segment contributed $\$ 7.5$ million to segment income in 1991. Strategic activities, mostly research, had net expense of $\$ 9.5$ million, resulting in an Agribusiness segment loss of $\$ 2.0$ million compared to a loss of $\$ 14.5$ million in 1990 . Included in 1990 was a $\$ 9.7$ million write-off of receivables and inventory in the traditional operations relating to the company's former affiliate in Italy which was unable to meet its financial obligations to the company. Excluding this write-off, Agribusiness improved $\$ 2.8$ million in 1991 compared to 1990 .

In 1990, Agribusiness revenues increased $13 \%$ to $\$ 117$ million due primarily to increased specialty vegetable oil volume, aided by the acquisition of an oilseed crushing and refining business. Gross profit improved by $15 \%$ to $\$ 40$ million as a result of higher revenues and lower seed production costs in the normal growing season of 1989 compared to the drought impacted 1988 season. In 1990, selling and administrative expenses declined $4 \%$ and research expense declined $9 \%$. These declines were primarily due to discontinuance of certain contract research programs and cost efficiencies from combining strategic research activities. This was possible because of the settlement with Agrigenetics Research Associates Limited and the acquisition of Sungene Technologies Corporation during 1989. The Agribusiness segment lost $\$ 14.5$ million in 1990 , approximately the same as in 1989 , primarily due to the $\$ 9.7$ million write-off of receivables and inventories.
In 1989, Agribusiness revenues increased $15 \%$ to $\$ 104$ million. Higher selling prices for planting seeds increased revenues by $12 \%$ and the remaining increase was due to favorable product mix in specialty vegetable oils. Gross profit increased $24 \%$ to $\$ 35$ million and, as a percentage of sales, increased to $34 \%$ in 1989 from $31 \%$ in 1988 as a result of the higher selling prices, offset in part by higher seed costs, both of which resulted from the 1988 drought. Higher selling expenses and traditional research expenses partially offset the increased gross profit in 1989. As a result, segment income from traditional operations was $\$ 1.8$ million, an improvement of $\$ 4.2$ million over 1988 .

## The Lubrizol Corporation

In 1989, the company paid $\$ 16$ million for the remaining rights to plant science technology developed by Agrigenetics Research Associates Limited and to secure the release of all claims under a related class action suit. The company also acquired the remaining shares of Sungene, a significant provider of strategic contract research. Agribusiness strategic research and development expenses decreased $31 \%$ to $\$ 11.9$ million in 1989 due to the discontinuance of certain research programs and cost efficiencies obtained because of the Sungene acquisition. In 1989, the loss from strategic Agribusiness activities was $\$ 16.5$ million or $\$ 21.3$ million less than in 1988 . Included in 1988 was a $\$ 17.1$ million special charge for the discontinuance of certain biotechnology research programs at Agrigenetics Advanced Science Company and the write-down of an investment.

## Working Capital, Liquidity and Capital Resources

The company's cash flows for the years 1989 through 1991 are presented in the consolidated statements of cash flows. Cash provided from operating activities during 1991 was $\$ 192.1$ million, an increase of $\$ 77.8$ million compared to 1990 . This increase was the result of a $\$ 26.1$ million growth in receipts from customers, net of payments to suppliers and employees, $\$ 20.4$ million received in 1991 from the Internal Revenue Service for settlement of tax audits and $\$ 31.2$ million of income taxes paid in 1990 related to the Genentech gain.

The company spent $\$ 80.0$ million for investing activities in 1991 compared to $\$ 90.3$ million in 1990 , excluding proceeds from the Genentech gain of $\$ 105.8$ million, as increased capital expenditures were more than offset by reduced spending for acquisitions and investments.

The company repurchased 285,000 of its common shares for $\$ 12.8$ million, compared to 2.4 million shares for $\$ 89.5$ million in 1990. At December 31, 1991, there was outstanding Board authorization for the repurchase of one million additional shares.

During 1991, the company's working capital requirements, capital expenditures, dividends and share repurchases were financed by internally generated funds and short-term borrowings to meet seasonal needs of Agribusiness. As a result of the activities discussed above, cash and short-term investments at December 31, 1991, increased by $\$ 50$ million compared to December 31, 1990.

The company's financial position continues to be strong. The ratio of current assets to current liabilities was 2.7:1 at December 31, 1991 and 1990. Aggregate debt as a percent of total capitalization (shareholders' equity plus short-term and long-term debt) was approximately $8 \%$ at the end of both years.

At December 31, 1991, the company had unused revolving credit agreements and other credit lines aggregating $\$ 55$ million. Management believes the company's credit facilities and internally generated funds will be sufficient to meet its capital needs during 1992, except for the proposed Amoco transaction as described below. Capital expenditures, primarily to provide manufacturing, administrative and technical sup-
port to the Specialty Chemicals segment, are anticipated to approximate $\$ 110$ million in 1992.

On June 3, 1991, the company signed a letter of intent with Amoco Chemical Company, a subsidiary of Amoco Corporation, to acquire certain assets of Amoco's worldwide petroleum additives business. The transaction is currently under review by the Federal Trade Commission. Additionally, due diligence and definitive agreements must be completed, and corporate and other governmental approvals must be obtained. If the acquisition is consummated, management currently expects to finance it through internally generated funds and debt, which debt may exceed the company's existing credit facilities. Management believes the company has the financial strength to obtain such additional financing. Due to the uncertain status of the proposed transaction, management is not able to determine with reasonable precision the effects on the financial condition or results of operations of the company if this acquisition is consummated.

In December 1990, the Financial Accounting Standards Board issued SFAS 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions." This statement focuses primarily on postretirement health care and will require accrual of the expected costs of providing these benefits over the years the employee provides services to become eligible to receive the benefits upon retirement. Management believes that this new accounting standard will not have a significant impact on the company's liquidity or ability to borrow funds. Refer to Note 10 to the financial statements for the estimated effects of such accruals on the company's financial condition and results of operations.

In February 1992, the Financial Accounting Standards Board issued SFAS 109, "Accounting for Income Taxes," which supersedes SFAS 96. The company anticipates that the adoption of this new statement will reduce its net deferred tax liabilities, and the resulting favorable impact will be separately recorded in the consolidated statement of income as the effect of a change in accounting principle. Refer to Note 8 to the financial statements for the estimated effect of adopting this new standard.

