

Specialty Materials  
Honeywell  
P.O. Box 430  
Highway 45 North  
Metropolis, IL 62960  
618 524-2111  
618 524-6239 Fax

May 27, 2005

U.S. Nuclear Regulatory Commission  
Attention: Michael Raddatz  
Fuel Cycle Licensing Branch, Mail Stop T-8A33  
Two White Flint North, 11545 Rockville Pike  
Rockville, MD 20852-2738

(UPS: 301-415-6334)

Subject: Renewal of USNRC Source Materials License

Re: Docket No. 40-3392  
License No. SUB-526

Dear Sirs,

Please find enclosed the Honeywell International Inc. application for renewal of USNRC Source Materials License SUB-526 for Honeywell's Metropolis, Illinois Uranium Conversion Facility (Docket No. 40-3392). This application has been prepared in accordance with the requirements of 10 CFR 40. The content and format of the application and supporting materials are generally consistent with the guidance provided in USNRC Regulatory Guide 3.55, "Standard Format and Content for the Health and Safety Section of License Renewal Applications for Uranium Hexafluoride Production." We have incorporated certain variations from this guidance consistent with our April 26, 2005 discussions with the NRC staff.

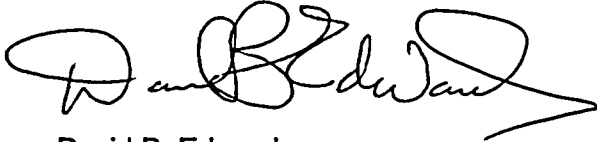
Enclosed are the following:

- One original and 7 copies of the Metropolis Works USNRC Source Materials License Application (Regulatory Guide 3.55 Chapters 1 through 7), including USNRC Form 313
- One original and 7 copies of the revised Metropolis Works Emergency Response Plan
- One original and 7 copies of the Metropolis Works Safety Demonstration Report (Regulatory Guide 3.55 Chapters 8 through 14), including related drawings and appendices
- One original and 7 copies of the Metropolis Works Environmental Report
- One compact disc containing the text files for each of the above in pdf format

Attached to this letter, please find a summary of the significant changes to the License Application and Safety Demonstration Report.

We hope that you will find these materials complete and in order. Should you have any questions, please contact Mr. Darren Mays, Metropolis Works Health, Safety, and Environmental Manager, at (618) 524-6396.

Sincerely,

A handwritten signature in black ink, appearing to read "David B. Edwards", with a long, sweeping horizontal line extending to the right.

David B. Edwards  
Plant Manager

Enclosures

cc:     Region II, US Nuclear Regulatory Commission     (UPS: 404-562-4731)  
          Attention: Mr. Jay L. Henson  
          Sam Nunn Atlanta Federal Center  
          23 T85, 61 Forsyth Street, S.W.  
          Atlanta, GA 30303-3415

**Honeywell Metropolis Works  
USNRC Source Materials License SUB-526  
Summary of Significant Changes to License Application  
and Safety Demonstration Report**

**General:**

1. Split former license Parts 1 and 2 into two separate documents – the License Application and the Safety Demonstration Report (SDR).
  - a. The License Application contains the conditions to which Honeywell is committed to ensure safe operation of the facility.
  - b. The Safety Demonstration Report contains more detailed and explanatory information that supports the License Application. A significant amount of detailed information has been transferred from the License Application to the SDR, with basic commitments remaining in the License Application.
2. Provided drawings as an Appendix to the SDR to allow for updates as part of the SDR update process.
3. Provided updated radiological, effluent, and demographic data.
4. Deleted references to the deconversion system.
5. Provided references to applicable Regulatory Guides, consensus standards, and other documents.

**Detailed Change Summary**

<b>Section (New)</b>	<b>Summary of Change</b>
Front matter	Provided table of contents and list of abbreviations
1.4	Provided updated licensed material possession information
1.5	Added product shipping and vehicle decontamination as authorized activities
1.6	Reduced level of detail provided for safety controls associated with cylinder filling, weight measurement, hydrocarbon controls, and glycol contamination controls. Transferred supporting technical details to SDR.
1.7	Reduced scope of radiological posting and labeling exemption to address labeling of source material containers only. Provided basis information in SDR. Deleted exemption related to use of the site Dispensary. Deleted details associated with leak testing of sealed sources, on-site disposal of radioactive waste (addressed by regulations) and material release (addressed in Section 3).
2.1 – 2.2	Provided updated organizational details, position descriptions, and information addressing authorization to change organizational structure and fill positions based on management prerogative, while maintaining separate lines of authority.
2.3	Provided description of revised Safety Committee structure, membership, and responsibilities
2.5	Provided updated description of employee training program

Growth at  
**Honeywell**

**2004**  
Annual Report

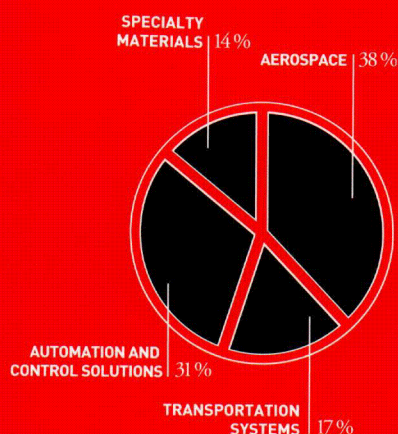


# FINANCIAL HIGHLIGHTS

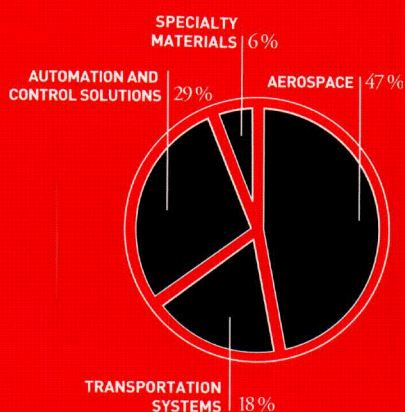
(Dollars and Shares in Millions, Except Per Share Amounts)	2004	2003	2002
Sales .....	<b>\$25,601</b>	\$ 23,103	\$ 22,274
Net Income (Loss) <sup>1</sup> .....	<b>\$ 1,281</b>	\$ 1,324	\$ (220)
Diluted Earnings (Loss) Per Common Share .....	<b>\$ 1.49</b>	\$ 1.54	\$ (0.27)
Cash Dividends Per Common Share .....	<b>\$ 0.75</b>	\$ 0.75	\$ 0.75
Book Value Per Common Share .....	<b>\$ 13.24</b>	\$ 12.45	\$ 10.45
Total Assets .....	<b>\$31,062</b>	\$ 29,314	\$ 27,565
Cash Flows from Operating Activities .....	<b>\$ 2,253</b>	\$ 2,199	\$ 2,380
Common Shares Outstanding at Year-end .....	<b>850</b>	862	854
Employees at Year-end .....	<b>109,000</b>	108,000	108,000

<sup>1</sup> In 2004, includes net repositioning, environmental, litigation, business impairment and other charges, gains on sales of non-strategic businesses and a gain related to the settlement of a patent infringement lawsuit resulting in a net after-tax charge of \$315 million, or \$0.36 per share. In 2003, includes the cumulative after-tax charge of \$20 million, or \$0.02 per share, for the adoption of SFAS No.143. In 2003, also includes net repositioning, environmental and other charges, gains on sales of non-strategic businesses and a gain related to the settlement of a patent infringement lawsuit resulting in a net after-tax charge of \$22 million, or \$0.03 per share. In 2002, includes net repositioning, litigation, business impairment, and other charges and gains on sales of non-strategic businesses resulting in a net after-tax charge of \$1,864 million, or \$2.27 per share.

**SALES BY  
BUSINESS SEGMENT\***  
(percent)



**PROFIT BY  
BUSINESS SEGMENT\***  
(percent)



\*Excludes Corporate sales of \$2 million and general Corporate unallocated expenses of \$158 million; see Note 23 in Financial Statements

These materials contain certain statements that may be deemed "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical fact, that address activities, events or developments that we or our management intends, expects, projects, believes, or anticipates will or may occur in the future are forward-looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments, and other factors they believe to be appropriate. The forward-looking statements included in these materials are also subject to a number of material risks and uncertainties, including but not limited to economic, competitive, governmental, and technological factors affecting our operations, markets, products, services, and prices. Such forward-looking statements are not guarantees of future performance, and actual results, developments, and business decisions may differ from those envisaged by such forward-looking statements.

## TABLE OF CONTENTS

1	Letter to Shareowners
7	Honeywell Brand Promise
8	Doing a Superb Job for Our Customers Every Day
10	Superior Sales and Marketing
12	Globalization
14	Developing Robust Technology Roadmaps
16	Aerospace
17	Automation and Control Solutions
18	Transportation Systems
19	Specialty Materials
20	Voice of the Customer
21	People and Performance
22	Senior Management and Leadership Teams
23	Board of Directors
24	Honeywell Hometown Solutions

## TO OUR SHAREOWNERS

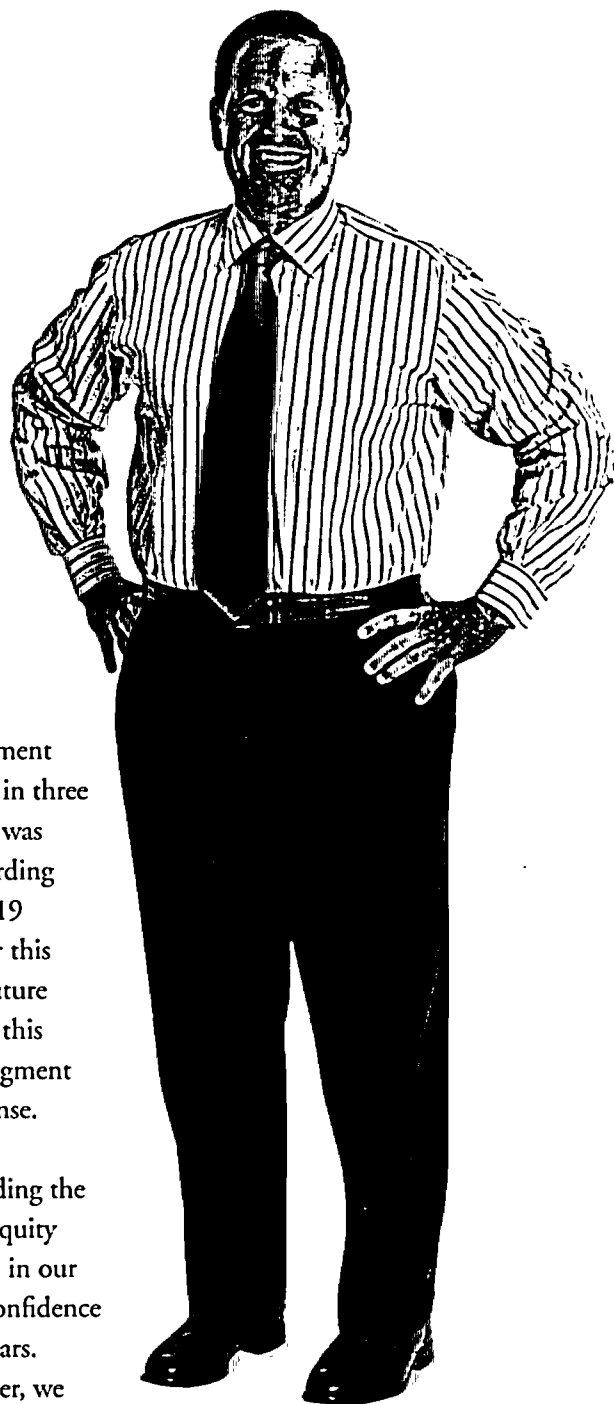
We have turned the corner!

And it feels great. In 2002 and 2003, we worked hard to resolve our big issues, get strong leadership teams in place, strengthen our balance sheet, and establish strong growth paths in every business even while our end markets suffered. It began to pay off in 2004 and looks even more exciting for 2005.

### FINANCIALS

We had a very good year. Sales of \$25.6 billion were up 11%, segment profit was up in each of our businesses with increases of more than 20% in three of them, and cash flow from operations was robust at \$2.3 billion. EPS was down 3% at \$1.49 reflecting the surprise verdict in February 2005 regarding the New Jersey chrome case, an unusual item that reduced earnings by 19 cents per share. It is painful to adjust previously announced earnings for this unanticipated, legacy item. That said, this verdict has little impact on future operations and does not reflect on the value of the company. Excluding this charge, EPS was up 9% with the difference between EPS growth and segment profit growth primarily attributable to increased non-cash pension expense. The strength of our operations is encouraging.

Our cash position and capital structure continued to improve, ending the year with net debt (total debt minus cash) to net capital (shareowners' equity plus net debt) of 13%. Having that cash gives us the flexibility to invest in our businesses and to increase returns for our shareowners. Reflecting our confidence in the future, we raised the dividend 10% ... the first increase in five years. Taking advantage of a temporary stock price decline in the fourth quarter, we bought back an incremental 10 million shares in addition to the 10 million shares planned in 2004. These actions returned \$1.3 billion to shareowners in 2004. We are also studying the provisions of the American Jobs Creation Act, which was signed by the President on October 22, 2004, giving us the opportunity in 2005 to bring back to the U.S. up to \$2.6 billion of cash from our foreign operations at a significantly reduced rate of U.S. income tax. Congress or the Department of Treasury still must act on the Technical Corrections Bill, introduced in Congress on November 19, 2004, to provide clarity and confidence on the cash repatriation provision of the American Jobs Creation Act.



Cash flexibility also allowed us to continue improving the businesses. We completed 3 dispositions (\$567 million sales, \$426 million cash proceeds) and 11 acquisitions (\$277 million sales, \$384 million cash purchase). With our new, more rigorous acquisition process now in its third year, we feel confident about generating the necessary returns. We adhere strictly to the new process and it works.

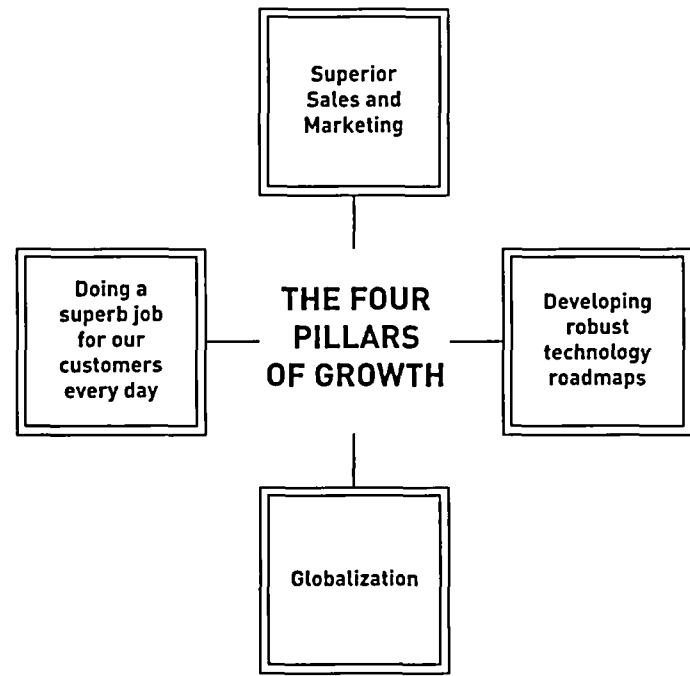
The year culminated with the announcement of our offer to acquire the shares of Novar plc. Subject to the completion of regulatory review, we expect to complete the transaction in the first quarter. The Intelligent Building Systems (IBS) division is a great addition to our Automation and Control Solutions (ACS) business. It adds a needed strengthening of our European fire detection, environmental controls, security, and services businesses. Roger Fradin and his team are already working hard to ensure we integrate quickly, efficiently, and effectively to realize the inherent synergies. The Security Printing Services (SPS – check printing) and Indalex Aluminum Solutions (IAS – aluminum extrusion) divisions of Novar are very strong businesses in their respective industries. They just don't fit with the Honeywell portfolio. There is already strong interest from the strategic and financial communities for these businesses ... to buy separately or together. We anticipate the sale of both within a year. This acquisition requires the work of integration in addition to that of selling two of three divisions but we expect when all is said and done this will be a great investment for us.

## **PENSION AND ASBESTOS**

Our improvement in pension financial impact is encouraging. We have no cash funding issues and returns have been great. We expect the negative impact of pension expense (29¢ per share in 2004), driven principally by our conservative recognition of book losses, to begin declining in 2005. Asbestos exposure continues to run as predicted and is consistent with our reserves. Claims settlement values in fact continue to run better than our original expectations. After 2005, our expenditures associated with our NARCO exposure should begin declining significantly. Even with asbestos expenditures, our 2005 free cash flow (cash from operations minus CAPEX) should be \$1.6 - \$1.7 billion (estimated cash flow from operations of \$2.4 - \$2.5 billion, minus capital expenditures). We continue to believe our exposure is well understood and contained. It is not dependent on legislative reform. Reform as contemplated by the U.S. Senate in the Fairness in Asbestos Injury Resolution (FAIR) Act establishing a national trust fund would be helpful to us of course and, more importantly, critical for the country. We all hope they act on it.

**The outlook for Honeywell is bright. In the global economy, capital investment is expanding, job growth continues, and cash flows from most companies continue to improve. All good news for our businesses.**

Introduced in 2002, the **FOUR PILLARS OF GROWTH** are the foundation of Honeywell's strategy to drive organic growth through processes and service excellence, innovative products and services, and close partnerships with our global customers.



## FIVE INITIATIVES AND TWELVE BEHAVIORS

On balance, the outlook for Honeywell is bright. The global economy (even with adverse commodities pricing) looks good. Flight hours continue to increase, capital investment is expanding, job growth continues, and cash flows for most companies continue to improve. All good news for our businesses.

We will stay the course with our Five Initiatives (Growth, Productivity, Cash, People, and our Enablers – DigitalWorks and Six Sigma) and our Twelve Behaviors. The Five Initiatives give us a path and the Twelve Behaviors ensure our results are sustainable. How we get things done is just as important as what we get done.

Our organic **Growth** focus continues to gain traction. It is based on four areas. One ... doing a great job every day for our customers in quality, delivery, value, and technology. There is still more to do but our progress in the last two years in becoming a more reliable supplier has been noticed by customers. Our 109,000 employees worldwide take this very seriously ... and it shows. Two ... Sales and Marketing excellence also shows improvement and promise. The focus on functional excellence and introduction of the Strategic Marketing Course is starting to pay off. While the benefits may seem obvious, few industrial companies are truly effective here. Three ... globalization continues to expand. We now have R&D centers in Bangalore, India; Shanghai, China; and Brno, Czech Republic that will help us do a much better job in developing products for local markets. Four ... developing robust funded technology roadmaps for new products and services supported by Six Sigma. Great progress here. Velocity Product Development™ (VPD™), our approach to getting better new products and services faster, is working. This year will see the introduction of many new products and services (especially in ACS) with more on the way. Our brand promise – “We are building a world that’s safer and more secure ... more comfortable and energy efficient ... more innovative and productive” – comes alive with these four pillars of growth.



**Productivity** continues to be a company strength and we will build upon it. In addition to our historic focus on materials, indirect costs, and labor we will be intensifying our look at functional costs and real estate. Functional costs are too high primarily because we lack standardization in our processes and haven't digitized as extensively as we could. Each corporate functional leader is working with business leaders and using DigitalWorks to improve dramatically the effectiveness and cost of their processes.

We are also introducing the Honeywell Operating System (HOS) to our operations. We have provided employees with great tools in Six Sigma, Lean, Cycle Time, and Safety but we haven't had a comprehensive approach a plant manager can use to continuously improve operations. HOS, based on the highly successful Toyota Production System, does exactly that ... providing a consistent roadmap incorporating all our tools. We're piloting it now in 10 plants with plans to launch in 20 more in 2005 and initial results are highly encouraging. Productivity opportunities for us are still big.

We all understand the importance of **Cash**. Cash from Operations continues to be strong, we've increased CAPEX plans for 2005 about \$150 million to a reinvestment ratio of 1.29 reflecting greater growth prospects, and the working capital focus remains intense. Working capital is a symptom of the effectiveness of operating practices. We've made great strides improving working capital turnover from 3.9 to 5.5 over three years. While it sounds like a small improvement, it freed up \$1.9 billion in cash, and there's still more to go.

**People** are the ultimate differentiator. Consistently providing good feedback, reinforcing the Twelve Behaviors, and rewarding achievement are essential to building a company culture of sustainable performance. Our new Performance & Development System standardizes and digitizes this process and makes both the first and second tier managers central to the evaluation process. It ensures employees receive a thorough, accurate, candid performance review and commensurate reward. Too often in the past, management abdicated this responsibility to the employee. That has changed.

On our leadership team, Bob Johnson transitioned to non-executive Chairman of Aerospace in anticipation of his retirement in January of next year. Bob did an outstanding job leading Aerospace through its most challenging times ... the worst slump in aviation history and the deal issues early in the decade. We will miss Bob, his leadership, and sense of humor and we wish him the absolute best. Rob Gillette (formerly CEO-Transportation Systems) became our Aerospace leader. Adriane Brown (formerly in Aerospace) became our Transportation Systems leader. Both Rob and Adriane have terrific track records and we expect great things from them!

**Cash flexibility allowed us to continue improving our businesses. With our new, more rigorous acquisition process now in its third year, we feel confident about generating the necessary returns.**

Our Board also saw changes with the retirement of Bob Luciano (Chairman Emeritus, Schering-Plough Corporation) last year and the anticipated retirement in April of Hans Becherer (Former Chairman and CEO, Deere & Company) this year. Bob (15 years) and Hans (14 years) provided critical leadership especially during our difficult transition years. Their counsel was important, timely, and appreciated by all of us. Brad Sheares (President, U.S. Human Health, Merck & Co., Inc.) joined us during the year. With his Ph.D. in Biochemistry, Brad provides a terrific perspective for our technology-based company. He is a welcome addition.

The impact of the tsunami in Asia affected us all. We are donating \$1 million as a company to support efforts primarily focused on rebuilding housing and infrastructure.

A process has been put in place around the world to facilitate employee giving. Our employees in India responded aggressively, volunteering from Bangalore to rebuild 50 homes and from Pune to donate a full day's salary from each of our 1,500 employees to relief efforts. There are a lot of people in the world working to rebuild in the wake of this tragedy. Employees feel better knowing we're part of it.

We also continue to support the Climate RESOLVE initiative of the President of the United States. We have a leader in place, the analytical work is about completed, and we are developing detailed implementation plans. This is another good place to participate in efforts that affect people everywhere.

Our Enablers, DigitalWorks and Six Sigma, support all our initiatives. Six Sigma is becoming more a part of how we do things from the Honeywell Operating System to Velocity Product Development™ and implementation of the new Performance & Development System. DigitalWorks is employed extensively as we implement ERP in Aerospace, pursue "One Process One System" in ACS, and drive more effective standardized functional processes with lower costs.

Our Five Initiatives have provided a clear and consistent operating path forward for our employees around the world. We will continue to use them as our framework for change, adding or modifying as we progress.

**We truly have turned the corner. Our businesses are in better shape competitively than they have ever been.**

## **BUSINESSES**

All of these efforts are having a great impact on our businesses. Our Aerospace enterprise is wonderful in both mechanical and electronic systems. With increasing commercial flight hours, this business just continues to get better and better. The Primus Epic® platform continues to be very well received by our business jet and regional aircraft customers, our commercial aircraft partners are including significant Honeywell content on their new platforms, and we continue to develop high-technology, high-value components for defense and space manufacturers and government contractors.

ACS is integrating a number of acquisitions to great effect and has good positions in their industries. We have many new products to be introduced this year. Numerous contract wins and increasing demand for installations and energy retrofits are driving growth in our Building Solutions and Process Solutions businesses. Specialty Materials is nearing completion of their divestiture program, exiting 9 businesses (\$1.1 billion sales) over the last three years. This traumatic but absolutely necessary step sharpens our focus on our core growth platforms (fluorines, advanced fibers and composites, electronic materials, reagents, and barrier solutions). During the past three years, Specialty Materials, adjusted for acquisitions and divestitures, produced nearly \$1 billion of growth and a 49% annual growth rate in segment profit. Transportation Systems continues to be a strong performer. Trends in the car and truck market continue to drive our turbocharging business, with diesel penetration in Europe reaching 48% in 2004 and Class 8 truck builds in the U.S. up more than 45%. With the improving economic picture and despite commodities inflation, the outlook for all our businesses is very encouraging.

## SUMMARY

So what does all this mean? It means we truly have turned the corner. Our businesses are in better shape competitively than they have ever been, the economic outlook is good, our balance sheet is strong, we have a great leadership team in place, and we are clearly building a world-class global company.

Five years ago we were three separate organizations (Honeywell, AlliedSignal, Pittway) with at least three separate cultures. We were just a collection of disparate businesses. Today we're a company. People are evaluated the same way, best practices are shared, functional excellence is standardizing processes, the Five Initiatives provide a path, and our Twelve Behaviors guide us. Today there are more things that unite rather than divide us. The progress is noticeable and our people feel it.

As much progress as we've made, we can also see the best is yet to come. There is lots of opportunity for Honeywell and our people. The future is exciting.

We have turned the corner.



David M. Cote  
Chairman and Chief Executive Officer  
February 2005

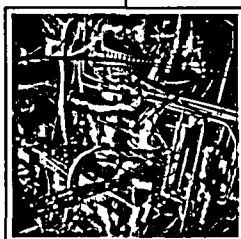
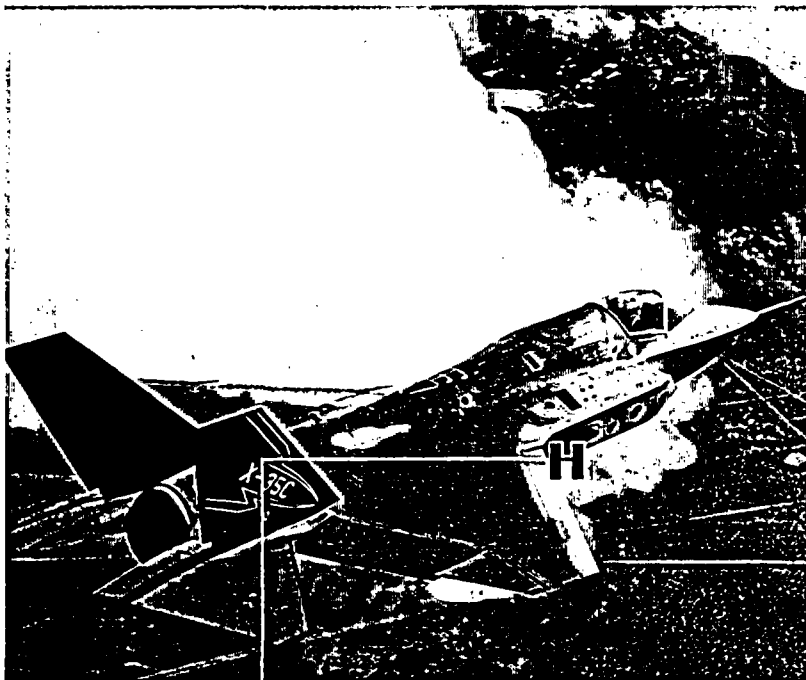
We are building a world  
that's safer and more secure ...  
more comfortable and energy efficient ...  
more innovative and productive.

We are Honeywell.

Our Initiatives:

Growth • Productivity • Cash • People • Enablers: DigitalWorks and Six Sigma

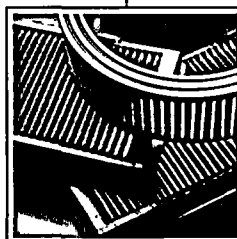




Lockheed Martin reduced the length and weight of its F-35 Joint Strike Fighter by **10 INCHES** and **1,000 POUNDS** with Honeywell's Power & Thermal Management System (PTMS).

PTMS integrates environmental controls and both auxiliary and electrical power for better reliability at lower life-cycle costs.

## DOING A SUPERB JOB FOR OUR CUSTOMERS EVERY DAY

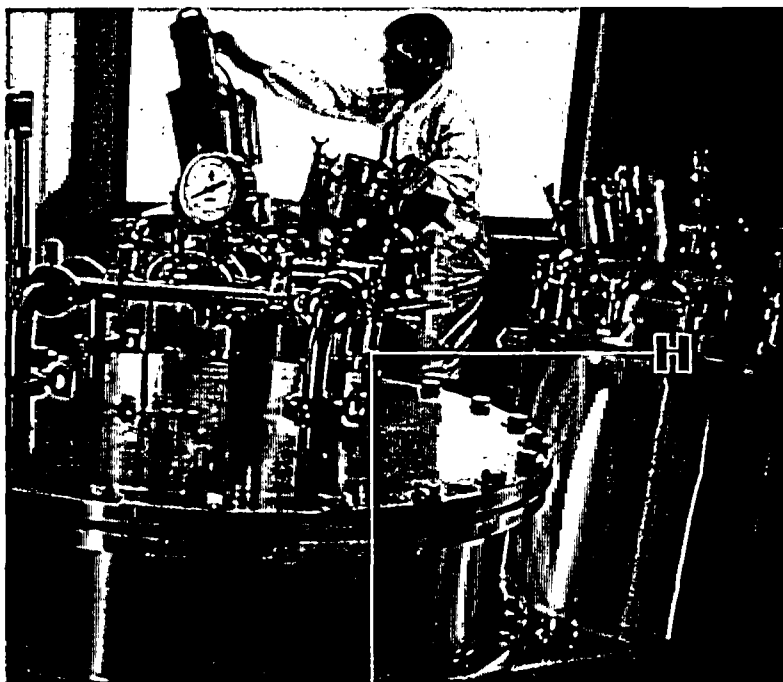


With more than 3,000 locations, AutoZone is among the largest retailers of Honeywell's consumer automotive power brands – FRAM®, Prestone® and Autolite®.

FRAM® AirHog™ achieved a **100% on-time DELIVERY RATE** on more than **400,000 UNITS** to retailers in 2004, and will add 200,000 more units in 2005.

At Honeywell, every factory worker, every shipping supervisor and every quality engineer is a customer service specialist. Keeping quality, delivery, value and technology promises to our customers is the most important thing we do.

Honeywell's 200 global manufacturing facilities and 226 service operations are the backbone of this commitment. Every site worldwide is measured monthly, based on our customers' expectations. We improved our quality performance in 2004 by 23 percent, with 99.75 percent of our products defect free as measured by the customer. We also improved our on-time delivery performance from 85 percent in 2003 to 90 percent in 2004.



Qualigens Fine Chemicals, a division of GlaxoSmithKline India, selects Honeywell's solvents that are at least **99.6% PURE** to meet the exacting requirements of biotechnology researchers.

Pharmaceutical and biotechnology companies choose Honeywell to produce high-purity solvents for chromatography applications in drug research.



Embraer enhances cockpit functionality and reliability with Primus Epic®. Reducing aircraft weight by approximately **400 POUNDS**, it allows an additional revenue-generating passenger seat on the Embraer 170.

Primus Epic®, an integrated avionics and fly-by-wire system, reduces pilot workload and optimizes system architecture on regional and business aircraft.



Dassault Aviation uses Honeywell's Ovation™ C Series cabin management system to offer entertainment, information and connectivity to business jet aircraft customers.

Ovation™ was installed in more than **100 BUSINESS JET AIRCRAFT** in 2004 – growing nearly 20% over the prior year.

Customers choose Honeywell because they know we can help solve their toughest technology challenges. Our specialty films used in blister packs provide moisture-barrier protection for medications. On a much larger scale, our integrated life-safety and security systems protect airports around the world. Engine and transmission manufacturers use our pressure transducers to ensure product quality and performance. The semiconductor industry uses our load cells to control polishing of silicon wafers, and we are creating the next generation of smoke detectors by applying wireless technology.

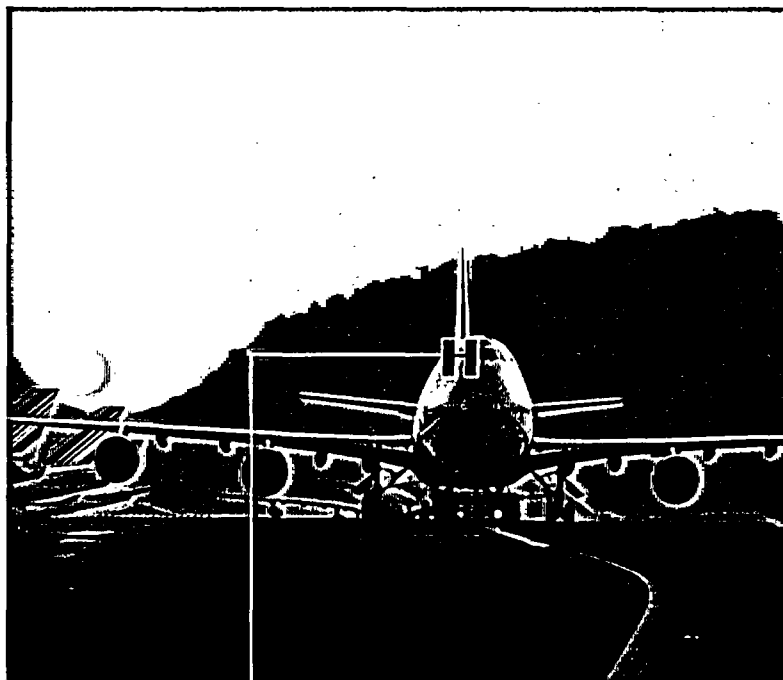
We listen and respond to our customers and develop technologies to help them grow.



Today's powerful microprocessors produce **HEAT FLUX** greater than that experienced on NASA's Space Shuttle at re-entry into Earth's atmosphere.

As computer chips get smaller and offer improved performance, Honeywell's thermal management materials help keep them cool and extend their life.

## SUPERIOR SALES AND MARKETING

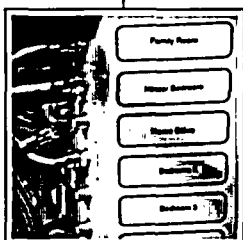


In 2001, U.S. airports reported approximately **ONE RUNWAY INCURSION** per day, a serious potential collision risk.

Leveraging technology from our Enhanced Ground Proximity Warning System, which alerts pilots to potential in-flight dangers, our Runway Awareness and Advisory System improves pilot position awareness during taxi, takeoff and landing.

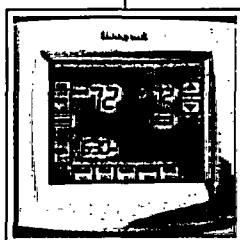
Honeywell Sales and Marketing is rooted in Voice of the Customer (VOC) analysis. VOC links our global research and development teams with our customers, ensuring Honeywell innovations solve their most critical needs.

Our leadership and our sales force use VOC tools to better understand both our customers and their competitors. For example, one Honeywell team spent more than 1,000 hours speaking with homeowners, contractors and builders to solve the ease-of-use problem with programmable thermostats. The result is the new VisionPRO™ thermostat, which exceeded initial order projections.



Structured wiring in new U.S. home construction will increase by 10% every year over the next several years.

Honeywell's structured wiring solutions integrate security, fire, heating, air conditioning, entertainment and communications into a single system for the homeowner.



Nearly 70% of homeowners claim that programmable thermostats are difficult to use.

VisionPRO's™ touch-screen offers both simple programming and significant savings in energy costs. Launched in June 2004, it helped grow Honeywell's programmable premium thermostat category by more than 40%.

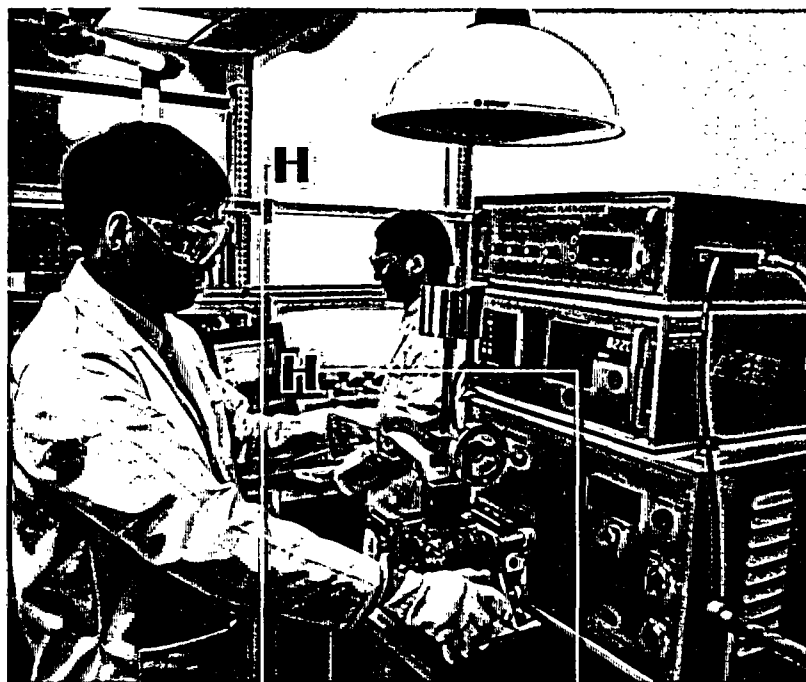


Spectra® fiber operations run 24 HOURS a day, SEVEN DAYS a week to meet U.S. military and law enforcement demand.

Ten times stronger than steel, yet light enough to float, Spectra® fiber is used in a wide range of applications, from bullet-resistant vests to ship mooring lines.

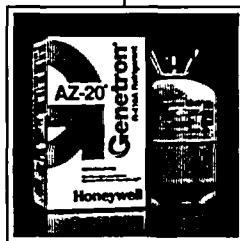
Another Honeywell team established an Energy Savings Performance Contracting program (ESPC) for government customers who lack capital to invest in building improvements. With ESPC, schools, hospitals and government facilities fund these programs with Honeywell-guaranteed savings from their energy budgets. Over the last 20 years, Honeywell has delivered customers more than \$1.9 billion in these savings.

Honeywell employees innovate with a purpose – to deliver productivity and performance advantages to our customers.



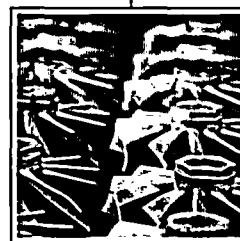
In 2004, Honeywell sold more than 370 building management systems in China, including several in the new Pudong area of Shanghai.

Our systems integrate building automation controls, fire alarms and safety management systems to improve efficiency and reduce energy consumption.



Demand for non-ozone-depleting HFC refrigerant blends is expected to grow in Asia by more than 20% in 2005.

Honeywell's high-performance fluorocarbon refrigerants enable air conditioning and refrigeration manufacturers to offer environmentally friendlier products worldwide.



Turbodiesel engines powered 48% of all passenger vehicles sold in Europe in 2004.

Honeywell Turbo Technologies' plant in Bucharest, Romania, manufactured nearly 900,000 TURBOCHARGERS in 2004, 10% of the company's global production.

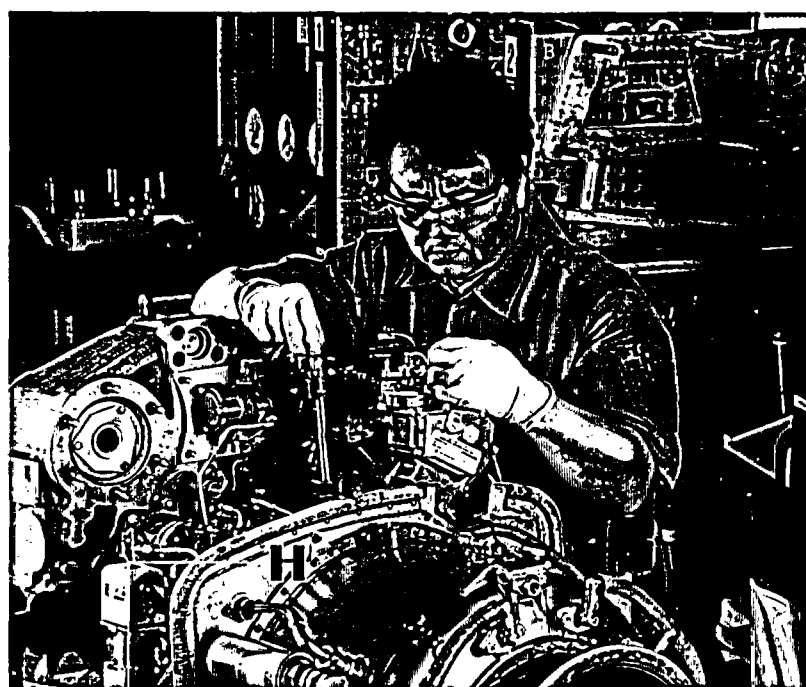
## GLOBALIZATION

Honeywell is creating a borderless mindset to design, manufacture, sell and service our products where it makes the most sense for our customers and their customers.

Honeywell has the infrastructure and scale to open new markets for our products and services, and the knowledge to execute successfully everywhere opportunities arise. We focus on developing our workforce, building partnerships and becoming part of the communities where we operate.

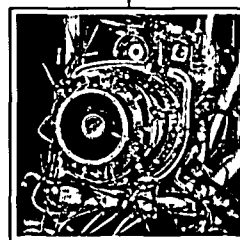
Our global design and manufacturing facility in Brno, Czech Republic, has more than 600 employees who develop products for combustion, environmental and water controls, home and building solutions, aerospace and security.

In 2004, we strengthened our presence in two of the world's fastest-growing economies: China and India.



More than 50% of India's largest oil and gas, refining, pulp and paper, and metal and mining companies utilize Honeywell's engineering services.

Honeywell's process solutions manufacturing, design and engineering organization in Pune, India, offers customers advanced software solutions, performance contracting, project engineering and total business management solutions.



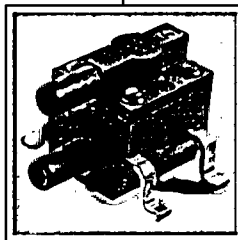
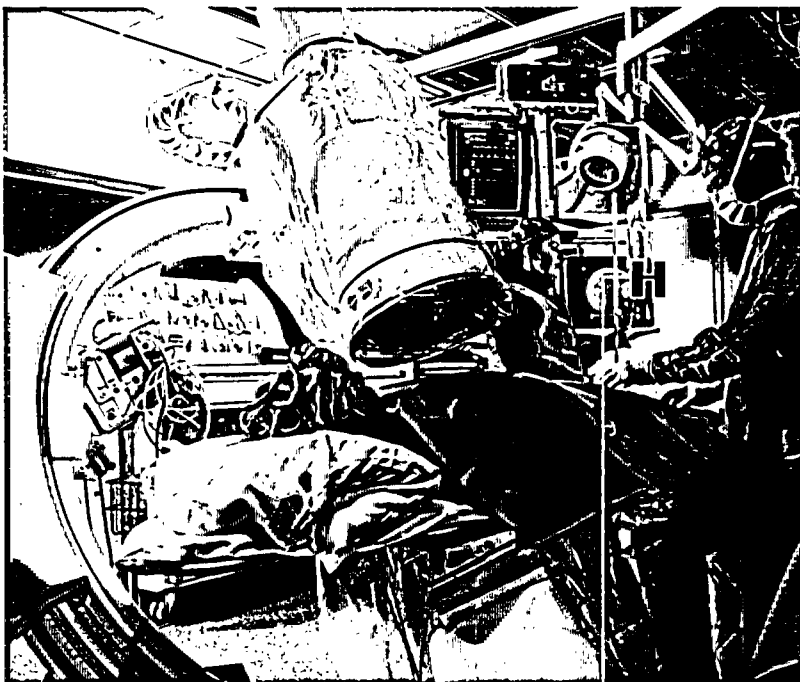
The Aerospace Repair & Overhaul facility in Singapore is one of Honeywell's largest, handling about 500 **ENGINES** and more than 8,000 **COMPONENTS** annually.

Commercial airlines and general aviation customers use our Singapore facility to service auxiliary power units, engines and other critical components.

Honeywell began trading in China in 1935. Today, we have 4,000 employees and 29 facilities in 13 Chinese cities. To further build our presence in the region, we opened our new Asia Pacific Headquarters and Technology Research & Development Center in Shanghai, as well as a manufacturing plant for our non-ozone-depleting refrigerant products.

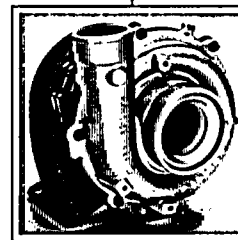
The acquisition of majority ownership in Tata Honeywell in Pune, India, expands our ability to address the region's growing automation and process control market while extending our global capabilities in software and process engineering.

Globalization is bringing new product design and development closer to our customers worldwide.



With **65,000 SENSING PRODUCTS**, Honeywell offers automotive, aviation, appliance, industrial, medical and technology customers the broadest range of solutions from any single manufacturer.

In the medical industry, Honeywell sensing technologies monitor airflow, pressure and force in respiratory devices, diagnostic equipment and infusion pumps.



A turbodiesel engine is **30% to 50%** more fuel-efficient than a naturally aspirated gasoline engine with similar power.

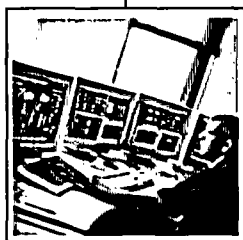
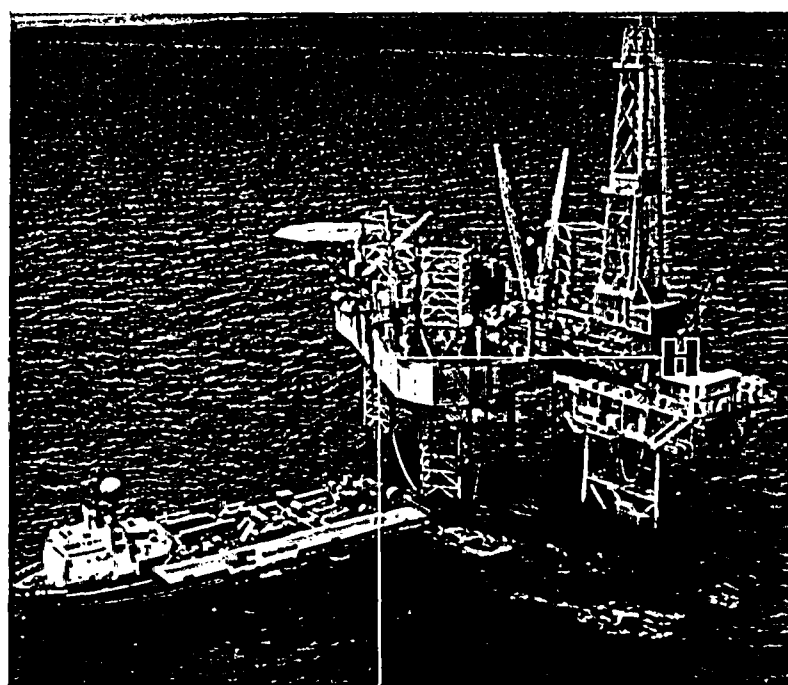
Honeywell turbocharging technology boosts diesel and gasoline engines in passenger vehicles and diesel engines in light- and heavy-duty trucks.