## Consolidated Statements of Income

| (In Thousands of Dollars Except Per Share Data) | Year Ended December 31 |  |  |
| :---: | :---: | :---: | :---: |
|  | 1991 | 1990 | 1989 |
| Net sales | \$1,467,901 | \$1,444,758 | \$1,220,386 |
| Royalties and other revenues | 8,405 | 7,943 | 7,524 |
| Total revenues | 1,476,306 | 1,452,701 | 1,227,910 |
| Cost of sales | 992,275 | 1,006,341 | 864,576 |
| Selling, testing and administrative expenses | 236,437 | 207,626 | 175,474 |
| Research and development expenses | 79,964 | 74,424 | 69,658 |
| Total cost and expenses | 1,308,676 | 1,288,391 | 1,109,708 |
| Gain on sale of Genentech |  | 101,921 |  |
| Other income - net | 9,500 | 504 | 8,329 |
| Interest income | 8,748 | 10,526 | 16,653 |
| Interest expense | $(7,738)$ | $(6,049)$ | $(5,438)$ |
| Income before income taxes | 178,140 | 271,212 | 137,746 |
| Provision for income taxes | 54,481 | 81,166 | 43,766 |
| Net income | \$ 123,659 | \$ 190,046 | \$ 93,980 |
| Net income per share . . | \$3.57 | \$5.34 | \$2.52 |

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

## Consolidated Balance Sheets

| (In Thousands of Dollars) | December 31 |  |
| :---: | :---: | :---: |
|  | 1991 | 1990 |
| Assets |  |  |
| Cash and short-term investments | \$ 126,147 | \$ 76,100 |
| Receivables | 240,382 | 258,129 |
| Inventories | 306,993 | 294,986 |
| Other | 28,049 | 39,595 |
| Total current assets | 701,571 | 668,810 |
| Property and equipment - at cost | 962,261 | 886,996 |
| Less accumulated depreciation | 582,231 | 533,445 |
| Property - net | 380,030 | 353,551 |
| Investments in non-consolidated companies | 52,441 | 53,698 |
| Intangible and other assets | 37,641 | 38,537 |
| TOTAL | \$1,171,683 | \$1,114,596 |

## Liabilities and Shareholders' Equity

| Short-term debt | \$ 32,801 | \$ 12,552 |
| :---: | :---: | :---: |
| Accounts payable | 126,140 | 133,757 |
| Income taxes and other current liabilities | 103,221 | 102,042 |
| Total current liabilities | 262,162 | 248,351 |
| Long-term debt | 34,982 | 54,023 |
| Non-current liabilities | 41,979 | 39,663 |
| Deferred income taxes | 38,094 | 36,348 |
| Total liabilities | 377,217 | 378,385 |
| Common shares without par value - Outs and $34,698,374$ shares in 1990 | 77,423 | 75,651 |
| Retained earnings | 713,229 | 654,991 |
| Accumulated translation adjustment | 3,814 | 5,569 |
| Total shareholders' equity | 794,466 | 736,211 |
| TOTAL | \$1,171,683 | \$1,114,596 |

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

## Consolidated Statements of Cash Flows

| (In Thousands of Dollars) | Year Ended December 31 |  |  |
| :---: | :---: | :---: | :---: |
|  | 1991 | 1990 | 1989 |
| Cash provided from (used for): |  |  |  |
| Operating activities: |  |  |  |
| Received from customers | \$1,480,776 | \$1,395,667 | \$1,220,978 |
| Paid to suppliers and employees | $(1,265,058)$ | $(1,206,060)$ | $(1,066,449)$ |
| Income taxes paid | $(55,116)$ | $(87,713)$ | $(51,528)$ |
| Interest and dividends received | 9,960 | 10,181 | 15,736 |
| Interest paid | $(7,129)$ | $(6,058)$ | $(6,193)$ |
| Tax refund received, including interest | 20,418 |  |  |
| Received from the sale of investments |  |  | 7,161 |
| Other - net | 8,266 | 8,302 | 5,200 |
| Total operating activities | 192,117 | 114,319 | 124,905 |
| Investing activities: |  |  |  |
| Proceeds from sale of Genentech |  | 105,843 |  |
| Capital expenditures | $(82,398)$ | $(77,407)$ | (64,721) |
| Investments in non-consolidated companies | (751) | $(6,690)$ | (1,723) |
| Acquisitions - net of cash acquired | (392) | $(8,134)$ | $(16,276)$ |
| Other - net | 3,589 | 1,912 | 2,691 |
| Total investing activities | $(79,952)$ | 15,524 | $(80,029)$ |
| Financing activities: |  |  |  |
| Short-term borrowing | 2,587 | 3,240 | 1,925 |
| Long-term borrowing | 18,400 | 34 |  |
| Long-term repayment | $(18,660)$ |  | (195) |
| Dividends paid | $(53,322)$ | $(52,257)$ | $(51,509)$ |
| Common shares purchased, net of options exercised | $(10,327)$ | $(86,980)$ | $(37,022)$ |
| Total financing activities | $(61,322)$ | $(135,963)$ | $(86,801)$ |
| Effect of exchange rate changes on cash | (796) | 579 | (670) |
| Net increase (decrease) in cash and short-term investments | 50,047 | $(5,541)$ | $(42,595)$ |
| Cash and short-term investments at the beginning of year | 76,100 | 81,641 | 124,236 |
| Cash and short-term investments at the end of year | \$ 126,147 | \$ 76,100 | \$ 81,641 |

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

## Consolidated Statements of Shareholders' Equity

|  |  |  | reholders' Eq |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Number of Shares Outstanding | Common Shares | Retained <br> Earnings | Accumulated Translation Adjustment |
|  |  |  | Thousands of DC |  |
| Balance, December 31, 1988 | 38,009,911 | \$ 77,260 | \$ 597,124 | \$(10,076) |
| Net income for 1989 |  |  | 93,980 |  |
| Cash dividends (\$1.38 per share) |  |  | $(51,509)$ |  |
| Translation adjustment for 1989 |  |  |  | $(6,493)$ |
| Common shares - Treasury: |  |  |  |  |
| Shares purchased | $(1,121,245)$ | $(2,310)$ | $(37,983)$ |  |
| Shares issued upon exercise of stock options | 119,442 | 3,271 |  |  |
| Balance, December 31, 1989 | 37,008,108 | 78,221 | 601,612 | $(16,569)$ |
| Net income for 1990 |  |  | 190,046 |  |
| Cash dividends (\$1.46 per share) |  |  | $(52,257)$ |  |
| Translation adjustment for 1990 |  |  |  | 22,138 |
| Common shares - Treasury: |  |  |  |  |
| Shares purchased | $(2,394,757)$ | $(5,097)$ | $(84,410)$ |  |
| Shares issued upon exercise of stock options | 85,023 | 2,527 |  |  |
| Balance, December 31, 1990 | 34,698,374 | 75,651 | 654,991 | 5,569 |
| Net income for 1991 |  |  | 123,659 |  |
| Cash dividends (\$1.54 per share) |  |  | $(53,322)$ |  |
| Translation adjustment for 1991 |  |  |  | $(1,755)$ |
| Common shares - Treasury: |  |  |  |  |
| Shares purchased ... | $(285,000)$ | (651) | $(12,099)$ |  |
| Shares issued upon exercise of stock options | 102,358 | 2,423 |  | - |
| Balance, December 31, 1991 | 34,515,732 | \$77,423 | \$713,229 | \$ 3,814 |

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

Notes To Financial Statements<br>(In Thousands of Dollars Unless Otherwise Indicated)

## Note 1 - Accounting Policies

Consolidation - The consolidated financial statements include the accounts of The Lubrizol Corporation and its majority-owned subsidiaries. For nonconsolidated companies (affiliates), the equity method of accounting is used when ownership exceeds $20 \%$ or when the company has the ability to exercise significant influence over the policies of the investee. Other affiliates are carried at cost.

Inventories - Inventories are stated at cost which is not in excess of market. Cost of Specialty Chemicals segment inventories is determined by the lastin, first-out (LIF0) method in the United States and the first-in, first-out (FIFO) method elsewhere. Agribusiness inventory cost is determined by the average cost method.