## DEVELOPING ROBUST TECHNOLOGY ROADMAPS

Innovative technologies, flawless execution and speed to market are critical to successful new product introductions for Honeywell and our customers. Using Lean Principles, Design for Six Sigma and Honeywell's Velocity Product Development™ process, we shorten the time from idea generation to market introduction.

With early customer insights from our marketing teams, Honeywell engineers use Six Sigma tools to ensure that our technologies deliver real value.

Technologies that we develop for one industry often benefit customers in another. Our silicon-on-insulator integrated circuit technology ensures data reliability from



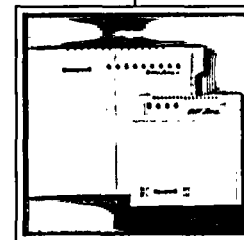
Our Experion Process Knowledge System™ unifies people, processes, asset management data and security systems, reducing operator errors by up to 33% and maintenance costs by nearly 30%.

Manufacturers in industries such as oil and gas, pharmaceuticals and refining make more informed and faster decisions with our integrated software management.



Honeywell researchers analyzed more than **2,000 MOLECULES** to develop and commercialize Enovate® 3000.

Our non-ozone-depleting blowing agent is a key ingredient in spray foam insulation used in refrigerators, as well as commercial and residential buildings.



Zoned heating and cooling is one of the most preferred features among U.S. homeowners, yet it's found in fewer than 18% of homes today.

In the growing wireless technology segment, Honeywell wireless zoning offers homeowners the comfort of zoned room-by-room temperature control.

electronic components in space vehicles and is being adapted to create heat-resistant electronics for drilling equipment used in natural gas exploration. Our jet engine technology has helped improve the design of our turbochargers.

By combining diverse technologies, we create unique solutions. Honeywell can integrate building controls, fire and life-safety solutions, security systems and process controls within a facility and across an enterprise.

At Honeywell, we are unwavering in our commitment to enhance our technology investments and deliver the innovations that drive our customers' success.



# AEROSPACE

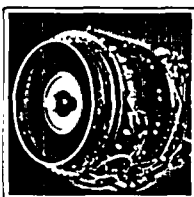
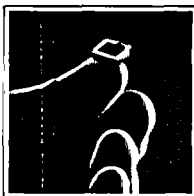
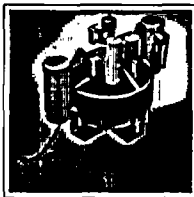
Honeywell is one of the world's most advanced suppliers of technology solutions, integrated systems and aftermarket services to the aerospace industry. Honeywell has the expertise to provide the best in both electronic and mechanical systems. Our powerful and efficient engines, integrated avionics and reliable landing systems improve safety, efficiency and mission capability for today's most advanced aircraft, spacecraft and military vehicles. Our customers include the world's top aircraft manufacturers, leading commercial airlines, aircraft owners and operators, military services, and defense and space prime contractors.



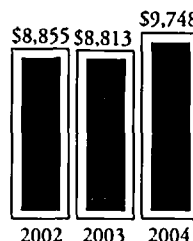
"Aerospace customers count on Honeywell to deliver technology solutions that enhance safety, improve performance and reduce costs."

Robert J. Gillette  
President and Chief Executive Officer  
Aerospace

Our diverse aerospace portfolio includes a fully autonomous, 29-inch diameter **ORGANIC AIR VEHICLE (OAV)** used for battlefield surveillance to provide soldiers with better situational awareness. **MICRO-ELECTROMECHANICAL SYSTEMS (MEMS)** technology integrates mechanical elements, sensors, actuators and electronics on a single silicon chip. MEMS are used in gyroscopes to measure rotation and in accelerometers to measure motion. **T55 GAS TURBINE ENGINES** power the U.S. Army CH-47D Chinook helicopter and other aircraft, delivering more power, greater reliability and improved fuel economy.



**SALES**  
(dollars in millions)



**SEGMENT PROFIT**  
(dollars in millions)



## GROWTH DRIVERS

- Global flying hours increased at double-digit rates in 2004 and are expected to continue as consumer confidence strengthens.
- Worldwide business jet deliveries are projected to reach 650 aircraft in 2005 – a 30 percent increase over 2003 delivery levels – increasing demand for avionics systems and engines.
- Commercial aircraft manufacturers increased production of fuel-efficient aircraft to meet carriers' demand for solutions to reduce operating costs and enhance overall performance.

## 2004 MILESTONES

- Boeing selected Honeywell's Flight Control Electronics, Crew Information System/Management System, Navigation package, and Exterior and Anti-Collision Lighting for its new 7E7 Dreamliner. The total program value is expected to be more than \$2.6 billion.
- Lufthansa and Emirates were among several of the world's leading airlines to choose Honeywell's wheel and brake products and services, generating more than \$460 million in total contract value.
- Lockheed Martin selected Honeywell to provide wholesale logistical supply chain support for the F-35 Joint Strike Fighter.

In 2004, Honeywell drove sales by supporting a recovering commercial aerospace market. Growth in 2005 is expected from an improving global economy, platforms with significant Honeywell content and an expanding global focus on safety and security. We will continue development for the Future Combat Systems, expanding our presence in providing communications, supply chain tools and network-enabled products to U.S. military forces.

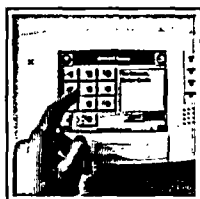
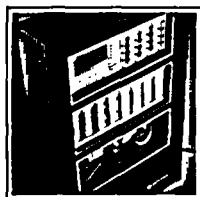
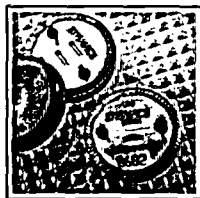
# AUTOMATION AND CONTROL SOLUTIONS



"Customer responsiveness, cutting-edge technology, and outstanding sales and marketing drive our growth. We meet the high standards set by our customers by delivering new products, building new markets and expanding partnerships."

Roger Fradin  
President and Chief Executive Officer  
Automation and Control Solutions

Our automation and control solutions include **BATTERY-LESS AND WIRELESS PRESSURE TRANSDUCERS** to accurately measure pressure and temperature in a variety of applications for transportation customers. **INTELLIGENT FIRE ALARM SYSTEMS** protect customers' most valuable assets with integrated fire detection and evacuation solutions. **HONEYWELL SYMPHONY** allows homeowners to easily control their security systems from home or the Internet, and view video feeds from security cameras installed around their homes.

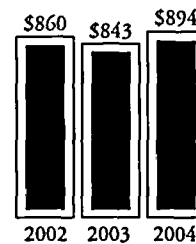


Honeywell enhances people's lives at home, at work and in transit. In 100 million homes and five million buildings worldwide, our products, services and solutions improve climate control, air quality, energy efficiency, life safety and security. We automate control processes in complex industrial environments to improve productivity and profitability. Our sensing technologies enhance safety and performance in medical, automotive, aviation, technology, consumer appliances and industrial businesses. We are experts in developing sensing and control technologies and in the ability to integrate critical systems for homes, businesses and government facilities.

**SALES**  
(dollars in millions)



**SEGMENT PROFIT**  
(dollars in millions)



## GROWTH DRIVERS

- Stricter government energy regulation and aging infrastructures are driving demand for building upgrades and energy efficiencies.
- The need for better data, improved efficiency and reduced wiring costs in industrial processes is driving demand for wireless transmitters in complex environments.
- Builders and developers are seeking to gain economies of scale through integrated solutions for heating, ventilation and air conditioning; indoor air quality; security; and structured wiring.

## 2004 MILESTONES

- The acquisition of majority ownership in Tata Honeywell in Pune, India, provides a platform for growth in the region.
- Honeywell increased its process solutions orders by 16 percent year-over-year, including projects at a refinery in Romania, a steel company in India and an oil and gas company in Croatia.
- Building Solutions won \$20 million in orders with the U.S. Postal Service to implement Shared Energy Savings Contracts in California, including chiller replacements and major mechanical upgrades, a co-generation project and lighting retro-fits in over 70 facilities.

In 2004, we introduced 115 new products based on Voice of the Customer research. Honeywell is moving into adjacent market segments such as water controls, life care, medical design and manufacturing, and structured wiring for homes. In 2005, we will launch new emergency response technology to provide emergency personnel with critical information before they arrive at a scene. We will also expand our ability to meet customer requirements in China, India, Japan and the Middle East through localization of process control, fire, building control, and security products, services and solutions.

## TRANSPORTATION SYSTEMS



"Honeywell's turbochargers enable automakers to develop more fuel-efficient vehicles – gasoline, diesel and hybrid – without sacrificing performance. Our turbocharging solutions also allow them to meet increasingly stringent emissions standards."

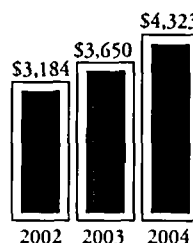
Adriane Brown  
President and Chief Executive Officer  
Transportation Systems

For vehicle performance, efficiency and appearance, Honeywell's **PRESTONE® ALL MAKES ALL MODELS** simplifies the antifreeze market with a unique formula compatible with any antifreeze/coolant for use in all automobiles and light-duty trucks. **LATEST GENERATION VNT™ TURBO** features improved aerodynamics for more power and torque, transient response and better fuel economy. **BENDIX® CT-3™** brake pads combine ceramic technology and organic friction for superior stopping power, shorter stopping distances and better fade resistance.

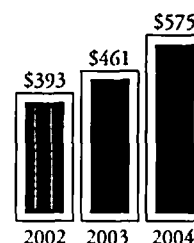


Honeywell products improve the performance, efficiency and appearance of cars, trucks and other vehicles. Honeywell's turbocharger business has grown at double-digit rates every year for more than a decade. Recognized as the global technology leader, we partner with manufacturers such as Volkswagen, Peugeot, Caterpillar and Hyundai. Honeywell's best-selling consumer automotive products are sold under the FRAM®, Prestone®, Autolite® and Holts® brands at major retail outlets, including Wal-Mart, AutoZone and Pep Boys. Honeywell is also one of the largest global suppliers of brake friction materials and aftermarket brake products under the Bendix® and JURID® brand names.

**SALES**  
(dollars in millions)



**SEGMENT PROFIT**  
(dollars in millions)



### GROWTH DRIVERS

- Forty-eight percent of all passenger vehicles sold in Europe were equipped with turbodiesel engines in 2004, driven by emissions rules and energy-efficiency benefits.
- The turbocharged engine segment is expected to grow at a 10 percent compounded annual growth rate through 2010, four times faster than the overall automotive industry.
- The high-performance car-care segment is expecting rapid growth over the next three to five years as enthusiasts continue to customize and improve their vehicles.

### 2004 MILESTONES

- Mercedes-Benz successfully introduced a turbodiesel version of its E320 sedan in the U.S. equipped with Honeywell turbocharging technology.
- To increase power and efficiency, BMW introduced its 120d in Europe with Honeywell's latest generation VNT™ turbo.
- Honeywell continued to drive brand extensions of its consumer automotive products. The FRAM® Air Hog™ and the Prestone® All Makes All Models products were successfully launched at retail outlets in the U.S.

In 2004, Transportation Systems produced more than 9 million turbochargers, and sales were up 18 percent versus 2003. In 2005, we will continue to increase our presence in emerging regions with a new technology center in Shanghai, China, and a new manufacturing facility in Pune, India. Increased turbodiesel penetration in Europe is expected to continue during 2005 and beyond. New products and brand extensions will increase the value of our retail car-care brands. Honeywell will also focus on engineering and formulating brake friction materials as well as aftermarket brake product innovation.

## SPECIALTY MATERIALS

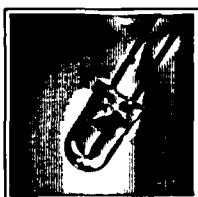
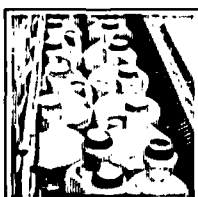
Honeywell is a world leader in developing and manufacturing high-purity, high-quality and high-performance chemicals and materials. Our products serve diverse markets and include environmentally friendlier refrigerants; specialty films to protect pharmaceuticals and food; bullet-resistant materials for military and law enforcement; research chemicals to speed drug discovery; and electronic materials and chemicals for cutting-edge semiconductor production and packaging.



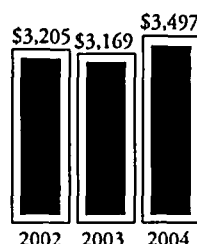
"Innovation and Voice of the Customer are the key drivers of our growth strategy. We strive to deliver tomorrow's technology rather than yesterday's chemistry."

Nance K. Dicciani, Ph.D.  
President and Chief Executive Officer  
Specialty Materials

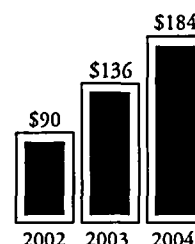
Our products solve a broad spectrum of industry challenges and include **ACLAR® BARRIER FILM** in blister packaging to protect pharmaceutical products from moisture and contamination. **AEGIS™ NYLON RESINS** enable beverage producers to take advantage of the convenience of lightweight, resealable plastic bottles with the same quality and freshness of glass. **SAPPHIRE SUBSTRATES** for light-emitting diodes (LEDs) are used in energy-efficient stadium displays as well as traffic and airport landing lights.



**SALES**  
(dollars in millions)



**SEGMENT PROFIT**  
(dollars in millions)



### GROWTH DRIVERS

- Stricter regulations are driving greater demand for environmentally friendlier and more energy-efficient refrigerants and blowing agents, replacing ozone-depleting CFCs and HCFCs.
- Faster screening of molecules for drug discovery is generating demand for consistently high-quality and high-purity research chemicals.
- Food, beverages, pharmaceuticals and electronics are increasingly requiring more protective, lightweight packaging.

### 2004 MILESTONES

- Honeywell invested \$20 million to expand production of Spectra® fiber used in bullet-resistant vests as well as specialty rope applications.
- A long-term supply agreement with Haier Group, a Chinese appliance manufacturer exporting to 160 countries, and the opening of a refrigerant manufacturing plant in Shanghai, China, expanded the presence of our HFC refrigerants in Asia.
- The acquisition of a semiconductor packaging product line and manufacturing facility in Chonburi, Thailand, and the purchase of Mitsubishi's stake in a business producing electronic chemicals for semiconductor manufacturing broadened Honeywell's electronic materials portfolio.

In 2004, Specialty Materials continued to move from volume-oriented, cyclical businesses to those that are value-driven and in high-growth markets. Core growth platforms – fluorines, electronic materials, barrier solutions, reagents, and advanced fibers and composites – posted operating margins of 9.4 percent and generated free cash flow of \$77 million. This helped offset headwinds from higher raw materials prices that affected non-core business performance. Growth in 2005 is expected to continue by leveraging technologies across business groups, expanding core technologies into adjacent markets and new vertical industries, and pursuing select acquisitions in high-growth segments and strategic licensing opportunities.

## AEROSPACE

"Jet Airways places high emphasis on customer service and technical reliability, and has the confidence that Honeywell's Maintenance, Repair & Overhaul Services will meet our requirements."

**Wolfgang Prock-Schauer**  
*Chief Executive Officer of Jet Airways*



## AUTOMATION AND CONTROL SOLUTIONS

"Securing the world's ports has become a top priority since 9/11. We knew we could count on Honeywell to provide a reliable and affordable security solution under an aggressive schedule."

**Fernando Diaz**  
*General Security Director of the Puerto Rican Port Authority*



## TRANSPORTATION SYSTEMS

"By combining technology solutions with continuous quality improvement, Honeywell Turbo Technologies has helped make the Hyundai Trajet XG VGT one of the best-selling vehicles in Korea."

**Hyung Ha Lee**  
*Senior Vice President of Hyundai-Kia Motor Company*



## SPECIALTY MATERIALS

"Haier is committed to providing customers with refrigeration and air conditioning products that can minimize environmental impact by using innovative, energy-efficient HFC technologies from Honeywell."

**Huo Shengjun**  
*General Manager for International Trading Co., Ltd of Haier Group*



# PEOPLE AND PERFORMANCE

Honeywell's Five Initiatives – Growth, Productivity, Cash, People and Our Enablers: DigitalWorks and Six Sigma – continued to drive our success in 2004. For the Growth Initiative, we continued two practices that we started in 2003. We measured all of our manufacturing and service sites monthly on their ability to meet customer requirements for quality and on-time delivery. We also recognized an individual each week who contributed to Growth by delivering great service to customers. We call this recognition the “Chairman’s Award for Everyday Heroes.”

## OPERATIONS AND MANUFACTURING QUALITY EXCELLENCE

### HONEYWELL'S 2004 TOP 10 SITES FOR QUALITY

**EL MONTE, CALIFORNIA, USA**  
Aerospace

**FREEHOLD, NEW JERSEY, USA**  
Transportation Systems

**ANNISTON, ALABAMA, USA**  
Aerospace

**SUBANG, MALAYSIA**  
Aerospace

**SINGAPORE, SINGAPORE**  
Aerospace

**JINCHEON-GUN, KOREA**  
Specialty Materials

**SRIRACHA, THAILAND**  
Specialty Materials

**MEXICO CITY, MEXICO**  
Transportation Systems

**ALSIP, ILLINOIS, USA**  
Transportation Systems

**FREEPORT (1), ILLINOIS, USA**  
Automation and  
Control Solutions

### HONEYWELL'S 2004 TOP 10 SITES FOR DELIVERY

**ANNISTON, ALABAMA, USA**  
Aerospace

**SUZHOU, CHINA**  
Aerospace

**FOMBELL, PENNSYLVANIA, USA**  
Specialty Materials

**ANSAN, KOREA**  
Transportation Systems

**ALSIP, ILLINOIS, USA**  
Transportation Systems

**TORRANCE, CALIFORNIA, USA**  
Transportation Systems

**OLATHE, KANSAS, USA**  
Aerospace

**HOPEWELL, VIRGINIA, USA**  
Specialty Materials

**AMHERSTBURG, CANADA**  
Specialty Materials

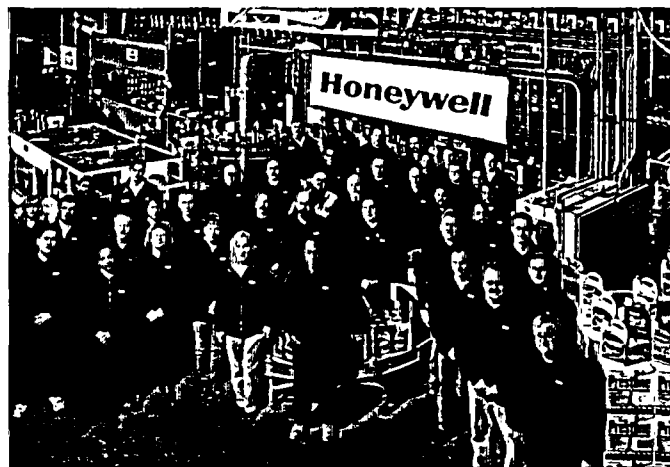
**CLEARFIELD, UTAH, USA**  
Transportation Systems

## CHAIRMAN'S AWARD FOR EVERYDAY HEROES

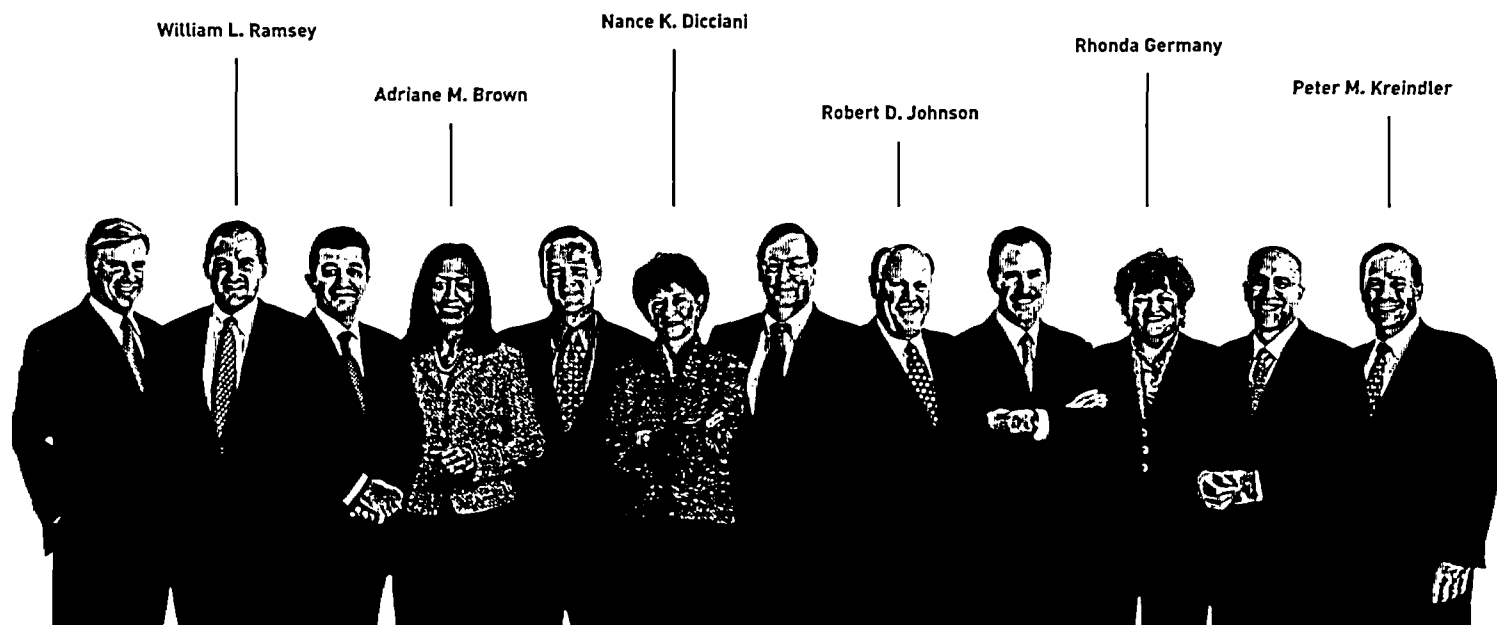
### 2004 WINNERS

<b>AEROSPACE</b> Tom Barcome Bill Hurst Dave Kallemeyn Warren Nechtman Robert Saccomanno Kelly Vander Weyst Bruce Walters Robert Wright Jr. Larry Yount	Tom Wang Jesse Wood YoungWook Kim
<b>TRANSPORTATION SYSTEMS</b> Steven Broadbent Marc Duseaux Edvaldo Hidetsugu Okazaki Gary Parent Ken Pressley	<b>SPECIALTY MATERIALS</b> Lou Avvisati Cory Christensen Mary Cooper Patrick Flint Evelyn Hu Dan Overoye Bryant Sartor Jan Smeding Vincent Speziale Chin Hwa Tan Ricardo Vargas Shilpa Vaswani Burkhard Vehre Marc Walon Antonio Williams
<b>AUTOMATION AND CONTROL SOLUTIONS</b> Audra Biesterfeld John Cuce Gareth Edwards Ralph Florio Ron Freimark Gale Harris Ken Lau Doug Mitchell Christophe Le Moing Liam O'Shea Jean-Claude Phillippon Randy Polson Tom Recine Andy Reyna Luis Rodrigues Jeffrey Scott Peter Stubbs Maurizio Tavano	<b>CORPORATE</b> Kate Olive

Aerospace's Military Repair & Overhaul Center in Phoenix, Arizona (left), and Transportation Systems' Prestone™ manufacturing site in Alsip, Illinois (right), were selected as Honeywell's Best Performing Sites for 2004, based on quality, delivery and other criteria such as safety, revenue and production volume.



## SENIOR MANAGEMENT TEAM



Thomas W. Weidenkopf

Shane Tedjarati

Robert J. Gillette

Larry E. Kittelberger

David J. Anderson

Roger Fradin

## LEADERSHIP TEAM

**DAVID M. COTE**  
Chairman and  
Chief Executive Officer

**ADRIANE M. BROWN**  
President and  
Chief Executive Officer  
Transportation Systems

**NANCE K. DICCIANI**  
President and  
Chief Executive Officer  
Specialty Materials

**ROGER FRADIN**  
President and  
Chief Executive Officer  
Automation and Control Solutions

**ROBERT J. GILLETTE**  
President and  
Chief Executive Officer  
Aerospace

**ROBERT D. JOHNSON**  
Chairman (non-executive)  
Aerospace

**DAVID J. ANDERSON**  
Senior Vice President and  
Chief Financial Officer

**LARRY E. KITTELBERGER**  
Senior Vice President  
Administration and  
Chief Information Officer

**PETER M. KREINDLER**  
Senior Vice President and  
General Counsel

**THOMAS W. WEIDENKOPF**  
Senior Vice President  
Human Resources and  
Communications

**RHONDA GERMANY**  
Vice President  
Strategy and Business  
Development

**WILLIAM L. RAMSEY**  
Vice President  
Six Sigma and Operations

**SHANE TEDJARATI**  
President  
Honeywell China

**DEAN M. FLATT**  
President  
Aerospace Electronic Systems

**RUSSELL D. TURNER**  
President  
Engines, Systems & Services

**TIMOTHY J. KEATING**  
Senior Vice President  
Government Relations

**THOMAS L. BUCKMASTER**  
Vice President  
Communications

**THOMAS F. LARKINS**  
Vice President  
Corporate Secretary and  
Deputy General Counsel

**HARSH BANSAL**  
Vice President  
Investments

**THOMAS A. SZLOSEK**  
Vice President and  
Controller

**JOHN J. TUS**  
Vice President and  
Treasurer

## BOARD OF DIRECTORS

Lord Clive R. Hollick

Michael W. Wright

Jaime Chico Pardo

Bradley T. Sheares

Ivan G. Seidenberg

Russell E. Palmer

James J. Howard



Gordon M. Bethune

Hans W. Becherer

General  
Eric K. Shinseki

Bruce Karatz

Marshall N. Carter

David M. Cote

John R. Stafford

## BOARD OF DIRECTORS

### DAVID M. COTE

Chairman and  
Chief Executive Officer  
Honeywell International Inc.  
Age: 52; elected 2002

### HANS W. BECHERER <sup>3,4</sup>

Former Chairman and  
Chief Executive Officer  
Deere & Company  
(mobile power machinery  
and financial services)  
Age: 69; elected in 1991

### GORDON M. BETHUNE <sup>2,3</sup>

Former Chairman and  
Chief Executive Officer  
Continental Airlines, Inc.  
(international commercial  
airline company)  
Age: 63; elected in 1999

### MARSHALL N. CARTER <sup>1,2</sup>

Senior Fellow at the Center for  
Public Leadership  
John F. Kennedy School of  
Government  
Harvard University  
Age: 64; elected in 1999

### JAIME CHICO PARDO <sup>2,4</sup>

Vice Chairman and  
Chief Executive Officer  
Telefonos de Mexico S.A. de C.V.  
(TELMEX)  
(telecommunications)  
Age: 55; elected in 1999

### LORD CLIVE R. HOLLICK <sup>3,4</sup>

Chief Executive  
United Business Media plc  
(information and  
publication services)  
Age: 59; elected in 2003

### JAMES J. HOWARD <sup>1,4</sup>

Chairman Emeritus  
Xcel Energy Inc.  
(energy company)  
Age: 69; elected in 1999

### BRUCE KARATZ <sup>2,3</sup>

Chairman and  
Chief Executive Officer  
KB Home  
(residential and commercial builder)  
Age: 59; elected in 1999

### RUSSELL E. PALMER <sup>1,2</sup>

Chairman and  
Chief Executive Officer  
The Palmer Group  
(private investment firm)  
Age: 70; elected in 1987

### IVAN G. SEIDENBERG <sup>2,3</sup>

Chairman and  
Chief Executive Officer  
Verizon Communications Inc.  
(telecommunications and  
information services provider)  
Age: 58; elected in 1995

### BRADLEY T. SHEARES, Ph.D. <sup>3,4</sup>

President, U.S. Human Health  
Merck & Co., Inc.  
(pharmaceutical)  
Age: 48; elected in 2004

### GENERAL ERIC K. SHINSEKI <sup>1,2</sup>

Retired U.S. Army Chief of Staff  
(U.S. Military)  
Age: 62; elected in 2003

### JOHN R. STAFFORD <sup>1,3</sup>

Retired Chairman,  
Chief Executive Officer  
and President  
Wyeth  
(pharmaceutical, health care  
products and animal health)  
Age: 67; elected in 1993

### MICHAEL W. WRIGHT <sup>1,4</sup>

Retired Chairman,  
Chief Executive Officer  
and President  
SUPERVALU INC.  
(food distributor and retailer)  
Age: 66; elected in 1999

### COMMITTEES OF THE BOARD

<sup>1</sup> Audit Committee  
Russell E. Palmer, Chair

<sup>2</sup> Corporate Governance and  
Responsibility Committee  
Bruce Karatz, Chair

<sup>3</sup> Management Development  
and Compensation Committee  
John R. Stafford, Chair

<sup>4</sup> Retirement Plans Committee  
Michael W. Wright, Chair



# HONEYWELL HOMETOWN SOLUTIONS

"Tangible results drive Honeywell Hometown Solutions programs. We measure our success by the number of lives we help save, homes we fix, students we teach and employees we touch in every part of our world."

Tom Buckmaster  
President  
Honeywell Hometown Solutions

Our hip-hop science education program inspired more than **30,000** middle school students' interest in science and math in 2004.

Our future depends on a talented workforce of scientists, engineers and technologists. To inspire today's best young minds, Honeywell and the National Aeronautics and Space Administration (NASA) created FMA Live!, a dynamic middle school science education program.



Great companies make the communities around them better. At Honeywell, community service is a century-long tradition, and we take our heritage seriously.

Through Honeywell Hometown Solutions™, we focus our community outreach efforts on three specific needs that align with Honeywell's expertise, products and people: Family Safety and Security; Science and Math Education; and Housing and Shelter. During the past year, we expanded programs globally to include many of the 100 countries where we do business. We taught 1.6 million elementary school students critical rules to keep them safe from abduction, sponsored 100 middle school teachers to the Space Academy for Educators program to help them develop the next generation of scientists, and improved living conditions for low-income homeowners in 24 Honeywell hometowns. And we're just getting started.

Nowhere is the impact of Honeywell's community outreach more apparent than through the tireless efforts of our employee volunteers. In places as diverse as Kansas City, Missouri; Newhouse, Scotland; and Bangalore, India; employee volunteers are creating stronger, healthier and more vibrant communities. We are committed to making things better where our employees work, live and raise their families. The cities, towns and villages where we have offices, labs and plants aren't just addresses to us – they're our hometowns.



More than **750** Honeywell employees volunteered their time and labor to make home improvements in 2004.

As a leading national sponsor of Rebuilding Together®, the largest volunteer housing rehabilitation organization in the U.S., Honeywell is improving the living conditions for low-income, elderly and disabled homeowners across the country.

Our abduction prevention materials reached **70% OF THIRD-GRADE CLASSROOMS** in the U.S. in 2004.

To protect families in our hometowns, we've partnered with the National Center for Missing & Exploited Children to develop Got 2B Safe!, a nationwide program educating 8- to 10-year-olds, their parents and teachers on how to prevent child abduction and exploitation.



Honeywell donated **\$1 MILLION** to assist with tsunami relief efforts in Asia.

Bangalore, India, employee volunteers supported a 90-day construction effort to rebuild **50 HOUSES** in an affected village. All **1,500** Pune, India, employees donated one day's salary to relief efforts.

**FORM 10-K**

---

**[THIS PAGE INTENTIONALLY LEFT BLANK]**

UNITED STATES  
SECURITIES AND EXCHANGE COMMISSION  
WASHINGTON, D.C. 20549

**Form 10-K**

☒ ANNUAL REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934

For the fiscal year ended December 31, 2004

OR

☐ TRANSITION REPORT PURSUANT TO SECTION 13 OR 15(d)  
OF THE SECURITIES EXCHANGE ACT OF 1934

For the transition period from        to

Commission file number 1-8974

**Honeywell International Inc.**

(Exact name of registrant as specified in its charter)

DELAWARE

(State or other jurisdiction of  
incorporation or organization)

101 Columbia Road  
Morris Township, New Jersey

(Address of principal executive offices)

22-2640650

(I.R.S. Employer  
Identification No.)

07962

(Zip Code)

Registrant's telephone number, including area code (973)455-2000

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

Title of Each Class	Name of Each Exchange on Which Registered
Common Stock, par value \$1 per share*	New York Stock Exchange Chicago Stock Exchange Pacific Exchange
Zero Coupon Serial Bonds due 2009	New York Stock Exchange
9½% Debentures due June 1, 2016	New York Stock Exchange

\* The common stock is also listed for trading on the London stock exchange.

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

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

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

Indicate by check mark whether the Registrant is an accelerated filer (as defined in Rule 12b-2 of the Securities Exchange Act of 1934). Yes ☒ No ☐

The aggregate market value of the voting stock held by nonaffiliates of the Registrant was approximately \$31.5 billion at June 30, 2004.

There were 850,772,327 shares of Common Stock outstanding at January 31, 2005.

Documents Incorporated by Reference

Part III: Proxy Statement for Annual Meeting of Shareowners to be held April 25, 2005.

## TABLE OF CONTENTS

	<u>Item</u>	<u>Page</u>
Part I.	1. Business .....	1
	2. Properties .....	11
	3. Legal Proceedings .....	12
	4. Submission of Matters to a Vote of Security Holders .....	12
	Executive Officers of the Registrant .....	12
Part II.	5. Market for Registrant's Common Equity, Related Stockholder Matters and Issuer Purchases of Equity Securities .....	14
	6. Selected Financial Data .....	15
	7. Management's Discussion and Analysis of Financial Condition and Results of Operations .....	15
	7A. Quantitative and Qualitative Disclosures About Market Risk .....	42
	8. Financial Statements and Supplementary Data .....	42
	9. Changes in and Disagreements with Accountants on Accounting and Financial Disclosure .....	92
	9A. Controls and Procedures .....	92
	9B. Other Information .....	93
Part III.	10. Directors and Executive Officers of the Registrant .....	93
	11. Executive Compensation .....	93
	12. Security Ownership of Certain Beneficial Owners and Management .....	93
	13. Certain Relationships and Related Transactions .....	96
	14. Principal Accounting Fees and Services .....	96
Part IV.	15. Exhibits and Financial Statement Schedules .....	96
	Signatures .....	97

---

This report contains certain statements that may be deemed "forward-looking statements" within the meaning of Section 21E of the Securities Exchange Act of 1934. All statements, other than statements of historical fact, that address activities, events or developments that we or our management intends, expects, projects, believes or anticipates will or may occur in the future are forward-looking statements. Such statements are based upon certain assumptions and assessments made by our management in light of their experience and their perception of historical trends, current conditions, expected future developments and other factors they believe to be appropriate. The forward-looking statements included in this report are also subject to a number of material risks and uncertainties, including but not limited to economic, competitive, governmental and technological factors affecting our operations, markets, products, services and prices. Such forward-looking statements are not guarantees of future performance, and actual results, developments and business decisions may differ from those envisaged by such forward-looking statements.

## PART I.

### Item 1. Business

Honeywell International Inc. (Honeywell) is a diversified technology and manufacturing company, serving customers worldwide with aerospace products and services, control, sensing and security technologies for buildings, homes and industry, turbochargers, automotive products, specialty chemicals, fibers, and electronic and advanced materials. Honeywell was incorporated in Delaware in 1985.

We maintain an internet website at <http://www.honeywell.com>. Our Annual Report on Form 10-K, Quarterly Reports on Form 10-Q, Current Reports on Form 8-K, and any amendments to those reports, are available free of charge on our website under the heading "Investor Relations" (see "SEC Filings and Reports") immediately after they are filed with, or furnished to, the Securities and Exchange Commission (SEC). Honeywell's Code of Business Conduct, Corporate Governance Guidelines and Charters of the Committees of the Board of Directors are also available, free of charge, on our website under the heading "Investor Relations" (see "Corporate Governance"), or by writing to Honeywell, 101 Columbia Road, Morris Township, New Jersey 07962, c/o Vice President and Corporate Secretary. Honeywell's Code of Business Conduct applies to all Honeywell directors, officers (including the Chief Executive Officer, Chief Financial Officer and Controller) and employees.

The certifications of our Chief Executive Officer and Chief Financial Officer pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 about the disclosure contained in this Annual Report on Form 10-K are included as Exhibits 31.1 and 31.2 to this Annual Report and are available free of charge on our website under the heading "Investor Relations" (see "SEC Filings and Reports"). Our Chief Executive Officer certified to the New York Stock Exchange (NYSE) on May 20, 2004, pursuant to Section 303A.12 of the NYSE's listing standards, that he was not aware of any violation by Honeywell of the NYSE's corporate governance listing standards as of that date.

### Major Businesses

We globally manage our business operations through strategic business units, which have been aggregated under four reportable segments: Aerospace, Automation and Control Solutions, Specialty Materials and Transportation Systems. Financial information related to our reportable segments is included in Note 23 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data."

Following is further information about our four reportable segments which are comprised of various strategic business units and product classes that serve multiple end markets:

<u>Strategic Business Units</u>	<u>Product Classes</u>	<u>Major Products/Services</u>	<u>Major Customers/Uses</u>	<u>Key Competitors</u>
<b>Aerospace</b>				
Engines, Systems and Services	Turbine propulsion engines	TFE731 turbofan TPE331 turboprop TFE1042 turbofan ATF3 turbofan F124 turbofan LF502 turbofan LF507 turbofan CFE738 turbofan HTF 7000 turbofan T53, T55 turboshaft LTS101 turboshaft T800 turboshaft AGT1500 turboshaft Repair, overhaul and spare parts	Business, regional, general aviation and military trainer aircraft Commercial and military helicopters Military vehicles	United Technologies (Pratt & Whitney Canada) Rolls Royce/ Allison Turbomeca Williams
	Auxiliary power units (APUs)	Airborne auxiliary power units Jet fuel starters Secondary power systems Ground power units Repair, overhaul and spare parts	Commercial, regional, business and military aircraft Ground power	United Technologies (Pratt & Whitney Canada) United Technologies (Hamilton Sundstrand)

<u>Strategic Business Units</u>	<u>Product Classes</u>	<u>Major Products/Services</u>	<u>Major Customers/Uses</u>	<u>Key Competitors</u>
	Environmental control systems	Air management systems: Air conditioning Bleed air Cabin pressure control Air purification and treatment Electrical power systems: Power distribution and control Emergency power generation Repair, overhaul and spare parts	Commercial, regional and general aviation aircraft Military aircraft Ground vehicles Spacecraft	Auxilec Barber Colman Dukes Eaton-Vickers Goodrich (Lucas Aerospace) Liebherr Litton Breathing Systems Pacific Scientific Parker Hannifin United Technologies (Hamilton Sundstrand) Smiths TAT
	Engine systems and accessories	Electronic and hydromechanical fuel controls Engine start systems Electronic engine controls Sensors Electric and pneumatic power generation systems Thrust reverser actuation, pneumatic and electric	Commercial, regional and general aviation aircraft Military aircraft	BAE Controls Goodrich (Chandler-Evans) Goodrich (Lucas Aerospace) Parker Hannifin United Technologies (Hamilton Sundstrand)
	Aircraft hardware distribution	Fasteners, including nuts, bolts, rivets, clamps and pins Bearings, including ball, roller, spherical, needle and ceramic Electrical hardware, including connectors, components, lighting products, terminals, and wire and wiring accessories Seals, including seals, o-rings, gaskets and packings Value-added services, repair and overhaul kitting and point-of-use replenishment	Commercial, regional, business and military aviation aircraft	Anixter (Pentacore) Arrow Pemco Avnet BE Aerospace (M&M Aerospace) Fairchild Direct Satair Wencor Wesco Aircraft
Aerospace Electronic Systems	Avionics systems	Flight safety systems: Enhanced Ground Proximity Warning Systems (EGPWS) Traffic Alert and Collision Avoidance Systems (TCAS) Windshear detection systems Flight data and cockpit voice recorders Weather Radar Communication, navigation and surveillance systems: Weather radar Navigation & communication radios Air-to-ground telephones Global positioning systems Automatic flight control systems Satellite systems Surveillance systems Integrated systems Flight management systems Cockpit display systems	Commercial, business and general aviation aircraft Government aviation	BAE Boeing/Jeppesen Garmin Goodrich Kaiser L3 Lockheed Martin Northrop Grumman Rockwell Collins Smiths Thales Trimble/Terra Universal Avionics Universal Weather

Strategic Business Units	Product Classes	Major Products/Services	Major Customers/Uses	Key Competitors
		Data management and aircraft performance monitoring systems Vehicle management systems Aircraft information systems Network file servers Wireless network transceivers Satellite TV systems Audio/Video equipment Weather information network Navigation database information Cabin management systems Vibration detection and monitoring Mission management systems Tactical data management systems		
Aircraft, Obstruction and Airport lighting	Inset lights Control and monitoring systems Regulators Tower and obstruction lights Interior and exterior aircraft lighting Visual docking guidance systems	Airports Commercial, regional, business, helicopter and military aviation aircraft (operators, OEMs, parts distributors and MRO service providers) General contractors (building and tower manufacturers), cell phone companies	Bruce Hella/Goodrich LSI Luminator Safegate Siemens Thorn Whelen	
Inertial sensor	Inertial sensor systems for guidance, stabilization, navigation and control Gyroscopes, accelerometers, inertial measurement units and thermal switches	Military and commercial vehicles Commercial spacecraft and launch vehicles Commercial, regional, business and military aircraft Transportation Missiles Munitions	Astronautics-Kearfott BAE Ball GEC L3 Com KVH Northrop Grumman Rockwell Smiths	
Automatic test equipment	EW ATE Avionics ATE Vehicle health Management	Boeing USAF Foreign air forces	Northrop Grumman Lockheed	
Control products	Radar altimeters Pressure products Air data products Thermal switches Magnetic sensors	Military aircraft Missiles, UAVs Commercial applications	Ball Brothers BAE Druck Goodrich NavCom Northrop Grumman Rosemount Solarton	
Space products and subsystems	Guidance subsystems Control subsystems Processing subsystems Radiation hardened electronics and integrated circuits GPS-based range safety systems	Commercial and military-spacecraft DoD FAA NASA	BAE Ithaco L3 Northrop Grumman Raytheon	



<u>Strategic Business Units</u>	<u>Product Classes</u>	<u>Major Products/Services</u>	<u>Major Customers/Uses</u>	<u>Key Competitors</u>
	Management and technical services	Maintenance/operation and provision of space systems, services and facilities Systems engineering and integration Information technology services Logistics and sustainment	U.S. government space (NASA) DoD (logistics and information services) DoE Local governments Commercial space ground segment systems and services	Bechtel Boeing Computer Sciences Dyncorp ITT Lockheed Martin Raytheon SAIC The Washington Group United Space Alliance
Aircraft Landing Systems	Landing systems	Wheels and brakes Friction products Wheel and brake repair and overhaul services	Commercial airline, regional, business and military aircraft High performance commercial vehicles USAF, DoD, DoE Boeing, Airbus, Lockheed Martin	Aircraft Braking Systems Dunlop Standard Aerospace Goodrich Messier-Bugatti NASCO Various smaller repair and overhaul companies

### Automation and Control Solutions

Products	Environmental controls and combustion; sensing and controls	Heating, ventilating and air conditioning controls and components for homes and buildings Indoor air quality products including zoning, air cleaners, humidification, heat and energy recovery ventilators Controls plus integrated electronic systems for burners, boilers and furnaces Consumer household products including humidifiers and thermostats Water controls Sensors, measurement, control and industrial components	Original equipment manufacturers (OEMs) Distributors Contractors Retailers System integrators Commercial customers and homeowners served by the distributor, wholesaler, contractor, retail and utility channels Package and materials handling operations Appliance manufacturers Automotive companies Aviation companies Food and beverage processors Medical equipment Heat treat processors Computer and business equipment manufacturers	Bosch Carrier Cherry Danfoss Eaton Emerson Endruss & Hauser Holmes Invensys Johnson Controls Motorola Omron Schneider Siemens Yokogawa
	Security and life safety products and services	Security products and systems Fire products and systems Access controls and closed circuit television Home health monitoring	OEMs Retailers Distributors Commercial customers and homeowners served by the distributor, wholesaler, contractor, retail and utility channels Health care organizations	Bosch GE Pelco Phillips Siemens SPX Tyco
Process Solutions	Industrial automation solutions	Advanced control software and industrial automation systems for control and monitoring of continuous, batch and hybrid operations Production management software Communications systems for Industrial Control equipment and systems Consulting, networking engineering and installation Process control instrumentation Field instrumentation	Refining and petrochemical companies Chemical manufacturers Oil and gas producers Food and beverage processors Pharmaceutical companies Utilities Film and coated producers Pulp and paper industry Continuous web producers in the paper, plastics, metals, rubber, non-wovens and printing industries Mining and mineral industries	Asea Brown Boveri Aspen Tech Emerson Invensys Siemens Yokogawa

<u>Strategic Business Units</u>	<u>Product Classes</u>	<u>Major Products/Services</u>	<u>Major Customers/Uses</u>	<u>Key Competitors</u>
		Analytical instrumentation Recorders Controllers Critical environment control solutions and services Aftermarket maintenance, repair and upgrade		
Building Solutions	Solutions and services	HVAC and building control solutions and services Energy management solutions and services Security and asset management solutions and services Enterprise building integration solutions Building information services	Building managers and owners Contractors, architects and developers Consulting engineers Security directors Plant managers Utilities Large, global corporations Public school systems Universities Local governments	GroupMac Invensys Johnson Controls Local contractors and utilities Siemens Trane

### Specialty Materials

Specialty Materials	Nylon	Nylon filament and staple yarns Nylon bulk continuous filament Nylon polymer Caprolactam Ammonium sulfate Cyclohexanol Cyclohexanone Sulfuric acid Ammonia	Commercial, residential and specialty carpet markets Nylon for fibers, engineered resins and film Fertilizer ingredients Specialty chemicals	BASF DSM Enichem Hoechst Invista Monsanto Rhodia Solutia
	Advanced Fibers & Composites	High molecular weight polyethylene fiber and shield composites Aramid shield composites	Bullet resistant vests, helmets and other armor applications Cut-resistant gloves Rope & cordage	DuPont DSM Teijin
	Specialty Films	Cast nylon film Bi-axially oriented nylon film Fluoropolymer film	Food and pharmaceutical packaging	American Biaxial CFP Daikan Kolon Unitika
	Specialty additives	Polyethylene waxes Petroleum waxes and blends PVC lubricant systems Plastic additives Luminescent photodyes	Coatings and inks PVC Plastics Reflective coatings Security and safe applications	BASF Clariant Eastman
	Fluorocarbons	Genetron® refrigerants, aerosol and insulation foam blowing agents Genesolv® solvents Oxyfume sterilant gases Ennovate 3000 blowing agent for refrigeration insulation	Refrigeration Air conditioning Polyurethane foam Precision cleaning Optical Metalworking Hospitals Medical equipment manufacturers	Arkema INEOS Fluor Solvay-Solexis
	Hydrofluoric acid (HF)	Anhydrous and aqueous hydrofluoric acid	Fluorocarbons Steel Oil refining Chemical intermediates	Ashland Atofina E. Merck Hashimoto Norfluor Quimica Fluor
	Fluorine specialties	Sulfur hexafluoride (SF <sub>6</sub> ) Iodine pentafluoride (IF <sub>5</sub> ) Antimony pentafluoride (SbF <sub>5</sub> )	Electric utilities Magnesium Gear manufacturers	Air Products Asahi Glass Atofina Solvay-Solexis

<u>Strategic Business Units</u>	<u>Product Classes</u>	<u>Major Products/Services</u>	<u>Major Customers/Uses</u>	<u>Key Competitors</u>
	Nuclear services	UF <sub>6</sub> conversion services	Nuclear fuel Electric utilities	British Nuclear Fuels Cameco Cogema
	Research and life sciences	Active pharmaceutical ingredients Pharmaceutical intermediates Pharmaceutical formulations Oxime-based fine chemicals Fluoroaromatics Bromoaromatics High-purity solvents	Agrichemicals Pharmaceuticals Biotech	Avecia Degussa DSM E. Merck Fisher Scientific Lonza Sigma-Aldrich
	Performance chemicals Imaging chemicals Chemical processing Display chemicals Surface treatment Catalysts Sealants	HF derivatives Fluoroaromatics Phosphors Catalysts Oxime-silanes Hydroxylamine	Diverse by product type	Atotech BASF Solvay-Solexis
	Electronic chemicals	Ultra high-purity HF Inorganic acids Hi-purity solvents	Semiconductors	Air Products Arch E. Merck
	Semiconductor materials and services	Interconnect-dielectrics Interconnect-metals Semiconductor packaging materials Advanced polymers Sapphire substrates Anti-reflective coatings Thermo-couplings	Semiconductors Microelectronics Telecommunications	ATMI Dow Chemical Dow Corning Japan Energy JSR Sumitomo Tokyo-Ohka Tosoh SMD
	UOP (50%-owned joint venture)	Catalysts Molecular sieves Adsorbents Design of process, plants and equipment Customer catalyst manufacturing	Petroleum, petrochemical, gas processing and chemical industries	ABB Lummus Axens Exxon-Mobil Procatalyse Shell/Criterion Stone & Webster Zeochem

## Transportation Systems

Honeywell Turbo Technologies	Charge-air systems	Turbochargers Remanufactured components	Passenger car, truck and off-highway OEMs Engine manufacturers Aftermarket distributors and dealers	ABB Borg-Warner Hitachi Holset IHI MHI Tianyan
	Thermal systems	Exhaust gas coolers Charge-air coolers Aluminum radiators Aluminum cooling modules	Passenger car, truck and off-highway OEMs Engine manufacturers Aftermarket distributors and dealers	Behr/McCord Modine Valeo

<u>Strategic Business Units</u>	<u>Product Classes</u>	<u>Major Products/Services</u>	<u>Major Customers/Uses</u>	<u>Key Competitors</u>
Consumer Products Group	Aftermarket filters, spark plugs, electronic components and car care products	Oil, air, fuel, transmission and coolant filters PCV valves Spark plugs Wire and cable Antifreeze/coolant Ice-fighter products Windshield washer fluids Waxes, washes and specialty cleaners	Automotive and heavy vehicle aftermarket channels, OEMs and OES Auto supply retailers Specialty installers Mass merchandisers	AC Delco Bosch Champion Champ Labs Havoline/Texaco Mann & Hummel NGK Peak/Old World Industries Pennzoil-Quaker State Purolator/Arvin Ind STP/ArmorAll/ Clorox Turtle Wax Various Private Label Wix/Dana Zerex/Valvoline
Friction Materials	Friction materials Aftermarket brake hard parts	Disc brake pads and shoes Drum brake linings Brake blocks Disc and drum brake components Brake hydraulic components Brake fluid Aircraft brake linings Railway linings	Automotive and heavy vehicle OEMs, OES, brake manufacturers and aftermarket channels Mass merchandisers Installers Railway and commercial/military aircraft OEMs and brake manufacturers	Akebono Dana Delphi Federal-Mogul ITT Galfer JBI Nisshinbo TMD Roulunds

## **Aerospace Sales**

Our sales to aerospace customers were 38, 38 and 40 percent of our total sales in 2004, 2003 and 2002, respectively. Our sales to commercial aerospace original equipment manufacturers were 8, 7 and 9 percent of our total sales in 2004, 2003 and 2002, respectively. If there are large changes in sales of aircraft that use our components, operating results could be impacted. In addition, our sales to commercial aftermarket customers of aerospace products and services were 16, 15 and 16 percent of our total sales in 2004, 2003, and 2002, respectively. If there are large changes in the number of global flying hours or landings for aircraft that use our components or services, operating results could be impacted. The terrorist attacks on September 11, 2001 resulted in an abrupt downturn in the aviation industry which was already negatively impacted by a weak economy. This dramatic downturn in the commercial air transport industry significantly impacted the operating results of our Aerospace segment in 2002 and 2003. We began to see some recovery at the end of 2003, which continued in 2004, aided by continued improvement in the commercial aerospace market segment and the favorable impact of safety mandates.

## **U.S. Government Sales**

Sales to the U.S. Government (principally by our Aerospace segment), acting through its various departments and agencies and through prime contractors, amounted to \$3,464, \$3,111 and \$2,730 million in 2004, 2003 and 2002, respectively, which included sales to the U.S. Department of Defense, as a prime contractor and subcontractor, of \$2,808, \$2,564 and \$2,046 million in 2004, 2003 and 2002, respectively. U.S. defense spending increased in 2004 and is also expected to increase in 2005.

In addition to normal business risks, companies engaged in supplying military and other equipment to the U.S. Government are subject to unusual risks, including dependence on Congressional appropriations and administrative allotment of funds, changes in governmental procurement legislation and regulations and other policies that may reflect military and political developments, significant changes in contract scheduling, complexity of designs and the rapidity with which they become obsolete, necessity for constant design improvements, intense competition for U.S. Government business necessitating increases in time and investment for design and development, difficulty of forecasting costs and schedules when bidding on developmental and highly sophisticated technical work and other factors characteristic of the industry. Changes are customary over the life of U.S. Government contracts, particularly development contracts, and generally result in adjustments of contract prices.

Our contracts with the U.S. Government are subject to audits. Like many other government contractors, we have received audit reports that recommend downward price adjustments to certain contracts to comply with various government regulations. We have made adjustments and paid voluntary refunds in appropriate cases. In addition, we accrue for liabilities associated with these government contract matters that are probable and can be reasonably estimated.

U.S. Government contracts are subject to termination by the government, either for the convenience of the government or for our failure to perform under the applicable contract. In the case of a termination for convenience, we are typically entitled to reimbursement for our allowable costs incurred, plus termination costs and a reasonable profit. If a contract is terminated by the government for our failure to perform, we could be liable for additional costs incurred by the government in acquiring undelivered goods or services from another source and any other damages suffered by the government.

We, like other government contractors, are subject to government investigations of business practices and compliance with government procurement regulations. If Honeywell or one of its businesses were charged with wrongdoing as a result of any such investigation or other government investigations (including violation of certain environmental or export laws), it could be suspended from bidding on or receiving awards of new government contracts pending the completion of legal proceedings. The U.S. Government also reserves the right to debar a contractor from receiving new government contracts for fraudulent, criminal or other egregious misconduct. Debarment generally does not exceed three years. Although the outcome of pending government investigations cannot be predicted with certainty, we are not aware of any investigations that we expect will have a material adverse effect on us.

### **Backlog**

Our total backlog at year-end 2004 and 2003 was \$8,229 and \$7,191 million, respectively. We anticipate that approximately \$6,339 million of the 2004 backlog will be filled in 2005. We believe that backlog is not necessarily a reliable indicator of our future sales because a substantial portion of the orders constituting this backlog may be canceled at the customer's option.

### **Competition**

We are subject to active competition in substantially all product and service areas. Competition is expected to continue in all geographic regions. Competitive conditions vary widely among the thousands of products and services provided by us, and vary country by country. Depending on the particular customer or market involved, our businesses compete on a variety of factors, such as price, quality, reliability, delivery, customer service, performance, applied technology, product innovation and product recognition. Brand identity, service to customers and quality are generally important competitive factors for our products and services, and there is considerable price competition. Other competitive factors for certain products include breadth of product line, research and development efforts and technical and managerial capability. While our competitive position varies among our products and services, we believe we are a significant competitor in each of our major product and service classes. However, a number of our products and services are sold in competition with those of a large number of other companies, some of which have substantial financial resources and significant technological capabilities. In addition, some of our products compete with the captive component divisions of original equipment manufacturers.

### **International Operations**

We are engaged in manufacturing, sales, service and research and development mainly in the United States, Europe, Canada, Asia and Latin America. U.S. exports and foreign manufactured products are significant to our operations. U.S. exports comprised 9 and 10 percent of our total net sales in 2004 and 2003, respectively. Foreign manufactured products and services, mainly in Europe, were 35 and 34 percent of our total net sales in 2004 and 2003, respectively.

Our international operations, including U.S. exports, are potentially subject to a number of unique risks and limitations, including: fluctuations in currency value; exchange control regulations; wage and price controls; employment regulations; foreign investment laws; import and trade restrictions, including embargoes; and governmental instability.

Approximately 18 percent of total 2004 net sales of Aerospace-related products and services were exports of U.S. manufactured products and systems and performance of services such as aircraft

repair and overhaul. Exports were principally made to Europe, Asia and Canada. Foreign manufactured products and systems and performance of services comprised 14 percent of total 2004 Aerospace net sales.

Approximately 3 percent of total 2004 net sales of Automation and Control Solutions products were exports of U.S. manufactured products. Foreign manufactured products and performance of services accounted for 49 percent of total 2004 net sales of Automation and Control Solutions. The principal manufacturing facilities outside the U.S. are in Europe and Mexico, with less significant operations in Asia and Canada.

Approximately 11 percent of total 2004 net sales of Specialty Materials were exports of U.S. manufactured products. Exports were principally made to Asia, Europe, Latin America and Canada. Foreign manufactured products comprised 29 percent of total 2004 net sales of Specialty Materials. The principal manufacturing facilities outside the U.S. are in Europe, with less significant operations in Asia and Canada.

Exports of U.S. manufactured products comprised 1 percent of total 2004 net sales of Transportation Systems products. Foreign manufactured products accounted for 62 percent of total 2004 net sales of Transportation Systems. The principal manufacturing facilities outside the U.S. are in Europe, with less significant operations in Asia, Latin America and Canada.

### **Raw Materials**

The principal raw materials used in our operations are generally readily available. We experienced no significant or unusual problems in the purchase of key raw materials and commodities in 2004. We are not dependent on any one supplier for a material amount of our raw materials. However, we are highly dependent on our suppliers and subcontractors in order to meet commitments to our customers. In addition, many major components and product equipment items are procured or subcontracted on a sole-source basis with a number of domestic and foreign companies. We maintain a qualification and performance surveillance process to control risk associated with such reliance on third parties. While we believe that sources of supply for raw materials and components are generally adequate, it is difficult to predict what effects shortages or price increases may have in the future. The costs of certain key raw materials, including natural gas and benzene, in our Specialty Materials' business were at historically high levels in 2004 and are expected to remain at those levels in 2005. We will continue to attempt to offset raw material cost increases with price increases where feasible. At present, we have no reason to believe a shortage of raw materials will cause any material adverse impact during 2005.

### **Patents, Trademarks, Licenses and Distribution Rights**

Our business as a whole, and that of our strategic business units, are not dependent upon any single patent or related group of patents, or any licenses or distribution rights. We own, or are licensed under, a large number of patents, patent applications and trademarks acquired over a period of many years, which relate to many of our products or improvements to those products and which are of importance to our business. From time to time, new patents and trademarks are obtained, and patent and trademark licenses and rights are acquired from others. We also have distribution rights of varying terms for a number of products and services produced by other companies. In our judgment, those rights are adequate for the conduct of our business. We believe that, in the aggregate, the rights under our patents, trademarks and licenses are generally important to our operations, but we do not consider any patent, trademark or related group of patents, or any licensing or distribution rights related to a specific process or product, to be of material importance in relation to our total business.

We have registered trademarks for a number of our products, including such consumer brands as Honeywell, Prestone, FRAM, Anso, Autolite, Bendix, Jurid and Garrett.

### **Research and Development**

Our research activities are directed toward the discovery and development of new products and processes and the development of new uses for existing products.

Research and development expense totaled \$917, \$751 and \$757 million in 2004, 2003 and 2002, respectively. The increase in research and development expense in 2004 compared with 2003 results primarily from design and developments costs associated with new aircraft platforms in Aerospace and new product development costs in Automation and Control Solutions. Customer-sponsored (principally the U.S. Government) research and development activities amounted to an additional \$593, \$608 and \$603 million in 2004, 2003 and 2002, respectively.

## Environment

We are subject to various federal, state, local and foreign government requirements regulating the discharge of materials into the environment or otherwise relating to the protection of the environment. It is our policy to comply with these requirements, and we believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage, and of resulting financial liability, in connection with our business. Some risk of environmental damage is, however, inherent in some of our operations and products, as it is with other companies engaged in similar businesses.

We are and have been engaged in the handling, manufacture, use and disposal of many substances classified as hazardous or toxic by one or more regulatory agencies. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and personal injury, and that our handling, manufacture, use and disposal of these substances are in accord with environmental and safety laws and regulations. It is possible, however, that future knowledge or other developments, such as improved capability to detect substances in the environment or increasingly strict environmental laws and standards and enforcement policies, could bring into question our current or past handling, manufacture, use or disposal of these substances.

Among other environmental requirements, we are subject to the federal superfund and similar state and foreign laws and regulations, under which we have been designated as a potentially responsible party that may be liable for cleanup costs associated with various hazardous waste sites, some of which are on the U.S. Environmental Protection Agency's superfund priority list. Although, under some court interpretations of these laws, there is a possibility that a responsible party might have to bear more than its proportional share of the cleanup costs if it is unable to obtain appropriate contribution from other responsible parties, we have not had to bear significantly more than our proportional share in multi-party situations taken as a whole.

In the matter entitled *Interfaith Community Organization, et al. v. Honeywell International Inc., et al.*, the United States District Court for the District of New Jersey held in May 2003 that a predecessor Honeywell site located in Jersey City, New Jersey constituted an imminent and substantial endangerment and ordered Honeywell to conduct the excavation and transport for offsite disposal of approximately one million tons of chromium residue present at the site. Honeywell appealed the Court's decision to the Third Circuit Court of Appeals (Appeals Court). As disclosed in prior SEC filings, we believed that the District Court-ordered remedy would be remanded, reversed or replaced and, accordingly, provisions previously made in our financial statements for remedial costs at this site did not assume excavation and offsite removal of chromium. On February 18, 2005, the Appeals Court denied Honeywell's appeal. In light of the Appeals Court decision, we recorded a pre-tax charge of \$278 million in the fourth quarter of 2004, which reflects the incremental cost of implementing the Court-ordered remedy. Implementation of the excavation and offsite removal remedy is expected to take place over a five-year period, and the cost of implementation is expected to be incurred evenly over that period. We do not expect implementation of the remedy to have a material adverse effect on our future consolidated results of operations, operating cash flows or financial position.

In accordance with a 1992 consent decree with the State of New York, Honeywell is studying environmental conditions in and around Onondaga Lake (the Lake) in Syracuse, New York. The purpose of the study is to identify, evaluate and propose remedial measures that can be taken to remedy historic industrial contamination in the Lake. A predecessor company to Honeywell operated a chemical plant which is alleged to have contributed mercury and other contaminants to the Lake. In November 2004, the New York State Department of Environmental Conservation (the DEC) issued its Proposed Plan for remediation of industrial contamination in the Lake. There will be a public comment period until March 1, 2005, and the Proposed Plan is subject to review by the U.S. Environmental Protection Agency. The DEC is currently expected to issue its Record of Decision in the first half of 2005.

The Proposed Plan calls for a combined dredging/capping remedy generally in line with the approach recommended in the Feasibility Study submitted by Honeywell in May 2004 (the May 2004 Feasibility Study). Although the Proposed Plan calls for additional remediation in certain parts of the Lake, it would not require the most extensive dredging alternatives described in the May 2004 Feasibility Study. The DEC's aggregate cost estimate is based on the high end of the range of potential costs for major elements of the Proposed Plan and includes a contingency. The actual cost of the

Proposed Plan will depend upon, among other things, the resolution of certain technical issues during the design phase of the remediation, expected to occur sometime in 2007 and beyond.

Based on currently available information and analysis performed by our engineering consultants, our estimated cost of implementing the remedy set forth in the Proposed Plan is consistent with amounts previously provided for in our financial statements. Our estimating process considered a range of possible outcomes and amounts recorded reflect our best estimate at this time. We do not believe that this matter will have a material adverse impact on our consolidated financial position. Given the scope and complexity of this project, it is possible that actual costs could exceed estimated costs by an amount that could have a material adverse impact on our consolidated results of operations and operating cash flows in the periods recognized or paid. At this time, however, we cannot identify any legal, regulatory or technical reason to conclude that a specific alternative outcome is more probable than the outcome for which we have made provisions in our financial statements.

Further information regarding environmental matters is included in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations."

### **Employees**

We have approximately 109,000 employees at December 31, 2004, of which approximately 60,000 were located in the United States.

### **Item 2. Properties**

We have 1,152 locations consisting of plants, research laboratories, sales offices and other facilities. Our headquarters and administrative complex is located at Morris Township, New Jersey. Our plants are generally located to serve large marketing areas and to provide accessibility to raw materials and labor pools. Our properties are generally maintained in good operating condition. Utilization of these plants may vary with sales to customers and other business conditions; however, no major operating facility is significantly idle. We own or lease warehouses, railroad cars, barges, automobiles, trucks, airplanes and materials handling and data processing equipment. We also lease space for administrative and sales staffs. Our properties and equipment are in good operating condition and are adequate for our present needs. We do not anticipate difficulty in renewing existing leases as they expire or in finding alternative facilities.



Our principal plants, which are owned in fee unless otherwise indicated, are as follows:

<u><b>Aerospace</b></u>		
Glendale, AZ (partially leased)	South Bend, IN	Rocky Mount, NC
Phoenix, AZ	Olathe, KS	Urbana, OH
Tempe, AZ	Minneapolis, MN	Redmond, WA
Tucson, AZ	Plymouth, MN	(leased)
Torrance, CA (partially leased)	Teterboro, NJ	Toronto, Canada
Clearwater, FL		Raunheim, Germany
<u><b>Automation and Control Solutions</b></u>		
Phoenix, AZ	Northford, CT	Chihuahua, Mexico
San Diego, CA	Freeport, IL	Juarez, Mexico
	Golden Valley, MN	Newhouse, Scotland
<u><b>Specialty Materials</b></u>		
Baton Rouge, LA	Pottsville, PA	Hopewell, VA
Geismar, LA	Chesterfield, VA	Seelze, Germany
<u><b>Transportation Systems</b></u>		
Mexicali, Mexico	Thaon-Les-Vosges, France	Atessa, Italy
	Glinde, Germany	

### Item 3. Legal Proceedings

We are subject to a number of lawsuits, investigations and claims (some of which involve substantial amounts) arising out of the conduct of our business. See a discussion of environmental, asbestos and other litigation matters in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data."

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

Not Applicable.

### Executive Officers of the Registrant

The executive officers of Honeywell, listed as follows, are elected annually by the Board of Directors. There are no family relationships among them.

<u>Name, Age, Date First Elected an Executive Officer</u>	<u>Business Experience</u>
David M. Cote (a), 52 2002	Chairman of the Board and Chief Executive Officer since July 2002. President and Chief Executive Officer from February 2002 to June 2002. Chairman of the Board, President and Chief Executive Officer of TRW (manufacturer of aerospace and automotive products) from August 2001 to February 2002. President and Chief Executive Officer of TRW from February 2001 to July 2001. President and Chief Operating Officer of TRW from November 1999 to January 2001. Senior Vice President of General Electric Company and President and Chief Executive Officer of GE Appliances from June 1996 to November 1999.
Adriane M. Brown, 46 2005	President and Chief Executive Officer Transportation Systems since January 2005. Vice President and General Manager of Engine Systems & Accessories from September 2001 to December 2004. Vice President and General Manager of Aircraft Landing Systems from October 1999 to August 2001.

(a) Also a Director.

Name, Age, Date First Elected an Executive Officer	Business Experience
Dr. Nance K. Dicciani, 57 2001	President and Chief Executive Officer Specialty Materials since November 2001. Senior Vice President and Business Group Executive of Chemical Specialties and Director, European Region of Rohm and Haas (chemical company) from June 1998 to October 2001.
Roger Fradin, 51 2004	President and Chief Executive Officer Automation and Control Solutions since January 2004. President of Automation and Control Products from June 2002 to December 2003. President and Chief Executive Officer of Security and Fire Solutions from February 2000 to May 2002. President of The Security Group of The Pittway Corporation from September 1995 to April 2002.
Robert J. Gillette, 44 2001	President and Chief Executive Officer Aerospace since January 2005. President and Chief Executive Officer Transportation Systems from July 2001 to December 2004. President of Honeywell Turbo Technologies from July 2000 to June 2001. Vice President and General Manager of Engineering Plastics from December 1996 to June 2000.
David J. Anderson, 55 2003	Senior Vice President and Chief Financial Officer since June 2003. Senior Vice President and Chief Financial Officer of ITT Industries (global manufacturing company) from December 1999 to June 2003.
Larry E. Kittelberger, 56 2001	Senior Vice President Administration and Chief Information Officer since August 2001. Senior Vice President and Chief Information Officer of Lucent Technologies Inc. from November 1999 to August 2001.
Peter M. Kreindler, 59 1992	Senior Vice President and General Counsel since March 1992. Secretary from December 1994 through November 1999.
Thomas W. Weidenkopf, 46 2002	Senior Vice President Human Resources and Communications since April 2002. Vice President of Human Resources, Aerospace, from March 1999 to March 2002.

## Part II.

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

Market and dividend information for Honeywell's common stock is included in Note 26 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data."

The number of record holders of our common stock at December 31, 2004 was 83,995.

The following table summarizes Honeywell's purchases of its common stock, par value \$1 per share, for the quarter ending December 31, 2004:

<b>Issuer Purchases of Equity Securities</b>				
	(a)	(b)	(c)	(d)
<u>Period</u>	<u>Total Number of Shares Purchased</u>	<u>Average Price Paid per Share</u>	<u>Total Number of Shares Purchased as Part of Publicly Announced Plans or Programs</u>	<u>Maximum Number (or Approximate Dollar Value) of Shares that May Yet be Purchased Under Plans or Programs</u>
October 2004	4,250,000	\$33.32	4,250,000	(A)
November 2004	6,750,000	\$35.61	6,750,000	(A)
December 2004	—	—	—	(A)

- (A) In November 2003, Honeywell announced its intention to repurchase sufficient outstanding shares of its common stock to offset the dilutive impact of employee stock based compensation plans, including future option exercises, restricted unit vesting and matching contributions under our savings plans. We estimate the issuance of approximately 10 million shares annually under such plans. Total repurchases may vary depending on market conditions and the level of other investing activities. In response to market conditions, in the fourth quarter of 2004, we repurchased shares to offset the anticipated 2005 dilutive impact of employee stock based compensation plans, bringing the total number of shares repurchased in 2004 to 20,072,650. Accordingly, we do not anticipate the need for additional share repurchases in 2005 under this program.

## Item 6. Selected Financial Data

	Years Ended December 31,					
	2004	2003	2002	2001	2000	1999
	(Dollars in millions, except per share amounts)					
<b>Results of Operations</b>						
Net sales.....	\$25,601	\$23,103	\$22,274	\$23,652	\$25,023	\$23,735
Net income (loss)(1) .....	1,281	1,324	(220)	(99)	1,659	1,541
<b>Per Common Share</b>						
Net earnings (loss):						
Basic .....	1.49	1.54	(0.27)	(0.12)	2.07	1.95
Assuming dilution .....	1.49	1.54	(0.27)	(0.12)	2.05	1.90
Dividends .....	0.75	0.75	0.75	0.75	0.75	0.68
<b>Financial Position at Year-End</b>						
Property, plant and equipment—net	4,331	4,295	4,055	4,933	5,230	5,630
Total assets .....	31,062	29,314	27,565	24,226	25,175	23,527
Short-term debt .....	1,204	199	370	539	1,682	2,609
Long-term debt .....	4,069	4,961	4,719	4,731	3,941	2,457
Total debt .....	5,273	5,160	5,089	5,270	5,623	5,066
Shareowners' equity .....	11,252	10,729	8,925	9,170	9,707	8,599

Note: Commencing January 1, 2002, we ceased amortization of goodwill and indefinite-lived intangible assets.

- (1) In 2004, includes net repositioning, environmental, litigation, business impairment and other charges, gains on sales of non-strategic businesses and a gain related to the settlement of a patent infringement lawsuit resulting in a net after-tax charge of \$315 million, or \$0.36 per share. In 2003, includes the cumulative after-tax charge of \$20 million, or \$0.02 per share, for the adoption of SFAS No. 143. In 2003, also includes net repositioning, environmental and other charges, gains on sales of non-strategic businesses and a gain related to the settlement of a patent infringement lawsuit resulting in a net after-tax charge of \$22 million, or \$0.03 per share. In 2002, includes net repositioning, litigation, business impairment and other charges and gains on sales of non-strategic businesses resulting in a net after-tax charge of \$1,864 million, or \$2.27 per share. In 2001, includes net repositioning, litigation, business impairment and other charges resulting in an after-tax charge of \$1,771 million, or \$2.18 per share. In 2000, includes net repositioning, litigation, business impairment and other charges and a gain on the sale of the TCAS product line of Honeywell Inc. resulting in a net after-tax charge of \$634 million, or \$0.78 per share. In 1999, includes merger, repositioning and other charges and gains on the sales of our Laminate Systems business and our investment in AMP Incorporated common stock resulting in a net after-tax charge of \$624 million, or \$0.78 per share.

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

### BUSINESS OVERVIEW

This Business Overview provides a summary of Honeywell's four reportable operating segments (Aerospace, Automation and Control Solutions, Specialty Materials and Transportation Systems), including how they generate income, the relevant economic and other factors impacting their results, and business challenges and areas of focus in both the short- and long-term. Each of these segments is comprised of various business units and product classes that serve multiple end markets. See Note 23 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further information on our reportable segments and our definition of segment profit.

## Aerospace

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net sales .....	\$9,748	\$8,813	\$8,855
Segment profit.....	\$1,479	\$1,221	\$1,308
Segment profit % .....	15.2%	13.9%	14.8%

Aerospace is a leading global supplier of aircraft engines, avionics, and related products and services for commercial airlines, business and regional aircraft, manned and unmanned military aircraft, and spacecraft. Our Aerospace portfolio includes Engines, Systems and Services (auxiliary power units; propulsion engines; environmental control systems; engine controls; repair and overhaul services; hardware; logistics; and electric power systems); Aerospace Electronic Systems (flight safety, communications, navigation, radar and surveillance systems; aircraft and airport lighting; management and technical services and advanced systems and instruments); and Aircraft Landing Systems (aircraft wheels and brakes). Aerospace sells its products to original equipment (OE) manufacturers in the commercial air transport and business and regional aircraft segments, as well as spare parts into the aftermarket (principally to aircraft operators). The United States Government is also a major customer for our defense and space products.

**Economic and Other Factors**—Aerospace's operating results are principally driven by the global demand for air travel as reflected in new aircraft production, as well as spare parts and maintenance and repair services for aircraft currently in use. Aircraft production by commercial air transport OE manufacturers, business and regional jet deliveries, as well as global flying hours and airline profitability, are the principal factors that drive our commercial aerospace operating results. U.S. Government appropriations for defense and space programs and military activity are critical factors impacting our defense and space operating results.

**Business Challenges/Areas of Focus**—Aerospace's primary business challenges and areas of focus include:

- Continuing to grow the sales and profitability of the commercial aerospace aftermarket as the worldwide airline industry struggles to regain and maintain profitable operations.
- Securing Honeywell product content on new aircraft platforms.
- Making our product development process faster and less costly to meet increasing customer requirements while continuing to reduce recurring manufacturing costs.
- Continuing to design equipment that enhances the safety, performance and durability of aircraft, while reducing weight and operating costs.
- Utilizing our systems engineering expertise for continued growth in Network Centric Warfare initiatives with the U.S. Government.

## Automation and Control Solutions (ACS)

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net sales .....	\$8,031	\$7,464	\$6,978
Segment profit.....	\$ 894	\$ 843	\$ 860
Segment profit % .....	11.1%	11.3%	12.3%

ACS provides innovative solutions that make homes, buildings, industrial sites and airport facilities more efficient, safe and comfortable. Our ACS portfolio includes Automation and Control Products (controls for heating, cooling, indoor air quality, ventilation, humidification and home automation; advanced software applications for home/building control and optimization; sensors, switches, control systems and instruments for measuring pressure, air flow, temperature, electrical current; and security and fire detection, access control, video surveillance and remote patient monitoring systems); Building Solutions (installs, maintains and upgrades systems that keep buildings safe, comfortable and productive); and Process Solutions (provides a full range of automation and control solutions for

industrial plants, offering advanced software and automation systems that integrate, control and monitor complex processes in many types of industrial settings).

**Economic and Other Factors**—ACS' operating results are principally driven by global residential and nonresidential construction, industrial production, capital spending on process and building automation, and fire and security concerns and regulations.

**Business Challenges/Areas of Focus**—ACS' primary business challenges and areas of focus include:

- Extending technology leadership: lowest total installed cost, integrated solutions within our security, fire and sensors product portfolios.
- Defending and extending our installed base through customer productivity and globalization.
- Sustaining strong brand recognition.
- Continuing to invest in sales and marketing resources and new product development capabilities to drive profitable growth.
- Integrating Novar plc's Intelligent Building Systems division into our life safety, building controls, security and related service businesses (acquisition of Novar plc expected to be completed in the first quarter of 2005).

## Specialty Materials

	2004	2003	2002
	(Dollars in millions)		
Net sales .....	\$3,497	\$3,169	\$3,205
Segment profit .....	\$ 184	\$ 136	\$ 90
Segment profit %.....	5.3%	4.3%	2.8%

Specialty Materials develops and manufactures high-purity, high-quality and high-performance chemicals and materials for applications in the automotive, healthcare, agricultural, packaging, fibers, refrigeration, semiconductor, wax and adhesives markets. Specialty Materials' product portfolio includes fluorocarbons, specialty films, advanced fibers, customized research chemicals and intermediates and electronic materials and chemicals. Specialty Materials' core growth businesses are Chemicals, Electronic Materials and Performance Products.

**Economic and Other Factors**—Specialty Materials' operating results are principally driven by global gross domestic product, plant capacity utilization and the costs of raw materials including natural gas and benzene. We expect raw material costs to remain at historically high levels in 2005 and will continue to attempt to offset raw material cost increases with price increases where feasible.

**Business Challenges/Areas of Focus**—Specialty Materials' primary business challenges and areas of focus include:

- Sharpening the focus on core growth platforms to drive improved profitability through new product applications and introductions.
- Continuing to restructure and exit non-core commodity lines of business with minimal or no differentiating technology and/or exposure to raw material cost volatility.
- Continuing to improve manufacturing productivity.

## Transportation Systems

	2004	2003	2002
	(Dollars in millions)		
Net sales .....	\$4,323	\$3,650	\$3,184
Segment profit .....	\$ 575	\$ 461	\$ 393
Segment profit %.....	13.3%	12.6%	12.3%

Transportation Systems provides automotive products that improve the performance, efficiency, and appearance of cars, trucks, and other vehicles through state-of-the-art technologies, world class brands and global solutions to our customers needs. Our Transportation Systems' portfolio includes Honeywell Turbo Technologies (Garrett® turbochargers and charge-air and thermal systems); the Consumer Products Group (car care products including anti-freeze (Prestone®), filters (Fram®), spark plugs (Autolite®), and cleaners, waxes and additives (Holts®)); and Friction Materials (friction materials and related brake system components (Bendix® and Jurid®)). Transportation Systems sells its products to OE automotive and truck manufacturers (e.g., BMW, Caterpillar, Daimler-Chrysler, Ford, Volkswagen), wholesalers and distributors and through the retail aftermarket.

**Economic and Other Factors**—Transportation Systems' operating results are principally driven by worldwide automobile and truck production and the global demand for automobiles and trucks equipped with turbochargers to enhance power, increase engine efficiency and lower emissions.

**Business Challenges/Areas of Focus**—Transportation Systems' primary business challenges and areas of focus include:

- Sustaining superior turbocharger technology.
- Increasing market penetration and share of diesel and gasoline turbocharger OEM demand.
- Expanding and strengthening established strong product brands in the Consumer Products Group business.
- Revitalizing our Friction Materials business.

## CRITICAL ACCOUNTING POLICIES

The preparation of our consolidated financial statements in accordance with generally accepted accounting principles is based on the selection and application of accounting policies that require us to make significant estimates and assumptions about the effects of matters that are inherently uncertain. We consider the accounting policies discussed below to be critical to the understanding of our financial statements. Actual results could differ from our estimates and assumptions, and any such differences could be material to our consolidated financial statements.

We have discussed the selection, application and disclosure of these critical accounting policies with the Audit Committee of our Board of Directors and our Independent Registered Public Accountants. There were no new accounting standards effective in 2004 which had a material impact on our consolidated financial statements.

**Contingent Liabilities**—We are subject to a number of lawsuits, investigations and claims (some of which involve substantial dollar amounts) that arise out of the conduct of our global business operations or those of previously owned entities. These contingencies relate to product liabilities, including asbestos, commercial transactions, government contracts and environmental health and safety matters. We recognize a liability for any contingency that is probable of occurrence and reasonably estimable. We continually assess the likelihood of any adverse judgments or outcomes to our contingencies, as well as potential amounts or ranges of probable losses, and recognize a liability, if any, for these contingencies based on a careful analysis of each matter with the assistance of outside legal counsel and, if applicable, other experts. Such analysis includes making judgments concerning matters such as the costs associated with environmental matters, the outcome of negotiations, the number and cost of pending and future (where estimable) asbestos claims, and the impact of evidentiary requirements. Because most contingencies are resolved over long periods of time, liabilities may change in the future due to new developments or changes in our settlement strategy. For a discussion of our contingencies related to shareowners litigation, environmental and asbestos matters, including management's judgment applied in the recognition and measurement of specific liabilities, see Notes 1 and 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data".

**Insurance for Asbestos Related Liabilities**—In connection with recognition of liabilities for asbestos related matters, we record asbestos related insurance recoveries that are deemed probable. In assessing the probability of insurance recovery, we make judgments concerning insurance coverage

that we believe are reasonable and consistent with our historical dealings with our insurers, our knowledge of any pertinent solvency issues surrounding insurers and various judicial determinations relevant to our insurance programs. We have approximately \$1.3 billion in insurance coverage remaining that can be specifically allocated to North American Refractories Company (NARCO) related asbestos liabilities. We also have \$1.9 billion in coverage remaining for Bendix related asbestos liabilities although there are gaps in our coverage due to insurance company insolvencies, a comprehensive policy buy-back settlement with Equitas and certain uninsured periods, resulting in approximately 50 percent of these claims being reimbursable by insurance. Our insurance is with both the domestic insurance market and the London excess market. While the substantial majority of our insurance carriers are solvent, some of our individual carriers are insolvent, which has been considered in our analysis of probable recoveries. Projecting future events is subject to various uncertainties that could cause the insurance recovery on asbestos related liabilities to be higher or lower than that projected and recorded. Given the inherent uncertainty in making future projections, we reevaluate our projections concerning our probable insurance recoveries in light of any changes to the projected liability, our recovery experience or other relevant factors that may impact future insurance recoveries. See Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for a discussion of management's judgments applied in the recognition and measurement of insurance recoveries for asbestos related liabilities.

**Defined Benefit Pension Plans**—We maintain defined benefit pension plans covering a majority of our employees and retirees. For financial reporting purposes, net periodic pension expense (income) is calculated based upon a number of actuarial assumptions including a discount rate for plan obligations and an expected rate of return on plan assets. We consider current market conditions, including changes in investment returns and interest rates, in making these assumptions. We determine the expected long-term rate of return on plan assets utilizing historic plan asset returns over varying long-term periods combined with current market conditions and broad asset mix considerations (see Note 22 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for actual and targeted asset allocation percentages for our pension plans). The expected rate of return on plan assets is a long-term assumption and generally does not change annually. The discount rate reflects the market rate for high-quality fixed-income investments on our annual measurement date (December 31) and is subject to change each year. The expected rate of return on pension assets and discount rate were determined in accordance with consistent methodologies as described in Note 22 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data".

The key assumptions used in developing our 2004, 2003 and 2002 net periodic pension expense (income) for our U.S. plans included the following:

	<u>2004</u>	<u>2003</u>	<u>2002</u>
Discount rate .....	6.00%	6.75%	7.25%
Assets:			
Expected rate of return .....	9%	9%	10%
Actual rate of return .....	13%	23%	(8)%
Actual 10 year average annual compounded rate of return ..	11%	10%	9%

The reduction in the discount rate in both 2004 and 2003 reflects the lower market interest rate environment for high-quality fixed income debt instruments. The discount rate is also volatile because it is determined based upon the prevailing rate as of the measurement date. Due to continuing declines in interest rates, we will use a 5.875 percent discount rate in 2005. The expected rate of return on plan assets was reduced from 10 to 9 percent for 2003 to reflect the impact of the poor performance of the equity markets during the three year period ended December 31, 2002. As equity markets have stabilized in 2003 and 2004, we plan to continue to use an expected rate of return of 9 percent for 2005. The unrecognized net losses for our U.S. pension plans were \$2.6 billion at December 31, 2004, down from \$3.2 billion at December 31, 2003. These unrecognized losses mainly result from actual plan asset returns below expected rates of return during 2002, 2001 and 2000 and from lower discount rates and are being systematically recognized in future net periodic pension expense in accordance with Statement of Financial Accounting Standards No. 87, "Employers Accounting for Pensions" (SFAS



No. 87). Under SFAS No. 87, we use the market-related value of plan assets reflecting changes in the fair value of plan assets over a three-year period. Further, unrecognized losses in excess of 10 percent of the greater of the market-related value of plan assets or the plans projected benefit obligation are recognized over a six-year period. Net periodic pension expense for our U.S. pension plans is expected to be \$320 million in 2005, a \$56 million decrease from 2004 due principally to a decrease in the amortization of unrecognized losses. The decline in the amortization of unrecognized losses results principally from actual plan asset returns higher than the expected rate of return in 2003 and 2004.

We made voluntary contributions of \$40, \$670 and \$830 million to our U.S. pension plans in 2004, 2003 and 2002, respectively. The 2003 and 2002 voluntary contributions were made to improve the funded status of the plans which had been impacted by the poor performance of the equity markets during the three-year period ended December 31, 2002, as well as the declining interest rate environment. Future plan contributions are dependent upon actual plan asset returns and interest rates. Assuming that actual plan returns are consistent with our expected plan return of 9 percent in 2005 and beyond, and that interest rates remain constant, we would not be required to make any contributions to our U.S. pension plans for the foreseeable future.

Changes in net periodic pension expense may occur in the future due to changes in our expected rate of return on plan assets and discount rate resulting from economic events. The following table highlights the sensitivity of our U.S. pension obligations and expense to changes in these assumptions, assuming all other assumptions remain constant:

<u>Change In Assumption</u>	<u>Impact on Annual Pension Expense</u>	<u>Impact on PBO</u>
0.25 percentage point decrease in discount rate ..	Increase \$50 million	Increase \$300 million
0.25 percentage point increase in discount rate ..	Decrease \$50 million	Decrease \$300 million
0.25 percentage point decrease in expected rate of return on assets .....	Increase \$25 million	—
0.25 percentage point increase in expected rate of return on assets .....	Decrease \$25 million	—

SFAS No. 87 requires recognition of an additional minimum pension liability if the fair value of plan assets is less than the accumulated benefit obligation at the end of the plan year. In 2004, we recorded a non-cash adjustment to equity through accumulated other nonowner changes of \$15 million (\$19 million on a pretax basis) which increased the additional minimum pension liability. In 2003, we recorded a non-cash adjustment to equity through accumulated other nonowner changes of \$369 million (\$604 million on a pretax basis) to reduce the additional minimum pension liability by \$304 million and reinstate a portion of our pension assets (\$300 million) written off as a result of the prior year's minimum pension liability adjustment. The 2003 adjustment resulted from an increase in our pension assets in 2003 due to the improvement in equity markets and our contribution of \$670 million to our U.S. plans. In 2002, due to the poor performance of the equity markets which adversely affected our pension assets and a decline in the discount rate, we recorded a non-cash adjustment to equity through accumulated other nonowner changes of \$606 million (\$956 million on a pretax basis) which increased the additional minimum pension liability. Equity market returns and interest rates significantly impact the funded status of our pension plans. Based on future plan asset performance and interest rates, additional adjustments to equity may be required.

**Long-Lived Assets (including Tangible and Definite-Lived Intangible Assets)**—To conduct our global business operations and execute our business strategy, we acquire tangible and intangible assets. We periodically evaluate the recoverability of the carrying amount of our long-lived assets (including property, plant and equipment and definite-lived intangible assets) whenever events or changes in circumstances indicate that the carrying amount of a long-lived asset group may not be fully recoverable. These events or changes in circumstances include business plans and forecasts, economic or competitive positions within an industry, as well as current operating performance and anticipated future performance based on a business' competitive position. An impairment is assessed when the undiscounted expected future cash flows derived from an asset are less than its carrying amount. Impairment losses are measured as the amount by which the carrying value of a long-lived asset exceeds its fair value and are recognized in earnings. We continually apply our best judgment

when applying the impairment rules to determine the timing of the impairment test, the undiscounted cash flows used to assess impairment, and the fair value of an impaired long-lived asset group. The dynamic economic environment in which each of our businesses operate and the resulting assumptions used to estimate future cash flows, such as economic growth rates, industry growth rates, product life cycles, selling price changes and cost inflation can significantly influence and impact the outcome of all impairment tests. For a discussion of the result of management's judgment applied in the recognition and measurement of impairment charges see the repositioning and other charges section of this MD&A.

**Income Taxes**—The future tax benefit arising from net deductible temporary differences and tax carryforwards was \$1.7 and \$1.8 billion at December 31, 2004 and 2003, respectively. We believe that our earnings during the periods when the temporary differences become deductible will be sufficient to realize the related future income tax benefits. For those jurisdictions where the expiration date of tax carryforwards or the projected operating results indicate that realization is not likely, a valuation allowance is provided.

In assessing the need for a valuation allowance, we consider all available positive and negative evidence, including past operating results, estimates of future taxable income and the feasibility of ongoing tax planning strategies. Significant management judgment is required in determining the provision for income taxes and, in particular, any valuation allowance recorded against our deferred tax assets. Additionally, valuation allowances related to deferred tax assets can be impacted by changes to tax laws and future taxable income levels. In the event we determine that we will not be able to realize our deferred tax assets in the future, we will reduce such amounts through a charge to income in the period that such determination is made. Conversely, if we determine that we will be able to realize deferred tax assets in excess of the carrying amounts, we will decrease the recorded valuation allowance through a credit to income in the period that such determination is made.

**Sales Recognition on Long-Term Contracts**—In 2004, we recognized approximately 8 percent of our total net sales using the percentage-of-completion method for long-term contracts in our Automation and Control Solutions and Aerospace reportable segments. The percentage-of-completion method requires us to make judgments in estimating contract revenues, contract costs and progress toward completion. These judgments form the basis for our determinations regarding overall contract value, contract profitability and timing of revenue recognition based on measured progress toward contract completion. Revenue and cost estimates are monitored on an ongoing basis and revised based on changes in circumstances. Anticipated losses on long-term contracts are recognized when such losses become evident. We maintain financial controls over the customer qualification, contract pricing and cost estimation processes to reduce the risk of contract losses.

**Aerospace Customer Incentives**—Consistent with other suppliers to commercial aircraft manufacturers and airlines, we provide sales incentives to commercial aircraft manufacturers and airlines in connection with their selection of our aircraft wheel and braking system hardware and auxiliary power units for installation on commercial aircraft. These incentives consist of free or deeply discounted products, product credits and upfront cash payments. The cost of these incentives are capitalized at the time we deliver the products to our customers or, in the case of product credits, at the time the credit is issued, or in the case of upfront cash payments, at the time the payment is made. In the case of free or deeply discounted product, the cost to manufacture less any amount recovered from the airframe manufacturer or airline is capitalized. Product credits and upfront cash payments are capitalized at exchanged value. Research, design, development and qualification costs related to these products are expensed as incurred, unless contractually guaranteed of reimbursement. The cost of the sales incentives described above is capitalized because the selection of our aircraft wheel and braking system hardware and auxiliary power units for installation on commercial aircraft results in the creation of future revenues and cash flows through aftermarket sales to fulfill long-term product maintenance requirements mandated by the Federal Aviation Administration (FAA) and other similar international organizations over the useful life of the aircraft. Once our products are certified and selected on an aircraft, the recovery of our investment is virtually guaranteed over the useful life of the aircraft. The likelihood of displacement by an alternative supplier is remote due to contractual sole-sourcing, the high cost to alternative suppliers and aircraft operators of product retrofits, and/or rigorous regulatory

specifications, qualification and testing requirements. Amounts capitalized at December 31, 2004, 2003 and 2002 were \$776, \$719 and \$662 million, respectively, and are being amortized over their useful lives on a straight-line basis, up to 25 years, representing the estimated minimum service life of the aircraft. This useful life is the period over which we are virtually assured to earn revenues from the aftermarket sales of certified products necessary to fulfill the maintenance required by the FAA and other similar international organizations. We classify the amortization expense associated with free and discounted products as cost of goods sold and the amortization expense associated with product credits and upfront cash payments as a reduction of sales. We regularly evaluate the recoverability of capitalized amounts whenever events or changes in circumstances indicate that the carrying amount of the incentives may not be fully recoverable. There were no impairment charges related to these capitalized incentives recognized during 2004, 2003 and 2002. For additional information see Note 13 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data."

## RESULTS OF OPERATIONS

### Net Sales

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net sales .....	\$25,601	\$23,103	\$22,274
% change compared with prior year .....	11%	4%	(6)%

The change in net sales in 2004 and 2003 is attributable to the following:

	<u>2004 Versus 2003</u>	<u>2003 Versus 2002</u>
Acquisitions .....	1%	3%
Divestitures .....	(1)	(2)
Price .....	—	—
Volume .....	8	—
Foreign Exchange .....	3	3
	<u>11%</u>	<u>4%</u>

A discussion of net sales by reportable segment can be found in the Review of Business Segments section of this MD&A.