Depreciation and Amortization - Accelerated depreciation methods are used in computing depreciation on approximately $67 \%$ of the depreciable assets. The remaining assets are depreciated using the straight-line method. Amortization of intangible and other assets is on a straight-line method over periods ranging from 5 to 25 years. For income tax purposes, different methods and rates are used in certain instances.

Foreign Currency Translation - The assets and liabilities of most non-U.S. subsidiaries are translated into U.S. dollars at exchange rates in effect at the balance sheet date. Operating results are translated at weighted average exchange rates in effect during the period. Net unrealized translation adjustments are recorded as a separate component of shareholders' equity.

Per Share Amounts - Net income per share has been computed by dividing net income by the average number of common shares outstanding during the period. Net income per share has not been adjusted for the effect of stock options as the dilution effect would be less than $3 \%$ in any year.

## Note 2 - Inventories

|  | 1991 | 1990 |
| :---: | :---: | :---: |
| Finished products | \$117,546 | \$108,616 |
| Products in process | 103,851 | 95,996 |
| Raw materials and supplies | 85,596 | 90,374 |
|  | \$306,993 | \$294,986 |

Inventories on the LIF0 method at December 31, 1991 and 1990 were $19 \%$ and $24 \%$ of consolidated inventories. The current replacement cost of these inventories exceeded the LIF0 cost at December 31, 1991 and 1990 by $\$ 41.7$ million and $\$ 48.1$ million. At December 31, 1991 and 1990, inventories of the Specialty Chemicals segment were $\$ 217.6$ million and $\$ 223.2$ million, and Agribusiness inventories were $\$ 89.4$ million and $\$ 71.8$ million.

## Note 3 - llnvestments in Non-Consolidated Companies

|  | 1991 | 1990 |
| :---: | :---: | :---: |
| Investments carried at equity | \$31,046 | \$45,257 |
| Investments carried at cost | 21,395 | 8,441 |
|  | \$52,441 | \$53,698 |

Investments carried at equity exceeded the company's equity in the underlying book values by $\$ 7.0$ million and $\$ 9.1$ million at December 31, 1991 and 1990. The excess is being amortized over periods not exceeding 15 years. Accumulated amortization of this excess was $\$ 6.5$ million and $\$ 4.4$ million at December 31, 1991 and 1990.

Included within investments in non-consolidated companies are marketable equity securities having a book carrying value of $\$ 18.6$ million in 1991 and 1990. The market value of these securities exceeded the book carrying value by $\$ 106$ million and $\$ 76$ million at December 31, 1991 and 1990.

## Note 4 - Short-Term and Long-Term Debt

Short-term debt consists of short-term bank loans and the current portion of long-term debt.

| Long-term debt consists of: |  |  |
| :---: | :---: | :---: |
|  | 1991 | 1990 |
| 7.875\% Marine terminal / Industrial development revenue bonds, due 2000 | \$ 1,000 | \$19,375 |
| $6.5 \%$ Marine terminal refunding | 18,375 |  |
| Term loans |  |  |
| 7.99\% due 1992 | 20,000 | 20,000 |
| 5.8\% yen denominated, due 1993 | 15,200 | 13,970 |
| Other (various rates) | 407 | 678 |
| Less current portion | $\begin{gathered} \hline 54,982 \\ (20,000) \end{gathered}$ | 54,023 |
|  | \$34,982 | \$54,023 |

The company has available $\$ 55$ million under revolving credit agreements and other credit lines which would permit the company to borrow at or below the U.S. prime rate. These facilities, which were unused at December 31, 1991, may be used to support commercial paper borrowings.

The Marine Terminal Refunding Revenue Bonds have a variable interest rate. The company has entered into an interest rate swap agreement that effectively fixes the interest rate at $6.5 \%$. The bondholders may put the bonds back to the company; however, the bonds are classified as non-current due to a remarketing agreement and credit facilities which permit the company to refinance for a period beyond one year.

## Note 5-0ther Balance Sheet Information

| Receivables: | 1991 | 1990 |
| :---: | :---: | :---: |
| Customers | \$216,908 | \$228,358 |
| Affiliates | 7,028 | 9,144 |
| Other | 16,446 | 20,627 |
|  | \$240,382 | \$258,129 |

Receivables are net of allowance for doubtful accounts of $\$ 2.8$ million in 1991 and $\$ 3.2$ million in 1990.

Other current assets at December 31, 1990 included an estimated federal income tax refund of $\$ 13.2$ million pertaining to the years 1979 through 1988 and accrued interest thereon of $\$ 8.0$ million. The refund amount relates principally to the utilization of excess foreign tax credits and was substantially collected during 1991.

| Property and Equipment: | 1991 | 1990 |
| :---: | :---: | :---: |
| Land and improvements | \$ 75,348 | \$ 70,799 |
| Buildings and improvements | 168,186 | 158,451 |
| Machinery and equipment | 658,966 | 604,929 |
| Construction in progress | 59,761 | 52,817 |
|  | \$962,261 | \$886,996 |

Depreciation expense was $\$ 54.6$ million in 1991, $\$ 54.0$ million in 1990 and $\$ 48.7$ million in 1989.

| Intangible and Other Assets: | 1991 | 1990 |
| :---: | :---: | :---: |
| Plant science technology | \$ 10,175 | \$ 11,772 |
| Goodwill and other intangibles | 17,328 | 17,505 |
| Other assets | 10,138 | 9,260 |
|  | \$ 37,641 | \$ 38,537 |

Accumulated amortization of intangible and other assets was $\$ 28.4$ million and $\$ 24.1$ million at December 31, 1991 and 1990.

| Accounts Payable: | 1991 | 1990 |
| :---: | :---: | :---: |
| Trade | \$116,619 | \$125,341 |
| Affiliates | 9,521 | 8,416 |
|  | \$126,140 | \$133,757 |
| Income Taxes and Other Current Liabilities: | 1991 | 1990 |
| Income taxes | \$ 36,137 | \$ 36,072 |
| Employee compensation | 35,269 | 35,071 |
| Taxes other than income | 9,220 | 10,279 |
| Other | 22,595 | 20,620 |
|  | \$103,221 | \$102,042 |


| Non-current Liabilities: | 1991 | 1990 |
| :---: | :---: | :---: |
| Employee benefits | \$ 24,074 | \$ 22,638 |
| Other | 17,905 | 17,025 |
|  | \$ 41,979 | \$ 39,663 |

## Note 6 - Shareholders' Equity

The company has $147,000,000$ authorized shares consisting of $2,000,000$ shares of serial preferred stock without par value designated Serial Preferred Stock (Serial Preferred Stock); 25,000,000 shares of serial preferred without par value designated Serial Preference Shares (Serial Preference Shares); and $120,000,000$ common shares without par value (Common Shares). No Serial Preferred Stock or Serial Preference Shares have been issued. The outstanding Common Shares shown on the balance sheets exclude Common Shares held in treasury of 8,582,215 and 8,399,573 at December 31, 1991 and 1990.