### Cost of Products and Services Sold

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Cost of products and services sold .....	\$20,585	\$18,235	\$17,615
Gross Margin % .....	19.6%	21.1%	20.9%

Gross margin decreased in 2004 by 1.5 percentage points compared with 2003. The decrease resulted primarily from an increase in net repositioning and other charges of \$349 million, higher pension and other postretirement benefits expense of \$249 million and an increase in research and development expense of \$166 million, partially offset by an increase in sales of higher-margin products and services, mainly in our Aerospace reportable segment. Gross margin increased in 2003 by 0.2 percentage points compared with 2002. The increase resulted primarily from a decrease in net repositioning and other charges of \$289 million partially offset by higher pension expense and a decrease in sales of higher-margin products and services, mainly in our Aerospace and Automation and Control Solutions reportable segments.

## Selling, General and Administrative Expenses

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Selling, general and administrative expenses .....	\$3,316	\$2,950	\$2,757
Percent of sales .....	13.0%	12.8%	12.4%

Selling, general and administrative expenses increased by \$366 million, or 12 percent in 2004 compared with 2003 due to an increase in general and administrative expenses of \$155 million due in part to higher spending for information technology systems, an increase in selling expenses of \$136 million from higher sales and an increase in pension and other postretirement benefits expense of \$54 million. Selling, general and administrative expenses increased by \$193 million, or 7 percent in 2003 compared with 2002 due primarily to an increase in general and administrative expenses of \$120 million due in part to an increase in other employee benefit expenses, and higher pension and other postretirement benefits expense of \$56 million.

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Pension and other postretirement benefits expense (income) included in cost of goods sold and selling, general and administrative expenses .....	\$628	\$325	\$(11)
Increase compared with prior year .....	\$303	\$336	\$154

Pension expense increased by \$276 and \$290 million in 2004 and 2003, respectively, mainly due to the following:

- A decrease in the market-related value of our pension plan assets during the period 2000 to 2002 due to the poor performance of the equity markets which adversely affected our pension fund assets during this period.
- A systematic recognition of higher losses resulting mainly from actual plan asset returns below the expected rate of return during the period 2000 to 2002.
- A reduction in 2003 in the expected rate of return on plan assets from 10 to 9 percent in response to the continued deterioration in financial market returns in 2002.
- A decrease in the discount rate for each of the years 2001 (7.75 percent), 2002 (7.25 percent), 2003 (6.75 percent) and 2004 (6.00 percent).

Using an expected long-term rate of return of 9 percent and a discount rate of 5.875 percent, pension expense for our U.S. plans is expected to be \$320 million in 2005, a decrease of \$56 million compared with 2004.

## (Gain) Loss on Sale of Non-Strategic Businesses

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
(Gain) loss on sale of non-strategic businesses .....	\$(255)	\$(38)	\$124

Gain on sale of non-strategic businesses of \$255 million in 2004 represents the pretax gains on the sales of our Security Monitoring and VCSEL Optical Products businesses in our Automation and Control Solutions reportable segment of \$215 and \$36 million, respectively. The gain also includes adjustments of \$19 million related to businesses sold in prior periods and the pretax loss of \$15 million on the sale of our Performance Fibers business in our Specialty Materials reportable segment. The dispositions of these businesses did not materially impact net sales and segment profit in 2004 compared with 2003. Gain on sale of non-strategic businesses of \$38 million in 2003 represents the net pretax gain on the dispositions of certain Specialty Materials (Engineering Plastics, Rudolstadt and Metglas) and Aerospace (Honeywell Aerospace Defense Services) businesses. The dispositions of these businesses did not materially impact net sales and segment profit in 2003 compared with 2002.

## Asbestos Related Litigation Charges, Net of Insurance

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Asbestos related litigation charges, net of insurance.....	\$76	\$ —	\$1,548

In 2004, we recognized charges totaling \$76 million primarily for Bendix related asbestos claims filed and defense costs incurred during 2004, net of insurance recoveries. The charges include an update of expected resolution values for pending Bendix claims and are net of an additional \$47 million of NARCO insurance deemed probable of recovery. In 2002, asbestos related litigation charges, net of insurance related to costs associated with asbestos claims related to NARCO. See Asbestos Matters in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further discussion.

## Business Impairment Charges

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Business impairment charges .....	\$42	\$ —	\$877

Business impairment charges in 2004 relates principally to the write-down of property, plant and equipment of our Performance Fibers business in our Specialty Materials reportable segment. The Performance Fibers business was sold in the fourth quarter of 2004. Business impairment charges in 2002 related to the write-down of property, plant and equipment of businesses in our Specialty Materials and Automation and Control Solutions reportable segments and of our Friction Materials business. See the repositioning and other charges section of this MD&A for further details.

## Equity in (Income) Loss of Affiliated Companies

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Equity in (income) loss of affiliated companies .....	\$(82)	\$(38)	\$(42)

Equity income increased by \$44 million in 2004 compared with 2003 due primarily to an improvement in earnings from our UOP process technology joint venture (UOP). Equity income decreased by \$4 million in 2003 compared with 2002 due to a charge of \$2 million in 2003 related to the sale of a Specialty Materials' equity investee's investment. Also, 2002 included income of \$15 million resulting from exiting joint ventures in our Aerospace and Transportation Systems reportable segments partially offset by a charge of \$13 million for severance actions by UOP.

## Other (Income) Expense

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Other (income) expense.....	\$(92)	\$19	\$(4)

Other income increased by \$111 million in 2004 compared with 2003 due principally to a decrease in foreign exchange losses of \$93 million in the current year due to a reduction in foreign exchange exposures resulting in losses in 2003 due to a weak U.S. dollar, a gain of \$27 million related to the settlement of a patent infringement lawsuit and an increase in interest income of \$13 million from higher cash balances, partially offset by the inclusion of a gain of \$20 million in the prior year related to the settlement of a patent infringement lawsuit. Other expense increased by \$23 million in 2003 compared with 2002 due principally to an increase of \$65 million in foreign exchange losses resulting from weakness in the U.S. dollar mainly against the EURO partially offset by a gain of \$20 million related to a settlement of a patent infringement lawsuit and an increase of \$19 million in interest income from higher cash balances.

## Interest and Other Financial Charges

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Interest and other financial charges .....	\$331	\$335	\$344
% change compared with prior year .....	(1)%	(3)%	(15)%

Interest and other financial charges decreased by 1 percent in 2004 compared with 2003 due principally to lower average short-term debt outstanding in the current year. Interest and other financial charges decreased by 3 percent in 2003 compared with 2002 due principally to lower average interest rates.

## Tax Expense (Benefit)

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Tax expense (benefit) .....	\$399	\$296	\$ (725)
Effective tax (benefit) rate .....	23.8%	18.0%	(76.7)%

The effective tax (benefit) rate in 2004, 2003 and 2002 was different than the statutory rate of 35 percent due in part to tax benefits from export sales, favorable tax audit settlements and foreign tax planning strategies. The effective tax rate in 2003 also includes tax benefits expected to be realized as a result of the redesignation of our Friction Materials business from held for sale to held and used resulting from the termination of discussions with Federal-Mogul Corp. The effective (benefit) rate in 2002 included the tax benefit resulting from a higher deductible tax basis than book basis related to sales of our Advanced Circuits, PFC and Consumer Products businesses. The impact of tax benefits from export sales, U.S. tax credits and favorable audit settlements had a more favorable impact on our effective (benefit) rate in 2002 principally due to the relative amount of these benefits in comparison to the amount of our pretax loss in 2002. See Note 7 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further information on taxes including a detailed effective tax rate reconciliation.

The American Jobs Creation Act of 2004, signed into law in October 2004, provides for a variety of changes in the tax law including incentives to repatriate undistributed earnings of foreign subsidiaries, a phased elimination of the extra-territorial income exclusion, and a domestic manufacturing benefit. More specifically, the Act creates a temporary incentive for U.S. corporations to repatriate accumulated income earned outside the U.S. by providing an 85 percent dividends received deduction for certain dividends from controlled foreign corporations. The deduction is subject to a number of limitations and currently, uncertainty remains as to how to interpret numerous provisions in the Act. As such, we are not in a position to determine whether, and to what extent, we might repatriate foreign earnings. Based on our analysis to date, however, it is reasonably possible that we may repatriate some amount up to approximately \$2.6 billion. We estimate the income tax effects of repatriating \$2.6 billion to be approximately \$150 to \$350 million. Honeywell has not provided for U.S. federal income and foreign withholding taxes on \$3.9 billion of undistributed earnings from non-U.S. operations as of December 31, 2004. Until our analysis of the Act is completed, we will continue to permanently reinvest those earnings. We expect to finalize our assessment later in 2005.

The extra-territorial income exclusion (ETI) for foreign sales will be phased-out over two years beginning in 2005. The deduction for income from qualified domestic production activities will be phased-in from 2005 through 2010. Similar to the ETI benefit, the domestic manufacturing benefit has no effect on deferred tax assets and liabilities existing at the enactment date. Rather, the impact of this deduction will be reported in the period in which the deduction is claimed on our federal income tax return. We are currently assessing the details of the Act and the net effect of the phase-out of the ETI and the phase-in of this new deduction. We expect to complete our analysis later in 2005. Until such time, it is not possible to determine what impact this legislation will have on our consolidated tax accruals or effective tax rate.

## Net Income (Loss)

	2004	2003	2002
	(Dollars in millions, except per share amounts)		
Net income (loss).....	\$1,281	\$1,324	\$ (220)
Earnings (loss) per share of common stock—assuming dilution	\$ 1.49	\$ 1.54	\$(0.27)

The decrease of \$0.05 per share in 2004 compared with 2003 relates primarily to increased charges for environmental matters primarily attributable to the denial of our appeal in the matter entitled *Interfaith Community Organization et. al. v. Honeywell International Inc. et. al.* (See Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data") and higher pension and other postretirement benefits expense, partially offset by an increase in segment profit across all reportable segments. The increase of \$1.81 per share in 2003 compared with 2002 mainly relates to a decrease in repositioning and other charges partially offset by the impact of higher pension expense and lower sales of higher-margin products and services, principally in our Aerospace and Automation and Control Solutions reportable segments.

## Review of Business Segments

	2004	2003	2002
	(Dollars in millions)		
<b>Net Sales</b>			
Aerospace .....	\$ 9,748	\$ 8,813	\$ 8,855
Automation and Control Solutions .....	8,031	7,464	6,978
Specialty Materials .....	3,497	3,169	3,205
Transportation Systems .....	4,323	3,650	3,184
Corporate .....	2	7	52
	<u>\$25,601</u>	<u>\$23,103</u>	<u>\$22,274</u>
<b>Segment Profit</b>			
Aerospace .....	\$ 1,479	\$ 1,221	\$ 1,308
Automation and Control Solutions .....	894	843	860
Specialty Materials .....	184	136	90
Transportation Systems .....	575	461	393
Corporate .....	(158)	(142)	(154)
	<u>\$ 2,974</u>	<u>\$ 2,519</u>	<u>\$ 2,497</u>

A reconciliation of segment profit to income (loss) before taxes and cumulative effect of accounting change follows:

	2004	2003	2002
	(Dollars in millions)		
Segment profit .....	\$2,974	\$2,519	\$ 2,497
Gain (loss) on sale of non-strategic businesses .....	255	38	(124)
Asbestos related litigation charges, net of insurance .....	(76)	—	(1,548)
Business impairment charges .....	(42)	—	(877)
Repositioning and other charges(1) .....	(646)	(276)	(606)
Pension and other postretirement benefits (expense) income(1) .....	(628)	(325)	11
Equity in income (loss) of affiliated companies .....	82	38	42
Other income (expense) .....	92	(19)	4
Interest and other financial charges .....	(331)	(335)	(344)
Income (loss) before taxes and cumulative effect of accounting change .....	<u>\$1,680</u>	<u>\$1,640</u>	<u>\$ (945)</u>

(1) Amounts included in cost of products and services sold and selling, general and administrative expenses.

## Aerospace

	2004	2003	2002
	(Dollars in millions)		
Net sales .....	\$9,748	\$8,813	\$8,855
% change compared with prior year .....	11%	—%	(8)%
Segment profit.....	\$1,479	\$1,221	\$1,308
% change compared with prior year .....	21%	(7)%	(18)%

Aerospace sales by major customer end-markets were as follows:

Market Segment	% of Aerospace Sales			% Change In Sales	
	2004	2003	2002	2004 Versus 2003	2003 Versus 2002
<b>Commercial:</b>					
Air transport aftermarket .....	22%	21%	20%	19%	(1)%
Air transport original equipment .....	9	9	11	5	(16)
Regional transport aftermarket .....	8	9	9	11	(8)
Regional transport original equipment .....	3	2	2	48	(15)
Business and general aviation aftermarket .....	8	8	8	13	6
Business and general aviation original equipment ....	7	6	8	27	(21)
<b>Defense and Space:</b>					
Defense and space aftermarket .....	13	13	11	7	16
Defense and space original equipment .....	30	32	31	6	4
Total .....	100%	100%	100%	11%	—%

Details of the changes in sales for both 2004 and 2003 by customer end-markets were as follows:

- Despite the continuing financial problems being experienced by many of the commercial airlines, air transport aftermarket sales improved substantially in 2004 primarily related to a 10 percent increase in global flying hours, the reintroduction of aircraft into service which were previously parked in the desert, a replenishment of spare parts inventories by the airlines and growth in low cost carriers. Additionally, global flying hours in 2003 were adversely impacted as a result of the SARS epidemic. Sales also improved due to an increase in upgrades and retrofits of avionics equipment (ground proximity warning systems) to meet new regulatory standards. Air transport aftermarket sales were adversely impacted in 2003 by a decrease in global flying hours of 1 percent and the financial problems being experienced by many of the commercial airlines. The global flying hours and sales decline trends began in 2001 and was exacerbated by the abrupt downturn in the aviation industry following the terrorists attacks on September 11, 2001 and the SARS epidemic in 2003. While sales of repair and overhaul services started to improve in 2003 signaling increased maintenance and out-sourcing activity by the major airlines, discretionary spending by airlines for purchases of spare parts for replacements and upgrades continued to be weak.
- Air transport original equipment (OE) sales increased in 2004 primarily reflecting higher aircraft deliveries by our OE customers (primarily Airbus and Boeing) as aircraft orders by the commercial airlines began to improve. Air transport OE sales decreased significantly in 2003 reflecting dramatically lower deliveries by our OE customers due to reduced aircraft orders by commercial airlines.
- Regional transport aftermarket sales increased in 2004 due primarily to an increase in fleet sizes and routes of regional carriers and the introduction of the Primus Epic integrated avionics



system. Regional aftermarket sales decreased in 2003 due mainly to lower sales of spare parts to regional airline operators.

- Business and general aviation aftermarket sales were higher in 2004 as an improving economy drove increased utilization of corporate aircraft. Also, there was an increase in upgrade activity in avionics equipment (RVSM) to meet new regulatory standards. Business and general aviation aftermarket sales also increased in 2003 largely due to higher repair and overhaul activity in the fractional jet market.
- Business and general aviation OE sales improved in 2004 due primarily to deliveries of the Primus Epic integrated avionics system and HTF7000 engine to business jet OE manufacturers. Business and general aviation OE sales were lower in 2003 reflecting a decline in projected deliveries of business jet airplanes due to weakness in the demand for fractional interests in aircraft and corporate profitability.
- Defense and space OE sales increased in both 2004 and 2003 due principally to war-related activities, continued growth in precision munitions and increases in restricted space programs.
- Defense and space aftermarket sales were strong in both 2004 and 2003 driven by war-related activities resulting in increases in repairs, platform upgrades and modifications for fixed, rotary wing and ground vehicles.

Aerospace segment profit in 2004 increased by 21 percent compared with 2003 due primarily to an increase in sales of higher margin commercial aftermarket products and services and volume growth. This increase was partially offset by higher development expense associated with new programs and an increase in spending for information technology systems. Aerospace segment profit in 2003 decreased by 7 percent compared with 2002 due mainly to lower sales of commercial original equipment and higher-margin commercial aftermarket spare parts.

Trends which may impact Aerospace operating results in 2005 include:

- Global flying hours improved by 10 percent in 2004 and are expected to increase again in 2005 (5 to 6 percent).
- The financial condition of major commercial airlines continues to be a concern due mainly to high fuel costs and intense fare competition.
- The extent to which increased military activity is offset by lower OE sales due to program completions and reductions.
- The magnitude of an expected increase in aircraft orders and deliveries in the air transport, business and general aviation segments.

## Automation and Control Solutions

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net sales .....	\$8,031	\$7,464	\$6,978
% change compared with prior year .....	8%	7%	(3)%
Segment profit.....	\$ 894	\$ 843	\$ 860
% change compared with prior year .....	6%	(2)%	11%

Automation and Control Solutions sales in 2004 increased by 8 percent compared with 2003 due to higher volumes of 5 percent and the favorable effect of foreign exchange of 4 percent, partially offset by the impact of lower prices of 1 percent. Sales increased by 9 percent for our Automation and Control Products businesses due principally to strong sales of fire solutions, environmental controls and sensor products, and the favorable effects of foreign exchange and acquisitions. Sales for our Process Solutions business increased by 8 percent due primarily to the favorable effect of foreign exchange and improvement in industrial production and capital spending. Sales for our Building Solutions business increased by 5 percent due primarily to the favorable effect of foreign exchange and the impact of investments in sales and marketing initiatives, partially offset by the divestiture of our Security

Monitoring business. Automation and Control Solutions sales in 2003 increased by 7 percent compared with 2002 due to favorable effects of foreign exchange of 5 percent and acquisitions, net of the disposition of our Consumer Products business, of 4 percent, partially offset by the impact of lower prices and volumes of 1 percent each. Sales increased by 11 percent for our Automation and Control Products businesses as the favorable effects of foreign exchange and acquisitions, mainly Invensys Sensor Systems (Invensys), more than offset the impact of the disposition of our Consumer Products business and lower volumes. Sales for our Process Solutions business increased by 4 percent due to the favorable effect of foreign exchange partially offset by lower unit volumes. Sales for our Building Solutions business increased by 2 percent as the favorable effect of foreign exchange more than offset lower volumes due to continued softness in the non-residential construction market.

Automation and Control Solutions segment profit in 2004 increased by 6 percent compared with 2003 due to the favorable effect of higher sales volumes partially offset by increased investments in sales and marketing initiatives and higher research and development costs to support new product introductions. Automation and Control Solutions segment profit in 2003 decreased by 2 percent compared with 2002 due mainly to the decline in higher-margin energy-retrofit and discretionary spot sales in our Building Solutions business, and increased research and development expense and investments in sales and marketing initiatives, mainly in our Automation and Control Products and Building Solutions businesses, respectively. Segment profit was also adversely impacted in 2003 by pricing pressures mainly in our Automation and Control Products and Process Solutions businesses.

Trends which may impact Automation and Control Solutions operating results in 2005 include:

- Extent, if any, of recovery in non-residential construction spending and capital spending on building and process automation.
- Consolidation in the fire and security industry may result in increased competition.

## Specialty Materials

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net sales .....	\$3,497	\$3,169	\$3,205
% change compared with prior year .....	10%	(1)%	(3)%
Segment profit.....	\$ 184	\$ 136	\$ 90
% change compared with prior year .....	35%	51%	61%

Specialty Materials sales in 2004 increased by 10 percent compared with 2003 due to the impact of higher prices of 6 percent (mainly in our Nylon System business), higher volumes of 5 percent and the favorable effect of foreign exchange of 1 percent, partially offset by prior year divestitures, net of acquisitions, of 2 percent. Sales for our Chemicals business improved by 19 percent driven principally by continuing strong demand for our non-ozone depleting HFC products for refrigeration and air conditioning applications, as well as for blowing agents for insulation applications. Sales for our Electronic Materials business increased by 13 percent driven by improvement in the semiconductor industry. Sales for our Performance Products business were also higher by 13 percent due to strong demand for our Spectra fiber, principally from the U.S. military. Specialty Materials sales in 2003 decreased by 1 percent compared with 2002 due to the impact of the divestitures of our Advanced Circuits, PFC and Engineering Plastics businesses, net of the acquisition of BASF's nylon fiber business, of 6 percent partially offset by the favorable effects of foreign exchange of 3 percent and higher volumes of 2 percent. Higher volumes were principally driven by strong demand for Spectra fiber from the U.S. military, increasing demand for HFCs, a key component of many non-ozone depleting refrigerants and foam blowing agents and increased demand for electronic materials from the semiconductor industry. Volumes were adversely affected in 2003 by the temporary plant shutdowns in our Fluorocarbons and Nylon System businesses.

Specialty Materials segment profit in 2004 increased by 35 percent compared with 2003 due principally to higher sales volumes and price increases, partially offset by higher raw material costs (principally phenol resulting from increases in benzene prices) mainly in our Nylon System business.

Additionally segment profit in 2003 was adversely impacted by temporary plant shutdowns in our Fluorocarbons and Nylon System businesses. Specialty Materials segment profit in 2003 increased by 51 percent compared with 2002 due mainly to the impact of the prior year write-down of property, plant and equipment in several businesses, the benefits of cost actions including synergies from the nylon transaction, divestitures of non-strategic businesses and higher sales volumes. The increase was partially offset by higher raw material costs (mainly natural gas and phenol resulting from increases in benzene prices) and the impact of the temporary plant shutdowns in our Fluorocarbons and Nylon System businesses.

Trends which may impact Specialty Materials operating results in 2005 include:

- Continued excess global capacity in the production of nylon. The Nylon System business did not perform in accordance with our operating plan in 2004. We have taken certain repositioning actions in 2004 (see repositioning section of this MD&A) and are evaluating other alternatives. Additionally, we continue to evaluate strategic alternatives to maximize the value of this business.
- Degree of volatility in significant raw material costs (natural gas and benzene).
- Extent of change in order rates from global semiconductor customers.

## Transportation Systems

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net sales .....	\$4,323	\$3,650	\$ 3,184
% change compared with prior year .....	18%	15%	(8)%
Segment profit .....	\$ 575	\$ 461	\$ 393
% change compared with prior year .....	25%	17%	28%

Transportation Systems sales in 2004 increased by 18 percent compared with 2003 due primarily to a favorable sales mix and higher volumes of 12 percent and the favorable effect of foreign exchange of 6 percent. The increase in sales for the segment resulted principally from a 29 percent increase in sales in our Honeywell Turbo Technologies business due to a favorable sales mix and volume growth driven by increasing diesel penetration in Europe and strength in the North American truck segment, and the favorable effect of foreign exchange. Sales for our Consumer Products Group business increased by 7 percent driven by strong retail demand for our high-end products and recent introductions of new Autolite, FRAM and Prestone products and the favorable effect of foreign exchange and higher prices (offsetting incremental ethylene glycol raw material costs). Sales for our Friction Materials business increased by 7 percent largely due to the favorable effect of foreign exchange. Transportation Systems sales in 2003 increased by 15 percent compared with 2002 due mainly to the favorable effects of foreign exchange of 9 percent and a favorable sales mix and volume growth of 5 percent. The increase resulted mainly from a 27 percent increase in sales in our Honeywell Turbo Technologies business due to a favorable sales mix and volume growth of 15 percent as worldwide demand for our turbochargers continued to be strong and the favorable effect of foreign exchange of 12 percent.

Transportation Systems segment profit in 2004 increased by 25 percent compared with 2003 due primarily to the effect of favorable sales mix and volume growth in our Honeywell Turbo Technologies business partially offset by higher raw material costs (mostly steel and other metals in each of the segment's businesses and ethylene glycol in our Consumer Products Group business). Transportation Systems segment profit in 2003 increased by 17 percent compared with 2002 as the effect of higher sales in our Honeywell Turbo Technologies business was partially offset by higher new product development and introduction and facility relocations expenses, and lower aftermarket sales at our Friction Materials business.

Trends which may impact Transportation Systems operating results in 2005 include:

- Rate of increase in global diesel and gasoline turbocharger OEM demand arising from continued penetration of diesel passenger cars into the European market, and North America truck shipments.
- The adoption of regulations aimed at reducing emissions.
- Change in consumer spending for automotive aftermarket products.

## Repositioning and Other Charges

A summary of repositioning and other charges follows:

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Severance .....	\$ 85	\$ 69	\$ 270
Asset impairments .....	21	6	121
Exit costs .....	10	7	62
Reserve adjustments .....	(28)	(69)	(76)
Total net repositioning charge .....	<u>88</u>	<u>13</u>	<u>377</u>
Asbestos related litigation charges, net of insurance .....	76	—	1,548
Other probable and reasonably estimable legal and environmental liabilities .....	565	261	30
Business impairment charges .....	42	—	877
Customer claims and settlements of contract liabilities .....	(10)	—	152
Write-offs of receivables, inventories and other assets .....	14	2	60
Investment impairment charges .....	—	2	15
Total net repositioning and other charges .....	<u>\$775</u>	<u>\$278</u>	<u>\$3,059</u>

The following table summarizes the pretax distribution of total net repositioning and other charges by income statement classification:

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Cost of products and services sold .....	\$621	\$272	\$ 561
Selling, general and administrative expenses .....	25	4	45
Asbestos related litigation charges, net of insurance .....	76	—	1,548
Business impairment charges .....	42	—	877
Equity in (income) loss of affiliated companies .....	6	2	13
Other (income) expense .....	5	—	15
	<u>\$775</u>	<u>\$278</u>	<u>\$3,059</u>

In 2004, we recognized repositioning charges totaling \$116 million primarily for severance costs related to workforce reductions of 2,272 manufacturing and administrative positions across all of our reportable segments. Also, \$28 million of previously established accruals, primarily for severance, were returned to income in 2004, due to fewer employee separations than originally planned associated with certain prior repositioning actions, resulting in reduced severance liabilities principally in our Automation and Control Solutions reportable segment.

In 2003, we recognized repositioning charges totaling \$82 million primarily for severance costs related to workforce reductions of 1,501 manufacturing and administrative positions across all of our reportable segments. Also, \$69 million of previously established accruals, primarily for severance, were returned to income in 2003, due to fewer employee separations than originally planned associated with certain prior repositioning actions, resulting in reduced severance liabilities in our Automation and Control Solutions, Aerospace and Specialty Materials reportable segments.

In 2002, we recognized repositioning charges totaling \$453 million for workforce reductions across all of our reportable segments and our UOP process technology joint venture. The charge also related to costs for the planned shutdown and consolidation of manufacturing plants in our Specialty Materials and Automation and Control Solutions reportable segments. Severance costs related to announced workforce reductions of approximately 8,100 manufacturing and administrative positions. Asset impairments principally related to manufacturing plant and equipment held for sale and capable of being taken out of service and actively marketed in the period of impairment. Exit costs related principally to incremental costs to exit facilities, including lease termination losses negotiated or subject to reasonable estimation related mainly to closed facilities in our Automation and Control Solutions and Specialty Materials reportable segments. Also, \$76 million of previously established severance accruals were returned to income in 2002, due to fewer employee separations than originally planned associated with certain prior repositioning actions and higher than expected voluntary employee attrition, resulting in reduced severance liabilities in our Aerospace, Automation and Control Solutions and Specialty Materials reportable segments.

Our 2004 repositioning actions are expected to generate incremental pretax savings of approximately \$75 million in 2005 compared with 2004 principally from planned workforce reductions. Cash expenditures for severance and other exit costs necessary to execute our repositioning actions were \$164, \$200 and \$447 million in 2004, 2003 and 2002, respectively. Such expenditures for severance and other exit costs have been funded principally through operating cash flows. Cash expenditures for severance and other exit costs necessary to execute the remaining actions will approximate \$100 million in 2005 and will be funded principally through operating cash flows.

In 2004, we recognized a charge of \$565 million for other probable and reasonably estimable legal and environmental liabilities. This includes \$536 million for legacy environmental liabilities, primarily related to the denial of our appeal of the matter entitled *Interfaith Community Organization, et al. v. Honeywell International Inc., et al.*, and estimated liabilities for remediation of environmental conditions in and around Onondaga Lake in Syracuse, New York. Both of these environmental matters are discussed in further detail in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data." We recognized a charge of \$29 million for various legal settlements including property damage claims in our Automation and Control Solutions reportable segment. We recognized a charge of \$76 million primarily for Bendix related asbestos claims and defense costs incurred in 2004 including an update of expected resolution values with respect to pending claims. The charge was net of probable Bendix related insurance recoveries and an additional \$47 million of NARCO insurance deemed probable of recovery. See Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further discussion. We recognized an impairment charge of \$42 million in the second quarter of 2004 related principally to the write-down of property, plant and equipment of our Performance Fibers business in our Specialty Materials reportable segment. This business was sold in December 2004. We recognized a charge of \$14 million for the write-off of receivables, inventories and other assets. We also reversed a reserve of \$10 million established in the prior year for a contract settlement.

In 2003, we recognized a charge of \$261 million for other probable and reasonably estimable legal and environmental liabilities. This included \$235 million for environmental liabilities mainly related to the matter entitled *Interfaith Community Organization, et al. v. Honeywell International Inc., et al.* and for remediation of environmental conditions in and around Onondaga Lake in Syracuse, New York, both as discussed in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data." We also recognized a charge of \$4 million in our Specialty Materials reportable segment including a loss on sale of an investment owned by an equity investee.

In 2002, we recognized business impairment charges of \$877 million related to businesses in our Specialty Materials and Automation and Control Solutions reportable segments, as well as our Friction Materials business. Based on current operating losses and deteriorating economic conditions in certain chemical and telecommunications end-markets, we performed impairment tests and recognized impairment charges of \$785 million principally related to the write-down of property, plant and equipment held and used in our Nylon System, Performance Fibers and Metglas Specialty Materials businesses, as well as an Automation and Control Solutions communication business. We also

recognized impairment charges of \$92 million related principally to the write-down of property, plant and equipment of our Friction Materials business, which was classified as assets held for disposal in Other Current Assets as of December 31, 2002. A plan of disposal of Friction Materials was adopted in 2001; in January 2003, we entered into a letter of intent to sell this business to Federal-Mogul Corp. The assets were reclassified from held for sale to held and used as of December 31, 2003 following the cessation of negotiations to sell our Friction Materials business to Federal-Mogul Corp. At that time, no adjustment to the carrying value of Friction Materials' assets was required based on a current reassessment of the fair value of those assets. Such reassessment of the fair value of the property, plant and equipment was performed using discounted estimated future cash flows of the business. The fair value approximated the written-down held for sale value and was also less than the carrying amount of the property, plant and equipment prior to being classified as held for sale, adjusted for depreciation expense that would have otherwise been recognized had these assets been classified as held and used (see Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further discussion). We recognized asbestos related litigation charges of \$1,548 million principally related to costs associated with the potential resolution of asbestos claims of NARCO (see Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further discussion). We also recognized other charges consisting of customer claims and settlements of contract liabilities of \$152 million and write-offs of receivables, inventories and other assets of \$60 million. These other charges related mainly to our Advanced Circuits business, bankruptcy of a customer in our Aerospace reportable segment, and customer claims in our Aerospace and Automation and Control Solutions reportable segments. Additionally, we recognized other charges consisting of other probable and reasonably estimable environmental liabilities of \$30 million and write-offs related to an other than temporary decline in the value of certain equity investments of \$15 million.

The following tables provide details of the pretax impact of total net repositioning and other charges by reportable segment.

#### **Aerospace**

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net repositioning charge .....	\$ 5	\$10	\$ 15
Customer claims and settlements of contract liabilities .....	(10)	—	99
Write-offs of receivables, inventories and other assets .....	—	—	21
Investment impairment charges .....	—	—	11
	<u>\$ (5)</u>	<u>\$10</u>	<u>\$146</u>

#### **Automation and Control Solutions**

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net repositioning charge .....	\$ 15	\$(22)	\$131
Other probable and reasonably estimable legal and environmental liabilities .....	13	—	—
Business impairment charges .....	—	—	22
Customer claims and settlements of contract liabilities .....	—	—	42
Write-offs of receivables, inventories and other assets .....	—	—	17
	<u>\$28</u>	<u>\$(22)</u>	<u>\$212</u>

## Specialty Materials

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net repositioning charge .....	\$36	\$16	\$167
Other probable and reasonably estimable legal and environmental liabilities .....	9	—	23
Business impairment charges .....	42	—	763
Customer claims and settlements of contract liabilities .....	—	—	11
Write-offs of receivables, inventories and other assets .....	3	2	12
Investment impairment charges .....	—	2	—
	<u>\$90</u>	<u>\$20</u>	<u>\$976</u>

## Transportation Systems

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net repositioning charge .....	\$ 26	\$ 5	\$ 26
Asbestos related litigation charges, net of insurance .....	120	—	167
Other probable and reasonably estimable legal and environmental liabilities .....	—	11	—
Business impairment charges .....	—	—	92
Write-offs of receivables, inventories and other assets .....	1	—	10
	<u>\$147</u>	<u>\$16</u>	<u>\$295</u>

## Corporate

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Net repositioning charge .....	\$ 6	\$ 4	\$ 38
Asbestos related litigation charges, net of insurance .....	(44)	—	1,381
Other probable and reasonably estimable legal and environmental liabilities .....	543	250	7
Write-offs of receivables, inventories and other assets .....	10	—	—
Investment impairment charges .....	—	—	4
	<u>\$515</u>	<u>\$254</u>	<u>\$1,430</u>

## LIQUIDITY AND CAPITAL RESOURCES

### Cash Flow Summary

Our cash flows from operating, investing and financing activities, as reflected in the Consolidated Statement of Cash Flows, are summarized as follows:

	<u>2004</u>	<u>2003</u>	<u>2002</u>
	(Dollars in millions)		
Cash provided by (used for):			
Operating activities .....	\$ 2,253	\$2,199	\$2,380
Investing activities .....	(584)	(680)	(870)
Financing activities .....	(1,223)	(895)	(932)
Effect of exchange rate changes on cash .....	190	305	50
Net increase in cash and cash equivalents .....	<u>\$ 636</u>	<u>\$ 929</u>	<u>\$ 628</u>

Cash provided by operating activities increased by \$54 million during 2004 compared with 2003 due primarily to increased cash earnings and a decrease in voluntary U.S. pension contributions of

\$630 million. The increase in cash provided by operating activities was partially offset by an increase in net asbestos related liability payments of \$558 million as the prior year included \$472 million in cash received from Equitas related to a comprehensive policy buy-back settlement, and an increase in working capital (receivables, inventories and accounts payable), usage of \$268 million principally related to higher sales and a weakening of the U.S. dollar versus the Euro and Canadian dollar throughout 2004. Cash provided by operating activities decreased by \$181 million during 2003 compared with 2002 mainly due to a \$540 million increase in voluntary U.S. pension contributions as well as an increase in working capital usage due primarily to a weakening of the U.S. dollar versus the Euro and Canadian dollar throughout 2003. The decrease was partially offset by reduced severance and exit costs payments of \$247 million, lower litigation payments of \$222 million, as well as insurance receipts in excess of asbestos liability payments of \$107 million during 2003.

Cash used for investing activities decreased by \$96 million during 2004 compared with 2003 due primarily to an increase in proceeds from sales of businesses of \$289 million largely from the dispositions of our Security Monitoring and VCSEL Optical Products businesses in the current year. Additionally, proceeds from the maturity of investment securities were \$80 million in 2004. The decrease in cash used for investing activities was partially offset by an increase in spending for acquisitions of \$185 million due principally to various acquisitions in our Automation and Control Solutions reportable segment and an investment of \$115 million in auction rate securities. Cash used for investing activities decreased by \$190 million during 2003 compared with 2002 due mainly to reduced spending of \$321 million for acquisitions, principally reflecting the acquisition of Invensys in October 2002. The decrease was partially offset by reduced proceeds from sales of investments of \$91 million related to the disposition of a cost investment in our Automation and Control Solutions reportable segment in 2002, and reduced proceeds from sales of businesses of \$46 million. Proceeds from business sales in 2003 resulted from the sale of certain non-core Specialty Materials (Engineering Plastics, Rudolstadt and Metglas) and Aerospace (Honeywell Aerospace Defense Services) businesses.

Cash used for financing activities increased by \$328 million during 2004 compared with 2003 due primarily to an increase in repurchases of common stock of \$687 million in connection with our stock repurchase program announced in November 2003 partially offset by a reduction in debt repayments, net of issuances, of \$337 million in 2004. Total debt of \$5,273 million at December 31, 2004 was \$113 million, or 2 percent higher than at December 31, 2003 principally reflecting higher commercial paper borrowings to fund our share repurchases in 2004. Cash used for financing activities decreased by \$37 million during 2003 compared with 2002 mainly due to lower net debt repayments in 2003, partially offset by cash used to repurchase shares in the fourth quarter of 2003. Total debt of \$5,160 million at December 31, 2003 was \$71 million, or 1 percent higher than at December 31, 2002 principally reflecting the assumption of \$267 million of debt associated with the purchase of assets under operating leases partially offset by lower short-term borrowings.

We had approximately \$3.4 and \$2.6 billion of cash and cash equivalents held by non-U.S. subsidiaries mainly in local currencies (principally the Euro, Canadian dollar, and Australian dollar) at December 31, 2004 and 2003, respectively. The \$190 and \$305 million increases in cash and cash equivalents in 2004 and 2003, respectively, due to exchange rate changes, principally resulted from a weakening of the U.S. dollar mainly against the Euro and Canadian dollar throughout 2004 and 2003. We manage our worldwide cash requirements considering available cash balances and the most cost effective method to access those cash balances. The repatriation of cash balances from some non-U.S. subsidiaries to the U.S. could have U.S. tax consequences (see discussion of American Jobs Creation Act of 2004 in Note 7 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data"); however, substantially all cash balances held by non-U.S. subsidiaries are available without legal restrictions to fund business operations.

## **Liquidity**

We manage our businesses to maximize operating cash flows as the primary source of our liquidity. Operating cash flows were \$2.3 billion in 2004. We have approximately \$3.6 billion in cash and cash equivalents and \$4.8 billion in working capital (receivables, inventories and accounts payable).



Each of our businesses continues to focus on strategies to improve working capital turnover in 2005 to increase operating cash flows. Considering the current economic environment in which each of our businesses operate and our business plans and strategies, including our focus on growth, cost reduction and productivity initiatives, we believe that our cash balances and operating cash flows will remain our principal source of liquidity. In addition to our available cash and operating cash flows, additional sources of liquidity include committed credit lines, access to the public debt and equity markets using debt and equity securities, including commercial paper, as well as our ability to sell trade accounts receivables.

A source of liquidity is our ability to issue short-term debt in the commercial paper market. Our ability to access the commercial paper market, and the related cost of these borrowings, is affected by the strength of our credit ratings and our \$2.3 billion of committed bank revolving credit facilities (Revolving Credit Facilities). Our credit ratings are periodically reviewed by the major independent debt-rating agencies. In 2004, Standard and Poor's and Fitch Rating Services affirmed their corporate ratings on our long-term debt, A and A+, respectively, and short-term debt A-1 and F1, respectively, and revised Honeywell's outlook from "negative" to "stable". Moody's Investors Service affirmed its corporate rating on our long-term and short-term debt of A2 and P-1, respectively. Our credit rating provided by Moody's Investors Service reflects a "negative outlook" due principally to the cyclical market conditions in the commercial air transport industry, our potential exposure to asbestos liabilities, and the existence of integration risk associated with our recently announced acquisition of Novar plc (expected to be completed in the first quarter of 2005). The "negative outlook" has not impaired, nor do we expect it to impair, our access to the commercial paper markets.

Commercial paper notes are sold at a discount and have a maturity of not more than 270 days from date of issuance. Borrowings under the commercial paper program are available for general corporate purposes as well as for financing potential acquisitions. There was \$220 million of commercial paper outstanding at December 31, 2004.

Our \$2.3 billion of Revolving Credit Facilities are maintained with a group of banks, arranged by Citigroup Global Markets Inc. and J.P. Morgan Securities Inc., and comprises: (a) a \$1 billion Five-Year Credit Agreement and (b) a \$1.3 billion Five-Year Credit Agreement. The credit agreements are maintained for general corporate purposes, including support for the issuance of commercial paper. The \$1 billion Five-Year Credit Agreement was put in place on October 22, 2004, replacing a \$1 billion 364-Day Credit Agreement which was expiring on November 24, 2004. This newly established Five-Year credit facility includes a \$200 million sub-limit for the potential issuance of letters of credit. The \$1.3 billion Five-Year Credit Agreement was increased in November 2003 with the addition of a \$300 million sub-limit for the potential issuance of letters of credit. See Note 15 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data."

We also have a shelf registration statement filed with the Securities and Exchange Commission which allows us to issue up to \$3 billion in debt securities, common stock and preferred stock that may be offered in one or more offerings on terms to be determined at the time of the offering. Net proceeds of any offering would be used for general corporate purposes, including repayment of existing indebtedness, capital expenditures and acquisitions.

We also sell interests in designated pools of trade accounts receivables to third parties. The sold receivables were over-collateralized by \$120 million at December 31, 2004 and we retain a subordinated interest in the pool of receivables representing that over-collateralization as well as an undivided interest in the balance of the receivables pools. New receivables are sold under the agreement as previously sold receivables are collected. The retained interests in the receivables are reflected at the amounts expected to be collected by us, and such carrying value approximates the fair value of our retained interests. The sold receivables were \$500 million at both December 31, 2004 and 2003.

In addition to our normal operating cash requirements, our principal future cash requirements will be to fund capital expenditures, debt repayments, employee benefit obligations, environmental remediation costs, asbestos claims, severance and exit costs related to repositioning actions, share repurchases and any strategic acquisitions. Our total capital expenditures in 2005 are currently projected at approximately \$775 million. These expenditures are primarily intended for maintenance,

replacement, production capacity expansion, cost reduction and growth. There are \$956 million of long-term debt repayments scheduled for 2005. Assuming that actual pension plan returns are consistent with our expected rate of return of 9 percent in 2005 and beyond and that interest rates remain constant, we would not be required to make any contributions to our U.S. pension plans for the foreseeable future. Due to share repurchases made in the fourth quarter of 2004 to offset the anticipated 2005 dilutive impact of employee stock-based compensation plans, we do not anticipate the need for additional share repurchases in 2005 under the program initiated in the fourth quarter of 2003. Total repurchases may vary depending on market conditions and the level of other investing activities. Cash expenditures for severance and other exit costs necessary to execute the remaining repositioning actions will approximate \$100 million in 2005. We expect our cash expenditures for asbestos claims in 2005 to be approximately \$744 million and insurance recoveries to be approximately \$150 million in 2005. See Asbestos Matters in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further discussion. As discussed in Note 2 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data," we expect to complete our acquisition of Novar plc in the first quarter of 2005. We expect to fund the acquisition with existing cash resources.

We continuously assess the relative strength of each business in our portfolio as to strategic fit, market position, profit and cash flow contribution in order to upgrade our combined portfolio and identify business units that will most benefit from increased investment. We identify acquisition candidates that will further our strategic plan and strengthen our existing core businesses. We also identify business units that do not fit into our long-term strategic plan based on their market position, relative profitability or growth potential. These business units are considered for potential divestiture, restructuring or other repositioning actions subject to regulatory constraints. In 2004, we realized \$426 million in cash proceeds from sales of non-strategic businesses.

We believe that our operating cash flows will be sufficient to meet our future cash needs. Our available cash, committed credit lines, access to the public debt and equity markets using debt and equity securities, including commercial paper, as well as our ability to sell trade accounts receivables, provide additional sources of short-term and long-term liquidity to fund current operations and future investment opportunities. Based on our current financial position and expected economic performance, we do not believe that our liquidity will be adversely impacted by an inability to access our sources of financing.

### Contractual Obligations and Probable Liability Payments

Following is a summary of our significant contractual obligations and probable liability payments at December 31, 2004:

	Payments by Period				
	<u>Total</u>	<u>2005</u>	<u>2006- 2007</u>	<u>2008- 2009</u>	<u>Thereafter</u>
	(Dollars in millions)				
Long-term debt, including capitalized leases(1) ...	\$ 5,025	\$ 956	\$ 1,385	\$ 611	\$2,073
Minimum operating lease payments .....	1,028	289	369	197	173
Purchase obligations(2) .....	2,663	334	1,104	302	923
Estimated environmental liability payments .....	895	267	260	260	108
Asbestos related liability payments(3) .....	2,750	744	860	286	860
	<u>12,361</u>	<u>2,590</u>	<u>3,978</u>	<u>1,656</u>	<u>4,137</u>
Asbestos insurance recoveries(4) .....	<u>(1,562)</u>	<u>(150)</u>	<u>(280)</u>	<u>(240)</u>	<u>(892)</u>
	<u>\$10,799</u>	<u>\$2,440</u>	<u>\$3,698</u>	<u>\$1,416</u>	<u>\$3,245</u>

(1) Assumes all long-term debt is outstanding until scheduled maturity.

(2) Purchase obligations are entered into with various vendors in the normal course of business and are consistent with our expected requirements.

- (3) These amounts are estimates of asbestos related cash payments for NARCO and Bendix. NARCO estimated payments are based on the terms and conditions, including evidentiary requirements, specified in the definitive agreements or agreements in principle and pursuant to Trust Distribution Procedures. Bendix payments are based on our estimate of pending claims. Projecting future events is subject to many uncertainties that could cause asbestos liabilities to be higher or lower than those projected and recorded. There is no assurance that NARCO or Bendix insurance recoveries will be timely, that a NARCO plan of reorganization will be proposed or confirmed, or whether there will be any NARCO related asbestos claims beyond 2018. See Asbestos Matters in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data".
- (4) These amounts represent probable insurance recoveries through 2018. See Asbestos Matters in Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data."

The table excludes our pension and other postretirement benefits (OPEB) obligations. We made voluntary contributions of \$40, \$670 and \$830 million to our U.S. pension plans in 2004, 2003 and 2002, respectively. Future plan contributions are dependent upon actual plan asset returns and interest rates. Assuming that actual plan asset returns are consistent with our expected plan return of 9 percent in 2005 and beyond, and that interest rates remain constant, we would not be required to make any contributions to our U.S. pension plans for the foreseeable future. Payments due under our OPEB plans are not required to be funded in advance, but are paid as medical costs are incurred by covered retiree populations, and are principally dependent upon the future cost of retiree medical benefits under our plans. We expect our OPEB payments to approximate \$208 million in 2005. See Note 22 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for further discussion of our pension and OPEB plans.

#### Off-Balance Sheet Arrangements

Following is a summary of our off-balance sheet arrangements:

**Guarantees**—We have issued or are a party to the following direct and indirect guarantees at December 31, 2004:

	Maximum Potential Future Payments (Dollars in millions)
Operating lease residual values .....	\$ 47
Other third parties' financing .....	4
Unconsolidated affiliates' financing .....	7
Customer and vendor financing .....	35
	<u>\$ 93</u>

We do not expect that these guarantees will have a material adverse effect on our consolidated results of operations, financial position or liquidity.

In connection with the disposition of certain businesses and facilities we have indemnified the purchasers for the expected cost of remediation of environmental contamination, if any, existing on the date of disposition. Such expected costs are accrued when environmental assessments are made or remedial efforts are probable and the costs can be reasonably estimated.