The company has a shareholder rights plan under which one right to buy one-half Common Share was distributed for each Common Share held. The rights may become exercisable under certain circumstances involving actual or potential acquisitions of $20 \%$ or more of the Common Shares by a person or affiliated persons who acquire such stock without complying with the requirements of the company's articles of incorporation. The rights would entitle shareholders, other than such person or affiliated persons, to purchase Common Shares of the company or of certain acquiring persons at $50 \%$ of then current market value. At the option of the directors, the rights may be exchanged for Common Shares, and may be redeemed in cash, securities or other consideration. The rights will expire in 1997 unless earlier redeemed.

The company has another shareholder rights plan under which one right to buy one share of Serial Preferred Stock was distributed for each Common Share held. The dividend and redemption value of the Serial Preferred Stock would be determined in relation to after-tax amounts which have been or may be recovered by the company from Exxon or its affiliates as a result of certain patent claims. The rights may become exercisable under certain circumstances involving actual or potential acquisitions of $20 \%$ or more of the company's Common Shares by a person or affiliated persons. The rights would entitle shareholders, other than such person or affiliated persons, to purchase shares of Serial Preferred Stock at the purchase price of \$1 plus 25 rights per share. The rights will expire in November 1996 unless earlier redeemed.

## Note 7 - Genentech Gain and Other Income

On September 7, 1990, a merger between Genentech, Inc. and Roche Holdings, Inc. was completed. As a result of this transaction, the company's 5.8 million common shares of Genentech and its warrant to purchase an additional 180,000 common shares were exchanged for $\$ 105.8$ million in cash and 3.0 million shares of newly issued Genentech redeemable common stock. The company realized a gain of $\$ 101.9$ million on this transaction. After taxes, and related expenses of $\$ 5.1$ million, the Genentech gain contributed $\$ 62.9$ million or $\$ 1.79$ per share to net income. At the option of Genentech, the newly issued common stock may be redeemed in whole, but not in part, at various redemption prices per share that range from $\$ 43.75$ at January 1, 1992, and increase to \$60 through June 30, 1995.

Other income - net consists of the following:

|  | 1991 | 1990 | 1989 |
| :---: | :---: | :---: | :---: |
| Equity earnings of non-consolidated companies | \$4,791 | \$ 3,431 | \$1,804 |
| Agribusiness charge |  | $(9,734)$ |  |
| Gain on sale of investments - net |  |  | 935 |
| Gain on investee stock issuance |  | 1,000 |  |
| Other - net | 4,709 | 5,807 | 5,590 |
|  | \$9,500 | \$ 504 | \$8,329 |

The Agribusiness charge in 1990 of $\$ 9,734$ relates to the write-off of receivables due from a former affiliate of Agrigenetics in Italy and for inventories which were dedicated to the market which this affiliate served. The write-off was necessary because the former affiliate did not meet its financial obligations to the company.

## Note 8 - Income Taxes

Income taxes have been determined using the liability method in accordance with Statement of Financial Accounting Standards (SFAS) 96. In February 1992, the Financial Accounting Standards Board issued SFAS 109 which supersedes SFAS 96 and establishes new financial accounting and reporting standards for income taxes. The new statement must be adopted by 1993. The company anticipates that the adoption of SFAS 109 will reduce its net deferred tax liabilities, and the resulting favorable impact will be separately recorded in the consolidated statement of income as the effect of a change in accounting principle. This would result in a reduction of net deferred tax liabilities of $\$ 10$ to $\$ 15$ million if the new statement were to be adopted at January 1, 1992.

Income before income taxes consists of the following:

|  | 1991 | 1990 | 1989 |
| :---: | :---: | :---: | :---: |
| United States | \$ 93,088 | \$171,278 | \$ 48,469 |
| Foreign | 85,052 | 99,934 | 89,277 |
| Total | \$178,140 | \$271,212 | \$137,746 |

The provision for income taxes consists of the following:

|  | 1991 | 1990 | 1989 |
| :---: | :---: | :---: | :---: |
| Current: |  |  |  |
| United States | \$25,169 | \$42,281 | \$ 4,428 |
| Foreign | 31,755 | 41,929 | 38,709 |
|  | 56,924 | 84,210 | 43,137 |
| Deferred: |  |  |  |
| United States | $(2,084)$ | $(4,924)$ | 293 |
| Foreign | (359) | 1,880 | 336 |
|  | $(2,443)$ | $(3,044)$ | 629 |
| Total | \$54,481 | \$81,166 | \$43,766 |

Foreign taxes include withholding taxes. The United States tax provision includes the U.S. tax on foreign income distributed to the company. The differences between the provision for income taxes at the statutory rate of $34 \%$ and the tax shown in the consolidated statements of income are summarized as follows:

|  | 1991 | 1990 | 1989 |
| :---: | :---: | :---: | :---: |
| Tax at statutory rate | \$60,568 | \$92,212 | \$46,834 |
| Foreign sales corporation earnings | $(4,042)$ | $(2,837)$ | $(3,188)$ |
| Settlement of U.S. and foreign tax audits |  | $(6,000)$ |  |
| Other - net | $(2,045)$ | $(2,209)$ | 120 |
| Tax shown in the statement of income | \$54,481 | \$81,166 | \$43,766 |

The components of deferred income tax expense are as follows:

|  | 1991 | 1990 |  | 1989 |
| :---: | :---: | :---: | :---: | :---: |
| Depreciation | \$(1,720) | \$ (543) |  | $(1,657)$ |
| Employee compensation | (452) | $(1,564)$ |  | 543 |
| Partnership expense allocations | (41) | $(1,165)$ |  | (465) |
| Other - net. | (230) | 228 |  | 2,208 |
|  | \$(2,443) | \$(3,044) |  | 629 |

U.S. income taxes or foreign withholding taxes are not provided on undistributed earnings of foreign subsidiaries which are considered to be indefinitely reinvested in the operations of such subsidiaries. The amount of such earnings was approximately $\$ 193$ million at December 31, 1991. Determination of the net amount of unrecognized U.S. income tax with respect to these earnings is not practicable. If such earnings were to be repatriated, foreign withholding taxes of approximately $\$ 19$ million would be incurred. A portion or all of such withholding taxes may be offset by credits in the United States.

## Note 9 - Supplemental Cash Flow Information

The company generally invests its excess cash in short-term investments with various banks and financial institutions. Short-term investments are cash equivalents as they are part of the cash management activities of the company and are comprised primarily of investments having maturities of less than three months.

The following is a reconciliation of net income to net cash provided by (used for) operating activities:

|  | 1991 | 1990 | 1989 |
| :---: | :---: | :---: | :---: |
| Net income | \$123,659 | \$190,046 | \$ 93,980 |
| Depreciation and amortization | 59,473 | 59,529 | 54,065 |
| Deferred income taxes | $(2,716)$ | 3,749 | 1,128 |
| Distributed (undistributed) earnings of non-consolidated companies | $(3,743)$ | $(4,178)$ | 650 |
| Write-down of assets |  | 14,734 | 5,000 |
| Gain on sale of Genentech |  | $(101,921)$ |  |
| Change in current assets and liabilities: |  |  |  |
| Receivables | 4,470 | $(57,034)$ | $(6,932)$ |
| Inventories | $(14,187)$ | $(32,244)$ | $(8,486)$ |
| Accounts payable and accrued expenses | 1,780 | 39,716 | $(8,463)$ |
| 0 ther current assets | 15,304 | $(2,146)$ | $(1,762)$ |
| Increase in non-current liabilities | 1,554 | 4,126 | 3,317 |
| Other items - net | 6,523 | (58) | $(7,592)$ |
| Net cash provided by operating activities. | \$192,117 | \$114,319 | \$124,905 |

In 1990, net cash provided by operating activities is after deducting $\$ 31.2$ million of income taxes paid resulting from the gain on sale of Genentech, the proceeds from which are included in investing activities.