**Retained Interests in Factored Pools of Trade Accounts Receivables**—As a source of liquidity, we sell interests in designated pools of trade accounts receivables to third parties. The sold receivables (\$500 million at December 31, 2004) are over-collateralized and we retain a subordinated interest in the pool of receivables representing that over-collateralization as well as an undivided interest in the balance of the receivables pools. The over-collateralization provides credit support to the purchasers of the receivable interest by limiting their losses in the event that a portion of the

receivables sold becomes uncollectible. At December 31, 2004, our retained subordinated and undivided interests at risk were \$120 and \$440 million, respectively. Based on the underlying credit quality of the receivables placed into the designated pools of receivables being sold, we do not expect that any losses related to our retained interests at risk will have a material adverse effect on our consolidated results of operations, financial position or liquidity.

## **Environmental Matters**

We are subject to various federal, state, local and foreign government requirements relating to the protection of the environment. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and personal injury and that our handling, manufacture, use and disposal of hazardous or toxic substances are in accord with environmental and safety laws and regulations. However, mainly because of past operations and operations of predecessor companies, we, like other companies engaged in similar businesses, have incurred remedial response and voluntary cleanup costs for site contamination and are a party to lawsuits and claims associated with environmental and safety matters, including past production of products containing toxic substances. Additional lawsuits, claims and costs involving environmental matters are likely to continue to arise in the future.

With respect to environmental matters involving site contamination, we continually conduct studies, individually or jointly with other responsible parties, to determine the feasibility of various remedial techniques to address environmental matters. It is our policy (see Note 1 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data") to record appropriate liabilities for environmental matters when remedial efforts or damage claim payments are probable and the costs can be reasonably estimated. Such liabilities are based on our best estimate of the undiscounted future costs required to complete the remedial work. The recorded liabilities are adjusted periodically as *remediation efforts progress or as additional technical or legal information becomes available*. Given the uncertainties regarding the status of laws, regulations, enforcement policies, the impact of other potentially responsible parties, technology and information related to individual sites, we do not believe it is possible to develop an estimate of the range of reasonable possible environmental loss in excess of our accrual. We expect to fund expenditures for these matters from operating cash flow. The timing of cash expenditures depends on a number of factors, including the timing of litigation and settlements of remediation liability, personal injury and property damage claims, regulatory approval of cleanup projects, remedial techniques to be utilized and agreements with other parties.

Remedial response and voluntary cleanup expenditures were \$248, \$77 and \$81 million in 2004, 2003, and 2002, respectively, and are currently estimated to be approximately \$267 million in 2005. We expect to fund such expenditures from operating cash flow.

Remedial response and voluntary cleanup costs charged against pretax earnings were \$536, \$235 and \$60 million in 2004, 2003 and 2002, respectively. At December 31, 2004 and 2003, the recorded liability for environmental matters was \$895 and \$593 million, respectively. In addition, in 2004 and 2003 we incurred operating costs for ongoing businesses of approximately \$116 and \$80 million, respectively, relating to compliance with environmental regulations.

Although we do not currently possess sufficient information to reasonably estimate the amounts of liabilities to be recorded upon future completion of studies, litigation or settlements, and neither the timing nor the amount of the ultimate costs associated with environmental matters can be determined, they could be material to our consolidated results of operations or operating cash flows in the periods recognized or paid. However, considering our past experience and existing reserves, we do not expect that environmental matters will have a material adverse effect on our consolidated financial position.

See Note 3 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for a discussion of our legal and environmental charges and Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for a discussion of our commitments and contingencies, including those related to environmental matters and toxic tort litigation.

## Financial Instruments

As a result of our global operating and financing activities, we are exposed to market risks from changes in interest and foreign currency exchange rates and commodity prices, which may adversely affect our operating results and financial position. We minimize our risks from interest and foreign currency exchange rate and commodity price fluctuations through our normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments. We do not use derivative financial instruments for trading or other speculative purposes and do not use leveraged derivative financial instruments. A summary of our accounting policies for derivative financial instruments is included in Note 1 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data".

We conduct our business on a multinational basis in a wide variety of foreign currencies. Our exposure to market risk for changes in foreign currency exchange rates arises from international financing activities between subsidiaries, foreign currency denominated monetary assets and liabilities and anticipated transactions arising from international trade. Our objective is to preserve the economic value of non-functional currency cash flows. We attempt to have all transaction exposures hedged with natural offsets to the fullest extent possible and, once these opportunities have been exhausted, through foreign currency forward and option agreements with third parties. Our principal currency exposures relate to the Euro, the Canadian dollar, British pound, and the U.S. dollar.

Our exposure to market risk from changes in interest rates relates primarily to our debt obligations. As described in Notes 15 and 17 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data", we issue both fixed and variable rate debt and use interest rate swaps to manage our exposure to interest rate movements and reduce overall borrowing costs.

Financial instruments, including derivatives, expose us to counterparty credit risk for nonperformance and to market risk related to changes in interest or currency exchange rates. We manage our exposure to counterparty credit risk through specific minimum credit standards, diversification of counterparties, and procedures to monitor concentrations of credit risk. Our counterparties are substantial investment and commercial banks with significant experience using such derivative instruments. We monitor the impact of market risk on the fair value and cash flows of our derivative and other financial instruments considering reasonably possible changes in interest and currency exchange rates and restrict the use of derivative financial instruments to hedging activities.

The following table illustrates the potential change in fair value for interest rate sensitive instruments based on a hypothetical immediate one-percentage-point increase in interest rates across all maturities, the potential change in fair value for foreign exchange rate sensitive instruments based on a 10 percent weakening of the U.S. dollar versus local currency exchange rates across all maturities, and the potential change in fair value of contracts hedging commodity purchases based on

a 20 percent decrease in the price of the underlying commodity across all maturities at December 31, 2004 and 2003.

	Face or Notional Amount	Carrying Value(1)	Fair Value(1)	Estimated Increase (Decrease) In Fair Value
(Dollars in millions)				
<b>December 31, 2004</b>				
<b>Interest Rate Sensitive Instruments</b>				
Long-term debt (including current maturities).....	\$(4,994)	\$(5,025)	\$(5,411)	\$ (131)
Interest rate swap agreements .....	1,218	39	39	(15)
<b>Foreign Exchange Rate Sensitive Instruments</b>				
Foreign currency exchange contracts(2) .....	790	16	16	(21)
<b>Commodity Price Sensitive Instruments</b>				
Forward commodity contracts(3) .....	87	8	8	(11)
<b>December 31, 2003</b>				
<b>Interest Rate Sensitive Instruments</b>				
Long-term debt (including current maturities).....	\$(4,947)	\$(5,008)	\$(5,508)	\$ (148)
Interest rate swap agreements .....	1,189	67	67	(26)
<b>Foreign Exchange Rate Sensitive Instruments</b>				
Foreign currency exchange contracts(2) .....	641	1	1	(32)
<b>Commodity Price Sensitive Instruments</b>				
Forward commodity contracts(3) .....	50	18	18	(13)

(1) Asset or (liability).

(2) Changes in the fair value of foreign currency exchange contracts are offset by changes in the fair value or cash flows of underlying hedged foreign currency transactions.

(3) Changes in the fair value of forward commodity contracts are offset by changes in the cash flows of underlying hedged commodity transactions.

The above discussion of our procedures to monitor market risk and the estimated changes in fair value resulting from our sensitivity analyses are forward-looking statements of market risk assuming certain adverse market conditions occur. Actual results in the future may differ materially from these estimated results due to actual developments in the global financial markets. The methods used by us to assess and mitigate risk discussed above should not be considered projections of future events.

## OTHER MATTERS

### Litigation

See Note 21 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for a discussion of environmental, asbestos and other litigation matters.

### Sales to the U.S. Government

Sales to the U.S. Government, acting through its various departments and agencies and through prime contractors, amounted to \$3,464, \$3,111 and \$2,730 million in 2004, 2003 and 2002, respectively. This included sales to the Department of Defense (DoD), as a prime contractor and subcontractor, of \$2,808, \$2,564 and \$2,046 million in 2004, 2003 and 2002, respectively. Sales to the DoD accounted for 11.0, 11.1 and 9.2 percent of our total sales in 2004, 2003 and 2002, respectively. U.S. defense spending increased in 2004 and is also expected to increase in 2005.

**Backlog**

Our total backlog at year-end 2004 and 2003 was \$8,229 and \$7,191 million, respectively. We anticipate that approximately \$6,339 million of the 2004 backlog will be filled in 2005. We believe that backlog is not necessarily a reliable indicator of our future sales because a substantial portion of the orders constituting this backlog may be canceled at the customer's option.

**Inflation**

Highly competitive market conditions have minimized inflation's impact on the selling prices of our products and the costs of our purchased materials. Except for the costs of certain raw materials in our Specialty Materials reportable segment (See Business Overview section of this MD&A for further discussion), cost increases for materials and labor have generally been low, and productivity enhancement programs, including repositioning actions and Six Sigma initiatives, have largely offset any impact.

**Recent Accounting Pronouncements**

See Note 1 of Notes to Financial Statements in "Item 8. Financial Statements and Supplementary Data" for a discussion of recent accounting pronouncements.

**Item 7A. Quantitative and Qualitative Disclosures About Market Risk**

Information relating to market risk is included in "Item 7. Management's Discussion and Analysis of Financial Condition and Results of Operations" under the caption "Financial Instruments".

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

**HONEYWELL INTERNATIONAL INC.**  
**CONSOLIDATED STATEMENT OF OPERATIONS**

	Years Ended December 31,		
	2004	2003	2002
	(Dollars in millions, except per share amounts)		
Product sales .....	\$20,408	\$18,234	\$17,608
Service sales .....	5,193	4,869	4,666
	<u>25,601</u>	<u>23,103</u>	<u>22,274</u>
Costs, expenses and other			
Cost of products sold .....	16,904	14,753	14,168
Cost of services sold .....	3,681	3,482	3,447
Selling, general and administrative expenses .....	3,316	2,950	2,757
(Gain) loss on sale of non-strategic businesses .....	(255)	(38)	124
Asbestos related litigation charges, net of insurance .....	76	—	1,548
Business impairment charges .....	42	—	877
Equity in (income) loss of affiliated companies .....	(82)	(38)	(42)
Other (income) expense .....	(92)	19	(4)
Interest and other financial charges .....	331	335	344
	<u>23,921</u>	<u>21,463</u>	<u>23,219</u>
Income (loss) before taxes and cumulative effect of accounting change .....	1,680	1,640	(945)
Tax expense (benefit) .....	399	296	(725)
Income (loss) before cumulative effect of accounting change .....	1,281	1,344	(220)
Cumulative effect of accounting change .....	—	(20)	—
Net income (loss) .....	<u>\$ 1,281</u>	<u>\$ 1,324</u>	<u>\$ (220)</u>
Earnings (loss) per share of common stock—basic:			
Income (loss) before cumulative effect of accounting change ...	\$ 1.49	\$ 1.56	\$ (0.27)
Cumulative effect of accounting change .....	—	(0.02)	—
Net income (loss) .....	<u>\$ 1.49</u>	<u>\$ 1.54</u>	<u>\$ (0.27)</u>
Earnings (loss) per share of common stock—assuming dilution:			
Income (loss) before cumulative effect of accounting change ...	\$ 1.49	\$ 1.56	\$ (0.27)
Cumulative effect of accounting change .....	—	(0.02)	—
Net income (loss) .....	<u>\$ 1.49</u>	<u>\$ 1.54</u>	<u>\$ (0.27)</u>

The Notes to Financial Statements are an integral part of this statement.



# HONEYWELL INTERNATIONAL INC.

## CONSOLIDATED BALANCE SHEET

	December 31,	
	2004	2003
	(Dollars in millions)	
<b>ASSETS</b>		
Current assets:		
Cash and cash equivalents .....	\$ 3,586	\$ 2,950
Accounts, notes and other receivables .....	4,243	3,643
Inventories .....	3,160	3,040
Deferred income taxes .....	1,289	1,526
Other current assets .....	542	465
Total current assets .....	12,820	11,624
Investments and long-term receivables .....	542	569
Property, plant and equipment—net .....	4,331	4,295
Goodwill .....	6,013	5,789
Other intangible assets—net .....	1,241	1,098
Insurance recoveries for asbestos related liabilities .....	1,412	1,317
Deferred income taxes .....	613	342
Prepaid pension benefit cost .....	2,985	3,173
Other assets .....	1,105	1,107
Total assets .....	<u>\$31,062</u>	<u>\$29,314</u>
<b>LIABILITIES</b>		
Current liabilities:		
Accounts payable .....	\$ 2,564	\$ 2,240
Short-term borrowings .....	28	152
Commercial paper .....	220	—
Current maturities of long-term debt .....	956	47
Accrued liabilities .....	4,971	4,314
Total current liabilities .....	8,739	6,753
Long-term debt .....	4,069	4,961
Deferred income taxes .....	397	316
Postretirement benefit obligations other than pensions .....	1,713	1,683
Asbestos related liabilities .....	2,006	2,279
Other liabilities .....	2,886	2,593
<b>CONTINGENCIES</b>		
<b>SHAREOWNERS' EQUITY</b>		
Capital—common stock—Authorized 2,000,000,000 shares (par value \$1 per share):		
—issued 957,599,900 shares .....	958	958
—additional paid-in capital .....	3,574	3,486
Common stock held in treasury, at cost:		
2004—107,586,616 shares; 2003—95,269,642 shares .....	(4,185)	(3,655)
Accumulated other nonowner changes .....	138	(189)
Retained earnings .....	10,767	10,129
Total shareowners' equity .....	11,252	10,729
Total liabilities and shareowners' equity .....	<u>\$31,062</u>	<u>\$29,314</u>

The Notes to Financial Statements are an integral part of this statement.

**HONEYWELL INTERNATIONAL INC.**  
**CONSOLIDATED STATEMENT OF CASH FLOWS**

	Years Ended December 31,		
	2004	2003	2002
	(Dollars in millions)		
<b>Cash Flows from Operating Activities</b>			
Net income (loss) .....	\$1,281	\$1,324	\$ (220)
Adjustments to reconcile net income (loss) to net cash provided by operating activities:			
Cumulative effect of accounting change .....	—	20	—
(Gain) loss on sale of non-strategic businesses .....	(255)	(38)	124
Repositioning and other charges .....	657	278	634
Severance and exit cost payments .....	(164)	(200)	(447)
Environmental and non-asbestos litigation payments .....	(273)	(91)	(313)
Business impairment charges .....	42	—	877
Asbestos related litigation charges, net of insurance .....	76	—	1,548
Asbestos related liability payments .....	(518)	(557)	(135)
Insurance receipts for asbestos related liabilities .....	67	664	76
Depreciation and amortization .....	650	661	730
Undistributed earnings of equity affiliates .....	(75)	(38)	(55)
Deferred income taxes .....	223	344	(775)
Pension and other postretirement benefits expense (income) .....	628	325	(11)
Pension contributions—U.S. plans .....	(40)	(670)	(130)
Other postretirement benefit payments .....	(207)	(203)	(199)
Other .....	(121)	(16)	(133)
Changes in assets and liabilities, net of the effects of acquisitions and divestitures:			
Accounts, notes and other receivables .....	(470)	(236)	105
Inventories .....	(84)	118	333
Other current assets .....	(77)	(20)	51
Accounts payable .....	408	240	63
Accrued liabilities .....	505	294	257
Net cash provided by operating activities .....	<u>2,253</u>	<u>2,199</u>	<u>2,380</u>
<b>Cash Flows from Investing Activities</b>			
Expenditures for property, plant and equipment .....	(629)	(655)	(671)
Proceeds from disposals of property, plant and equipment .....	38	37	41
Decrease in investments .....	80	—	91
(Increase) in investments .....	(115)	—	—
Cash paid for acquisitions .....	(384)	(199)	(520)
Proceeds from sales of businesses .....	426	137	183
Decrease in short-term investments .....	—	—	6
Net cash (used for) investing activities .....	<u>(584)</u>	<u>(680)</u>	<u>(870)</u>
<b>Cash Flows from Financing Activities</b>			
Net increase (decrease) in commercial paper .....	220	(201)	198
Net (decrease) increase in short-term borrowings .....	(121)	81	(96)
Proceeds from issuance of common stock .....	74	54	41
Proceeds from issuance of long-term debt .....	—	—	6
Payments of long-term debt .....	(29)	(147)	(428)
Repurchases of common stock .....	(724)	(37)	—
Cash dividends on common stock .....	(643)	(645)	(614)
Other .....	—	—	(39)
Net cash (used for) financing activities .....	<u>(1,223)</u>	<u>(895)</u>	<u>(932)</u>
Effect of foreign exchange rate changes on cash and cash equivalents .....	190	305	50
Net increase in cash and cash equivalents .....	636	929	628
Cash and cash equivalents at beginning of year .....	2,950	2,021	1,393
Cash and cash equivalents at end of year .....	<u>\$3,586</u>	<u>\$2,950</u>	<u>\$ 2,021</u>

The Notes to Financial Statements are an integral part of this statement.

**HONEYWELL INTERNATIONAL INC.**  
**CONSOLIDATED STATEMENT OF SHAREOWNERS' EQUITY**

	Common Stock Issued		Additional Paid-in Capital	Common Stock Held in Treasury		Accumulated Other Non- owner Changes	Retained Earnings	Total Shareowners' Equity
	Shares	Amount		Shares	Amount			
	(In millions, except per share amounts)							
Balance at December 31, 2001 .....	957.6	\$958	\$3,015	(142.6)	\$(4,252)	\$ (835)	\$10,284	\$ 9,170
Net loss.....							(220)	(220)
Foreign exchange translation adjustments .....						310		310
Minimum pension liability adjustment .....						(606)		(606)
Change in fair value of effective cash flow hedges .....						22		22
Nonowner changes in shareowners' equity .....								(494)
Common stock issued for employee savings and option plans (including related tax expense of \$28) .....			138	7.7	54			192
Common stock contributed to pension plans .....			286	31.5	414			700
Cash dividends on common stock (\$0.75 per share) .....							(614)	(614)
Other owner changes .....			(30)	.3	1			(29)
Balance at December 31, 2002 .....	957.6	958	3,409	(103.1)	(3,783)	(1,109)	9,450	8,925
Net income .....							1,324	1,324
Foreign exchange translation adjustments .....						551		551
Minimum pension liability adjustment .....						369		369
Change in fair value of effective cash flow hedges .....						—		—
Nonowner changes in shareowners' equity .....								2,244
Common stock issued for employee savings and option plans (including related tax benefits of \$19) .....			75	9.3	182			257
Repurchases of common stock .....				(1.9)	(62)			(62)
Cash dividends on common stock (\$0.75 per share) .....							(645)	(645)
Other owner changes .....			2	.4	8			10
Balance at December 31, 2003 .....	957.6	958	3,486	(95.3)	(3,655)	(189)	10,129	10,729
Net income .....							1,281	1,281
Foreign exchange translation adjustments .....						351		351
Minimum pension liability adjustment .....						(15)		(15)
Change in fair value of effective cash flow hedges .....						(9)		(9)
Nonowner changes in shareowners' equity .....								1,608
Common stock issued for employee savings and option plans (including related tax benefits of \$19) .....			79	7.5	162			241
Repurchases of common stock .....				(20.1)	(699)			(699)
Cash dividends on common stock (\$0.75 per share) .....							(643)	(643)
Other owner changes .....			9	.3	7			16
Balance at December 31, 2004 .....	957.6	\$958	\$3,574	(107.6)	\$(4,185)	\$ 138	\$10,767	\$11,252

The Notes to Financial Statements are an integral part of this statement.

## HONEYWELL INTERNATIONAL INC.

### NOTES TO FINANCIAL STATEMENTS

(Dollars in millions, except per share amounts)

#### Note 1—Summary of Significant Accounting Policies

**Honeywell International Inc.** is a diversified technology and manufacturing company, serving customers worldwide with aerospace products and services, control, sensing and security technologies for buildings, homes and industry, turbochargers, automotive products, specialty chemicals, fibers, and electronic and advanced materials. The following is a description of the significant accounting policies of Honeywell International Inc.

**Principles of Consolidation**—The consolidated financial statements include the accounts of Honeywell International Inc. and all of its subsidiaries and entities in which a controlling interest is maintained. Our consolidation policy requires the consolidation of entities where a controlling financial interest is obtained as well as consolidation of variable interest entities in which we are designated as the primary beneficiary in accordance with Financial Accounting Standards Board (FASB) Interpretation No. 46, "Consolidation of Variable Interest Entities" (FIN 46), as amended. See Recent Accounting Pronouncements in this Note for further discussion of FIN 46. All intercompany transactions and balances are eliminated in consolidation.

**Cash and Cash Equivalents**—Cash and cash equivalents include cash on hand and on deposit and highly liquid, temporary cash investments with an original maturity of three months or less.

**Inventories**—Inventories are valued at the lower of cost or market using the first-in, first-out or the average cost method and the last-in, first-out (LIFO) method for certain qualifying domestic inventories.

**Investments**—Investments in affiliates over which we have a significant influence, but not a controlling interest, are accounted for using the equity method of accounting. Other investments are carried at market value, if readily determinable, or cost. All equity investments are periodically reviewed to determine if declines in fair value below cost basis are other-than-temporary. Significant and sustained decreases in quoted market prices and a series of historic and projected operating losses by investees are considered in the review. If the decline in fair value is determined to be other-than-temporary, an impairment loss is recorded and the investment is written down to a new carrying value.

**Property, Plant and Equipment**—Property, plant and equipment are recorded at cost less accumulated depreciation. For financial reporting, the straight-line method of depreciation is used over the estimated useful lives of 10 to 40 years for buildings and improvements and 3 to 15 years for machinery and equipment.

**Goodwill and Indefinite-Lived Intangible Assets**—Goodwill represents the excess of acquisition costs over the fair value of net assets of businesses acquired. Statement of Financial Accounting Standards No. 142, "Goodwill and Other Intangible Assets" (SFAS No. 142) requires that goodwill and certain other intangible assets having indefinite lives no longer be amortized to income, but instead be periodically tested for impairment. Intangible assets determined to have definite lives will continue to be amortized over their useful lives. When we adopted SFAS No. 142, we reassessed the useful lives and residual values of all acquired intangible assets to make any necessary amortization period adjustments. Based on that assessment, an amount related to a trademark in our automotive consumer products business was determined to be an indefinite-lived intangible asset because it is expected to generate cash flows indefinitely. There were no other adjustments made to the amortization period or residual values of other intangible assets. We also completed our goodwill impairment testing during the three months ended March 31, 2002 and determined that there was no impairment as of January 1, 2002. This initial impairment assessment was updated as of March 31, 2004 and no impairment was determined. Impairment tests for our reporting units are performed annually as of March 31 or when events or changes in circumstances occur. See Note 13 for additional details.

**Other Intangible Assets with Determinable Lives**—Other intangible assets with determinable lives consist of Aerospace customer incentives, patents and trademarks and other intangibles and are amortized over weighted average service periods of 25, 19 and 15 years, respectively.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Long-Lived Assets**—We periodically evaluate the recoverability of the carrying amount of long-lived assets (including property, plant and equipment, and intangible assets with determinable lives) whenever events or changes in circumstances indicate that the carrying amount of an asset may not be fully recoverable. We evaluate events or changes in circumstances based on a number of factors including operating results, business plans and forecasts, general and industry trends and, economic projections and anticipated cash flows. An impairment is assessed when the undiscounted expected future cash flows derived from an asset are less than its carrying amount. Impairment losses are measured as the amount by which the carrying value of an asset exceeds its fair value and are recognized in earnings. We also continually evaluate the estimated useful lives of all long-lived assets and periodically revise such estimates based on current events.

**Sales Recognition**—Product and service sales are recognized when persuasive evidence of an arrangement exists, product delivery has occurred or services have been rendered, pricing is fixed or determinable, and collection is reasonably assured. Service sales, principally representing repair, maintenance and engineering activities in our Aerospace and Automation and Control Solutions reportable segments, are recognized over the contractual period or as services are rendered. Sales under long-term contracts in the Aerospace and Automation and Control Solutions reportable segments are recorded on a percentage-of-completion method measured on the cost-to-cost basis for engineering-type contracts and the units-of-delivery basis for production-type contracts. Provisions for anticipated losses on long-term contracts are recorded in full when such losses become evident. Revenues from contracts with multiple element arrangements are recognized as each element is earned based on the relative fair value of each element and when the delivered elements have value to customers on a standalone basis. Amounts allocated to each element are based on its objectively determined fair value, such as the sales price for the product or service when it is sold separately or competitor prices for similar products or services.

**Aerospace Customer Incentives**—We provide sales incentives to commercial aircraft manufacturers and airlines in connection with their selection of our aircraft wheel and braking system hardware and auxiliary power units for installation on commercial aircraft. These incentives consist of free or deeply discounted products, product credits and upfront cash payments. The cost of these incentives are capitalized at the time we deliver the products to our customers or, in the case of product credits, at the time the credit is issued, or in the case of upfront cash payments, at the time the payment is made. In the case of free or deeply discounted product, the cost to manufacture less any amount recovered from the airframe manufacturer or airline is capitalized. Product credits and upfront cash payments are capitalized at exchanged value. Research, design, development and qualification costs related to these products are expensed as incurred, unless contractually guaranteed of reimbursement. The cost of the sales incentives described above is capitalized because the selection of our aircraft wheel and braking system hardware and auxiliary power units for installation on commercial aircraft results in the creation of future revenues and cash flows through aftermarket sales to fulfill long-term product maintenance requirements mandated by the Federal Aviation Administration (FAA) and other similar international organizations over the useful life of the aircraft. Once our products are certified and selected on an aircraft, the recovery of our investment is virtually guaranteed over the useful life of the aircraft. The likelihood of displacement by an alternative supplier is remote due to contractual sole-sourcing, the high cost to alternative suppliers and aircraft operators of product retrofits, and/or rigorous regulatory specifications, qualification and testing requirements. We amortize the cost of these capitalized sales incentives over their useful lives on a straight-line basis, up to 25 years, representing the estimated minimum service life of the aircraft. This useful life is the period over which we are virtually assured to earn revenues from the aftermarket sales of certified products necessary to fulfill the maintenance required by the FAA and other similar international organizations. We classify the amortization expense associated with free and discounted products as cost of goods sold and the amortization expense associated with product credits and upfront cash payments as a

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

reduction of sales. We regularly evaluate the recoverability of capitalized amounts whenever events or changes in circumstances indicate that the carrying amount of the incentives may not be fully recoverable. There were no impairment charges related to these capitalized incentives recognized during 2004, 2003 and 2002. See Note 13 for additional details.

**Environmental Expenditures**—Environmental expenditures that relate to current operations are expensed or capitalized as appropriate. Expenditures that relate to an existing condition caused by past operations, and that do not provide future benefits, are expensed as incurred. Liabilities are recorded when environmental remedial efforts or damage claim payments are probable and the costs can be reasonably estimated. Such liabilities are based on our best estimate of the undiscounted future costs required to complete the remedial work. The recorded liabilities are adjusted periodically as remediation efforts progress or as additional technical or legal information becomes available. Given the uncertainties regarding the status of laws, regulations, enforcement policies, the impact of other potentially responsible parties, technology and information related to individual sites, we do not believe it is possible to develop an estimate of the range of reasonably possible environmental loss in excess of our accruals. The undiscounted liabilities for environmental costs recorded in Accrued Liabilities and Other Liabilities at December 31, 2004 were \$267 and \$628 million, respectively, and at December 31, 2003 were \$90 and \$503 million, respectively.

**Asbestos Related Contingencies and Insurance Recoveries**—Honeywell is a defendant in personal injury actions related to asbestos containing products (refractory products and friction products). We recognize a liability for any asbestos related contingency that is probable of occurrence and reasonably estimable. Regarding North American Refractories Company (NARCO) asbestos related claims, we accrue for pending claims based on terms and conditions, including evidentiary requirements, in definitive agreements or agreements in principle with current claimants. We also accrued for the probable value of future asbestos related claims through 2018 based on the disease criteria and payment values contained in the NARCO trust as described in Note 21. In light of the inherent uncertainties in making long term projections regarding claims filing rates and disease manifestation, we do not believe that we have a reasonable basis for estimating asbestos claims beyond 2018 under Statement of Financial Accounting Standards No. 5, "Accounting for Contingencies" (SFAS No. 5). Regarding Bendix asbestos related claims, we accrue for the estimated value of pending claims based on expected claim resolution values and dismissal rates. We have not accrued for future Bendix asbestos related claims as we cannot reasonably predict how many additional claims may be brought against us, the allegations in such claims or their probable outcomes and resulting settlement values in the tort system. We continually assess the likelihood of any adverse judgments or outcomes to our contingencies, as well as potential ranges of probable losses and recognize a liability, if any, for these contingencies based on a careful analysis of each individual issue with the assistance of outside legal counsel and, if applicable, other experts.

In connection with the recognition of liabilities for asbestos related matters, we record asbestos related insurance recoveries that are deemed probable. In assessing the probability of insurance recovery, we make judgments concerning insurance coverage that we believe are reasonable and consistent with our historical dealings with our insurers, our knowledge of any pertinent solvency issues surrounding insurers and various judicial determinations relevant to our insurance programs.

**Research and Development**—Research and development costs for company-sponsored research and development projects are expensed as incurred. Such costs are principally included in Cost of Products Sold and were \$917, \$751 and \$757 million in 2004, 2003 and 2002, respectively.

**Stock-Based Compensation Plans**—We account for our fixed stock option plans under Accounting Principles Board Opinion No. 25, "Accounting for Stock Issued to Employees" (APB No. 25). Under APB No. 25, there is no compensation cost recognized for our fixed stock option plans, because the options granted under these plans have an exercise price equal to the market value of the

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

underlying stock at the grant date. Statement of Financial Accounting Standards No. 123, "Accounting for Stock-Based Compensation" (SFAS No. 123), as amended, allows, but does not require, companies to record compensation cost for fixed stock option plans using a fair value based method. As permitted by SFAS No. 123, we elected to continue to account for compensation cost for our fixed stock option plans using the intrinsic value based method under APB No. 25. See Recent Accounting Pronouncements section of this Note for discussion of recently issued rules regarding accounting for share-based payments. The following table sets forth pro forma information as if compensation cost had been determined consistent with the requirements of SFAS No. 123.

	<u>2004</u>	<u>2003</u>	<u>2002</u>
Net income (loss), as reported.....	\$1,281	\$1,324	\$ (220)
Deduct: Total stock-based employee compensation cost determined under fair value method for fixed stock option plans, net of related tax effects .....	(42)	(48)	(64)
Pro forma net income (loss) .....	<u>\$1,239</u>	<u>\$1,276</u>	<u>\$ (284)</u>
Earnings (loss) per share of common stock:			
Basic—as reported.....	<u>\$ 1.49</u>	<u>\$ 1.54</u>	<u>\$(0.27)</u>
Basic—pro forma .....	<u>\$ 1.44</u>	<u>\$ 1.48</u>	<u>\$(0.35)</u>
Earnings (loss) per share of common stock:			
Assuming dilution—as reported .....	<u>1.49</u>	<u>\$ 1.54</u>	<u>\$(0.27)</u>
Assuming dilution—pro forma.....	<u>\$ 1.44</u>	<u>\$ 1.48</u>	<u>\$(0.35)</u>

The following table sets forth fair value per share information, including related assumptions, used to determine compensation cost consistent with the requirements of SFAS No. 123.

	<u>2004</u>	<u>2003</u>	<u>2002</u>
Weighted average fair value per share of options granted during the year(1) .....	\$10.97	\$ 8.82	\$12.64
Assumptions:			
Historical dividend yield .....	2.1%	2.0%	1.9%
Historical volatility .....	37.9%	46.7%	43.8%
Risk-free rate of return .....	3.3%	2.9%	4.2%
Expected life (years) .....	5.0	5.0	5.0

(1) Estimated on date of grant using Black-Scholes option-pricing model.

**Foreign Currency Translation**—Assets and liabilities of subsidiaries operating outside the United States with a functional currency other than U.S. dollars are translated into U.S. dollars using year-end exchange rates. Sales, costs and expenses are translated at the average exchange rates effective during the year. Foreign currency translation gains and losses are included as a component of Accumulated Other Nonowner Changes. For subsidiaries operating in highly inflationary environments, inventories and property, plant and equipment, including related expenses, are remeasured at the exchange rate in effect on the date the assets were acquired, while monetary assets and liabilities are remeasured at year-end exchange rates. Remeasurement adjustments for these subsidiaries are included in earnings.

**Derivative Financial Instruments**—Derivative financial instruments are accounted for under Statement of Financial Accounting Standards No. 133, "Accounting for Derivative Instruments and Hedging Activities", as amended (SFAS No. 133). Under SFAS No. 133, all derivatives are recorded on the balance sheet as assets or liabilities and measured at fair value. For derivatives designated as hedges of the fair value of assets or liabilities, the changes in fair values of both the derivatives and the

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

hedged items are recorded in current earnings. For derivatives designated as cash flow hedges, the effective portion of the changes in fair value of the derivatives are recorded in Accumulated Other Nonowner Changes and subsequently recognized in earnings when the hedged items impact earnings. Changes in the fair value of derivatives not designated as hedges and the ineffective portion of cash flow hedges are recorded in current earnings.

**Transfers of Financial Instruments**—Sales, transfers and securitization of financial instruments are accounted for under Statement of Financial Accounting Standards No. 140, "Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities". We sell interests in designated pools of trade accounts receivables to third parties. The receivables are removed from the Consolidated Balance Sheet at the time they are sold. The value assigned to our subordinated interests and undivided interests retained in trade receivables sold is based on the relative fair values of the interests retained and sold. The carrying value of the retained interests approximates fair value due to the short-term nature of the collection period for the receivables.

**Income Taxes**—Deferred tax liabilities or assets reflect temporary differences between amounts of assets and liabilities for financial and tax reporting. Such amounts are adjusted, as appropriate, to reflect changes in tax rates expected to be in effect when the temporary differences reverse. A valuation allowance is established to offset any deferred tax assets if, based upon the available evidence, it is more likely than not that some or all of the deferred tax assets will not be realized.

**Earnings Per Share**—Basic earnings per share is based on the weighted average number of common shares outstanding. Diluted earnings per share is based on the weighted average number of common shares outstanding and all dilutive potential common shares outstanding.

**Use of Estimates**—The preparation of consolidated financial statements in conformity with generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts in the financial statements and related disclosures in the accompanying notes. Actual results could differ from those estimates. Estimates and assumptions are periodically reviewed and the effects of revisions are reflected in the consolidated financial statements in the period they are determined to be necessary.

**Reclassifications**—Certain prior year amounts have been reclassified to conform with the current year presentation.

**Recent Accounting Pronouncements**—In December 2004, the FASB issued Statement of Financial Accounting Standards No. 123 (revised), "Share-Based Payment (Revised 2004)" (SFAS 123R) requiring that the compensation cost relating to share-based payment transactions be recognized in financial statements. The cost is to be measured based on the fair value of the equity or liability instruments issued. SFAS 123R is effective as of the first interim or annual reporting period beginning after June 15, 2005. We currently expect that the adoption of SFAS 123R will reduce 2005 diluted earnings per share by \$0.04 to \$0.05.

In November 2004, the FASB issued Statement of Financial Accounting Standards No. 151, "Inventory Costs, an amendment of ARB No. 43, Chapter 4" (SFAS No. 151) which amends Accounting Research Bulletin (ARB) No. 43, Chapter 4, to clarify that abnormal amounts of idle facility expense, freight, handling costs and wasted materials (spoilage) should be recognized as current-period charges. In addition, SFAS No. 151 requires that allocation of fixed production overhead to inventory be based on the normal capacity of the production facilities. SFAS No. 151 is effective for inventory costs incurred during fiscal years beginning after June 15, 2005. We are currently assessing the impact of SFAS No. 151 on our consolidated financial statements.

In May 2004, the FASB issued FASB Staff Position No. 106-2, "Accounting and Disclosure Requirements Related to the Medicare Prescription Drug, Improvement and Modernization Act of 2003" (FSP No. 106-2) which provides guidance on accounting for the effects of the Medicare



**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

Prescription Drug, Improvement and Modernization Act of 2003 (the Act) for employers that sponsor postretirement health care plans that provide prescription drug coverage that is at least actuarially equivalent to that offered by Medicare Part D. We have determined that the enactment of the Act does not have a material impact on our accumulated postretirement benefit obligation and, therefore, is not a "significant event" as defined in FSP No. 106-2 for our postretirement health care plans. Accordingly, as permitted, we adopted FSP No. 106-2 on December 31, 2004 and such adoption did not have a material effect on our consolidated financial statements.

In December 2003, the FASB issued Statement of Financial Accounting Standards No. 132 (Revised 2003), "Employers' Disclosures about Pensions and Other Postretirement Benefits, an amendment of FASB Statements No. 87, 88, and 106" (SFAS No. 132-Revised 2003) which revises employers' disclosures about pension plans and other postretirement benefit plans. All provisions of this statement are effective for the year ended December 31, 2004. See Note 22 for further information.

In January 2003, the FASB issued FIN 46, which provides guidance on consolidation of variable interest entities. In December 2003, the FASB deferred the effective date of FIN 46 for certain variable interest entities (i.e., non-special purpose entities) until the first quarter of 2004. Our full adoption of the provisions of FIN 46 did not have a material effect on our consolidated financial statements.

In November 2002, the FASB issued FASB Interpretation No. 45, "Guarantor's Accounting and Disclosure Requirements for Guarantees, Including Indirect Guarantees of Indebtedness of Others" (FIN 45), which requires us to recognize a liability for the fair value of an obligation assumed by issuing a guarantee. FIN 45 was effective for guarantees issued or modified on or after January 1, 2003. The adoption of FIN 45 did not have a material effect on our consolidated financial statements. See Note 21 for further information.

In November 2002, the Emerging Issues Task Force (EITF) reached a consensus on EITF Issue No. 00-21, "Accounting for Revenue Arrangements with Multiple Deliverables". EITF Issue No. 00-21 provides guidance on when and how to separate elements of an arrangement that may involve the delivery or performance of multiple products, services and rights to use assets into separate units of accounting. The guidance in the consensus was effective for revenue arrangements entered into in fiscal periods beginning after June 15, 2003. We adopted EITF Issue No. 00-21 prospectively in the quarter beginning July 1, 2003. The adoption of EITF Issue No. 00-21 did not have a material effect on our consolidated financial statements.

In June 2002, the FASB issued Statement of Financial Accounting Standards No. 146, "Accounting for Costs Associated with Exit or Disposal Activities" (SFAS No. 146), the provisions of which were effective for any exit or disposal activities initiated by us after December 31, 2002. SFAS No. 146 provides guidance on the recognition and measurement of liabilities associated with exit or disposal activities and requires that such liabilities be recognized when incurred. The adoption of the provisions of SFAS No. 146 impacted the measurement and timing of costs associated with any exit or disposal activities initiated after December 31, 2002.

In June 2001, the FASB issued Statement of Financial Accounting Standards No. 143, "Accounting for Asset Retirement Obligations" (SFAS No. 143) which requires recognition of the fair value of obligations associated with the retirement of tangible long-lived assets when there is a legal obligation to incur such costs. Upon initial recognition of a liability the cost is capitalized as part of the related long-lived asset and depreciated over the corresponding asset's useful life. SFAS No. 143 primarily impacts our accounting for costs associated with the future retirement of nuclear fuel conversion facilities in our Specialty Materials reportable segment. Upon adoption on January 1, 2003, we recorded an increase in property, plant and equipment, net of \$16 million and recognized an asset retirement obligation of \$47 million. This resulted in the recognition of a non-cash charge of \$31 million (\$20 million after-tax, or \$0.02 per share) that was reported as a cumulative effect of an accounting

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

change. This accounting change did not have a material impact on results of operations for 2004 and 2003. Pro forma effects for 2002 assuming adoption of SFAS No. 143 as of January 1, 2002, were not material to net income or per share amounts.

**Note 2—Acquisitions**

We acquired businesses for an aggregate cost of \$396, \$199 and \$520 million in 2004, 2003 and 2002, respectively. All of our acquisitions were accounted for under the purchase method of accounting, and accordingly, the assets and liabilities of the acquired businesses were recorded at their estimated fair values at the dates of acquisition. Significant acquisitions made in these years are discussed below.

In May 2003, Honeywell sold its Engineering Plastics business to BASF in exchange for BASF's nylon fiber business and \$90 million in cash. BASF's nylon fiber business became part of Specialty Materials' nylon business. Since the cash consideration received from BASF was in excess of 25 percent of the fair value of this exchange, this transaction was viewed as "monetary" in accordance with Issue 8(a) of EITF 01-2, "Interpretations of APB Opinion No. 29". Accordingly, the pre-tax gain on the sale of our Engineering Plastics business of \$38 million was based on the fair value of the consideration received from BASF less the sum of the net book value of our Engineering Plastics business and related transaction costs. We recorded the assets and liabilities acquired in the BASF business at fair market value based on a valuation performed by an independent appraisal firm at the acquisition date which corresponded to the value agreed upon in the asset purchase agreement for this transaction. Specialty Materials' Engineering Plastics business and BASF's nylon fiber business both had annual sales of approximately \$400 million.

In October 2002 we acquired Invensys Sensor Systems (ISS) for approximately \$416 million in cash with \$115 million allocated to tangible net assets, \$206 million allocated to goodwill and \$95 million allocated to other intangible assets with determinable lives. ISS is a global supplier of sensors and controls used in the medical, office automation, aerospace, HVAC, automotive, off-road vehicle and consumer appliance industries. ISS is part of our Automation and Control Products business in our Automation and Control Solutions reportable segment. ISS had sales of approximately \$253 million in 2002.

In connection with all acquisitions in 2004, 2003 and 2002, the amounts recorded for transaction costs and the costs of integrating the acquired businesses into Honeywell were not material. The results of operations of all acquired businesses have been included in the consolidated results of Honeywell from their respective acquisition dates. The pro forma results for 2004, 2003 and 2002, assuming these acquisitions had been made at the beginning of the year, would not be materially different from reported results.

On December 13, 2004, we announced that we had reached agreement with the board of directors of Novar plc (Novar) on the terms of recommended Offers for the entire issued and ordinary preference share capital of Novar. The aggregate value of the Offers is \$2.4 billion (fully diluted for the exercise of all outstanding options), including the assumption of approximately \$580 million of outstanding debt, net of cash. The Novar board has unanimously recommended the Offers. We expect to complete the transaction in the first quarter of 2005 and to fund the acquisition with existing cash resources.

Novar is a UK listed holding company which operates globally in the electrical, electronic and control products, the aluminum extrusion and the security printing businesses and had reported 2003 revenues of \$2.7 billion. We do not intend to hold the aluminum extrusion and security printing businesses in the long-term and expect to pursue strategic alternatives for these units as soon as practical.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Note 3—Repositioning and Other Charges**

A summary of repositioning and other charges follows:

	Years Ended December 31,		
	2004	2003	2002
Severance.....	\$ 85	\$ 69	\$ 270
Asset impairments.....	21	6	121
Exit costs.....	10	7	62
Reserve adjustments.....	(28)	(69)	(76)
Total net repositioning charge.....	<u>88</u>	<u>13</u>	<u>377</u>
Asbestos related litigation charges, net of insurance.....	76	—	1,548
Other probable and reasonably estimable legal and environmental liabilities.....	565	261	30
Business impairment charges.....	42	—	877
Customer claims and settlements of contract liabilities.....	(10)	—	152
Write-offs of receivables, inventories and other assets.....	14	2	60
Investment impairment charges.....	—	2	15
Total net repositioning and other charges.....	<u>\$775</u>	<u>\$278</u>	<u>\$3,059</u>

The following table summarizes the pretax distribution of total net repositioning and other charges by income statement classification.

	Years Ended December 31,		
	2004	2003	2002
Cost of products and services sold.....	\$621	\$272	\$ 561
Selling, general and administrative expenses.....	25	4	45
Asbestos related litigation charges, net of insurance.....	76	—	1,548
Business impairment charges.....	42	—	877
Equity in (income) loss of affiliated companies.....	6	2	13
Other (income) expense.....	5	—	15
	<u>\$775</u>	<u>\$278</u>	<u>\$3,059</u>

The following table summarizes the pretax impact of total net repositioning and other charges by reportable segment.

	Years Ended December 31,		
	2004	2003	2002
Aerospace.....	\$ (5)	\$ 10	\$ 146
Automation and Control Solutions.....	28	(22)	212
Specialty Materials.....	90	20	976
Transportation Systems.....	147	16	295
Corporate.....	515	254	1,430
	<u>\$775</u>	<u>\$278</u>	<u>\$3,059</u>

In 2004, we recognized repositioning charges totaling \$116 million primarily for severance costs related to workforce reductions of 2,272 manufacturing and administrative positions across all of our reportable segments. Also, \$28 million of previously established accruals, primarily for severance, were returned to income in 2004, due to fewer employee separations than originally planned associated with certain prior repositioning actions, resulting in reduced severance liabilities principally in our Automation and Control Solutions reportable segment.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

In 2003, we recognized repositioning charges totaling \$82 million primarily for severance costs related to workforce reductions of 1,501 manufacturing and administrative positions across all of our reportable segments. Also, \$69 million of previously established accruals, primarily for severance, were returned to income in 2003, due to fewer employee separations than originally planned associated with certain prior repositioning actions, resulting in reduced severance liabilities in our Automation and Control Solutions, Aerospace and Specialty Materials reportable segments.

In 2002, we recognized repositioning charges totaling \$453 million for workforce reductions across all of our reportable segments and our UOP process technology joint venture. The charge also related to costs for the planned shutdown and consolidation of manufacturing plants in our Specialty Materials and Automation and Control Solutions reportable segments. Severance costs related to workforce reductions of approximately 8,100 manufacturing and administrative positions. Asset impairments principally related to manufacturing plant and equipment held for sale and capable of being taken out of service and actively marketed in the period of impairment. Exit costs related principally to incremental costs to exit facilities, including lease termination losses negotiated or subject to reasonable estimation related mainly to closed facilities in our Automation and Control Solutions and Specialty Materials reportable segments. Also, \$76 million of previously established severance accruals were returned to income in 2002, due to fewer employee separations than originally planned associated with certain prior repositioning actions and higher than expected voluntary employee attrition, resulting in reduced severance liabilities in our Aerospace, Automation and Control Solutions and Specialty Materials reportable segments.

The following table summarizes the status of our total repositioning costs.