## Note 10 - Postretirement Benefits

The company has retirement plans, including non-contributory defined benefit pension plans and a profit sharing plan, covering most full-time employees in the United States and at non-U.S. subsidiaries. Pension benefits are based on years of service and the employee's compensation. The company's funding policy in the United States is to contribute amounts to satisfy the Internal Revenue Service funding standards and elsewhere to fund amounts in accordance with local regulations. Several defined benefit plans are unfunded. Plan assets are invested principally in listed equity securities and fixed income instruments including insurance contracts.

The U.S. defined benefit pension plan was amended effective October 1, 1991, resulting in an increase in the projected benefit obligation at December 31, 1991 of $\$ 19.6$ million and an increase in net periodic pension cost of $\$ .9$ million for the period October to December 1991.
Expense for all retirement plans was $\$ 13.3$ million in 1991, $\$ 12.7$ million in 1990 and $\$ 8.9$ million in 1989, including profit sharing contributions in the U.S. of $\$ 4.7$ million in 1991, $\$ 6.6$ million in 1990 and $\$ 3.6$ million in 1989.

Net periodic pension cost of the U.S. and significant international defined benefit plans consists of:


The weighted average assumptions used at December 31 were:

|  | 1991 | 1990 | 1989 |
| :---: | :---: | :---: | :---: |
| Assumed discount rate | 8.1\% | 8.0\% | 8.0\% |
| Assumed rate of compensation increase . | 5.8\% | 5.8\% | 5.7\% |
| Expected rate of return on plan assets . | 8.9\% | 8.2\% | 8.2\% |

The funded status of such defined benefit pension plans and the amounts recognized in the consolidated balance sheets at December 31 are as follows:

|  | 1991 |  | 1990 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | Assets <br> Exceed <br> Accum. <br> Benefits | Accum. <br> Benefits <br> Exceed <br> Assets | Assets <br> Exceed <br> Accum. <br> Benefits | Accum. <br> Benefits <br> Exceed <br> Assets |
| Fair value of plan assets | \$154,506 | \$ 4,040 | \$132,233 | 3,236 |
| Projected benefit obligation | $(150,669)$ | $(24,139)$ | $(114,437)$ | $(21,183)$ |
| Plan assets in excess of (less than) projected benefit obligation. | 3,837 | $(20,099)$ | 17,796 | $(17,947)$ |
| Unrecognized net transition obligation (asset) | $(22,051)$ | 3,228 | $(24,074)$ | 3,366 |
| Unrecognized net loss (gain) . . . . | $(3,803)$ | 3,053 | 5,044 | 3,468 |
| Unrecognized prior service cost. . . | 22,468 | 2,198 | 3,889 | 1,745 |
| Minimum liability adjustment . . . . |  | $(1,831)$ |  | $(2,235)$ |
| Accrued pension asset (liability) . . | \$ 451 | \$(13,451) | \$ 2,655 | \$(11,603) |
| Actuarial present value of accumulated benefit obligation. | \$110,450 | \$ 16,009 | \$ 83,896 | \$ 13,410 |
| $V$ Vested benefits | \$107,194 | \$ 13,259 | \$ 80,417 | \$ 10,861 |

The company provides certain postretirement benefits other than pensions, primarily health care, for retired employees. Substantially all of the company's full-time Specialty Chemicals segment employees in the U.S. become eligible for these benefits after five years of service and attainment of age 55 at retirement. Participants will contribute approximately $25 \%$ to $50 \%$ of the cost of such benefits. These postretirement health care benefits are not funded and are expensed as benefits are paid. The expense for these benefits to retired participants and their beneficiaries was $\$ 1.5$ million in 1991, $\$ 1.4$ million in 1990 and $\$ 1.1$ million in 1989. Generally, the company's non-U.S. employees are covered by government sponsored plans.

In December 1990, the Financial Accounting Standards Board issued SFAS 106, "Employers' Accounting for Postretirement Benefits Other Than Pensions." This statement will require accrual of postretirement benefits (such as health care benefits) over the years the employee provides services to become eligible to receive the benefits upon retirement. The company has not yet adopted SFAS 106, which must be adopted for U.S. plans by 1993 and by 1995 for non-U.S. plans. Based upon preliminary actuarial computations, which are subject to refinement, the company estimates that its transition obligation for such postretirement benefits would be $\$ 70$ to $\$ 90$ million, before tax effects, if SFAS 106 were adopted as of January 1, 1992. Annual expense accruals required by SFAS 106 would be in the range of $\$ 8$ million to $\$ 11$ million, compared to current expense of $\$ 1.5$ million on a pay as you go basis, assuming the transition obligation is recorded at the date of adoption.

## Note 11 - Leases

The company has commitments under operating leases primarily for office space, terminal facilities, land and various office equipment. Rental expense was $\$ 16.5$ million in $1991 ; \$ 15.2$ million in 1990 ; and $\$ 12.8$ million in 1989. Future minimum rental commitments under operating leases having initial or remaining non-cancelable lease terms exceeding one year are $\$ 13.0$ million in 1992; $\$ 8.6$ million in 1993; $\$ 7.4$ million in 1994; $\$ 5.9$ million in 1995; $\$ 4.5$ million in 1996 ; and $\$ 29.6$ million thereafter.

## Note 12 - Forward Exchange Contracts

The company periodically enters into forward exchange contracts to manage currency exposure. At December 31, 1991, the company had short-term forward contracts to sell currencies at various dates during 1992 for $\$ 23.9$ million. These contracts are recorded at market value and the gains or losses are recognized immediately and offset the exchange adjustment related to the exposed currency position.

## Note 13 - Operations in Geographic Areas

Financial data by geographic area, based on the location of the subsidiary which shipped and billed the product, is as follows:

|  | 1991 | 1990 |  | 1989 |
| :---: | :---: | :---: | :---: | :---: |
| Revenues from customers: |  |  |  |  |
| United States | \$ 687,654 | \$ 631,492 |  | \$ 589,013 |
| Europe | 446,699 | 470,910 |  | 373,229 |
| Far East | 173,351 | 171,171 |  | 143,096 |
| Other | 168,602 | 179,128 |  | 122,572 |
|  | 1,476,306 | 1,452,701 |  | 1,227,910 |
| Intercompany transfers: |  |  |  |  |
| United States | 273,037 | 240,087 |  | 207,816 |
| Europe | 10,004 | 8,522 |  | 8,854 |
| Other | 23,554 | 10,193 |  | 5,147 |
|  | 306,595 | 258,802 |  | 221,817 |
| Gross revenues. | 1,782,901 | 1,711,503 |  | 1,449,727 |
| Less: Intercompany transfers | $(306,595)$ | $(258,802)$ |  | $(221,817)$ |
| Consolidated revenues. | \$1,476,306 | \$1,452,701 |  | \$1,227,910 |
| Operating profit: |  |  |  |  |
| United States | \$ 123,058 | \$ 99,245 |  | \$ 65,463 |
| Europe | 67,630 | 70,544 |  | 53,225 |
| Far East | 7,927 | 11,069 |  | 12,937 |
| Other | 4,675 | 8,837 |  | 13,358 |
| Eliminations | $(7,718)$ | $(1,280)$ |  | $(11,004)$ |
|  | 195,572 | 188,415 |  | 133,979 |
| General corporate expenses | $(27,942)$ | $(24,105)$ |  | $(15,777)$ |
| Gain on sale of Genentech |  | 101,921 |  |  |
| Other income - net | 9,500 | 504 |  | 8,329 |
| Interest - net | 1,010 | 4,477 |  | 11,215 |
| Income before income taxes. | \$ 178,140 | \$ 271,212 |  | 137,746 |
| Identifiable assets: |  |  |  |  |
| United States | \$ 654,560 | \$ 659,814 |  | \$ 559,150 |
| Europe | 283,526 | 282,589 |  | 202,405 |
| Far East | 132,038 | 123,930 |  | 112,310 |
| Other | 80,144 | 80,992 |  | 72,326 |
| Eliminations | $(159,027)$ | $(154,106)$ |  | $(126,120)$ |
|  | 991,241 | 993,219 |  | 820,071 |
| Corporate assets. | 180,442 | 121,377 |  | 140,113 |
| Total assets | \$1,171,683 | \$1,114,596 |  | 960,184 |

Notes:
A. Intercompany transfers are made at prices comparable to normal unaffiliated customer sales for similar products.
B. Affiliated companies are not allocated to geographic segments.
C. Corporate assets consist of short-term investments and investments in affiliated companies.

Export sales from the United States to customers, primarily in Latin America, the Middle East and Asia, were $\$ 161$ million in 1991 and $\$ 125$ million in 1990 and 1989.

Net assets of non-U.S. subsidiaries at December 31, 1991 and 1990 were $\$ 319$ million and $\$ 331$ million, respectively. Net income of these subsidiaries was $\$ 50$ million in 1991, $\$ 57$ million in 1990 and $\$ 52$ million in 1989; and dividends received from the subsidiaries were $\$ 12$ million, $\$ 79$ million and $\$ 66$ million, respectively.

## Note 14 - Business Segment Information

A description of the company's segments and a summary of operating results and identifiable assets by segment are contained on pages 21 and 22 . Following is additional industry segment information:

|  | Capital <br> Expenditures | Depreciation \& Amortization |
| :---: | :---: | :---: |
| 1991 |  |  |
| Specialty Chemicals. | \$76,547 | \$51,791 |
| Agribusiness | 5.851 | 7,682 |
|  | \$82,398 | \$59,473 |
| 1990 |  |  |
| Specialty Chemicals. | \$70,543 | \$50,767 |
| Agribusiness | 6,864 | 8.762 |
|  | \$77,407 | \$59,529 |
| 1989 |  |  |
| Specialty Chemicals. | \$60,394 | \$46,084 |
| Agribusiness | 4,327 | 7,981 |
|  | \$64,721 | \$54,065 |

The company's Specialty Chemicals segment has a concentration of sales and receivables in the oil and chemical industries. The ten largest customers in the Specialty Chemicals segment, most of which are international oil companies and a number of which are groups of affiliated entities, accounted for approximately $43 \%$ of consolidated sales in 1991, $46 \%$ in 1990 and $45 \%$ in 1989. Although the largest single group accounted for $11 \%$ of sales in 1991 and 1990, this group is made up of a number of separate entities that the company believes make independent purchasing decisions with respect to Specialty Chemicals. No single group or customer accounted for $10 \%$ or more of sales in 1989.

## Note 15 - Stock 0ptions

The 1991 Stock Incentive Plan provides for granting of options to buy Common Shares intended either to qualify as "incentive stock options" under the Internal Revenue Code or "non-statutory stock options" not intended to so qualify, up to an annual amount equal to one percent of the outstanding Common Shares at the beginning of any year, plus any unused amount from prior years. Under the 1991 Plan, options generally become exercisable $50 \%$ one year after grant, $75 \%$ after two years, and $100 \%$ after three years, and expire up to ten years after grant. The 1985 Employee Stock Option Plan and the 1991 Plan also provide for "reload options," which are options to purchase additional shares if a grantee uses already-owned shares to pay for an option exercise. To date, no employee options have been granted under the 1991 Plan. The 1991 Plan generally supersedes the 1985 Plan, which replaced the 1981 Incentive Stock Option Plan. A 1975 Employee Stock Option Plan expired by its terms in 1985. Options remain outstanding and exercisable under the 1975 Plan, the 1981 Plan and the 1985 Plan. The option price under all plans is the fair market value of the shares on the date of grant. All plans permit or permitted the granting of stock appreciation rights in connection with the grant of options, and the 1991 Plan also permits the grant of restricted and unrestricted shares. In addition, the 1991 Plan provides for an automatic annual grant to each outside director of the Corporation of an option to purchase 1,000 Common Shares, with terms generally comparable to employee stock options. When Agrigenetics was acquired, options outstanding under a stock option plan of that company became fully vested and were converted to options to purchase Common Shares.

Information regarding these option plans is as follows:

|  | Number of Shares |  |  |
| :---: | :---: | :---: | :---: |
|  | 1991 | 1990 | 1989 |
| Outstanding, January 1 | 835,801 | 678,962 | 607,693 |
| Granted at \$33.31 to |  |  |  |
| \$57.56 per share. | 310,190 | 243,350 | 198,000 |
| Exercised at $\$ 18.63$ to $\$ 43.06$ per share . . | $(156,898)$ | $(82,873)$ | $(124,893)$ |
| Surrendered at $\$ 23.38$ to $\$ 51.56$ per share. | $(3,870)$ | $(3,638)$ | $(1,838)$ |
| Outstanding, December 31 | 985,223 | 835,801 | 678,962 |
| Exercisable, December 31. | 507,278 | 395,587 | 296,139 |
| Available for grant, December 31 . | 806,115 | 765,452 | 1,005,164 |

The 1975 Plan options expire through November 1994, with an average option price of $\$ 22.88$. The 1981 Plan options expire September 1992 to November 1994, with an average option price of $\$ 22.24$. The 1985 Plan options expire June 1995 to November 2001, with an average option price of $\$ 40.68$. The 1991 Plan options granted to outside directors in 1991 expire in April 2001, and have an option price of $\$ 57.56$. The Agrigenetics options expire January 1992 to July 1994, with an average option price of $\$ 37.20$.

## Independent Auditors' Report

To the Shareholders and Board of Directors of The Lubrizol Corporation:

We have audited the accompanying consolidated balance sheets of The Lubrizol Corporation and its subsidiaries as of December 31, 1991 and 1990 and the related consolidated statements of income, shareholders' equity and cash flows for each of the three years in the period ended December 31, 1991. 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 in accordance with generally accepted auditing standards. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements. An audit also includes assessing the accounting principles used and
significant estimates made by management, as well as evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

In our opinion, such consolidated financial statements present fairly, in all material respects, the financial position of The Lubrizol Corporation and its subsidiaries at December 31, 1991 and 1990 and the results of their operations and their cash flows for each of the three years in the period ended December 31, 1991 in conformity with generally accepted accounting principles.


Cleveland, Ohio
February 12, 1992

## Quarterly Financial Data (Unaudited)



[^1]Summary of Operations
Revenues ..... \$1,476,306
\$1,452,701
Cost of sales ..... 992,275
Selling, testing, administrative \& research expenses ..... 316,401
Total cost and expenses ..... 1,308,676 ..... 1,006,341
282,050 ..... 1,288,391
Other income (charges) ..... 10,510
Income before income taxes ..... 178,140
Change in accounting for income taxes
Net income \$ 123,659 ..... 271,212106,902
For the Year:
\$3.57 Net income per share ..... 83.57
Dividends declared per share ..... 1.54
Average Common Shares outstanding (in thousands) ..... 34,630
Consolidated Statement of Financial Position
Current assets§ 701,571
Current liabilities ..... 262,162
Working capital ..... 439,409
Property - net ..... 380,030
Other assets ..... 90,082
Total ..... 909,521
Less:
Long-term debt
34,982
Non-current liabilities ..... 41,979
Deferred income taxes ..... 38,094
Net assets - Shareholders' equity\$ 794,466
\$ 668,810248,351420,459
353,551
92,235866,245
Other Data
Return on average shareholders' equity ..... $16 \%$
54,023
Total assets ..... \$1,171,683
Capital investments ..... 83,54139,66336,348
Depreciation ..... 54,614
At End of Year:
Number of employees5,299
Number of shareholders ..... 6,767
Common Shares outstanding (in thousands) ..... 34,516
\$ 736,211
Shareholders' equity per share ..... § 23.02 ..... \$$27 \%$
$\$ 1,114,596$92,231
53,960
5,1696,69234,698$\$ 5.34$
1.46
35,560

|  | 1,227,910 |  | 1,125,731 |  | ,022,277 | \$985,182 | \$913,351 | \$844,175 | \$800,303 | \$812,247 | \$899,161 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | 864,576 |  | 783,113 |  | 713,152 | 695,068 | 659,130 | 627,378 | 588,266 | 610,717 | 653,748 |
|  | 245,132 |  | 226,776 |  | 203,236 | 180,650 | 158,358 | 114,501 | 113,363 | 107,470 | 96,006 |
|  | 1,109,708 |  | 1,009,889 |  | 916,388 | 875,718 | 817,488 | 741,879 | 701,629 | 718,187 | 749,754 |
|  | 19,544 |  | 69,908 |  | 23,310 | 19,200 | 7,582 | 12,788 | 15,032 | $(6,739)$ | 8,168 |
|  | 137,746 |  | 185,750 |  | 129,199 | 128,664 | 103,445 | 115,084 | 113,706 | 87,321 | 157,575 |
|  | 43,766 |  | 54,544 |  | 47,864 | 50,479 | 43,221 | 47,353 | 48,962 | 39,760 | 65,544 |
|  |  |  | 8,751 |  |  |  |  |  |  |  |  |
| \$ | 93,980 | \$ | 139,957 | \$ | 81,335 | \$ 78,185 | \$ 60,224 | \$ 67,731 | \$ 64,744 | \$ 47,561 | \$ 92,031 |
|  | \$2.52 |  | \$3.62 |  | \$2.06 | \$1.97 | \$1.49 | \$1.73 | \$1.65 | \$1.21 | \$2.36 |
|  | 1.38 |  | 1.30 |  | 1.22 | 1.17 | 1.16 | 1.12 | 1.08 | 1.08 | 1.08 |
|  | 37,333 |  | 38,695 |  | 39,559 | 39,678 | 40,409 | 39,138 | 39,195 | 39,192 | 38,986 |
| \$ | 543,166 | \$ | 573,002 | \$ | 513,342 | \$462,982 | \$447,441 | \$376,050 | \$361,964 | \$304,542 | \$341,825 |
|  | 180,908 |  | 184,888 |  | 169,166 | 162,797 | 182,543 | 132,252 | 129,766 | 115,255 | 129,696 |
|  | 362,258 |  | 388,114 |  | 344,176 | 300,185 | 264,898 | 243,798 | 232,198 | 189,287 | 212,129 |
|  | 316,493 |  | 298,670 |  | 297,573 | 289,078 | 290,298 | 251,735 | 274,337 | 288,504 | 284,088 |
|  | 100,525 |  | 98,999 |  | 128,463 | 125,847 | 116,706 | 74,189 | 46,563 | 50,698 | 47,252 |
|  | 779,276 |  | 785,783 |  | 770,212 | 715,110 | 671,902 | 569,722 | 553,098 | 528,489 | 543,469 |
|  | 53,180 |  | 55,339 |  | 56,138 | 52,616 | 73,444 | 30,416 | 27,213 | 19,428 | 25,268 |
|  | 29,320 |  | 26,851 |  | 23,952 | 16,806 | 13,161 | 11,480 | 10,038 | 8,961 | 8,829 |
|  | 33,512 |  | 39,285 |  | 68,489 | 73,009 | 65,999 | 53,483 | 44,326 | 38,056 | 30,854 |
| \$ | 663,264 | \$ | 664,308 | \$ | 621,633 | \$572,679 | $\stackrel{\text { \$519,298 }}{\underline{-}}$ | $\underline{\$ 474,343}$ | $\underline{\$ 471,521}$ | \$462,044 | \$478,518 |
|  | 14\% |  | 22\% |  | 14\% | 14\% | 12\% | 14\% | 14\% | 10\% | 20\% |
| \$ | 960,184 | \$ | 970,671 | \$ | 939,378 | \$877,907 | \$854,445 | \$701,974 | \$682,864 | \$643,744 | \$673,165 |
|  | 82,720 |  | 71,891 |  | 56,460 | 52,986 | 103,990 | 49,001 | 27,961 | 64,044 | 77,214 |
|  | 48,682 |  | 46,598 |  | 47,229 | 42,591 | 44,605 | 38,723 | 37,038 | 37,168 | 32,068 |
|  | 5,030 |  | 4,781 |  | 4,817 | 4,802 | 5,205 | 4,176 | 4,165 | 4,322 | 4,237 |
|  | 7,370 |  | 7,782 |  | 8,335 | 9,240 | 10,803 | 10,804 | 11,277 | 10,615 | 9,986 |
|  | 37,008 |  | 38,010 |  | 38,961 | 39,691 | 39,661 | 39,111 | 39,195 | 39,195 | 39,946 |
| \$ | 17.92 | \$ | 17.48 | \$ | 15.96 | \$ 14.43 | \$ 13.09 | \$ 12.13 | \$ 12.03 | \$ 11.79 | \$ 11.98 |

## Transfer Agent, Registrar, and Dividend Disbursing Agent

National City Bank
P.O. Box 92301

Cleveland, Ohio 44193-0900
(216) 575-2529
(800) 622-6757

## Annual Meeting

The Annual Meeting of Shareholders will be held at the Clarion Hotel \& Conference Center, Eastlake, Ohio, on Monday, April 27, 1992.