	Severance Costs	Asset Impairments	Exit Costs	Total
Balance at December 31, 2001 .....	\$ 484	\$ —	\$113	\$ 597
2002 charges .....	270	121	62	453
2002 usage .....	(355)	(121)	(92)	(568)
Adjustments .....	(74)	—	(2)	(76)
Balance at December 31, 2002 .....	325	—	81	406
2003 charges .....	69	6	7	82
2003 usage .....	(166)	(6)	(34)	(206)
Adjustments .....	(57)	—	(12)	(69)
Balance at December 31, 2003 .....	171	—	42	213
2004 charges .....	85	21	10	116
2004 usage .....	(138)	(21)	(26)	(185)
Adjustments .....	(21)	—	(7)	(28)
Balance at December 31, 2004 .....	<u>\$ 97</u>	<u>\$ —</u>	<u>\$ 19</u>	<u>\$ 116</u>

In 2004, we recognized a charge of \$565 million for other probable and reasonably estimable legal and environmental liabilities. This includes \$536 million for legacy environmental liabilities, primarily related to the denial of our appeal of the matter entitled *Interfaith Community Organization, et. al. v. Honeywell International Inc., et al.*, and estimated liabilities for remediation of environmental conditions in and around Onondaga Lake in Syracuse, New York. Both of these environmental matters are discussed in further detail in Note 21. We recognized a charge of \$29 million for various legal settlements including property damage claims in our Automation and Control Solutions reportable segment. We recognized a charge of \$76 million primarily for Bendix related asbestos claims and defense costs incurred in 2004 including an update of expected resolution values with respect to pending claims. The charge was net of probable Bendix related insurance recoveries and an additional \$47 million of NARCO insurance deemed probable of recovery. See Note 21 for further discussion. We recognized an impairment charge of \$42 million in the second quarter of 2004 related principally to the

## HONEYWELL INTERNATIONAL INC.

### NOTES TO FINANCIAL STATEMENTS—(Continued)

(Dollars in millions, except per share amounts)

write-down of property, plant and equipment of our Performance Fibers business in our Specialty Materials reportable segment. This business was sold in December 2004. We recognized a charge of \$14 million for the write-off of receivables, inventories and other assets. We also reversed a reserve of \$10 million established in the prior year for a contract settlement.

In 2003, we recognized a charge of \$261 million for other probable and reasonably estimable legal and environmental liabilities. This included \$235 million for environmental liabilities mainly related to the matter entitled *Interfaith Community Organization, et al. v. Honeywell International Inc., et al.* and for remediation of environmental conditions in and around Onondaga Lake in Syracuse, New York, both as discussed in Note 21. We also recognized a charge of \$4 million in our Specialty Materials reportable segment including a loss on sale of an investment owned by an equity investee.

In 2002, we recognized business impairment charges of \$877 million related to businesses in our Specialty Materials and Automation and Control Solutions reportable segments, as well as our Friction Materials business. Based on current operating losses and deteriorating economic conditions in certain chemical and telecommunications end markets, we performed impairment tests and recognized impairment charges of \$785 million principally related to the write-down of property, plant and equipment held and used in our Nylon System, Performance Fibers and Metglas Specialty Materials businesses, as well as an Automation and Control Solutions communication business. We also recognized impairment charges of \$92 million related principally to the write-down of property, plant and equipment of our Friction Materials business, which was classified as assets held for disposal in Other Current Assets as of December 31, 2002. A plan of disposal of Friction Materials was adopted in 2001; in January 2003, we entered into a letter of intent to sell this business to Federal-Mogul Corp. The assets were reclassified from held for sale to held and used as of December 31, 2003 following the cessation of negotiations to sell our Friction Materials business to Federal-Mogul Corp. At that time, no adjustment to the carrying value of Friction Materials' assets was required based on a current reassessment of the fair value of those assets. Such reassessment of the fair value of the property, plant and equipment was performed using discounted estimated future cash flows of the business. The fair value approximated the written-down held for sale value and was also less than the carrying amount of the property, plant and equipment prior to being classified as held for sale, adjusted for depreciation expense that would have otherwise been recognized had these assets been classified as held and used (See Note 21). We recognized asbestos related litigation charges of \$1,548 million principally related to costs associated with the potential resolution of asbestos claims of NARCO (see Note 21). We also recognized other charges consisting of customer claims and settlements of contract liabilities of \$152 million and write-offs of receivables, inventories and other assets of \$60 million. These other charges related mainly to our Advanced Circuits business, bankruptcy of a customer in our Aerospace reportable segment, and customer claims in our Aerospace and Automation and Control Solutions reportable segments. Additionally, we recognized other charges consisting of other probable and reasonably estimable environmental liabilities of \$30 million and write-offs related to an other than temporary decline in the value of certain equity investments of \$15 million.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Note 4—Gain (Loss) on Sale of Non-Strategic Businesses**

The following is a summary of non-strategic businesses sold:

	Year Ended December 31, 2004	
	Pretax Gain (Loss)	After-tax Gain (Loss)
Automation and Control Solutions—Security Monitoring and VSCEL Optical Products .....	\$251	\$133
Specialty Materials—Performance Fibers.....	(15)	(3)
Adjustments related to businesses sold in prior years ...	19	14
	<u>\$255</u>	<u>\$144</u>

In 2004, we realized proceeds of \$426 million in cash on the sale of these businesses. The sales of these businesses did not materially impact net sales and segment profit in 2004 compared with 2003.

	Year Ended December 31, 2003	
	Pretax Gain (Loss)	After-tax Gain (Loss)
Specialty Materials—Engineering Plastics, Rudolstadt and Metglas.....	\$25	\$(5)
Aerospace—Honeywell Aerospace Defense Services ....	13	9
	<u>\$38</u>	<u>\$ 4</u>

In 2003, we realized proceeds of \$137 million in cash on the sales of these businesses. The sales of these businesses did not materially impact net sales and segment profit in 2003 compared with 2002. The after-tax loss on the sale of our Specialty Materials' businesses resulted mainly from tax benefits associated with prior capital losses.

	Year Ended December 31, 2002	
	Pretax Gain (Loss)	After-tax Gain (Loss)
Automation and Control Solutions—Consumer Products	\$(131)	\$(10)
Specialty Materials—Advanced Circuits .....	(83)	18
Specialty Materials—Pharmaceutical Fine Chemicals (PFC) .....	(35)	108
Transportation Systems—Bendix Commercial Vehicle Systems (BCVS) .....	125	79
	<u>\$(124)</u>	<u>\$195</u>

In 2002, we realized proceeds of approximately \$435 million in cash and investment securities on the sales of these businesses. Our Advanced Circuits and PFC businesses had a higher deductible tax basis than book basis which resulted in an after-tax gain. The sales of these businesses reduced net sales and increased segment profit in 2002 compared with 2001 by approximately \$500 and \$31 million, respectively.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Note 5—Other (Income) Expense**

	Years Ended December 31,		
	2004	2003	2002
Interest income and other .....	\$(130)	\$(109)	\$ (68)
Minority interests .....	10	7	8
Foreign exchange loss .....	28	121	56
	<u>\$ (92)</u>	<u>\$ 19</u>	<u>\$ (4)</u>

**Note 6—Interest and Other Financial Charges**

	Years Ended December 31,		
	2004	2003	2002
Total interest and other financial charges .....	\$349	\$350	\$365
Less—capitalized interest .....	(18)	(15)	(21)
	<u>\$331</u>	<u>\$335</u>	<u>\$344</u>

The weighted average interest rate on short-term borrowings and commercial paper outstanding at December 31, 2004 and 2003 was 2.81 and 6.81 percent, respectively.

**Note 7—Income Taxes**

**Income (loss) before taxes and cumulative effect of accounting change**

	Years Ended December 31,		
	2004	2003	2002
United States .....	\$ 878	\$ 925	\$(1,262)
Foreign .....	802	715	317
	<u>\$1,680</u>	<u>\$1,640</u>	<u>\$ (945)</u>

**Tax expense (benefit)**

	Years Ended December 31,		
	2004	2003	2002
United States .....	\$ 170	\$ 98	\$(894)
Foreign .....	229	198	169
	<u>\$ 399</u>	<u>\$296</u>	<u>\$(725)</u>

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

	Years Ended December 31,		
	2004	2003	2002
Tax expense (benefit) consist of:			
Current:			
United States .....	\$ 26	\$(251)	\$(175)
State .....	16	(1)	28
Foreign .....	134	204	197
	<u>176</u>	<u>(48)</u>	<u>50</u>
Deferred:			
United States .....	109	347	(679)
State .....	19	3	(68)
Foreign .....	95	(6)	(28)
	<u>223</u>	<u>344</u>	<u>(775)</u>
	<u>\$399</u>	<u>\$ 296</u>	<u>\$(725)</u>

	Years Ended December 31,		
	2004	2003	2002
The U.S. statutory federal income tax rate is reconciled to our effective income tax rate as follows:			
Statutory U.S. federal income tax rate .....	35.0%	35.0%	(35.0)%
Taxes on foreign earnings over (under) U.S. tax rate (1) .....	(7.1)	(5.0)	10.0
Asset basis differences .....	(.6)	(2.2)	(33.1)
Nondeductible amortization .....	1.1	1.9	2.4
State income taxes (1) .....	1.4	.4	(2.6)
Tax benefits on export sales .....	(4.5)	(3.6)	(8.5)
ESOP dividend tax benefit .....	(1.2)	(1.2)	(1.9)
Tax credits .....	(.6)	(1.0)	(1.5)
Equity income .....	(.5)	(.8)	(1.7)
Redesignation of Friction Materials business from held for sale to held and used .....	—	(6.6)	—
All other items—net .....	.8	1.1	(4.8)
	<u>23.8%</u>	<u>18.0%</u>	<u>(76.7)%</u>

(1) Net of changes in valuation allowance.



**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Deferred tax assets (liabilities)**

	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
Deferred income taxes represent the future tax effects of transactions which are reported in different periods for tax and financial reporting purposes. The tax effects of temporary differences and tax carryforwards which give rise to future income tax benefits and payables are as follows:		
Property, plant and equipment basis differences .....	\$ (509)	\$ (570)
Postretirement benefits other than pensions and postemployment benefits .....	748	707
Investment and other asset basis differences .....	(205)	(215)
Other accrued items .....	558	535
Net operating losses .....	706	967
Tax credits .....	440	373
Undistributed earnings of subsidiaries .....	(34)	(33)
All other items—net .....	(33)	52
	1,671	1,816
Valuation allowance .....	(338)	(299)
	<u>\$1,333</u>	<u>\$1,517</u>

The amount of federal tax net operating losses available for carryforward at December 31, 2004 was \$213 million, including \$79 million of charitable contributions deductions converted to federal net operating losses under the Internal Revenue Code. Also, included are \$86 million of loss carryforwards that were generated by certain subsidiaries prior to their acquisition and have expiration dates through 2022. The use of pre-acquisition operating losses is subject to limitations imposed by the Internal Revenue Code. We do not anticipate that these limitations will affect utilization of the carryforwards prior to their expiration. Various subsidiaries have state tax net operating loss carryforwards of \$3.5 billion at December 31, 2004 with varying expiration dates through 2024. We also have foreign net operating losses of \$1.9 billion which are available to reduce future income tax payments in several countries, subject to varying expiration rules.

We have U.S. tax credit carryforwards of \$170 million at December 31, 2004, including carryforwards of \$90 million with various expiration dates through 2024, and tax credits of \$80 million which are not subject to expiration. In addition, we have \$270 million of foreign tax credits available for carryback or carryforward at December 31, 2004 with varying expiration dates through 2014.

The valuation allowance was increased by \$39, \$108 and \$80 million in 2004, 2003 and 2002, respectively. The increase in 2004 was primarily due to an increase in state tax net operating loss carryforwards (net of federal impact) and foreign net operating and capital losses that are not expected to be realized of \$40 and \$27 million, respectively, offset by a decrease of \$30 million for foreign tax credits which we now believe will be utilized due to the extension of the foreign tax credit carryforward period from five to 10 years under the American Jobs Creation Act of 2004. The increase in 2003 was primarily due to an increase in foreign net operating losses that are not expected to be utilized. The increase in 2002 was primarily due to foreign tax credits which are not expected to be realized and state tax net operating loss carryforwards (net of federal impact) which we believe will expire unutilized.

The American Jobs Creation Act of 2004, signed into law in October 2004, provides for a variety of changes in the tax law including incentives to repatriate undistributed earnings of foreign subsidiaries, a phased elimination of the extra-territorial income exclusion, and a domestic manufacturing benefit. More specifically, the Act creates a temporary incentive for U.S. corporations to repatriate accumulated

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

income earned outside the U.S. by providing an 85 percent dividends received deduction for certain dividends from controlled foreign corporations. The deduction is subject to a number of limitations and currently, uncertainty remains as to how to interpret numerous provisions in the Act. As such, we are not in a position to determine whether, and to what extent, we might repatriate foreign earnings. Based on our analysis to date, however, it is reasonably possible that we may repatriate some amount up to approximately \$2.6 billion. We estimate the income tax effects of repatriating \$2.6 billion to be approximately \$150 to \$350 million. Honeywell has not provided for U.S. federal income and foreign withholding taxes on \$3.9 billion of undistributed earnings from non-U.S. operations as of December 31, 2004. Until our analysis of the Act is completed, we will continue to permanently reinvest those earnings. We expect to finalize our assessment later in 2005.

The extra-territorial income exclusion (ETI) for foreign sales will be phased-out over two years beginning in 2005. The deduction for income from qualified domestic production activities will be phased-in from 2005 through 2010. Similar to the ETI benefit, the domestic manufacturing benefit has no effect on deferred tax assets and liabilities existing at the enactment date. Rather, the impact of this deduction will be reported in the period in which the deduction is claimed on our federal income tax return. We are currently assessing the details of the Act and the net effect of the phase-out of the ETI and the phase-in of this new deduction. We expect to complete our analysis later in 2005. Until such time, it is not possible to determine what impact this legislation will have on our consolidated tax accruals or effective tax rate.

**Note 8—Earnings (Loss) Per Share**

The following table sets forth the computations of basic and diluted earnings (loss) per share:

	2004		2003		2002	
	Basic	Assuming Dilution	Basic	Assuming Dilution	Basic	Assuming Dilution
<b>Income (loss)</b>						
Income (loss) before cumulative effect of accounting change..	\$ 1,281	\$ 1,281	\$ 1,344	\$ 1,344	\$ (220)	\$ (220)
Cumulative effect of accounting change .....	—	—	(20)	(20)	—	—
Net income (loss) .....	<u>\$ 1,281</u>	<u>\$ 1,281</u>	<u>\$ 1,324</u>	<u>\$ 1,324</u>	<u>\$ (220)</u>	<u>\$ (220)</u>
<b>Average shares</b>						
Average shares outstanding ...	858,857,721	858,857,721	860,671,264	860,671,264	820,292,870	820,292,870
Dilutive securities issuable in connection with stock plans ..	—	3,475,613	—	1,423,992	—	—
Total average shares .....	<u>858,857,721</u>	<u>862,333,334</u>	<u>860,671,264</u>	<u>862,095,256</u>	<u>820,292,870</u>	<u>820,292,870</u>
<b>Earnings (loss) per share of common stock</b>						
Income (loss) before cumulative effect of accounting change..	\$ 1.49	\$ 1.49	\$ 1.56	\$ 1.56	\$ (0.27)	\$ (0.27)
Cumulative effect of accounting change .....	—	—	(0.02)	(0.02)	—	—
Net income (loss) .....	<u>\$ 1.49</u>	<u>\$ 1.49</u>	<u>\$ 1.54</u>	<u>\$ 1.54</u>	<u>\$ (0.27)</u>	<u>\$ (0.27)</u>

In 2004 and 2003, the diluted earnings per share calculation excludes the effect of stock options when the options' exercise prices exceed the average market price of the common shares during the period. In 2004 and 2003, the number of stock options not included in the computation were 41,656,606 and 41,908,964, respectively. These stock options were outstanding at the end of each of the respective years. As a result of the net loss for 2002, 2,527,229 of dilutive securities issuable in connection with stock plans have been excluded from the diluted loss per share calculation because their effect would reduce the loss per share.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Note 9—Accounts, Notes and Other Receivables**

	December 31,	
	2004	2003
Trade .....	\$3,656	\$3,230
Other .....	724	563
	4,380	3,793
Less—Allowance for doubtful accounts .....	(137)	(150)
	<u>\$4,243</u>	<u>\$3,643</u>

We sell interests in designated pools of trade accounts receivables to third parties. The sold receivables are over-collateralized by \$120 million at December 31, 2004 and we retain a subordinated interest in the pool of receivables representing that over-collateralization as well as an undivided interest in the balance of the receivables pools. New receivables are sold under the agreement as previously sold receivables are collected. Losses are recognized when our interest in the receivables are sold. The retained interests in the receivables are shown at the amounts expected to be collected by us, and such carrying value approximates the fair value of our retained interests. We are compensated for our services in the collection and administration of the receivables.

	December 31,	
	2004	2003
Designated pools of trade receivables .....	\$1,060	\$ 995
Interest sold to third parties .....	(500)	(500)
Retained interest .....	<u>\$ 560</u>	<u>\$ 495</u>

Losses on sales of receivables were \$9, \$7 and \$10 million in 2004, 2003 and 2002, respectively. No credit losses were incurred during those years.

**Note 10—Inventories**

	December 31,	
	2004	2003
Raw materials .....	\$1,153	\$ 972
Work in process .....	779	802
Finished products .....	1,382	1,412
	3,314	3,186
Less—		
Progress payments .....	(24)	(20)
Reduction to LIFO cost basis .....	(130)	(126)
	<u>\$3,160</u>	<u>\$3,040</u>

Inventories valued at LIFO amounted to \$108 and \$144 million at December 31, 2004 and 2003, respectively. Had such LIFO inventories been valued at current costs, their carrying values would have been approximately \$130 and \$126 million higher at December 31, 2004 and 2003, respectively.

**Note 11—Investments and Long-Term Receivables**

	December 31,	
	2004	2003
Investments .....	\$ 305	\$ 181
Long-term receivables .....	237	388
	<u>\$ 542</u>	<u>\$ 569</u>

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

There were no marketable equity securities classified as available-for-sale at December 31, 2004 and 2003.

**Note 12—Property, Plant and Equipment**

	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
Land and improvements.....	\$ 356	\$ 335
Machinery and equipment.....	8,935	9,011
Buildings and improvements.....	2,027	1,964
Construction in progress .....	344	435
	<u>11,662</u>	<u>11,745</u>
Less—Accumulated depreciation and amortization.....	<u>(7,331)</u>	<u>(7,450)</u>
	<u>\$ 4,331</u>	<u>\$ 4,295</u>

Depreciation expense was \$572, \$595 and \$671 million in 2004, 2003 and 2002, respectively.

**Note 13—Goodwill and Other Intangibles—Net**

The change in the carrying amount of goodwill for the years ended December 31, 2004 and 2003 by reportable segment are as follows:

	<u>December 31,</u> <u>2003</u>	<u>Acquisitions</u>	<u>Divestitures</u>	<u>Currency</u> <u>Translation</u> <u>Adjustment</u>	<u>December 31,</u> <u>2004</u>
Aerospace.....	\$1,641	\$ 64	\$ —	\$16	\$1,721
Automation and Control Solutions .....	2,832	162	(60)	20	2,954
Specialty Materials.....	781	—	(12)	10	779
Transportation Systems .....	535	—	—	24	559
	<u>\$5,789</u>	<u>\$226</u>	<u>\$(72)</u>	<u>\$70</u>	<u>\$6,013</u>

	<u>December 31,</u> <u>2002</u>	<u>Acquisitions</u>	<u>Divestitures</u>	<u>Currency</u> <u>Translation</u> <u>Adjustment</u>	<u>December 31,</u> <u>2003</u>
Aerospace.....	\$1,644	\$ —	\$ (3)	\$ —	\$1,641
Automation and Control Solutions .....	2,678	136	—	18	2,832
Specialty Materials.....	849	5	(89)	16	781
Transportation Systems .....	527	—	—	8	535
	<u>\$5,698</u>	<u>\$141</u>	<u>\$(92)</u>	<u>\$ 42</u>	<u>\$5,789</u>

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

Intangible assets are comprised of:

	December 31, 2004			December 31, 2003		
	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>	<u>Net Carrying Amount</u>	<u>Gross Carrying Amount</u>	<u>Accumulated Amortization</u>	<u>Net Carrying Amount</u>
Intangible assets with determinable lives:						
Investments in Aerospace customer incentives....	\$ 952	\$(176)	\$ 776	\$ 860	\$(141)	\$ 719
Patents and trademarks..	445	(310)	135	425	(295)	130
Other .....	512	(219)	293	398	(186)	212
	<u>1,909</u>	<u>(705)</u>	<u>1,204</u>	<u>1,683</u>	<u>(622)</u>	<u>1,061</u>
Trademark with indefinite life	46	(9)	37	46	(9)	37
	<u>\$1,955</u>	<u>\$(714)</u>	<u>\$1,241</u>	<u>\$1,729</u>	<u>\$(631)</u>	<u>\$1,098</u>

Intangible assets amortization expense was \$78, \$66 and \$59 million in 2004, 2003 and 2002, respectively. Estimated intangible assets amortization expense for each of the five succeeding years approximates \$75 million.

**Note 14—Accrued Liabilities**

	December 31,	
	<u>2004</u>	<u>2003</u>
Compensation and benefit costs .....	\$ 538	\$ 386
Customer advances .....	545	516
Income taxes .....	216	145
Environmental costs .....	267	90
Asbestos related liabilities .....	744	730
Severance .....	97	171
Product warranties and performance guarantees .....	270	242
Other .....	2,294	2,034
	<u>\$4,971</u>	<u>\$4,314</u>

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Note 15—Long-term Debt and Credit Agreements**

	December 31,	
	2004	2003
6.875% notes due 2005 .....	\$ —	\$ 750
5.25% notes due 2006 .....	368	339
8 <sup>5</sup> / <sub>8</sub> % debentures due 2006 .....	100	100
5 <sup>1</sup> / <sub>8</sub> % notes due 2006 .....	500	500
7.0% notes due 2007 .....	350	350
7 <sup>1</sup> / <sub>8</sub> % notes due 2008 .....	200	200
6.20% notes due 2008 .....	200	200
Zero coupon bonds and money multiplier notes, 13.0%–14.26%, due 2009 .....	100	100
Floating rate notes due 2009-2011 .....	252	267
7.50% notes due 2010 .....	1,000	1,000
6 <sup>1</sup> / <sub>8</sub> % notes due 2011 .....	500	500
Industrial development bond obligations, 1.1%–2.4%, maturing at various dates through 2037 .....	66	66
6 <sup>5</sup> / <sub>8</sub> % debentures due 2028 .....	216	216
9.065% debentures due 2033 .....	51	51
Other (including capitalized leases), 0.53%–15.69%, maturing at various dates through 2020 .....	166	322
	<u>\$4,069</u>	<u>\$4,961</u>

The schedule of principal payments on long-term debt is as follows:

	At December 31, 2004
2005 .....	\$ 956
2006 .....	999
2007 .....	386
2008 .....	402
2009 .....	209
Thereafter .....	<u>2,073</u>
	5,025
Less—current portion .....	<u>(956)</u>
	<u>\$4,069</u>

We maintain \$2.3 billion of bank revolving credit facilities with a group of banks, arranged by Citigroup Global Markets Inc. and J.P. Morgan Securities Inc., and comprises: (a) a \$1.3 billion Five-Year Credit Agreement, with a \$300 million letter of credit sub-limit and (b) a \$1 billion Five-Year Credit Agreement with a \$200 million letter of credit sub-limit. The credit agreements are maintained for general corporate purposes, including support for the issuance of commercial paper. We had no borrowings outstanding under either agreement at December 31, 2004. We have issued \$115 million of letters of credit under the \$1.3 billion Five-Year Credit Agreement at December 31, 2004.

Neither of the credit agreements restricts our ability to pay dividends and neither contains financial covenants. The failure to comply with customary conditions or the occurrence of customary events of default contained in the credit agreements would prevent any further borrowings and would generally require the repayment of any outstanding borrowings under such credit agreements. Such events of default include: (a) non-payment of credit agreement debt, interest or fees; (b) non-compliance with the terms of the credit agreement covenants; (c) cross-default to other debt in certain circumstances;

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

(d) bankruptcy; and (e) defaults upon obligations under Employee Retirement Income Security Act. Additionally, each of the banks has the right to terminate its commitment to lend additional funds or issue additional letters of credit under the credit agreements if any person or group acquires beneficial ownership of 30 percent or more of our voting stock, or, during any 12-month period, individuals who were directors of Honeywell at the beginning of the period cease to constitute a majority of the Board of Directors (the Board).

Loans under the \$1.3 billion Five-Year Credit Agreement are required to be repaid no later than November 26, 2008. Loans under the \$1 billion Five-Year Credit Agreement are required to be repaid no later than October 22, 2009. We have agreed to pay a facility fee of 0.08 percent per annum on the aggregate commitment for both Five-Year Credit Agreements.

Interest on borrowings under both Five-Year Credit Agreements would be determined, at Honeywell's option, by (a) an auction bidding procedure; (b) the highest of the floating base rate publicly announced by Citibank, N.A., 0.5 percent above the average CD rate, or 0.5 percent above the Federal funds rate; or (c) the Eurocurrency rate plus 0.22 percent (applicable margin).

The facility fee, the applicable margin over the Eurocurrency rate on both Five-Year Credit Agreements and the letter of credit issuance fee in both Five-Year Credit Agreements, are subject to change, based upon a grid determined by our long-term debt ratings. Neither credit agreement is subject to termination based upon a decrease in our debt ratings or a material adverse change.

**Note 16—Lease Commitments**

Future minimum lease payments under operating leases having initial or remaining noncancellable lease terms in excess of one year are as follows:

	At December 31, 2004
2005.....	\$ 289
2006.....	216
2007.....	153
2008.....	122
2009.....	75
Thereafter.....	173
	<u>\$1,028</u>

We have entered into agreements to lease land, equipment and buildings. Principally all our operating leases have initial terms of up to 25 years, and some contain renewal options subject to customary conditions. At any time during the terms of some of our leases, we may at our option purchase the leased assets for amounts that approximate fair value. We do not expect that any of our commitments under the lease agreements will have a material adverse effect on our consolidated results of operations, financial position or liquidity.

Rent expense was \$321, \$314 and \$274 million in 2004, 2003 and 2002, respectively.

**Note 17—Financial Instruments**

As a result of our global operating and financing activities, we are exposed to market risks from changes in interest and foreign currency exchange rates and commodity prices, which may adversely affect our operating results and financial position. We minimize our risks from interest and foreign currency exchange rate and commodity price fluctuations through our normal operating and financing activities and, when deemed appropriate, through the use of derivative financial instruments.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Credit and Market Risk**—Financial instruments, including derivatives, expose us to counterparty credit risk for nonperformance and to market risk related to changes in interest or currency exchange rates. We manage our exposure to counterparty credit risk through specific minimum credit standards, diversification of counterparties, and procedures to monitor concentrations of credit risk. Our counterparties in derivative transactions are substantial investment and commercial banks with significant experience using such derivative instruments. We monitor the impact of market risk on the fair value and cash flows of our derivative and other financial instruments considering reasonably possible changes in interest and currency exchange rates and restrict the use of derivative financial instruments to hedging activities. We do not use derivative financial instruments for trading or other speculative purposes and do not use leveraged derivative financial instruments.

We continually monitor the creditworthiness of our customers to which we grant credit terms in the normal course of business. While concentrations of credit risk associated with our trade accounts and notes receivable are considered minimal due to our diverse customer base, a significant portion of our customers are in the commercial air transport industry (aircraft manufacturers and airlines) accounting for approximately 13 percent of our consolidated sales in 2004. The terms and conditions of our credit sales are designed to mitigate or eliminate concentrations of credit risk with any single customer. Our sales are not materially dependent on a single customer or a small group of customers.

**Foreign Currency Risk Management**—We conduct our business on a multinational basis in a wide variety of foreign currencies. Our exposure to market risk for changes in foreign currency exchange rates arises from international financing activities between subsidiaries, foreign currency denominated monetary assets and liabilities and anticipated transactions arising from international trade. Our objective is to preserve the economic value of non-functional currency denominated cash flows. We attempt to have all transaction exposures hedged with natural offsets to the fullest extent possible and, once these opportunities have been exhausted, through foreign currency forward and option agreements with third parties. Our principal currency exposures relate to the Euro, the British pound, the Canadian dollar, and the U.S. dollar.

We hedge monetary assets and liabilities denominated in non-functional currencies. Prior to conversion into U.S. dollars, these assets and liabilities are remeasured at spot exchange rates in effect on the balance sheet date. The effects of changes in spot rates are recognized in earnings and included in Other (Income) Expense. We hedge our exposure to changes in foreign exchange rates principally with forward contracts. Forward contracts are marked-to-market with the resulting gains and losses similarly recognized in earnings offsetting the gains and losses on the non-functional currency denominated monetary assets and liabilities being hedged.

We partially hedge forecasted 2005 sales and purchases denominated in non-functional currencies with currency forward contracts. When a functional currency strengthens against non-functional currencies, the decline in value of forecasted non-functional currency cash inflows (sales) or outflows (purchases) is partially offset by the recognition of gains (sales) and losses (purchases), respectively, in the value of the forward contracts designated as hedges. Conversely, when a functional currency weakens against non-functional currencies, the increase in value of forecasted non-functional currency cash inflows (sales) or outflows (purchases) is partially offset by the recognition of losses (sales) and gains (purchases), respectively, in the value of the forward contracts designated as hedges. Market value gains and losses on these contracts are recognized in earnings when the hedged transaction is recognized. All open forward contracts mature by December 31, 2005.

At December 31, 2004 and 2003, we had contracts with notional amounts of \$790 and \$641 million, respectively, to exchange foreign currencies, principally in the Euro countries and Great Britain.

**Commodity Price Risk Management**—Our exposure to market risk for commodity prices arises from changes in our cost of production. We mitigate our exposure to commodity price risk through the



**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

use of long-term, firm-price contracts with our suppliers and forward commodity purchase agreements with third parties hedging anticipated purchases of several commodities (principally natural gas). Forward commodity purchase agreements are marked-to-market, with the resulting gains and losses recognized in earnings when the hedged transaction is recognized.

**Interest Rate Risk Management**—We use a combination of financial instruments, including medium-term and short-term financing, variable-rate commercial paper, and interest rate swaps to manage the interest rate mix of our total debt portfolio and related overall cost of borrowing. At December 31, 2004 and 2003, interest rate swap agreements designated as fair value hedges effectively changed \$1,218 and \$1,189 million, respectively, of fixed rate debt at an average rate of 6.42 and 6.45 percent, respectively, to LIBOR based floating rate debt. Our interest rate swaps mature through 2007.

**Fair Value of Financial Instruments**—The carrying value of cash and cash equivalents, trade accounts and notes receivables, payables, commercial paper and short-term borrowings contained in the Consolidated Balance Sheet approximates fair value. Summarized below are the carrying values and fair values of our other financial instruments at December 31, 2004 and 2003. The fair values are based on the quoted market prices for the issues (if traded), current rates offered to us for debt of the same remaining maturity and characteristics, or other valuation techniques, as appropriate.

	December 31, 2004		December 31, 2003	
	Carrying Value	Fair Value	Carrying Value	Fair Value
<b>Assets</b>				
Long-term receivables .....	\$ 237	\$ 218	\$ 388	\$ 369
Interest rate swap agreements .....	39	39	67	67
Foreign currency exchange contracts .....	22	22	12	12
Forward commodity contracts .....	10	10	18	18
<b>Liabilities</b>				
Long-term debt and related current maturities .....	\$(5,025)	\$(5,411)	\$(5,008)	\$(5,508)
Foreign currency exchange contracts .....	(6)	(6)	(11)	(11)
Forward commodity contracts .....	(2)	(2)	—	—

**Note 18—Capital Stock**

We are authorized to issue up to 2,000,000,000 shares of common stock, with a par value of one dollar. Common shareowners are entitled to receive such dividends as may be declared by the Board, are entitled to one vote per share, and are entitled, in the event of liquidation, to share ratably in all the assets of Honeywell which are available for distribution to the common shareowners. Common shareowners do not have preemptive or conversion rights. Shares of common stock issued and outstanding or held in the treasury are not liable to further calls or assessments. There are no restrictions on us relative to dividends or the repurchase or redemption of common stock.

In November 2003, Honeywell announced its intention to repurchase sufficient outstanding shares of its common stock to offset the dilutive impact of employee stock based compensation plans, including future option exercises, restricted unit vesting and matching contributions under our savings plans. While we estimate the issuance of approximately 10 million shares annually under such plans, in 2004, we repurchased 20.1 million shares for \$699 million, which included shares repurchased in response to market conditions in the fourth quarter to offset the anticipated 2005 dilutive impact of employee stock based compensation plans.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

We are authorized to issue up to 40,000,000 shares of preferred stock, without par value, and can determine the number of shares of each series, and the rights, preferences and limitations of each series. At December 31, 2004, there was no preferred stock outstanding.

**Note 19—Other Nonowner Changes in Shareowners' Equity**

Total nonowner changes in shareowners' equity are included in the Consolidated Statement of Shareowners' Equity. The changes in Accumulated Other Nonowner Changes are as follows:

	<u>Pretax</u>	<u>Tax</u>	<u>After-Tax</u>
<b>Year Ended December 31, 2004</b>			
Foreign exchange translation adjustments .....	\$ 351	\$ —	\$ 351
Change in fair value of effective cash flow hedges.....	(15)	6	(9)
Minimum pension liability adjustment .....	(19)	4	(15)
	<u>\$ 317</u>	<u>\$ 10</u>	<u>\$ 327</u>
<b>Year Ended December 31, 2003</b>			
Foreign exchange translation adjustments .....	\$ 551	\$ —	\$ 551
Change in fair value of effective cash flow hedges.....	—	—	—
Minimum pension liability adjustment .....	604	(235)	369
	<u>\$1,155</u>	<u>\$ (235)</u>	<u>\$ 920</u>
<b>Year Ended December 31, 2002</b>			
Foreign exchange translation adjustments .....	\$ 310	\$ —	\$ 310
Change in fair value of effective cash flow hedges.....	35	(13)	22
Minimum pension liability adjustment .....	(956)	350	(606)
	<u>\$ (611)</u>	<u>\$ 337</u>	<u>\$ (274)</u>

The components of Accumulated Other Nonowner Changes are as follows:

	<u>December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
Cumulative foreign exchange translation adjustments .....	\$ 489	\$ 138	\$ (413)
Fair value of effective cash flow hedges .....	8	17	17
Minimum pension liability.....	(359)	(344)	(713)
	<u>\$ 138</u>	<u>\$ (189)</u>	<u>\$ (1,109)</u>

**Note 20—Stock-Based Compensation Plans**

We have stock plans available to grant incentive stock options, non-qualified stock options and stock appreciation rights to officers and employees.

**Fixed Stock Options**—The exercise price, term and other conditions applicable to each option granted under the stock plans are generally determined by the Management Development and Compensation Committee of the Board. The options are granted at a price equal to our stock's fair market value on the date of grant. The options generally become exercisable over a three-year period and expire after ten years.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

The following table summarizes information about stock option activity for the three years ended December 31, 2004:

	Number of Options	Weighted Average Exercise Price
Outstanding at December 31, 2001.....	53,879,625	\$39.37
Granted .....	2,996,005	33.61
Exercised .....	(1,692,005)	18.15
Lapsed or canceled .....	(3,168,916)	43.14
Outstanding at December 31, 2002.....	52,014,709	39.50
Granted .....	9,372,850	23.70
Exercised .....	(2,361,930)	18.34
Lapsed or canceled .....	(4,735,283)	39.58
Outstanding at December 31, 2003.....	54,290,346	37.68
Granted .....	9,409,800	35.49
Exercised .....	(2,947,232)	21.20
Lapsed or canceled .....	(2,433,985)	39.41
Outstanding at December 31, 2004.....	<u>58,318,929</u>	38.09

The following table summarizes information about stock options outstanding and exercisable at December 31, 2004:

Range of exercise prices	Options Outstanding			Options Exercisable	
	Number Outstanding	Weighted Average Life(1)	Weighted Average Exercise Price	Number Exercisable	Weighted Average Exercise Price
\$17.79–\$29.86.....	11,088,429	6.3	\$23.67	6,151,309	\$23.66
\$30.03–\$39.94.....	30,819,327	6.5	35.90	20,812,117	36.17
\$40.02–\$49.97.....	9,156,099	4.0	43.47	9,124,599	43.48
\$50.13–\$66.73.....	7,255,074	4.9	62.62	7,255,074	62.62
	<u>58,318,929</u>	5.9	38.09	<u>43,343,099</u>	40.36

(1) Average remaining contractual life in years.

There were 40,547,240 and 38,179,208 options exercisable at weighted average exercise prices of \$41.14 and \$39.58 at December 31, 2003 and 2002, respectively. There were 20,173,109 shares available for future grants under the terms of our stock option plans at December 31, 2004.

**Restricted Stock Units**—Restricted stock unit (RSU) awards entitle the holder to receive one share of common stock for each unit when the units vest. RSU's are issued to certain key employees as compensation and as incentives tied directly to the achievement of certain performance objectives.

RSU's issued were 980,706, 1,578,000 and 1,777,700 in 2004, 2003 and 2002, respectively. Compensation expense related to these RSUs was \$24, \$27 and \$36 million in 2004, 2003 and 2002, respectively. There were 3,691,556, 3,103,513 and 2,342,960 RSU's outstanding, with a weighted average grant date fair value per share of \$31.18, \$30.10 and \$37.12 at December 31, 2004, 2003 and 2002, respectively.

**Non-Employee Directors' Plan**—We also have a Stock Plan for Non-Employee Directors (Directors' Plan) under which restricted shares and options are granted. Each new director receives a one-time grant of 3,000 shares of common stock, subject to specific restrictions.

The Directors' Plan also provides for an annual grant to each director of options to purchase 5,000 shares of common stock at the fair market value on the date of grant. We have set aside 450,000

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

shares for issuance under the Directors' Plan. Options generally become exercisable over a three-year period and expire after ten years.

**Note 21—Commitments and Contingencies**

**Shareowner Litigation**—Honeywell and three of its former officers were defendants in a class action lawsuit filed in the United States District Court for the District of New Jersey. Plaintiffs alleged, among other things, that the defendants violated federal securities laws by purportedly making false and misleading statements and by failing to disclose material information concerning Honeywell's financial performance, thereby allegedly causing the value of Honeywell's stock to be artificially inflated. The Court certified a class consisting of all purchasers of Honeywell stock between December 20, 1999 and June 19, 2000. On June 4, 2004 Honeywell and the lead plaintiffs agreed to a settlement of this matter which required a payment to the class of \$100 million. Honeywell's contribution to the settlement was \$15 million, which amount had previously been fully reserved. Honeywell's insurance carriers paid the remainder of the settlement. The settlement was approved by the Court on August 16, 2004. A small number of class members, including the Florida State Board of Administration (FSBA), opted out of the settlement. The FSBA claims have been settled for \$1.25 million. Honeywell believes that all opt-out claims, including that of the FSBA, are fully insured.

**ERISA Class Action Lawsuit**—Honeywell and several of its current and former officers and directors are defendants in a purported class action lawsuit filed in the United States District Court for the District of New Jersey. The complaint principally alleges that the defendants breached their fiduciary duties to participants in the Honeywell Savings and Ownership Plan (the "Savings Plan") by purportedly making false and misleading statements, failing to disclose material information concerning Honeywell's financial performance, and failing to diversify the Savings Plan's assets and monitor the prudence of Honeywell stock as a Savings Plan investment. In September 2004, Honeywell reached an agreement in principle to settle this matter for \$14 million plus an agreement to permit Savings Plan participants greater diversification rights. The settlement will be paid in full by Honeywell's insurers. The settlement will require Court approval, which is expected in 2005.

**Environmental Matters**—We are subject to various federal, state, local and foreign government requirements relating to the protection of the environment. We believe that, as a general matter, our policies, practices and procedures are properly designed to prevent unreasonable risk of environmental damage and personal injury and that our handling, manufacture, use and disposal of hazardous or toxic substances are in accord with environmental and safety laws and regulations. However, mainly because of past operations and operations of predecessor companies, we, like other companies engaged in similar businesses, have incurred remedial response and voluntary cleanup costs for site contamination and are a party to lawsuits and claims associated with environmental and safety matters, including past production of products containing toxic substances. Additional lawsuits, claims and costs involving environmental matters are likely to continue to arise in the future.

With respect to environmental matters involving site contamination, we continually conduct studies, individually or jointly with other responsible parties, to determine the feasibility of various remedial techniques to address environmental matters. It is our policy to record appropriate liabilities for environmental matters when remedial efforts or damage claim payments are probable and the costs can be reasonably estimated. Such liabilities are based on our best estimate of the undiscounted future costs required to complete the remedial work. The recorded liabilities are adjusted periodically as remediation efforts progress or as additional technical or legal information becomes available. Given the uncertainties regarding the status of laws, regulations, enforcement policies, the impact of other potentially responsible parties, technology and information related to individual sites, we do not believe it is possible to develop an estimate of the range of reasonably possible environmental loss in excess of our accruals. We expect to fund expenditures for these matters from operating cash flow. The timing

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

of cash expenditures depends on a number of factors, including the timing of litigation and settlements of remediation liability, personal injury and property damage claims, regulatory approval of cleanup projects, remedial techniques to be utilized and agreements with other parties.

Although we do not currently possess sufficient information to reasonably estimate the amounts of liabilities to be recorded upon future completion of studies, litigation or settlements, and neither the timing nor the amount of the ultimate costs associated with environmental matters can be determined, they could be material to our consolidated results of operations or operating cash flows in the periods recognized or paid. However, considering our past experience and existing reserves, we do not expect that these environmental matters will have a material adverse effect on our consolidated financial position.

In the matter entitled *Interfaith Community Organization, et al. v. Honeywell International Inc., et al.*, the United States District Court for the District of New Jersey held in May 2003 that a predecessor Honeywell site located in Jersey City, New Jersey constituted an imminent and substantial endangerment and ordered Honeywell to conduct the excavation and transport for offsite disposal of approximately one million tons of chromium residue present at the site. Honeywell appealed the Court's decision to the Third Circuit Court of Appeals (Appeals Court). As disclosed in prior SEC filings, we believed that the District Court-ordered remedy would be remanded, reversed or replaced and, accordingly, provisions previously made in our financial statements for remedial costs at this site did not assume excavation and offsite removal of chromium. On February 18, 2005, the Appeals Court denied Honeywell's appeal. In light of the Appeals Court decision, we recorded a pre-tax charge of \$278 million in the fourth quarter of 2004, which reflects the incremental cost of implementing the Court-ordered remedy. Implementation of the excavation and offsite removal remedy is expected to take place over a five-year period, and the cost of implementation is expected to be incurred evenly over that period. We do not expect implementation of the remedy to have a material adverse effect on our future consolidated results of operations, operating cash flows or financial position.

In accordance with a 1992 consent decree with the State of New York, Honeywell is studying environmental conditions in and around Onondaga Lake (the Lake) in Syracuse, New York. The purpose of the study is to identify, evaluate and propose remedial measures that can be taken to remedy historic industrial contamination in the Lake. A predecessor company to Honeywell operated a chemical plant which is alleged to have contributed mercury and other contaminants to the Lake. In November 2004, the New York State Department of Environmental Conservation (the DEC) issued its Proposed Plan for remediation of industrial contamination in the Lake. There will be a public comment period until March 1, 2005, and the Proposed Plan is subject to review by the U.S. Environmental Protection Agency. The DEC is currently expected to issue its Record of Decision in the first half of 2005.

The Proposed Plan calls for a combined dredging/capping remedy generally in line with the approach recommended in the Feasibility Study submitted by Honeywell in May 2004 (the May 2004 Feasibility Study). Although the Proposed Plan calls for additional remediation in certain parts of the Lake, it would not require the most extensive dredging alternatives described in the May 2004 Feasibility Study. The DEC's aggregate cost estimate is based on the high end of the range of potential costs for major elements of the Proposed Plan and includes a contingency. The actual cost of the Proposed Plan will depend upon, among other things, the resolution of certain technical issues during the design phase of the remediation, expected to occur sometime in 2007 and beyond.

Based on currently available information and analysis performed by our engineering consultants, our estimated cost of implementing the remedy set forth in the Proposed Plan is consistent with amounts previously provided for in our financial statements. Our estimating process considered a range of possible outcomes and amounts recorded reflect our best estimate at this time. We do not believe that this matter will have a material adverse impact on our consolidated financial position.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

Given the scope and complexity of this project, it is possible that actual costs could exceed estimated costs by an amount that could have a material adverse impact on our consolidated results of operations and operating cash flows in the periods recognized or paid. At this time, however, we cannot identify any legal, regulatory or technical reason to conclude that a specific alternative outcome is more probable than the outcome for which we have made provisions in our financial statements.

**Asbestos Matters**—Like many other industrial companies, Honeywell is a defendant in personal injury actions related to asbestos. We did not mine or produce asbestos, nor did we make or sell insulation products or other construction materials that have been identified as the primary cause of asbestos related disease in the vast majority of claimants. Products containing asbestos previously manufactured by Honeywell or by previously owned subsidiaries fall into two general categories; refractory products and friction products.

**Refractory Products**—Honeywell owned North American Refractories Company (NARCO) from 1979 to 1986. NARCO produced refractory products (high temperature bricks and cement) which were sold largely to the steel industry in the East and Midwest. Less than 2 percent of NARCO's products contained asbestos.

When we sold the NARCO business in 1986, we agreed to indemnify NARCO with respect to personal injury claims for products that had been discontinued prior to the sale (as defined in the sale agreement). NARCO retained all liability for all other claims. NARCO had resolved approximately 176,000 claims through January 4, 2002, the date NARCO filed for reorganization under Chapter 11 of the U.S. Bankruptcy Code, at an average cost per claim of two thousand two hundred dollars. Of those claims, 43 percent were dismissed on the ground that there was insufficient evidence that NARCO was responsible for the claimant's asbestos exposure. As of the date of NARCO's bankruptcy filing, there were approximately 116,000 remaining claims pending against NARCO, including approximately 7 percent in which Honeywell was also named as a defendant. Since 1983, Honeywell and our insurers have contributed to the defense and settlement costs associated with NARCO claims.

As a result of the NARCO bankruptcy filing, all of the claims pending against NARCO are automatically stayed pending the reorganization of NARCO. Because the claims pending against Honeywell necessarily will impact the liabilities of NARCO, because the insurance policies held by Honeywell are essential to a successful NARCO reorganization, and because Honeywell has offered to commit the value of those policies to the reorganization, the bankruptcy court has temporarily enjoined any claims against Honeywell, current or future, related to NARCO, except one claim which is not material as to which the stay was lifted in August 2003. Although the stay has remained in effect continuously since January 4, 2002, there is no assurance that such stay will remain in effect. In connection with NARCO's bankruptcy filing, we paid NARCO's parent company \$40 million and agreed to provide NARCO with up to \$20 million in financing. We also agreed to pay \$20 million to NARCO's parent company upon the filing of a plan of reorganization for NARCO acceptable to Honeywell, and to pay NARCO's parent company \$40 million, and to forgive any outstanding NARCO indebtedness, upon the confirmation and consummation of such a plan.