## Form 10-K

The Form 10-K Annual Report to the Securities and Exchange Commission will be available April 1. A copy may be obtained without charge upon written request to the Secretary of the Corporation.

## Shareholder Information

The Common Shares of The Lubrizol Corporation are listed on the New York Stock Exchange under the symbol L.Z. The number of shareholders of record of Common Shares was 6,848 as of February 10, 1992.

## DIRECTORS

L. E. COLEMAN

Chairman of the Board and
Chief Executive Officer
W. G. BARES

President and Chief Operating Officer
EDWARD F. BELL
President and Chief Executive Officer of Ohio Bell, an Ameritech subsidiary, which provides telephone service, data transmission and other advanced telecommunications services to residential and business customers in Ohio. The company serves approximately three-fifths of the state's population.

## ANDRE GILLET

Retired Chairman and Chief Executive Officer of International Multifoods Corporation, a diversified food company.

## DAVID H. HOAG

Chairman and Chief Executive Officer of The LTV Corporation and Chief Executive Officer of LTV Steel Company. The LTV Corporation is a diversified company engaged in the production of steel, energy equipment and aerospace and defense systems.

## THOMAS C. MacAVOY

Professor of Business Administration, Darden School, University of Virginia and Retired Vice Chairman of the Board of Corning, Inc., a diversified glass and glass products company.

## RICHARD A. MILLER

Retired Chairman and Chief Executive Officer of Centerior Energy Corporation, an electric utility holding company with operating subsidiaries in Northern Ohio.

## RONALD A. MITSCH

Executive Vice President, Industrial and Consumer Sector and Corporate Services of 3M, a manufacturer of products for industrial, commercial, health care and consumer markets.

## RENOLD D. THOMPSON

President, Chief Executive Officer and a Director of Oglebay Norton Company, a raw materials and Great Lakes marine transportation company.

## KARL E. WARE

Chairman and Chief Executive Officer of Ware Industries, Inc., a company which designs, manufactures and markets a broad range of specialty wire forms and steel components.

## OFFICERS

## L. E. COLEMAN

Chairman of the Board and Chief Executive Officer
W. G. BARES

President and Chief
Operating Officer
PHILIP L. KRUG
Executive Vice President
GEORGE R. HILL
Senior Vice President
ROGER Y. K. HSU
Senior Vice President
WILLIAM D. MANNING
Senior Vice President

## ROBERT W. SCHER

Senior Vice President
RAY A. ANDREAS
Vice President and Chief
Financial Officer

## JEAN-POL ARZUL

Vice President
K. H. HOPPING

Vice President and Secretary
R. JOHN SENZ

Vice President
JOHN A. STUDEBAKER
Vice President
JOHN R. AHERN
Controller
WILLIAM R. JONES
Treasurer

## elubrizol <br> 29400 Lakeland Boulevard <br> Wickliffe, Ohio 44092

(216) 943-4200

## SPECIALTY CHEMICALS <br> LUBRIZOL PETROLEUM CHEMICALS COMPANY LUBRIZOL PERFORMANCE PRODUCTS COMPANY

## Principal Subsidiaries

and Branches
Lubrizol A.G. (Switzerland)
Lubrizol Australia
Lubrizol do Brasil Aditivos, Ltda.
Lubrizol Canada Limited
Lubrizol de Chile Limitada
Lubrizol Eastern Pacific Limited
(Hong Kong)
Lubrizol Enterprises, Inc.
Lubrizol Española, S.A.
Lubrizol France, S.A.
Lubrizol Gesellschaft m.b.H. (Austria)
Lubrizol G.m.b.H. (Germany)
Lubrizol Great Britain Limited
Lubrizol International, Inc.
Lubrizol Italiana, S.p.A.
Lubrizol Japan Limited
Lubrizol Korea
Lubrizol Limited (England)
Lubrizol de Mexico, S. de R.L.
Lubrizol S.A. (Belgium)
Lubrizol Scandinavia AB
Lubrizol Servicios Tecnicos
S. de R.L. (Mexico)

Lubrizol South Africa
(Pty.) Limited
Lubrizol Southeast Asia
(Pte.) Ltd. (Singapore)
Lubrizol de Venezuela C.A.
Gate City Equipment Company, Inc.
Resource Development, Inc.

## Affiliates

Lubrizol India Limited
Industrias Lubrizol S.A.
de C.V. (Mexico)
Lubrizol Transarabian Company Limited (Saudi Arabia)
C.A. Lubricantes Quimicos
L. $\mathbf{Q}$. (Venezuela)

SoLub Product Application
Laboratory (Russia)
Manufacturing Plants
Painesville, Ohio
Bayport, Texas
Deer Park, Texas
Atlanta, Georgia
Sydney, Australia
Rio de Janeiro, Brazil
Niagara Falls, Canada
Bromborough, England
LeHavre, France
Rouen, France
Mourenx, France
Bombay, India
Kinuura, Japan
Apodaca, Mexico
Yanbu, Saudi Arabia
Jurong, Singapore
Durban, South Africa
Valencia, Venezuela

## Laboratories

Chemical Research
Wickliffe, Ohio
Mechanical Testing
Atsugi, Japan
Hazelwood, England
Wickliffe, Ohio

## AGRIBUSINESS

AGRIGENETICS COMPANY

## Seed Divisions

AgriGene Seed Research Des Moines, lowa
Agrigenetics S.A.
(Argentina)
Agrigenetics SRL (Italy)
Eurograin Semences, S.A. (France)
Golden Acres Seed Company
Croton, Ohio
GroAgri Seed Company
Lubbock, Texas
Jacques Seed Company
Prescott, Wisconsin
McCurdy Seed Company
Fremont, Iowa
SIGCO Research
Breckenridge, Minnesota
Taylor-Evans Seed Company
Tulia, Texas
R.C. Young and Company

Lubbock, Texas
Specialty Vegetable
Oil Division
SV0 Enterprises
Eastlake, Ohio
Culbertson, Montana

## Affiliates

Dectesca S.A.
(Venezuela)

## Laboratories

Agrigenetics Laboratories
Biotechnology Research
Madison, Wisconsin

## © LUBRIZOL <br> 29400 Lakeland Boulevard

Wickliffe, Ohio 44092
(216) 943-4200


[^0]:    $45 \%$Engine Oil Additives 5\% Fuel Products
    $19 \% \square$ Driveline Oil AdditivesIndustrial Products
    7\% $\square$ Additive Components $3 \%$
     New Ventures

    5\%Viscosity Modifiers
    $9 \% \square$ Agribusiness

[^1]:    Most of the sales of the Agribusiness segment are made during the first half of the year, and operating losses are incurred in the third and fourth quarters as a result of incurring operating expenses with low sales. Agribusiness' cost of sales includes certain period costs and, therefore, may exceed sales in a quarter which has low volume.

    The third quarter of 1990 includes the gain on the sale of Genentech of $\$ 1.79$ per share and a loss of $\$ .14$ per share for the closure of a manufacturing plant in Spain. The fourth quarter of 1990 includes a charge in Agribusiness for the write-off of receivables and inventories of $\$ .19$ per share and a benefit from the settlement of tax audits of $\$ .17$ per share.