As a result of negotiations with counsel representing NARCO related asbestos claimants regarding settlement of all pending and potential NARCO related asbestos claims against Honeywell, we have reached definitive agreements with approximately 260,000 claimants, which represents in excess of 90 percent of the anticipated current claimants who are expected to file a claim as part of the NARCO reorganization process. We are also in discussions with the NARCO Committee of Asbestos Creditors and the Court-appointed legal representative for future asbestos claimants on Trust Distribution Procedures for NARCO. We believe that, as part of the NARCO plan of reorganization, a trust will be established pursuant to these Trust Distribution Procedures for the benefit of all asbestos claimants, current and future. If the trust is put in place and approved by the Court as fair and equitable, Honeywell as well as NARCO will be entitled to a permanent channeling injunction barring

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

all present and future individual actions in state or federal courts and requiring all asbestos related claims based on exposure to NARCO products to be made against the federally-supervised trust. NARCO has deferred filing its plan of reorganization pending resolution of the bankruptcy proceedings related to one of its sister companies. We now expect the NARCO plan of reorganization and the NARCO trust to be approved by the Court in 2005. As part of its ongoing settlement negotiations, Honeywell has reached agreement in principle with the representative for future NARCO claimants to cap its annual contributions to the trust with respect to future claims at a level that would not have a material impact on Honeywell's operating cash flows. Given the substantial progress of negotiations between Honeywell and NARCO related asbestos claimants and between Honeywell and the Committee of Asbestos Creditors during the fourth quarter of 2002, Honeywell developed an estimated liability for settlement of pending and future asbestos claims and recorded a charge of \$1.4 billion for NARCO related asbestos litigation charges, net of insurance recoveries. This charge consisted of the estimated liability to settle current asbestos related claims, the estimated liability related to future asbestos related claims through 2018 and obligations to NARCO's parent, net of insurance recoveries of \$1.8 billion.

The estimated liability for current claims is based on terms and conditions, including evidentiary requirements, in definitive agreements with in excess of 90 percent of current claimants. Substantially all settlement payments with respect to current claims are expected to be made by the end of 2007.

The liability for future claims estimates the probable value of future asbestos related bodily injury claims asserted against NARCO through 2018 and obligations to NARCO's parent as discussed above. The estimate is based upon the disease criteria and payment values contained in the NARCO Trust Distribution Procedures negotiated with the NARCO Committee of Asbestos Creditors and the NARCO future claimants representative. In light of the uncertainties inherent in making long-term projections we do not believe that we have a reasonable basis for estimating asbestos claims beyond 2018 under Statement of Financial Accounting Standards No. 5. Honeywell retained the expert services of Hamilton, Rabinovitz and Alschuler, Inc. (HR&A) to project the probable number and value, including trust claim handling costs, of asbestos related future liabilities based upon historical experience with similar trusts. The methodology used to estimate the liability for future claims has been commonly accepted by numerous courts and is the same methodology that is utilized by an expert who is routinely retained by the asbestos claimants committee in asbestos related bankruptcies. The valuation methodology includes an analysis of the population likely to have been exposed to asbestos containing products, epidemiological studies to estimate the number of people likely to develop asbestos related diseases, NARCO claims filing history, the pending inventory of NARCO asbestos related claims and payment rates expected to be established by the NARCO trust.

Honeywell has approximately \$1.3 billion in insurance limits remaining that reimburses it for portions of the costs incurred to settle NARCO related claims and court judgments as well as defense costs. This coverage is provided by a large number of insurance policies written by dozens of insurance companies in both the domestic insurance market and the London excess market. At December 31, 2004, a significant portion of this coverage is with insurance companies with whom we have agreements to pay full policy limits based on corresponding Honeywell claims costs. This includes agreements with a substantial majority of the London-based insurance companies entered into primarily in the first quarter of 2004. We conduct analyses to determine the amount of insurance that we estimate is probable that we will recover in relation to payment of current and projected future claims. While the substantial majority of our insurance carriers are solvent, some of our individual carriers are insolvent, which has been considered in our analysis of probable recoveries. In the second quarter of 2004, based on our ongoing evaluation of our ability to enforce our rights under the various insurance policies, we concluded that we had additional probable insurance recoveries of \$47 million, net of solvency reserves, which has been reflected in insurance receivables. We made judgments

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

concerning insurance coverage that we believe are reasonable and consistent with our historical dealings with our insurers, our knowledge of any pertinent solvency issues surrounding insurers and various judicial determinations relevant to our insurance programs.

Projecting future events is subject to many uncertainties that could cause the NARCO related asbestos liabilities to be higher or lower than those projected and recorded. There is no assurance that a plan of reorganization will be proposed or confirmed, that insurance recoveries will be timely or whether there will be any NARCO related asbestos claims beyond 2018. Given the inherent uncertainty in predicting future events, we review our estimates periodically, and update them based on our experience and other relevant factors. Similarly we will reevaluate our projections concerning our probable insurance recoveries in light of any changes to the projected liability or other developments that may impact insurance recoveries.

**Friction Products**—Honeywell's Bendix Friction Materials (Bendix) business manufactured automotive brake pads that contained chrysotile asbestos in an encapsulated form. There is a group of existing and potential claimants consisting largely of individuals that allege to have performed brake replacements.

From 1981 through December 31, 2004, we have resolved approximately 71,000 Bendix related asbestos claims including trials covering 120 plaintiffs, which resulted in 115 favorable verdicts. Trials covering five individuals resulted in adverse verdicts; however, two of these verdicts were reversed on appeal and the remaining three claims were settled.

Through the second quarter of 2002, Honeywell had no out-of-pocket costs for Bendix related asbestos claims since its insurance deductible was satisfied many years ago. Beginning with claim payments made in the third quarter of 2002, Honeywell began advancing indemnity and defense claim costs. Those indemnity and defense costs were approximately \$165, \$112 and \$70 million in 2004, 2003 and 2002, respectively. In 2004 and 2003 Honeywell collected approximately \$8 and \$90 million, respectively, in insurance reimbursements and settlements for Bendix related asbestos claims. See further discussion of insurance coverage below.

The following tables present information regarding Bendix related asbestos claims activity during the past two years:

<u>Claims Activity</u>	<u>Years Ended December 31,</u>	
	<u>2004</u>	<u>2003</u>
Claims Unresolved at beginning of year .....	72,976	50,821
Claims Filed .....	10,504	25,765
Claims Resolved .....	<u>(7,132)</u>	<u>(3,610)</u>
Claims Unresolved at end of year .....	<u>76,348</u>	<u>72,976</u>
<u>Disease Distribution of Unresolved Claims</u>	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
Mesothelioma and Other Cancer Claims .....	3,534	3,277
Other Claims .....	<u>72,814</u>	<u>69,699</u>
Total Claims .....	<u>76,348</u>	<u>72,976</u>

Approximately 30 percent of the approximately 76,000 pending claims at December 31, 2004 are on the inactive, deferred, or similar dockets established in some jurisdictions for claimants who allege minimal or no impairment. The approximately 76,000 pending claims also include claims filed in jurisdictions such as Texas, Virginia and Mississippi that allow for consolidated filings. In these



**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

jurisdictions, plaintiffs are permitted to file complaints against a pre-determined master list of defendants, regardless of whether they have claims against each individual defendant. Many of these plaintiffs may not actually have claims against Honeywell. Based on state rules and prior experience in these jurisdictions, we anticipate that many of these claims will ultimately be dismissed. During 2003, Honeywell was served with numerous complaints filed in Mississippi in advance of the January 1, 2003 effective date for tort reform in that state. Also during 2003, Honeywell experienced an increase in nonmalignancy filings that we believe were in response to the possibility of federal legislation. Based on prior experience, we anticipate that many of these claims will be placed on deferred, inactive or similar dockets or be dismissed. Honeywell has experienced average resolution values excluding legal costs as follows:

	Years Ended December 31,		
	2004	2003	2002
	(In whole dollars)		
Malignant claims .....	\$90,000	\$95,000	\$166,000
Nonmalignant claims.....	\$ 1,600	\$ 3,500	\$ 1,300

It is not possible to predict whether resolution values for Bendix related asbestos claims will increase, decrease or stabilize in the future.

We have accrued for the estimated cost of pending Bendix related asbestos claims. The estimate is based on the number of pending claims at December 31, 2004, disease classifications, expected settlement values and historic dismissal rates. Honeywell retained the expert services of HR&A (see discussion of HR&A under Refractory products above) to assist in developing the estimated expected settlement values and historic dismissal rates. We cannot reasonably estimate losses which could arise from future Bendix related asbestos claims because we cannot predict how many additional claims may be brought against us, the allegations in such claims or their probable outcomes and resulting settlement values in the tort system.

Honeywell presently has approximately \$1.9 billion of insurance coverage remaining with respect to pending Bendix related asbestos claims as well as claims which may be filed against us in the future. This coverage is provided by a large number of insurance policies written by dozens of insurance companies in both the domestic insurance market and the London excess market. Although Honeywell has approximately \$1.9 billion in insurance, there are gaps in our coverage due to insurance company insolvencies, a comprehensive policy buy-back settlement with Equitas in 2003 and certain uninsured periods. We analyzed the amount of insurance that we estimate is probable that we will recover in relation to payment of asbestos related claims and determined that approximately 50 percent of expenditures for such claims are recoverable by insurance. While the substantial majority of our insurance carriers are solvent, some of our individual carriers are insolvent, which has been considered in our analysis of probable recoveries. We made judgments concerning insurance coverage that we believe are reasonable and consistent with our historical dealings with our insurers, our knowledge of any pertinent solvency issues surrounding insurers and various judicial determinations relevant to our insurance programs. Based on our analysis, at December 31, 2004 we had amounts receivable from our insurers of approximately \$340 million representing probable reimbursements associated with our liability for pending claims as well as amounts due to us for previously settled and paid claims related to the estimated liabilities for pending claims.

In the fourth quarter of 2002, we recorded a charge of \$167 million which consisted of a \$127 million accrual for our Bendix related asbestos liabilities to be settled by the then contemplated sale of Bendix to Federal-Mogul, net of insurance recoveries, and a \$40 million accrual for other costs which we expected to be required in order to complete the transaction (completion costs). In 2003, we paid \$112 million to settle Bendix related asbestos claims, which were charged to this accrual. When the deal negotiations ended, the \$40 million accrual for the expected completion costs was reversed and

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

an additional asbestos accrual was recorded to reflect our current estimate of the asbestos exposure, net of expected insurance coverage.

Honeywell believes it has sufficient insurance coverage and reserves to cover all pending Bendix related asbestos claims. Although it is impossible to predict the outcome of pending claims or to reasonably estimate losses which could arise from future Bendix related asbestos claims, we do not believe that such claims would have a material adverse effect on our consolidated financial position in light of our insurance coverage and our prior experience in resolving such claims. If the rate and types of claims filed, the average indemnity cost of such claims and the period of time over which claim settlements are paid (collectively, the "Variable Claims Factors") do not substantially change, Honeywell would not expect future Bendix related asbestos claims to have a material adverse effect on our results of operations or operating cash flows in any fiscal year. No assurances can be given, however, that the Variable Claims Factors will not substantially change.

NARCO and Bendix asbestos related balances are included in the following balance sheet accounts:

	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
Other current assets .....	\$ 150	\$ 130
Insurance recoveries for asbestos related liabilities .....	<u>1,412</u>	<u>1,317</u>
	<u>\$1,562</u>	<u>\$1,447</u>
Accrued liabilities .....	\$ 744	\$ 730
Asbestos related liabilities .....	<u>2,006</u>	<u>2,279</u>
	<u>\$2,750</u>	<u>\$3,009</u>

During 2004, we paid \$518 million in indemnity and defense costs related to NARCO and Bendix claims. Additionally, we recognized charges totaling \$76 million primarily for Bendix related asbestos claims filed and defense costs incurred during 2004, net of probable insurance recoveries. The charges include an update of expected resolution values for pending Bendix claims and are net of an additional \$47 million of NARCO insurance deemed probable of recovery.

We are monitoring proposals for federal asbestos legislation pending in the United States Congress. Due to the uncertainty surrounding the proposed legislation, it is not possible at this point in time to determine what impact such legislation would have on the NARCO bankruptcy strategy or our asbestos liabilities and related insurance recoveries.

**Warranties and Guarantees**—We have issued or are a party to the following direct and indirect guarantees at December 31, 2004:

	<u>Maximum Potential Future Payments</u>
Operating lease residual values .....	\$ 47
Other third parties' financing .....	4
Unconsolidated affiliates' financing .....	7
Customer and vendor financing .....	<u>35</u>
	<u>\$ 93</u>

We do not expect that these guarantees will have a material adverse effect on our consolidated results of operations, financial position or liquidity.

In connection with the disposition of certain businesses and facilities we have indemnified the purchasers for the expected cost of remediation of environmental contamination, if any, existing on the

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

date of disposition. Such expected costs are accrued when environmental assessments are made or remedial efforts are probable and the costs can be reasonably estimated.

In the normal course of business we issue product warranties and product performance guarantees. We accrue for the estimated cost of product warranties and performance guarantees based on contract terms and historical experience at the time of sale. Adjustments to initial obligations for warranties and guarantees are made as changes in the obligations become reasonably estimable. The following table summarizes information concerning our recorded obligations for product warranties and product performance guarantees:

	<u>Years Ended December 31,</u>		
	<u>2004</u>	<u>2003</u>	<u>2002</u>
Beginning of year .....	\$ 275	\$ 217	\$ 217
Accruals for warranties/guarantees issued during the year .....	236	215	158
Adjustment of pre-existing warranties/guarantees .....	1	35	(18)
Settlement of warranty/guarantee claims .....	(213)	(192)	(140)
End of year .....	<u>\$ 299</u>	<u>\$ 275</u>	<u>\$ 217</u>

Product warranties and product performance guarantees are included in the following balance sheet accounts:

	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
Accrued liabilities .....	\$270	\$242
Other liabilities .....	29	33
	<u>\$299</u>	<u>\$275</u>

**Other Matters**—We are subject to a number of other lawsuits, investigations and disputes (some of which involve substantial amounts claimed) arising out of the conduct of our business, including matters relating to commercial transactions, government contracts, product liability, prior acquisitions and divestitures, and health and safety matters. We recognize a liability for any contingency that is probable of occurrence and reasonably estimable. We continually assess the likelihood of adverse judgments of outcomes in these matters, as well as potential ranges of probable losses, based on a careful analysis of each matter with the assistance of outside legal counsel and, if applicable, other experts. Given the uncertainty inherent in litigation, we do not believe it is possible to develop estimates of the range of reasonably possible loss in excess of current accruals for these matters. Considering our past experience and existing accruals, we do not expect the outcome of these matters, either individually or in the aggregate, to have a material adverse effect on our consolidated financial position. Because most contingencies are resolved over long periods of time, potential liabilities are subject to change due to new developments, changes in settlement strategy or the impact of evidentiary requirements, which could cause us to pay damage awards or settlements (or become subject to equitable remedies) that could have a material adverse effect on our results of operations or operating cash flows in the periods recognized or paid.

**Note 22—Pension and Other Postretirement Benefits**

We sponsor both funded and unfunded U.S. and non-U.S. defined benefit pension plans covering the majority of our employees and retirees. Pension benefits for substantially all U.S. employees are provided through non-contributory, qualified and non-qualified defined benefit pension plans. U.S. defined benefit pension plans comprise 86 percent of our projected benefit obligation. Non-U.S. employees, who are not U.S. citizens, are covered by various retirement benefit arrangements, some of which are considered to be defined benefit pension plans for accounting purposes. Non-U.S. defined benefit pension plans comprise 14 percent of our projected benefit obligation.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

We also sponsor postretirement benefit plans that provide health care benefits and life insurance coverage to eligible retirees. Our retiree medical plans mainly cover U.S. employees who retire with pension eligibility for hospital, professional and other medical services. All non-union hourly and salaried employees joining Honeywell after January 1, 2000 are not eligible to participate in our retiree medical and life insurance plans. Most of the U.S. retiree medical plans require deductibles and copayments, and virtually all are integrated with Medicare. Retiree contributions are generally required based on coverage type, plan and Medicare eligibility. Honeywell has limited its subsidy of its retiree medical plans to a fixed-dollar amount for substantially all future retirees and for almost half of its current retirees. This cap of retiree medical benefits under our plans limits our exposure to the impact of future health care cost increases. The retiree medical and life insurance plans are not funded. Claims and expenses are paid from our general assets.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

The following tables summarize the balance sheet impact, including the benefit obligations, assets and funded status associated with our significant pension and other postretirement benefit plans at December 31, 2004 and 2003. We use a December 31 measurement date for the majority of our pension and postretirement benefit plans.

	<b>Pension Benefits</b>		<b>Other Postretirement Benefits</b>	
	<b>2004</b>	<b>2003</b>	<b>2004</b>	<b>2003</b>
Change in benefit obligation:				
Benefit obligation at beginning of year.....	\$12,993	\$11,660	\$ 2,421	\$ 2,241
Service cost .....	222	201	17	17
Interest cost .....	755	757	138	145
Plan amendments .....	1	30	(19)	(92)
Actuarial losses .....	361	1,010	3	313
Acquisitions (divestitures) .....	(9)	15	—	—
Benefits paid .....	(905)	(883)	(207)	(203)
Settlements and curtailments .....	1	(2)	—	—
Other .....	168	205	—	—
Benefit obligation at end of year .....	<u>13,587</u>	<u>12,993</u>	<u>2,353</u>	<u>2,421</u>
Change in plan assets:				
Fair value of plan assets at beginning of year .....	12,265	10,178	—	—
Actual return on plan assets .....	1,461	2,072	—	—
Company contributions .....	111	725	—	—
Acquisitions (divestitures) .....	(9)	15	—	—
Benefits paid .....	(905)	(883)	—	—
Other .....	147	158	—	—
Fair value of plan assets at end of year .....	<u>13,070</u>	<u>12,265</u>	<u>—</u>	<u>—</u>
Funded status of plans .....	(517)	(728)	(2,353)	(2,421)
Unrecognized net obligation at transition .....	11	11	—	—
Unrecognized net loss .....	3,245	3,666	679	779
Unrecognized prior service cost (credit) .....	151	187	(196)	(215)
Net amount recognized .....	<u>\$ 2,890</u>	<u>\$ 3,136</u>	<u>\$(1,870)</u>	<u>\$(1,857)</u>
Amounts recognized in Consolidated Balance Sheet consist of:				
Prepaid pension benefit cost .....	\$ 2,985	\$ 3,173	\$ —	\$ —
Intangible asset(1) .....	88	101	—	—
Accrued liabilities .....	—	—	(197)	(197)
Postretirement benefit obligations other than pensions(2) .....	—	—	(1,673)	(1,660)
Accrued benefit liability(3) .....	(225)	(170)	—	—
Additional minimum liability(3) .....	(462)	(453)	—	—
Accumulated other nonowner changes .....	504	485	—	—
Net amount recognized .....	<u>\$ 2,890</u>	<u>\$ 3,136</u>	<u>\$(1,870)</u>	<u>\$(1,857)</u>

(1) Included in Other Assets—Non-Current on Consolidated Balance Sheet.

(2) Excludes Non-U.S. plans of \$40 and \$23 million in 2004 and 2003, respectively.

(3) Included in Other Liabilities—Non-Current on Consolidated Balance Sheet.

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
*(Dollars in millions, except per share amounts)*

The accumulated benefit obligation for our defined benefit pension plans was \$12,996 and \$12,391 million at December 31, 2004 and 2003, respectively.

Net periodic pension and other postretirement benefit costs (income) for our significant plans include the following components:

<b>Pension Benefits</b>			
<b>Years Ended December 31,</b>			
	<b>2004</b>	<b>2003</b>	<b>2002</b>
Service cost .....	\$ 222	\$ 201	\$ 201
Interest cost .....	755	757	753
Expected return on plan assets .....	(1,042)	(1,030)	(1,164)
Amortization of transition asset .....	—	(7)	(7)
Amortization of prior service cost .....	38	37	43
Recognition of actuarial losses .....	413	178	13
Net periodic benefit cost (income) .....	386	136	(161)
Settlements and curtailments .....	—	—	14
Net periodic benefit cost (income) after settlements and curtailments .....	<u>\$ 386</u>	<u>\$ 136</u>	<u>\$ (147)</u>
<b>Other Postretirement Benefits</b>			
<b>Years Ended December 31,</b>			
	<b>2004</b>	<b>2003</b>	<b>2002</b>
Service cost .....	\$ 17	\$ 17	\$ 21
Interest cost .....	138	145	141
Expected return on plan assets .....	—	—	—
Amortization of prior service (credit) .....	(37)	(30)	(22)
Recognition of actuarial losses .....	101	62	10
Net periodic benefit cost .....	219	194	150
Settlements and curtailments .....	—	—	(30)
Net periodic benefit cost after settlements and curtailments .....	<u>\$ 219</u>	<u>\$ 194</u>	<u>\$ 120</u>

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

Major actuarial assumptions used in determining the benefit obligations and net periodic benefit cost (income) for our U.S. benefit plans are presented in the following table. For non-U.S. benefit plans, no one of which was material, assumptions reflect economic assumptions applicable to each country.

	Pension Benefits			Other Postretirement Benefits		
	2004	2003	2002	2004	2003	2002
Actuarial assumptions used to determine benefit obligations as of December 31:						
Discount rate .....	5.875%	6.00%	6.75%	5.50%	6.00%	6.75%
Expected annual rate of compensation increase ....	4.00%	4.00%	4.00%	—	—	—
Actuarial assumptions used to determine net periodic benefit cost (income) for years ended December 31:						
Discount rate .....	6.00%	6.75%	7.25%	6.00%	6.75%	7.25%
Expected rate of return on plan assets .....	9.00%	9.00%	10.00%	—	—	—
Expected annual rate of compensation increase ....	4.00%	4.00%	4.00%	—	—	—

We considered the available yields on high-quality fixed-income investments with maturities corresponding to the expected payment dates of our benefit obligations to determine our discount rates at each measurement date.

**Pension Benefits**

Pension plans with accumulated benefit obligations exceeding the fair value of plan assets were as follows:

	December 31,	
	2004	2003
Projected benefit obligation .....	\$1,801	\$1,639
Accumulated benefit obligation .....	1,720	1,566
Fair value of plan assets .....	950	906

Statement of Financial Accounting Standards No. 87, "Employers Accounting for Pensions" (SFAS No. 87) requires recognition of an additional minimum pension liability if the fair value of plan assets is less than the accumulated benefit obligation at the end of the plan year. In 2004, we recorded a non-cash adjustment to equity through accumulated other nonowner changes of \$15 million (\$19 million on a pretax basis) which increased the additional minimum pension liability. In 2003, we recorded a non-cash adjustment to equity through accumulated other nonowner changes of \$369 million (\$604 million on a pretax basis) to reduce the additional minimum pension liability by \$304 million and reinstate a portion of the pension assets (\$300 million) written off in the prior year's minimum pension liability adjustment. This 2003 adjustment resulted from an increase in our pension assets in 2003 due to the improvement in equity markets and our contribution of \$670 million to our U.S. plans. In 2002, due to the poor performance of the equity markets which adversely affected our pension assets and a decline in the discount rate, we recorded a non-cash adjustment to equity through accumulated other nonowner changes of \$606 million (\$956 million on a pretax basis) which increased the additional minimum pension liability.

Under SFAS No. 87, for our U.S. pension plans, we use the market-related value of plan assets reflecting changes in the fair value of plan assets over a three-year period. Further, unrecognized

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

losses in excess of 10 percent of the greater of the market-related value of plan assets or the plans projected benefit obligation are recognized over a six-year period.

Our U.S. pension plans assets were \$11.5 and \$10.9 billion and our non-U.S. pension plans assets were \$1.6 and \$1.4 billion at December 31, 2004 and 2003, respectively. Our asset allocation and target allocation for our pension plans assets are as follows:

<u>Asset Category</u>	<u>Percentage of Plans Assets at December 31,</u>		<u>Long-term Target Allocation</u>
	<u>2004</u>	<u>2003</u>	
Equity securities.....	61%	58%	40-65%
Debt securities, including cash.....	33	35	30-45
Real estate .....	4	5	2-8
Other .....	<u>2</u>	<u>2</u>	2-6
	<u>100%</u>	<u>100%</u>	

Equity securities include Honeywell common stock of \$214 and \$544 million at December 31, 2004 and 2003, respectively. An independent fiduciary holds and makes all investment decisions with respect to the Honeywell common stock.

Our asset investment strategy focuses on maintaining a diversified portfolio, using various asset classes, in order to achieve our long-term investment objectives on a risk adjusted basis. Our actual invested positions in various securities change over time based on short and longer-term investment opportunities. To achieve our objectives, our U.S. investment policy requires that our U.S. Master Retirement Trust be invested as follows: (a) no less than 30 percent be invested in fixed income securities; (b) no more than 10 percent in high-yield securities; (c) no more than 10 percent in private real estate investments; and (d) no more than 6 percent in other investment alternatives involving limited partnerships of various types. There is no stated limit on investments in publicly-held U.S. and international equity securities. Our non-U.S. investment policies are different for each country, but the long-term investment objectives remain the same.

Our expected rate of return on plan assets of 9 percent is a long-term rate based on historic plan asset returns over varying long-term periods combined with current market conditions and broad asset mix considerations. The expected rate of return is a long-term assumption and generally does not change annually.

Our general funding policy for qualified pension plans is to contribute amounts at least sufficient to satisfy regulatory funding standards. In 2004, 2003 and 2002, we made voluntary contributions of \$40, \$670 and \$830 million, respectively, to our U.S. defined benefit pension plans to improve the funded status of our plans. The contributions in 2002 included \$700 million of Honeywell common stock. Assuming that actual plan asset returns are consistent with our expected rate of 9 percent in 2005 and beyond, and that interest rates remain constant, we would not be required to make any contributions to our U.S. pension plans for the foreseeable future. We expect to contribute approximately \$28 million in cash to our non-U.S. defined benefit pension plans in 2005. These contributions do not reflect benefits to be paid directly from Company assets.



**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

Benefit payments, including amounts to be paid from Company assets, and reflecting expected future service, as appropriate, are expected to be paid as follows:

2005 .....	\$ 912
2006 .....	918
2007 .....	924
2008 .....	933
2009 .....	942
2010-2014 .....	4,938

**Other Postretirement Benefits**

	<u>December 31,</u>	
	<u>2004</u>	<u>2003</u>
Assumed health care cost trend rate:		
Health care cost trend rate assumed for next year .....	10.0%	11.0%
Rate that the cost trend rate gradually declines to .....	5.0%	5.0%
Year that the rate reaches the rate it is assumed to remain at .....	2010	2010

The assumed health care cost trend rate has a significant effect on the amounts reported. A one-percentage-point change in the assumed health care cost trend rate would have the following effects:

	<u>1 percentage point</u>	
	<u>Increase</u>	<u>Decrease</u>
Effect on total of service and interest cost components .....	\$ 8	\$ (7)
Effect on postretirement benefit obligation .....	\$123	\$(111)

Benefit payments, including amounts to be paid from Company assets, and reflecting expected future service, as appropriate, are expected to be paid as follows:

2005 .....	\$208
2006 .....	198
2007 .....	199
2008 .....	201
2009 .....	197
2010-2014 .....	902

**Employee Savings Plans**—We sponsor employee savings plans under which we match, in the form of our common stock, certain eligible U.S. employee savings plan contributions. Shares issued under the stock match plans were 4.3, 6.5 and 5.6 million at a cost of \$151, \$173 and \$173 million in 2004, 2003 and 2002, respectively.

**Note 23—Segment Financial Data**

We globally manage our business operations through strategic business units (SBUs) serving customers worldwide with aerospace products and services, control, sensing and security technologies for buildings, homes and industry, automotive products and chemicals. Segment information is consistent with how management reviews the businesses, makes investing and resource allocation decisions and assesses operating performance. Based on similar economic and operational characteristics, our SBUs are aggregated and managed in four reportable segments as follows:

- Aerospace includes Engines, Systems and Services (auxiliary power units; propulsion engines; environmental control systems; engine controls; repair and overhaul services; hardware;

## HONEYWELL INTERNATIONAL INC.

### NOTES TO FINANCIAL STATEMENTS—(Continued)

(Dollars in millions, except per share amounts)

logistics and electric power systems); Aerospace Electronic Systems (flight safety, communications, navigation, radar and surveillance systems; aircraft and airport lighting; management and technical services and advanced systems and instruments); and Aircraft Landing Systems (aircraft wheels and brakes).

- Automation and Control Solutions includes Automation and Control Products (controls for heating, cooling, indoor air quality, ventilation, humidification and home automation; advanced software applications for home/building control and optimization; sensors, switches, control systems and instruments for measuring pressure, air flow, temperature, electrical current; and security and fire detection, access control, video surveillance and remote patient monitoring systems); Building Solutions (installs, maintains and upgrades systems that keep buildings safe, comfortable and productive); and Process Solutions (provides a full range of automation and control solutions for industrial plants, offering advanced software and automation systems that integrate, control and monitor complex processes in many types of industrial settings).
- Specialty Materials includes fluorocarbons, specialty films, advanced fibers, customized research chemicals and intermediates, and electronic materials and chemicals.
- Transportation Systems includes Honeywell Turbo Technologies (turbochargers and charge-air and thermal systems); the Consumer Products Group (car care products including anti-freeze, filters, spark plugs, and cleaners, waxes and additives); and Friction Materials (friction materials and related brake system components).

The accounting policies of the segments are the same as those described in Note 1. Honeywell's senior management evaluates segment performance based on segment profit. Segment profit is business unit income (loss) before taxes excluding general corporate unallocated expenses, gains (losses) on sales of non-strategic businesses, equity income (loss), other income (expense), interest and other financial charges, pension and other postretirement benefits (expense) income and repositioning and other charges and accounting changes. In 2003, Honeywell changed its definition of segment profit to exclude pension and other postretirement benefits (expense) income. Pension and other postretirement benefits (expense) income is significantly impacted by external factors such as investment returns, interest rates and other actuarial assumptions that Honeywell does not consider indicative of the underlying business segment operating performance under the control of business unit management. All periods presented in this annual report have been restated to reflect this change. Intersegment sales approximate market and are not significant. Reportable segment data follows:

# HONEYWELL INTERNATIONAL INC.

## NOTES TO FINANCIAL STATEMENTS—(Continued)

(Dollars in millions, except per share amounts)

	Years Ended December 31,		
	2004	2003	2002
Net sales			
Aerospace .....	\$ 9,748	\$ 8,813	\$ 8,855
Automation and Control Solutions .....	8,031	7,464	6,978
Specialty Materials .....	3,497	3,169	3,205
Transportation Systems .....	4,323	3,650	3,184
Corporate .....	2	7	52
	<u>\$25,601</u>	<u>\$23,103</u>	<u>\$22,274</u>
Depreciation and amortization			
Aerospace .....	\$ 235	\$ 256	\$ 260
Automation and Control Solutions .....	159	168	190
Specialty Materials .....	141	133	180
Transportation Systems .....	80	80	66
Corporate .....	35	24	34
	<u>\$ 650</u>	<u>\$ 661</u>	<u>\$ 730</u>
Segment profit			
Aerospace .....	\$ 1,479	\$ 1,221	\$ 1,308
Automation and Control Solutions .....	894	843	860
Specialty Materials .....	184	136	90
Transportation Systems .....	575	461	393
Corporate .....	(158)	(142)	(154)
	<u>\$ 2,974</u>	<u>\$ 2,519</u>	<u>\$ 2,497</u>
Capital expenditures			
Aerospace .....	\$ 168	\$ 218	\$ 182
Automation and Control Solutions .....	106	100	106
Specialty Materials .....	156	144	233
Transportation Systems .....	137	108	108
Corporate .....	62	85	42
	<u>\$ 629</u>	<u>\$ 655</u>	<u>\$ 671</u>
	December 31,		
	2004	2003	2002
Total assets			
Aerospace .....	\$ 8,441	\$ 7,792	\$ 7,006
Automation and Control Solutions .....	8,128	7,590	7,017
Specialty Materials .....	3,239	3,239	3,517
Transportation Systems .....	3,131	2,612	2,206
Corporate .....	8,123	8,081	7,819
	<u>\$31,062</u>	<u>\$29,314</u>	<u>\$27,565</u>

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

A reconciliation of segment profit to consolidated income (loss) before taxes and cumulative effect of accounting change is as follows:

	Years Ended December 31,		
	2004	2003	2002
Segment profit .....	\$2,974	\$ 2,519	\$2,497
Gain (loss) on sale of non-strategic businesses .....	255	38	(124)
Asbestos related litigation charges, net of insurance .....	(76)	—	(1,548)
Business impairment charges .....	(42)	—	(877)
Repositioning and other charges(1) .....	(646)	(276)	(606)
Pension and other postretirement benefits (expense) income(1) .....	(628)	(325)	11
Equity in income (loss) of affiliated companies .....	82	38	42
Other income (expense) .....	92	(19)	4
Interest and other financial charges .....	(331)	(335)	(344)
Income (loss) before taxes and cumulative effect of accounting change .....	<u>\$1,680</u>	<u>\$ 1,640</u>	<u>\$ (945)</u>

(1) Amounts included in cost of products and services sold and selling, general and administrative expenses.

**Note 24—Geographic Areas—Financial Data**

	Net Sales(1)			Long-lived Assets(2)		
	Years Ended December 31,			Years Ended December 31,		
	2004	2003	2002	2004	2003	2002
United States .....	\$16,633	\$15,178	\$15,522	\$ 9,083	\$ 8,963	\$ 8,665
Europe .....	6,097	5,433	4,483	2,044	1,833	1,756
Other International .....	2,871	2,492	2,269	458	386	406
	<u>\$25,601</u>	<u>\$23,103</u>	<u>\$22,274</u>	<u>\$11,585</u>	<u>\$11,182</u>	<u>\$10,827</u>

(1) Sales between geographic areas approximate market and are not significant. Net sales are classified according to their country of origin. Included in United States net sales are export sales of \$2,399, \$2,246 and \$2,249 million in 2004, 2003 and 2002, respectively.

(2) Long-lived assets are comprised of property, plant and equipment, goodwill and other intangible assets.

**Note 25—Supplemental Cash Flow Information**

	Years Ended December 31,		
	2004	2003	2002
Interest paid, net of amounts capitalized .....	\$330	\$367	\$352
Income taxes paid, net of refunds .....	178	31	(14)
Non-cash investing and financing activities:			
Common stock contributed to U.S. pension plans .....	—	—	700
Common stock contributed to U.S. savings plans .....	151	173	173
Debt assumed in the purchase of leased assets .....	—	267	—
Investment securities received in connection with sale of BCVS business .....	—	—	250

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

**Note 26—Unaudited Quarterly Financial Information**

	2004					2003				
	Mar. 31(1)(2)	June 30(3)(4)	Sept. 30(5)(6)(7)	Dec. 31(8)(9)	Year	Mar. 31(10)	June 30(11)(12)(13)	Sept. 30(14)(15)	Dec. 31(16)(17)	Year
Net sales .....	\$6,178	\$6,388	\$6,395	\$6,640	\$25,601	\$5,399	\$5,749	\$5,768	\$ 6,187	\$23,103
Gross profit .....	1,259	1,209	1,332	1,216	5,016	1,159	1,235	1,259	1,215	4,868
Income before cumulative effect of accounting change ....	295	361	372	253	1,281	274	319	344	407	1,344
Net income .....	295	361	372	253	1,281	254	319	344	407	1,324
Earnings per share— basic:										
Income before cumulative effect of accounting change ..	.34	.42	.43	.30	1.49	.32	.37	.40	.47	1.56
Net income .....	.34	.42	.43	.30	1.49	.30	.37	.40	.47	1.54
Earnings per share— assuming dilution:										
Income before cumulative effect of accounting change ..	.34	.42	.43	.30	1.49	.32	.37	.40	.47	1.56
Net income .....	.34	.42	.43	.30	1.49	.30	.37	.40	.47	1.54
Dividends paid .....	.1875	.1875	.1875	.1875	.75	.1875	.1875	.1875	.1875	.75
Market price(18)										
High .....	37.43	37.51	38.11	36.76	38.11	25.65	29.02	30.06	33.43	33.43
Low .....	31.75	32.60	34.58	32.23	31.75	20.73	21.61	26.22	26.56	20.73

- (1) Includes a \$56 million provision for environmental, litigation and net repositioning charges. Total after-tax charge was \$35 million, or \$0.04 per share. The total pretax charge included in gross profit was \$41 million.
- (2) Includes an after-tax gain of \$14 million, or \$0.02 per share, on the sale of our VCSEL Optical Products business.
- (3) Includes a \$242 million provision for environmental, litigation, business impairment, net repositioning and other charges. Total after-tax charge was \$158 million, or \$0.18 per share. The total pretax charge included in gross profit was \$183 million.
- (4) Includes an after-tax gain of \$130 million, or \$0.15 per share, on the sale of our Security Monitoring business.
- (5) Includes a \$101 million provision for environmental, litigation and net repositioning charges. Total after-tax charge was \$56 million, or \$0.06 per share. The total pretax charge included in gross profit was \$76 million.
- (6) Includes an after-tax gain of \$3 million, with no effect on earnings per share, for adjustments related to businesses sold in prior periods.
- (7) Includes an after-tax gain of \$17 million, or \$0.02 per share, related to the settlement of a patent infringement lawsuit.
- (8) Includes a \$376 million provision for environmental, litigation, business impairment, net repositioning and other charges. Total after-tax charge was \$227 million, or \$0.26 per share. The total pretax charge included in gross profit was \$321 million.
- (9) Includes an after-tax loss of \$3 million, with no effect on earnings per share, on the sale of our Performance Fibers business and for adjustments related to businesses sold in prior periods.
- (10) Includes the January 1, 2003 adoption of SFAS No. 143. This adoption resulted in an after-tax cumulative effect expense adjustment of \$20 million, or \$0.02 per share.

(footnotes continued on next page)

**HONEYWELL INTERNATIONAL INC.**  
**NOTES TO FINANCIAL STATEMENTS—(Continued)**  
(Dollars in millions, except per share amounts)

*(footnotes continued from previous page)*

- (11) Includes a \$34 million provision for environmental, net repositioning and other charges. Total after-tax charge was \$21 million, or \$0.03 per share. The total pretax charge included in gross profit was \$29 million.
- (12) Includes an after-tax gain of \$9 million, or \$0.01 per share, on the sale of our Engineering Plastics business.
- (13) Includes an after-tax gain of \$15 million, or \$0.02 per share, related to the settlement of a patent infringement lawsuit.
- (14) Includes a \$30 million provision for environmental, net repositioning and other charges. Total after-tax charge was \$1 million, with no effect on earnings per share. The total pretax charge included in gross profit was \$26 million.
- (15) Includes an after-tax loss of \$3 million, with no effect on earnings per share, on the sale of several non-strategic businesses.
- (16) Includes a \$214 million provision for environmental, net repositioning and other charges. Total after-tax charge was \$19 million, or \$0.02 per share. The total pretax charge included in gross profit was \$217 million.
- (17) Includes an after-tax loss of \$2 million, with no effect on earnings per share, for adjustments related to businesses sold in prior periods.
- (18) From composite tape—stock is primarily traded on the New York Stock Exchange.

## REPORT OF INDEPENDENT REGISTERED PUBLIC ACCOUNTING FIRM

TO THE BOARD OF DIRECTORS AND SHAREOWNERS OF  
HONEYWELL INTERNATIONAL INC.:

We have completed an integrated audit of Honeywell International Inc.'s 2004 consolidated financial statements and of its internal control over financial reporting as of December 31, 2004 and audits of its 2003 and 2002 consolidated financial statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Our opinions, based on our audits, are presented below.

### Consolidated financial statements and financial statement schedule

In our opinion, the consolidated financial statements listed in the index appearing under Item 15(a)(1) present fairly, in all material respects, the financial position of Honeywell International Inc. and its subsidiaries at December 31, 2004 and 2003, and the results of their operations and their cash flows for each of the three years in the period ended December 31, 2004 in conformity with accounting principles generally accepted in the United States of America. In addition, in our opinion, the financial statement schedule listed in the index appearing under Item 15(a)(2) presents fairly, in all material respects, the information set forth therein when read in conjunction with the related consolidated financial statements. These financial statements and financial statement schedule are the responsibility of the Company's management. Our responsibility is to express an opinion on these financial statements and financial statement schedule based on our audits. We conducted our audits of these statements in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement. An audit of financial statements includes examining, on a test basis, evidence supporting the amounts and disclosures in the financial statements, assessing the accounting principles used and significant estimates made by management, and evaluating the overall financial statement presentation. We believe that our audits provide a reasonable basis for our opinion.

As discussed in Note 1 to the consolidated financial statements, on January 1, 2003, the Company adopted the provisions of Statement of Financial Accounting Standards No. 143, "Accounting for Asset Retirement Obligations."

### Internal control over financial reporting

Also, in our opinion, management's assessment, included in Management's Report on Internal Control Over Financial Reporting appearing under Item 9A, that the Company maintained effective internal control over financial reporting as of December 31, 2004 based on criteria established in *Internal Control—Integrated Framework* issued by the Committee of Sponsoring Organizations of the Treadway Commission (COSO), is fairly stated, in all material respects, based on those criteria. Furthermore, in our opinion, the Company maintained, in all material respects, effective internal control over financial reporting as of December 31, 2004, based on criteria established in *Internal Control—Integrated Framework* issued by the COSO. The Company's management is responsible for maintaining effective internal control over financial reporting and for its assessment of the effectiveness of internal control over financial reporting. Our responsibility is to express opinions on management's assessment and on the effectiveness of the Company's internal control over financial reporting based on our audit. We conducted our audit of internal control over financial reporting in accordance with the standards of the Public Company Accounting Oversight Board (United States). Those standards require that we plan and perform the audit to obtain reasonable assurance about whether effective internal control over financial reporting was maintained in all material respects. An audit of internal control over financial reporting includes obtaining an understanding of internal control over financial reporting, evaluating management's assessment, testing and evaluating the design and operating effectiveness of internal control, and performing such other procedures as we consider necessary in the circumstances. We believe that our audit provides a reasonable basis for our opinions.

A company's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. A company's internal control over financial reporting includes those policies and procedures that (i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of the assets of the company; (ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of management and directors of the company; and (iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use, or disposition of the company's assets that could have a material effect on the financial statements.

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

/s/ PricewaterhouseCoopers LLP

PricewaterhouseCoopers LLP  
Florham Park, New Jersey  
February 25, 2005



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

Not Applicable.

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

Honeywell management, including the Chief Executive Officer and Chief Financial Officer, conducted an evaluation of the effectiveness of our disclosure controls and procedures as of the end of the period covered by this Annual Report on Form 10-K. Based upon that evaluation, the Chief Executive Officer and the Chief Financial Officer concluded that such disclosure controls and procedures were effective as of the end of the period covered by this Annual Report on Form 10-K in alerting them on a timely basis to material information relating to Honeywell required to be included in Honeywell's periodic filings under the Exchange Act. There have been no changes that have materially affected, or are reasonably likely to materially affect, Honeywell's internal control over financial reporting that have occurred during the period covered by this Annual Report on Form 10-K.

### **Management's Report on Internal Control Over Financial Reporting**

Honeywell management is responsible for establishing and maintaining adequate internal control over financial reporting as defined in Rules 13a-15(f) and 15d-15(f) under the Securities Exchange Act of 1934. Honeywell's internal control over financial reporting is a process designed to provide reasonable assurance regarding the reliability of financial reporting and the preparation of financial statements for external purposes in accordance with generally accepted accounting principles. Honeywell's internal control over financial reporting includes those policies and procedures that:

(i) pertain to the maintenance of records that, in reasonable detail, accurately and fairly reflect the transactions and dispositions of Honeywell's assets;

(ii) provide reasonable assurance that transactions are recorded as necessary to permit preparation of financial statements in accordance with generally accepted accounting principles, and that receipts and expenditures of the company are being made only in accordance with authorizations of Honeywell's management and directors; and

(iii) provide reasonable assurance regarding prevention or timely detection of unauthorized acquisition, use or disposition of Honeywell's assets that could have a material effect on the financial statements.

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

Management assessed the effectiveness of Honeywell's internal control over financial reporting as of December 31, 2004. In making this assessment, management used the criteria set forth by the Committee of Sponsoring Organizations of the Treadway Commission (COSO) in *Internal Control-Integrated Framework*.

Based on this assessment, management determined that Honeywell maintained effective internal control over financial reporting as of December 31, 2004.

Management's assessment of the effectiveness of Honeywell's internal control over financial reporting as of December 31, 2004 has been audited by PricewaterhouseCoopers LLP, an independent registered public accounting firm, as stated in their report which is included in "Item 8. Financial Statements and Supplementary Data."

**Item 9B. Other Information**

Not Applicable.

**Part III.****Item 10. Directors and Executive Officers of the Registrant**

Information relating to the Directors of Honeywell, as well as information relating to compliance with Section 16(a) of the Securities Exchange Act of 1934, will be contained in our definitive Proxy Statement involving the election of the Directors which will be filed with the SEC pursuant to Regulation 14A not later than 120 days after December 31, 2004, and such information is incorporated herein by reference. Certain other information relating to the Executive Officers of Honeywell appears in Part I of this Annual Report on Form 10-K under the heading "Executive Officers of the Registrant".

The members of the Audit Committee of our Board of Directors are: Russell E. Palmer (Chair), Marshall N. Carter, James J. Howard, Eric K. Shinseki, John R. Stafford, and Michael W. Wright. The Board has determined that Mr. Palmer satisfies the "audit committee financial expert" criteria established by the SEC and the "accounting or related financial management expertise" criteria established by the NYSE. All members of the Audit Committee are "independent" as that term is defined in applicable SEC Rules and NYSE listing standards.

Honeywell's Code of Business Conduct is available, free of charge, on our website under the heading "Investor Relations" (see "Corporate Governance"), or by writing to Honeywell, 101 Columbia Road, Morris Township, New Jersey 07962, c/o Vice President and Corporate Secretary. Honeywell's Code of Business Conduct applies to all Honeywell directors, officers (including the Chief Executive Officer, Chief Financial Officer and Controller) and employees. Amendments to or waivers of the Code of Business Conduct granted to any of Honeywell's directors or executive officers will be published on our website within five business days of such amendment or waiver.

**Item 11. Executive Compensation**

Information relating to executive compensation is contained in the Proxy Statement referred to above in "Item 10. Directors and Executive Officers of the Registrant," and such information is incorporated herein by reference.

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

Information relating to security ownership of certain beneficial owners and management is contained in the Proxy Statement referred to above in "Item 10. Directors and Executive Officers of the Registrant," and such information is incorporated herein by reference.

**Equity Compensation Plans**

Information about our equity compensation plans is as follows:

<u>Plan Category</u>	<u>Number of Shares to be Issued Upon Exercise of Outstanding Options, Warrants and Rights</u> (a)	<u>Weighted- Average Exercise Price of Outstanding Options, Warrants and Rights</u> (b)	<u>Number of Securities Remaining Available for Future Issuance Under Equity Compensation Plans (Excluding Securities Reflected in Column(a))</u> (c)
Equity compensation plans approved by security holders .....	56,835,712(1)	\$34.84(2)	20,282,109(3)
Equity compensation plans not approved by security holders .....	899,793(4)	N/A(5)	N/A(6)
Total .....	57,735,505	\$34.84	20,282,109

(1) Equity compensation plans approved by shareowners that are included in column (a) of the table are the 2003 Stock Incentive Plan of Honeywell International Inc. and its Affiliates (the 2003 Stock

(footnotes continued on next page)

*(footnotes continued from previous page)*

Incentive Plan) (9,666,400 common shares to be issued for options; 2,241,706 restricted units subject to attainment of certain performance goals or continued employment; and 423,582 deferred restricted units of previously earned and vested awards under prior plans approved by shareowners where delivery of shares has been deferred); the 1993 Stock Plan for Employees of Honeywell International Inc. and its Affiliates (42,630,949 common shares to be issued for options; 169,225 shares to be issued for SARs; and 1,449,850 restricted units subject to attainment of certain performance goals or continued employment); and the Stock Plan for Non-Employee Directors of Honeywell International Inc. and predecessor plans (206,000 common shares to be issued for options and 48,000 shares of restricted stock). 822,060 growth plan units were issued in the first quarter of 2005 pursuant to a long-term compensation program established under the 2003 Stock Incentive Plan. The ultimate value of any growth plan award may be paid in cash or shares of Honeywell common stock and, thus, growth plan units are not included in the table above. The ultimate value of growth plan units depends upon the achievement of pre-established performance goals during a two-year performance cycle relating to growth in earnings per share, revenue and return on investment. The growth plan units issued in the first quarter of 2005 relate to the performance cycle commencing January 1, 2005 and ending December 31, 2006. Awards made with respect to the prior two-year performance cycle (January 1, 2003–December 31, 2004) were paid in cash.

- (2) Column (b) does not include any exercise price for restricted units or growth plan units granted to employees or non-employee directors under equity compensation plans approved by shareowners. Restricted units do not have an exercise price because their value is dependent upon attainment of certain performance goals or continued employment or service and they are settled for shares of Honeywell common stock on a one-for-one basis. Growth plan units are denominated in cash units and the ultimate value of the award is dependent upon attainment of certain performance goals.
- (3) The number of shares that may be issued under the 2003 Stock Incentive Plan as of December 31, 2004 is 20,173,109 which includes the following additional shares under the 2003 Stock Incentive Plan (or any Prior Plan as defined in the 2003 Stock Incentive Plan) that may again be available for issuance: shares that are settled for cash, expire, are cancelled, are tendered in satisfaction of an option exercise price or tax withholding obligations, are reacquired with cash tendered in satisfaction of an option exercise price or with monies attributable to any tax deduction enjoyed by Honeywell to the exercise of an option, and are under any outstanding awards assumed under any equity compensation plan of an entity acquired by Honeywell. The remaining 109,000 shares included in column (c) are shares remaining for future grants under the Stock Plan for Non-Employee Directors of Honeywell International Inc.
- (4) Equity compensation plans not approved by shareowners that are included in the table are the Supplemental Non-Qualified Savings Plans for Highly Compensated Employees of Honeywell International Inc. and its Subsidiaries, the AlliedSignal Incentive Compensation Plan for Executive Employees of AlliedSignal Inc. and its Subsidiaries, and the Deferred Compensation Plan for Non-Employee Directors of Honeywell International Inc.

The Supplemental Non-Qualified Savings Plans for Highly Compensated Employees of Honeywell International Inc. and its Subsidiaries are unfunded, nonqualified plans that provide benefits equal to the employee deferrals and company matching allocations that would have been provided under Honeywell's U.S. tax-qualified savings plan if the Internal Revenue Code limitations on compensation and contributions did not apply. The company matching contribution is credited to participants' accounts in the form of notional shares of Honeywell common stock. Additional notional shares are credited to participants' accounts equal to the value of any cash dividends payable on actual shares of Honeywell common stock. The notional shares are distributed in the form of actual shares of Honeywell common stock when payments are made to participants under the plans.

*(footnotes continued on next page)*

*(footnotes continued from previous page)*

The AlliedSignal Incentive Compensation Plan for Executive Employees of AlliedSignal Inc. and its Subsidiaries was a cash incentive compensation plan maintained by AlliedSignal Inc. This plan has expired. Employees were permitted to defer receipt of a cash bonus payable under the plan and invest the deferred bonus in notional shares of Honeywell common stock. The notional shares are distributed in the form of actual shares of Honeywell common stock when payments are made to participants under the plan. No further deferrals can be made under this plan. The number of Honeywell securities that remain to be issued under this expired plan is 55,658.

The Deferred Compensation Plan for Non-Employee Directors of Honeywell International Inc. provides for mandatory and elective deferral of certain payments to non-employee directors. Mandatory deferrals are invested in notional shares of Honeywell common stock. Directors may also invest any elective deferrals in notional shares of Honeywell common stock. Additional notional shares are credited to participant accounts equal to the value of any cash dividends payable on actual shares of Honeywell common stock. Notional shares of Honeywell common stock are converted to an equivalent amount of cash at the time the distributions are made from the plan to directors. However, one former director is entitled to receive periodic distributions of actual shares of Honeywell common stock that were notionally allocated to his account in years prior to 1992. The number of Honeywell securities that remain to be issued to this director is 2,993.

- (5) Column (b) does not include any exercise price for notional shares allocated to employees under Honeywell's equity compensation plans not approved by shareowners because all of these shares are notionally allocated as a matching contribution under the non-qualified savings plans or as a notional investment of deferred bonuses or fees under the cash incentive compensation and directors' plans as described in note 4 and are only settled for shares of Honeywell common stock on a one-for-one basis.
- (6) No securities are available for future issuance under the AlliedSignal Incentive Compensation Plan for Executive Employees of AlliedSignal Inc. and its Subsidiaries and the Deferred Compensation Plan for Non-Employee Directors of Honeywell International Inc. The cash incentive compensation plan has expired. All notional investments in shares of Honeywell common stock are converted to cash when payments are made under the directors' plan (other than with respect to 2,993 shares of Honeywell common stock included in column (a) that is payable to one former director). The amount of securities available for future issuance under the Supplemental Non-Qualified Savings Plan for Highly Compensated Employees of Honeywell International Inc. and its Subsidiaries is not determinable because the number of securities that may be issued under these plans depends upon the amount deferred to the plans by participants in future years.

The table does not contain information for the following plans and arrangements:

- Employee benefit plans of Honeywell intended to meet the requirements of Section 401(a) of the Internal Revenue Code and a small number of foreign employee benefit plans that are similar to such Section 401(a) plans.
- Equity compensation plans maintained by Honeywell Inc. immediately prior to the merger of Honeywell Inc. and AlliedSignal Inc. on December 1, 1999. The right to receive Honeywell International Inc. securities was substituted for the right to receive Honeywell Inc. securities under these plans. No new awards have been granted under these plans after the merger date. The number of shares to be issued under these plans upon exercise of outstanding options, warrants and rights is 5,852,355 and their weighted-average exercise price is \$42.53.

- The Honeywell Global Employee Stock Purchase Plan. This plan is maintained solely for eligible employees of participating non-U.S. affiliates. Eligible employees can contribute between 2 and 8 percent of base pay from January through October of each year to purchase shares of Honeywell common stock in November of that year at a 15 percent discount. Honeywell has historically purchased shares through non-dilutive, open market purchases and intends to continue this practice. Employees purchased 351,283 shares of common stock at \$21.233 per share in 2003 and 342,317 shares of common stock at \$28.331 per share in 2004.

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

Information relating to certain relationships and related transactions is contained in the Proxy Statement referred to above in "Item 10. Directors and Executive Officers of the Registrant," and such information is incorporated herein by reference.

### **Item 14. Principal Accounting Fees and Services**

Information relating to fees paid to and services performed by PricewaterhouseCoopers LLP in 2004 and 2003 and our Audit Committee's pre-approval policies and procedures with respect to non-audit services are contained in the Proxy Statement referred to above in "Item 10. Directors and Executive Officers of the Registrant," and such information is incorporated herein by reference.

## **Part IV.**

### **Item 15. Exhibits and Financial Statement Schedules**

(a)(1.) Consolidated Financial Statements:	<u>Page Number in Form 10-K</u>
Consolidated Statement of Operations for the years ended	
December 31, 2004, 2003 and 2002	43
Consolidated Balance Sheet at December 31, 2004 and 2003	44
Consolidated Statement of Cash Flows for the years ended	
December 31, 2004, 2003 and 2002	45
Consolidated Statement of Shareowners' Equity for the years	
ended December 31, 2004, 2003 and 2002	46
Notes to Financial Statements	47
Report of Independent Registered Public Accounting Firm	90
(a)(2.) Consolidated Financial Statement Schedules:	<u>Page Number in Form 10-K</u>
Schedule II—Valuation and Qualifying Accounts	101
All other financial statement schedules have been omitted because they are not applicable to us or the required information is shown in the consolidated financial statements or notes thereto.	
(a)(3.) Exhibits	
See the Exhibit Index on pages 98 through 100 of this Annual Report on Form 10-K.	

## SIGNATURES

Pursuant to the requirements of Section 13 or 15(d) of the Securities Exchange Act of 1934, the Registrant has duly caused this annual report to be signed on its behalf by the undersigned, thereunto duly authorized.

HONEYWELL INTERNATIONAL INC.

February 25, 2005

By: /s/ THOMAS A. SZLOSEK  
Thomas A. Szlosek  
Vice President and Controller

Pursuant to the requirements of the Securities Exchange Act of 1934, this annual report has been signed below by the following persons on behalf of the Registrant and in the capacities and on the date indicated:

<u>Name</u>	<u>Name</u>
<hr/> *	<hr/> *
David M. Cote Chairman of the Board, Chief Executive Officer and Director	Bruce Karatz Director
<hr/> *	<hr/> *
Hans W. Becherer Director	Russell E. Palmer Director
<hr/> *	<hr/> *
Gordon M. Bethune Director	Ivan G. Seidenberg Director
<hr/> *	<hr/> *
Marshall N. Carter Director	Bradley T. Sheares, Ph.D. Director
<hr/> *	<hr/> *
Jaime Chico Pardo Director	Eric K. Shinseki Director
<hr/> *	<hr/> *
Clive R. Hollick Director	John R. Stafford Director
<hr/> *	<hr/> *
James J. Howard Director	Michael W. Wright Director
<hr/> /s/ DAVID J. ANDERSON	<hr/> /s/ THOMAS A. SZLOSEK
David J. Anderson Senior Vice President and Chief Financial Officer (Principal Financial Officer)	Thomas A. Szlosek Vice President and Controller (Principal Accounting Officer)
<hr/> *By: /s/ DAVID J. ANDERSON	
(David J. Anderson Attorney-in-fact)	

February 25, 2005

## EXHIBIT INDEX

<u>Exhibit No.</u>	<u>Description</u>
2	Omitted (Inapplicable)
3(i)	Restated Certificate of Incorporation of Honeywell International Inc. (incorporated by reference to Exhibit 3(i) to Honeywell's Form 8-K filed December 3, 1999 and modified by Exhibit 3(i) to Honeywell's Form 10-Q for quarter ended June 30, 2004)
3(ii)	By-laws of Honeywell, as amended (incorporated by reference to Exhibit 3(ii) to Honeywell's Form 10-Q for the quarter ended September 30, 2001)
4	Honeywell International Inc. is a party to several long-term debt instruments under which, in each case, the total amount of securities authorized does not exceed 10% of the total assets of Honeywell and its subsidiaries on a consolidated basis. Pursuant to paragraph 4(iii)(A) of Item 601(b) of Regulation S-K, Honeywell agrees to furnish a copy of such instruments to the Securities and Exchange Commission upon request.
9	Omitted (Inapplicable)
10.1*	2003 Stock Incentive Plan of Honeywell International Inc., and its Affiliates (incorporated by reference to Honeywell's Proxy Statement, dated March 17, 2003, filed pursuant to Rule 14a-6 of the Securities and Exchange Act of 1934 and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.2*	Deferred Compensation Plan for Non-Employee Directors of Honeywell International Inc., as amended and restated (incorporated by reference to Exhibit 10.2 to Honeywell's Form 10-Q for quarter ended June 30, 2003 and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.3*	Stock Plan for Non-Employee Directors of AlliedSignal Inc., as amended (incorporated by reference to Exhibit 10.3 to Honeywell's Form 10-Q for the quarter ended June 30, 2003)
10.4*	1985 Stock Plan for Employees of AlliedSignal Inc. and its Subsidiaries, as amended (incorporated by reference to Exhibit 19.3 to Honeywell's Form 10-Q for the quarter ended September 30, 1991)
10.5*	AlliedSignal, Inc. Incentive Compensation Plan for Executive Employees, as amended (incorporated by reference to Exhibit B to Honeywell's Proxy Statement, dated March 10, 1994, filed pursuant to Rule 14a-b of the Securities and Exchange Act of 1934, and amended by Exhibit 10.5 to Honeywell's Form 10-Q for the quarter ended June 30, 1999)
10.6*	Supplemental Non-Qualified Savings Plan for Highly Compensated Employees of Honeywell International Inc. and its Subsidiaries as amended and restated (incorporated by reference to Exhibit 10.6 to Honeywell's Form 10-Q for the quarter ended June 30, 2004, and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.7*	Honeywell International Inc., Severance Plan for Senior Executives, as amended and restated (incorporated by reference to Exhibit 10.7 to Honeywell's Form 10-K for the year ended December 31, 2003, and amended by Exhibit 10.7 to Honeywell's Form 10-Q for the quarter ended June 30, 2004)

<u>Exhibit No.</u>	<u>Description</u>
10.8*	Salary and Incentive Award Deferral Plan for Selected Employees of Honeywell International Inc., and its Affiliates, as amended and restated (incorporated by reference to Exhibit 10.8 to Honeywell's Form 10-Q for the quarter ended June 30, 2004, and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.9*	1993 Stock Plan for Employees of Honeywell International Inc. and its Affiliates, as amended (incorporated by reference to Exhibit A to Honeywell's Proxy Statement, dated March 10, 1994, filed pursuant to Rule 14a-6 of the Securities and Exchange Act of 1934, and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.10	Five-Year Credit Agreement dated as of October 22, 2004 among Honeywell, the initial lenders named therein, Citicorp USA, Inc., as administrative agent, JPMorgan Chase Bank, as syndication agent, and Bank of America, N.A., Barclays Bank plc, Deutsche Bank AG, New York branch, and UBS Securities LLC as documentation agents, and CitiGroup Global Markets Inc. and J.P. Morgan Securities Inc., as joint lead arrangers and co-book managers (filed herewith)
10.11	Five-Year Credit Agreement dated as of November 26, 2003 among Honeywell, the initial lenders named therein, Citibank, N.A., as administrative agent, JPMorgan Chase Bank, as syndication agent, and Deutsche Bank AG, New York Branch, Bank of America, N.A., and Barclays Bank PLC, as documentation agents, and CitiGroup Global Markets Inc. and J.P. Morgan Securities Inc., as joint lead arrangers and co-book managers (incorporated by reference to Exhibit 10.11 to Honeywell's Form 10-K for the year ended December 31, 2003)
10.12*	Honeywell International Inc., Supplemental Pension Plan, as amended and restated (incorporated by reference to Exhibit 10.13 to Honeywell's Form 10-K for the year ended December 31, 2000, and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.13*	Employment Separation Agreement and Release between J. Kevin Gilligan and Honeywell International Inc. dated February 10, 2004 (incorporated by reference to Honeywell's Form 10-K for year ended December 31, 2003)
10.14*	Honeywell International Inc. Supplemental Executive Retirement Plan for Executives in Career Band 6 and Above (incorporated by reference to Exhibit 10.14 to Honeywell's Form 10-Q for quarter ended June 30, 2004, and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.15*	Honeywell Supplemental Defined Benefit Retirement Plan, as amended and restated (incorporated by reference to Exhibit 10.15 to Honeywell's Form 10-Q for the quarter ended June 30, 2004, and amended by Exhibit 10.1 to Honeywell's Form 8-K filed December 21, 2004)
10.16*	Letter between David J. Anderson and Honeywell International Inc. dated June 12, 2003 (incorporated by reference to Exhibit 10.26 to Honeywell's Form 10-Q for the quarter ended June 30, 2003)
10.17*	Employment Separation Agreement and Release between Richard F. Wallman and Honeywell International Inc. dated July 17, 2003 (incorporated by reference to Exhibit 10.2 to Honeywell's Form 10-Q for the quarter ended September 30, 2003)



<u>Exhibit No.</u>	<u>Description</u>
10.18*	Honeywell International Inc. Severance Plan for Corporate Staff Employees (Involuntary Termination Following a Change in Control), as amended and restated (incorporated by reference to Exhibit 10.19 to Honeywell's Form 10-K for the year ended December 31, 2002)
10.19*	Employment Agreement dated as of February 18, 2002 between Honeywell and David M. Cote (incorporated by reference to Exhibit 10.24 to Honeywell's Form 8-K filed March 4, 2002)
10.20*	2003 Stock Incentive Plan for Employees of Honeywell International Inc. and its Affiliates Award Agreement (incorporated by reference to Exhibit 10.1 to Honeywell's Form 8-K filed on February 7, 2005)
10.21*	2003 Stock Incentive Plan for Employees of Honeywell International Inc. and its Affiliates Restricted Unit Agreement (filed herewith)
10.22*	2003 Stock Incentive Plan for Employees of Honeywell International Inc. and its Affiliates Growth Plan Agreement (filed herewith)
11	Omitted (Inapplicable)
12	Statement re: Computation of Ratio of Earnings to Fixed Charges (filed herewith)
16	Omitted (Inapplicable)
18	Omitted (Inapplicable)
21	Subsidiaries of the Registrant (filed herewith)
22	Omitted (Inapplicable)
23	Consent of PricewaterhouseCoopers LLP (filed herewith)
24	Powers of Attorney (filed herewith)
31.1	Certification of Principal Executive Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
31.2	Certification of Principal Financial Officer Pursuant to Section 302 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.1	Certification of Principal Executive Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
32.2	Certification of Principal Financial Officer Pursuant to 18 U.S.C. Section 1350, as Adopted Pursuant to Section 906 of the Sarbanes-Oxley Act of 2002 (filed herewith)
99	Omitted (Inapplicable)

The Exhibits identified above with an asterisk(\*) are management contracts or compensatory plans or arrangements.

**HONEYWELL INTERNATIONAL INC**  
**SCHEDULE II—VALUATION AND QUALIFYING ACCOUNTS**  
Three Years Ended December 31, 2004  
(In millions)

**Allowance for Doubtful Accounts:**

Balance December 31, 2001 .....	\$ 128
Provision charged to income .....	109
Deductions from reserves(1) .....	<u>(90)</u>
Balance December 31, 2002 .....	147
Provision charged to income .....	72
Deductions from reserves(1) .....	<u>(69)</u>
Balance December 31, 2003 .....	150
Provision charged to income .....	100
Deductions from reserves(1) .....	<u>(113)</u>
Balance December 31, 2004 .....	<u><u>\$ 137</u></u>

(1) Represents uncollectible accounts written off, less recoveries, translation adjustments and reserves acquired.

**[THIS PAGE INTENTIONALLY LEFT BLANK]**

**[THIS PAGE INTENTIONALLY LEFT BLANK]**

**[THIS PAGE INTENTIONALLY LEFT BLANK]**

## SHAREOWNER INFORMATION

### ANNUAL MEETING

The Annual Meeting of Shareowners will be held at 10:30 a.m. on Monday, April 25, 2005, at Honeywell's corporate headquarters, 101 Columbia Road, Morristown, New Jersey.

### DIVIDENDS/SHAREOWNERS MATTERS

Honeywell's Dividend Reinvestment and Share Purchase Plan provides for automatic reinvestment of common stock dividends at market price. Participants also may add cash for the purchase of additional shares of common stock without payment of any brokerage commission or service charge. Honeywell offers Direct Registration, or paperless stock ownership. This means that instead of getting a paper stock certificate to represent your shares, your shares are held in your name and tracked electronically on our records.

The company has established a Direct Deposit of Dividends service enabling registered shareowners to have their quarterly dividend payments sent electronically to their bank accounts on the payment date.

For more information on these services or for answers to questions about dividend checks, stock transfers, or other shareowner matters, please contact Honeywell's transfer agent and registrar:

### AMERICAN STOCK TRANSFER & TRUST CO.

59 Maiden Lane  
New York, NY 10038  
1-800-647-7147  
<http://www.amstock.com>  
E-mail: [info@amstock.com](mailto:info@amstock.com)

### HONEYWELL INTERNATIONAL INC.

Corporate Publications  
P.O. Box 2245  
Morristown, NJ 07962-2245  
973-455-5402

### STOCK EXCHANGE LISTINGS

Honeywell's Common Stock is listed on the New York, Chicago, and Pacific stock exchanges under the symbol HON. It is also listed on the London stock exchange. Shareowners of record as of December 31, 2004, totaled 83,995.

### GENERAL INQUIRIES

For additional shareowner inquiries, please contact Honeywell's Shareowner Services at 1-800-647-7147. For information on Honeywell's products, please call the company's Customer Support Center at 1-800-601-3099 or 602-365-3099. The company's Internet address is <http://www.honeywell.com>.

# Honeywell

Honeywell International Inc.

101 Columbia Road

P.O. Box 2245

Morristown, NJ 07962-2245

USA

For more information about our company, visit our Internet site at: [www.honeywell.com](http://www.honeywell.com)

<b>NRC FORM 313</b> (4-2004) 10 CFR 30, 32, 33, 34, 35, 36, 39, and 40	<b>U.S. NUCLEAR REGULATORY COMMISSION</b>	<b>APPROVED BY OMB: NO. 3150-0120</b> Estimated burden per response to comply with this mandatory collection request: 7 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the Records and FOIA/Privacy Services Branch (T-5 F52), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by Internet e-mail to <a href="mailto:infocollects@nrc.gov">infocollects@nrc.gov</a> , and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.
<h2 style="margin: 0;">APPLICATION FOR MATERIAL LICENSE</h2>		

**INSTRUCTIONS: SEE THE APPROPRIATE LICENSE APPLICATION GUIDE FOR DETAILED INSTRUCTIONS FOR COMPLETING APPLICATION. SEND TWO COPIES OF THE ENTIRE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.**

<b>APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:</b>  DIVISION OF INDUSTRIAL AND MEDICAL NUCLEAR SAFETY OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS U.S. NUCLEAR REGULATORY COMMISSION WASHINGTON, DC 20555-0001  <b>ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:</b>  <b>IF YOU ARE LOCATED IN:</b>  ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, MISSISSIPPI, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA, SEND APPLICATIONS TO:  LICENSING ASSISTANCE TEAM DIVISION OF NUCLEAR MATERIALS SAFETY U.S. NUCLEAR REGULATORY COMMISSION, REGION I 475 ALLENDALE ROAD KING OF PRUSSIA, PA 19406-1415	<b>IF YOU ARE LOCATED IN:</b>  ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:  MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION III 2443 WARRENVILLE ROAD, SUITE 210 LISLE, IL 60532-4352  ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING, SEND APPLICATIONS TO:  NUCLEAR MATERIALS LICENSING BRANCH U.S. NUCLEAR REGULATORY COMMISSION, REGION IV 611 RYAN PLAZA DRIVE, SUITE 400 ARLINGTON, TX 76011-4005
---	---

**PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.**

<b>1. THIS IS AN APPLICATION FOR (Check appropriate item)</b>  <input type="checkbox"/> A. NEW LICENSE <input type="checkbox"/> B. AMENDMENT TO LICENSE NUMBER <input checked="" type="checkbox"/> C. RENEWAL OF LICENSE NUMBER <u>SUB-526</u>	<b>2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)</b>  Honeywell, Metropolis Works P. O. Box 430 Metropolis, IL 62960
<b>3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED</b>  Honeywell, Metropolis Works 2768 North US 45 Road Metropolis, IL 62960	<b>4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION</b>  Darren E. Mays  <b>TELEPHONE NUMBER</b>  618-524-6396

**SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.**

<b>5. RADIOACTIVE MATERIAL</b> a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.	<b>6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.</b>
<b>7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING EXPERIENCE.</b>	<b>8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.</b>
<b>9. FACILITIES AND EQUIPMENT.</b>	<b>10. RADIATION SAFETY PROGRAM.</b>
<b>11. WASTE MANAGEMENT.</b>	<b>12. LICENSE FEES (See 10 CFR 170 and Section 170.31)</b> FEE CATEGORY <u>2A (1)</u> AMOUNT ENCLOSED \$

**13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.**

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.

**WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1949 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.**

CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE David B. Edwards, Plant Manager	SIGNATURE 	DATE May 27, 2005
--	---------------	----------------------

**FOR NRC USE ONLY**

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
			\$		
APPROVED BY				DATE	



**Honeywell Metropolis Works**  
**Application for Renewal of USNRC**  
**Source Materials License**  
**SUB-526**

**Docket Number 40-3392**

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**Table of Contents**

<b>1.</b>	<b>Standard Conditions and Special Authorizations.....</b>	<b>1-1</b>
<b>1.1.</b>	<b>Name, Address, and Corporate Information.....</b>	<b>1-1</b>
1.1.1.	Licensee Name.....	1-1
1.1.2.	Licensee Address .....	1-1
1.1.3.	State in Which Licensee is Incorporated.....	1-1
1.1.4.	Corporate Office Location .....	1-1
<b>1.2.</b>	<b>Site Location.....</b>	<b>1-1</b>
1.2.1.	State, County, and Municipality .....	1-1
1.2.2.	Site Description.....	1-1
1.2.3.	Nearest Residence.....	1-1
1.2.4.	Nearest School .....	1-1
1.2.5.	Nearest Population Center .....	1-1
<b>1.3.</b>	<b>License Number and Period of License .....</b>	<b>1-2</b>
1.3.1.	License Number .....	1-2
1.3.2.	Period of License .....	1-2
<b>1.4.</b>	<b>Possession Limits.....</b>	<b>1-2</b>
<b>1.5.</b>	<b>Authorized Activities .....</b>	<b>1-2</b>
<b>1.6.</b>	<b>UF<sub>6</sub> Cylinder Safety Controls .....</b>	<b>1-4</b>
1.6.1.	Safety Controls for Cylinder Filling and Handling.....	1-4
1.6.2.	Safety Controls for Heating or Sampling of UF <sub>6</sub> Cylinders .....	1-4
1.6.3.	Hydrocarbon Controls.....	1-5
<b>1.7.</b>	<b>Exemptions and Special Authorizations .....</b>	<b>1-5</b>
1.7.1.	Exemptions .....	1-5
1.7.2.	Special Authorizations .....	1-5
<b>1.8.</b>	<b>References.....</b>	<b>1-6</b>
<b>2.</b>	<b>General Organizational and Administrative Requirements.....</b>	<b>2-1</b>
<b>2.1.</b>	<b>Organizational Responsibilities and Authority.....</b>	<b>2-1</b>
<b>2.2.</b>	<b>Personnel Education, and Experience Requirements.....</b>	<b>2-1</b>
2.2.1.	Plant Manager.....	2-1
2.2.2.	HSE Manager.....	2-2
2.2.3.	Quality Assurance Manager.....	2-2
2.2.4.	Regulatory Affairs Manager .....	2-2
2.2.5.	Maintenance Manager.....	2-3
2.2.6.	Engineering Manager.....	2-3
2.2.7.	Nuclear Services Leader .....	2-3
2.2.8.	Health Physics Supervisor .....	2-4
<b>2.3.</b>	<b>Safety Review Committees .....</b>	<b>2-4</b>
2.3.1.	HSE Council .....	2-4
2.3.2.	"A" Council Safety Committee.....	2-4
2.3.3.	ALARA Committee.....	2-4
2.3.4.	Environmental Committee .....	2-5
2.3.5.	"B" Council .....	2-5
<b>2.4.</b>	<b>Approval Authority for Personnel Selection .....</b>	<b>2-5</b>
<b>2.5.</b>	<b>Training .....</b>	<b>2-5</b>
2.5.1.	Employee Initial Training and Refresher Training .....	2-5

## Honeywell Metropolis Works

### Application for Renewal of Source Material License SUB-526

2.5.2.	Emergency Response Team Training .....	2-6
2.5.3.	Plant Operator (Chemical Operator) Training .....	2-6
2.5.4.	Other Training .....	2-6
2.6.	Operating Procedures.....	2-7
2.6.1.	Operating Procedures.....	2-7
2.6.2.	Conduct of Operations .....	2-7
2.7.	Internal Audits and Inspections .....	2-8
2.8.	Investigations and Reporting.....	2-9
2.8.1.	Investigations.....	2-9
2.8.2.	Reports.....	2-9
2.9.	Records .....	2-9
2.10.	References .....	2-10
3.	Radiation Protection .....	3-1
3.1.	Special Administrative Requirements.....	3-1
3.1.1.	ALARA Policy .....	3-1
3.1.2.	Radiation Work Permit Procedures .....	3-1
3.2.	Technical Requirements.....	3-2
3.2.1.	Restricted Area – Access Control .....	3-2
3.2.2.	Ventilation .....	3-3
3.2.3.	Work Area Air Sampling.....	3-4
3.2.4.	Radioactivity Measurement Instrumentation .....	3-4
3.2.5.	Radiation Exposures .....	3-4
3.2.6.	Surface Contamination .....	3-6
3.3.	References.....	3-7
4.	Environmental Protection .....	4-1
4.1.	Effluent Control System.....	4-1
4.1.1.	Effluent Sampling .....	4-1
4.1.2.	Compliance with 40 CFR 190.....	4-1
4.2.	Environmental Monitoring .....	4-2
4.2.1.	Air Monitoring.....	4-2
4.2.2.	Liquid and Sediment Monitoring.....	4-2
4.2.3.	Soil and Vegetation Monitoring.....	4-3
4.2.4.	Groundwater Monitoring .....	4-3
4.2.5.	Environmental Monitoring Program Results .....	4-3
4.3.	Licenses, Permits, and Other Approvals .....	4-3
5.	Special Processes .....	5-1
5.1.	Proprietary Information .....	5-1
5.2.	Process Vents – Radioactive and Hazardous Chemical Controls.....	5-1
5.3.	Occupational Safety.....	5-1
5.3.1.	Chemical Safety.....	5-1
5.3.2.	Fire Protection System.....	5-1
5.4.	Standby Utilities.....	5-2
5.4.1.	Standby Electrical Power.....	5-2
5.4.2.	Liquid Nitrogen System.....	5-2

**Honeywell Metropolis Works**

**Application for Renewal of Source Material License SUB-526**

<b>5.5. Radioactive Waste Management .....</b>	<b>5-2</b>
5.5.1. Liquid Wastes .....	5-2
5.5.2. Solid Wastes .....	5-3
<b>5.6. References.....</b>	<b>5-3</b>
<b>6. Decommissioning Plan.....</b>	<b>6-1</b>
<b>7. Emergency Response/Radiological Contingency Plan .....</b>	<b>7-1</b>
7.1. Emergency Response Plan .....	7-1
7.2. References.....	7-1
<b>8. Other Submittals .....</b>	<b>8-1</b>
8.1. Interim Compensatory Measures.....	8-1
8.2. Safety Demonstration Report .....	8-1

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**Acronyms/Abbreviations**

AC	Alternating Current
ALARA	As Low As Is Reasonably Achievable
ALI	Annual Limit on Intake
ANSI	American National Standards Institute
B.S.	Bachelor of Science
CFR	Code of Federal Regulations
cfs	Cubic feet per second
cpm	Counts per minute
DAC	Derived Air Concentration
DOE	U.S. Department of Energy
DOT	U.S. Department of Transportation
dpm	Disintegrations per minute
EDPM	Ethylene-Propylene Diene Monomer
EPA	U.S. Environmental Protection Agency
EPF	Environmental Protection Facility
FMB	Feed Materials Building
HF	Hydrofluoric Acid
HP	Health Physics
HS&E	Health, Safety, and Environmental
IPC	Internal Proportional Counter
KOH	Potassium Hydroxide
KPA	Kinetic Phosphorescence Analyzer
MOC	Management of Change
mrem	Millirem
MTW	Metropolis Works or Metropolis Plant
NFPA	National Fire Protection Association
NIOSH	National Institutes of Occupational Safety and Health
NRC	U.S. Nuclear Regulatory Commission
NVLAP	National Voluntary Laboratory Accreditation Program

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**Acronyms/Abbreviations**

OSHA	U.S. Occupational Safety and Health Administration
PHA	Process Hazards Assessment
ppb	Parts per billion
ppm	Parts per million
PSI	Process Safety Information
PSIG	Pounds per square inch (gauge)
PSM	Process Safety Management
QA	Quality Assurance
SCFH	Standard cubic feet per hour
UF <sub>4</sub>	Uranium Tetrafluoride
UF <sub>6</sub>	Uranium Hexafluoride

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**1. Standard Conditions and Special Authorizations**

**1.1. Name, Address, and Corporate Information**

**1.1.1. Licensee Name**

Honeywell International, Inc. (Honeywell)

**1.1.2. Licensee Address**

Honeywell Metropolis Works  
2768 North US 45 Road  
Metropolis, IL 62960

**1.1.3. State in Which Licensee is Incorporated**

Delaware

**1.1.4. Corporate Office Location**

Morristown, New Jersey

**1.2. Site Location**

**1.2.1. State, County, and Municipality**

The site is located in Massac County in the state of Illinois approximately one half mile northwest of the city limits of the city of Metropolis.

**1.2.2. Site Description**

The Honeywell Metropolis Works is located on approximately 1,000 acres of land in Massac County at the southern tip of Illinois, along the north bank of the Ohio River. The site perimeter is formed by U.S. Highway 45 to the north, the Ohio River to the south, an industrial coal blending plant to the west and privately-owned, developed land to the east. Plant operations are conducted in a fenced restricted area (as defined at 10 CFR 20.1003) (Ref. 1) covering approximately 59 acres in the north-central portion of the site. The majority of the uranium processing activities occur in the Feed Materials Building (FMB).

**1.2.3. Nearest Residence**

The nearest permanent residence is approximately 1,850 feet NNE of the FMB.

**1.2.4. Nearest School**

The nearest school is approximately 2 miles ESE of the FMB.

**1.2.5. Nearest Population Center**

The city limits of the city of Metropolis, IL, population approximately 6,482 (Year 2000 Census, Ref. 2), are located approximately one half mile SE of the FMB.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 1 - Standard Conditions and Special Authorizations**

**1.3. License Number and Period of License**

1.3.1. License Number

SUB-526

1.3.2. Period of License

Honeywell requests extension of its license for a period of ten (10) years from June 30, 2005 until June 30, 2015.

**1.4. Possession Limits**

Type of Licensed Material	Possession Limit	Physical and/or Chemical Form
Natural uranium	150 million pounds	Yellowcake, $U_3O_8$ , $UO_2$ , $UF_4$ , and $UF_6$ , chemical intermediates of these compounds
Depleted natural uranium	150 pounds	$UO_2$ , $UF_4$ , $UF_6$ , $U_3O_8$
Cesium (Cs) - 137	100 millicuries (mCi)	Sealed radioactive sources
Any licensed material between atomic numbers 1 – 100	1 millicurie (mCi)	Sealed and unsealed radioactive sources

**1.5. Authorized Activities**

Authorized activities are related to the chemical conversion of uranium ore concentrates into uranium hexafluoride ( $UF_6$ ), including supporting activities. These activities generally include the successive steps of:

- Receiving ore concentrates
- Sampling ore concentrates
- Charging ore concentrates into the  $UF_6$  conversion process through a drum dumping station
- Processing ore concentrates either directly to the ore preparation section via the calciner or through the wet processing unit (for impurity removal) and then to the calciner
- Blending, agglomerating, drying, crushing, and sizing ore concentrates to a uniform particle called "prepared feed"
- Processing prepared feed through fluid bed reductors where uranium is reduced to the dioxide form utilizing hydrogen from dissociated ammonia



Honeywell Metropolis Works

Application for Renewal of Source Material License SUB-526

Section 1 - Standard Conditions and Special Authorizations

- Feeding uranium dioxide from the reductor into fluid bed hydrofluorinators. Each pair of hydrofluorinators, operated in series, provides a countercurrent flow of anhydrous HF to convert the uranium dioxide into uranium tetrafluoride (UF<sub>4</sub>)
- Feeding the UF<sub>4</sub> into fluid bed fluorinators that also contain an inert fluidizing matrix (CaF<sub>2</sub>) to convert the UF<sub>4</sub> into gaseous UF<sub>6</sub>, which is volatilized from the fluorinator
- Passing the volatilized UF<sub>6</sub> gas, which also contains excess fluorine and HF, through a series of filters for particulate removal, and through a series of cold traps for UF<sub>6</sub> collection
- Intermittently removing crude UF<sub>6</sub> from the cold traps following liquefaction by heating, and then transferring it to still feed tanks to await purification by fractional distillation
- Feeding crude UF<sub>6</sub> from the still feed tanks through a low boiler, and then a high boiler distillation column for final product purification
- Packaging the product UF<sub>6</sub> into cylinders approved by the responsible regulatory authority
- Shipping the product UF<sub>6</sub> offsite

Process off-grade materials that contain significant quantities of uranium may be processed through an on-site uranium recovery unit or shipped off-site to a licensed facility for uranium recovery processing. Uranium recovered from these operations may be recycled through the UF<sub>6</sub> conversion plant.

Some low level uranium-bearing residues may be packaged and shipped directly to a licensed radioactive waste broker or to a licensed radioactive waste disposal site when recovery of the contained uranium is not economical.

Product UF<sub>6</sub> cylinders are periodically washed and tested to ensure design integrity. Cylinder cleaning residues that contain uranium daughter products (principally Th<sup>234</sup> and Pa<sup>234</sup>) are stored on-site and eventually disposed of at a licensed waste disposal facility.

Concentrates that are classified as wet or hard ores may be processed through Wet Process or other procedurally-controlled process prior to blending with other concentrates.

Other operations that involve handling of significant quantities of source material include:

- Outdoor and indoor storage pads for ore concentrates, uranium intermediate inventories, UF<sub>6</sub> cylinders, and recyclable and waste materials;
- A uranium recovery unit;
- A Potassium Hydroxide (KOH) Muds recovery unit;
- A pond muds calciner;

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 1 - Standard Conditions and Special Authorizations**

- A Laboratory Building that houses facilities for conducting process control, product, and radiological analyses; and
- Facilities and equipment for clothing, area, and equipment decontamination and maintenance and waste processing and packaging.

**1.6. UF<sub>6</sub> Cylinder Safety Controls**

**1.6.1. Safety Controls for Cylinder Filling and Handling**

**1.6.1.1 Leak Isolation**

Honeywell's UF<sub>6</sub> cylinder filling system uses the following features to isolate potential leaks and minimize the amount of UF<sub>6</sub> that might be released in the event of a pigtail failure:

- A remotely-operated shut-off valve in the liquid UF<sub>6</sub> filling manifold to prevent further cylinder filling if a UF<sub>6</sub> leak occurs in the pigtail piping.
- A remotely-operated drive motor on the product cylinder valve to prevent back flow of UF<sub>6</sub> from the cylinder

These two controls may be simultaneously activated from several locations.

**1.6.1.2 Cylinder Weight Measurement and Limitation**

The maximum fill limits for the uranium hexafluoride cylinders shall not exceed the packaging limit specified by American National Standards Institute (ANSI) Standard N 14.1 (Ref. 3). Plant administrative fill limits shall be established at levels less than those listed in ANSI Standard N14.1.

Cylinder filling operations shall not be conducted unless at least two independent methods exist for determining the amount of UF<sub>6</sub> filled into the cylinder. At least one of these methods shall involve measurement of the cylinder weight; the second method may involve either physical measurement or manual or automatic calculations.

**1.6.2. Safety Controls for Heating or Sampling of UF<sub>6</sub> Cylinders**

To reduce the potential hazards associated with heating and sampling of UF<sub>6</sub> cylinders, Honeywell shall implement the following controls:

- The UF<sub>6</sub> continuous sampling system normally shall be used to obtain required UF<sub>6</sub> samples between the high boiler column and the product take-off control valve, thus reducing the need for UF<sub>6</sub> cylinder sampling.
- When a sample must be drawn from a UF<sub>6</sub> cylinder, the cylinder weight shall be confirmed prior to heating.

If the cylinder weight exceeds administrative limits established in Honeywell's written procedures, Honeywell shall inform the NRC of planned remedial actions prior to cylinder heating.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 1 - Standard Conditions and Special Authorizations**

**1.6.3. Hydrocarbon Controls**

Honeywell shall employ controls to reduce hydrocarbon contamination of the UF<sub>6</sub> cold trap systems and UF<sub>6</sub> product cylinders, including:

- Production of UF<sub>6</sub> in a closed system;
- Implementation of system design features to trap and eliminate oil contamination from system components;
- Implementation of administrative controls and degreasing procedures during system maintenance;
- Control, cleaning, and inspection of Honeywell-owned UF<sub>6</sub> cylinders in accordance with the revision of ANSI N14.1 in effect at the time of cylinder manufacture; and
- Customer certification of the cleanliness of customer-owned cylinders.

Honeywell shall also employ controls to prevent contamination of the UF<sub>6</sub> cold trap systems and UF<sub>6</sub> product cylinders.

**1.7. Exemptions and Special Authorizations**

**1.7.1. Exemptions**

Honeywell requests continuation of its current exemption from the requirements of 10 CFR 20.1904(a) as they may apply to labeling of containers of natural uranium and the resulting intermediates and byproducts of uranium processing operations. In lieu of labeling each individual radioactive material container as specified in 10 CFR 20.1904(a), Honeywell shall establish one or more Radioactive Material Areas within the restricted area and post all entrance or access points to the Radioactive Material Areas with signs bearing the standard radiation trefoil and the words:

**CAUTION**

**RADIOACTIVE MATERIAL AREA**

**Any area or container in this plant (or "beyond this point")**

**may contain radioactive materials**

The terms "entrance or access point" and "restricted area" are used consistent with the definitions provided at 10 CFR 20.1003. This posting practice is consistent with the guidance provided in Section 7 of Regulatory Guide 8.30, "Health Physics Surveys in Uranium Recovery Facilities" (Ref. 4). In addition, Honeywell maintains other structured means of providing radiological hazard warnings to employees, including radiation safety training and other radiological postings.

**1.7.2. Special Authorizations**

None.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 1 - Standard Conditions and Special Authorizations**

**1.8. References**

1. Title 10, Code of Federal Regulations (CFR), Part 20, *Standards for protection against radiation*, USNRC, as amended,
2. URL, U.S. Census Bureau, [www.census.gov](http://www.census.gov)
3. ANSI N14.1, *Uranium Hexafluoride –Packaging for Transport*, American National Standards Institute, as amended
4. Regulatory Guide 8.30, Revision 1, *Health Physics Surveys in Uranium Recovery Facilities*, USNRC, May 2002

## **2. General Organizational and Administrative Requirements**

### **2.1. Organizational Responsibilities and Authority**

The Metropolis UF<sub>6</sub> conversion plant is owned and operated by Honeywell International, Inc. Corporate headquarters are located in Morristown, New Jersey. The top-ranking member of management at the plant site is the Plant Manager. The Plant Manager reports to business unit executives in Honeywell's corporate offices.

All personnel permanently assigned to the site report through a chain of command to the Plant Manager. The lines of authority for production, maintenance, and engineering functions are independent of those for safety, auditing, and regulatory affairs functions. Primary responsibility for development of plant safety programs, including programs for industrial, chemical, and environmental safety, is assigned to the Health, Safety and Environmental (HSE) Manager. Primary responsibility for auditing and inspection functions is assigned to the Quality Assurance (QA) Manager. Primary responsibility for regulatory affairs and health physics functions is assigned to the Regulatory Affairs Manager. Primary responsibility for plant engineering, production, and maintenance functions is assigned to the Engineering, Nuclear Services, and Maintenance Managers, respectively.

The following sections discuss functional titles and responsibilities as they exist at the time of the application. The actual job titles, responsibilities, and reporting relationships may change as organizational needs evolve and the various roles and responsibilities may be combined or separated as necessary to support ongoing organizational needs. However, Honeywell shall implement all organizational changes in a manner that maintains independent reporting chains for production/maintenance/engineering and safety/auditing/regulatory affairs functions, as discussed above.

### **2.2. Personnel Education, and Experience Requirements**

Qualification prerequisites for staff positions shall be consistent with the requirements described below. Individuals who do not meet the formal educational requirements specified below shall not be automatically eliminated where other factors provide sufficient demonstration of their abilities. The Plant Manager shall evaluate and approve these factors on a case-by-case basis.

#### **2.2.1. Plant Manager**

The Plant Manager reports to corporate executive-level personnel and bears primary responsibility for the safe, efficient, and reliable operation of the facility. The Plant Manager delegates these responsibilities through his staff managers, as discussed in this section. Requirements for the position of Plant Manager include:

- B.S. in Engineering, Science or related discipline
- Eight years of diversified experience in chemical manufacturing, including supervisory or management experience

## **Honeywell Metropolis Works**

### **Application for Renewal of Source Material License SUB-526**

#### **Section 2 - General Organizational and Administrative Requirements**

- Sound judgment and ability to work effectively with management, labor, and government officials.

##### **2.2.2. HSE Manager**

The HSE Manager is responsible for the Environmental, Chemical, and Industrial Safety Programs. A supervisor is appointed over each of these programs and reports to the HSE Manager. These supervisors may communicate directly with the Plant Manager to ensure the Plant Manager is fully informed of significant safety issues. Requirements for the position of HSE Manager include:

- B.S. in Engineering, Science, or related discipline
- Eight years of diversified experience in chemical manufacturing, including supervisory or management experience
- Knowledge of applicable regulations and other standards
- Sound judgment and ability to work effectively with management and government officials.

##### **2.2.3. Quality Assurance Manager**

The Quality Assurance Manager is responsible for on-site quality assurance activities. Requirements for the position of Quality Assurance Manager include:

- B.S. in Engineering, Science, or related discipline
- Six years diversified experience in complex manufacturing operations, including supervisory or management experience
- Knowledge of applicable regulations and standards
- Sound judgment and ability to work effectively with management and government officials

##### **2.2.4. Regulatory Affairs Manager**

The Regulatory Affairs Manager is responsible for monitoring the development and implementation of plant programs and activities to ensure they meet applicable regulatory and licensing requirements. The Regulatory Affairs Manager also oversees the activities of the Health Physics and Security organizations and manages Honeywell's interface with regulatory agencies. Requirements for the position of Regulatory Affairs Manager include:

- B.S. in Engineering, Science, or related discipline
- Eight years of diversified experience in chemical or nuclear industry, including supervisory, management, or oversight experience
- Knowledge of applicable regulations and other standards
- Extensive knowledge of the nuclear fuel cycle

**Honeywell Metropolis Works**

**Application for Renewal of Source Material License SUB-526**

**Section 2 - General Organizational and Administrative Requirements**

- Sound judgment and ability to work effectively with management and government officials.

**2.2.5. Maintenance Manager**

The Maintenance Manager is responsible for process and facility maintenance activities, including preventative and corrective maintenance and management of the Maintenance staff. Requirements for the position of Maintenance Manager include:

- B.S. in Mechanical or Chemical Engineering or equivalent technical discipline
- Seven years of maintenance experience, including supervisory or management experience
- Sound judgment and ability to work effectively with management and government officials.

**2.2.6. Engineering Manager**

The Engineering Manager is responsible for overseeing the activities of the Process and Project Engineering staff in development and implementation of plant design changes and maintenance of the design status, consistent with applicable codes and standards. Requirements for the position of Engineering Manager include:

- B.S. in Chemistry or Chemical Engineering or equivalent technical discipline
- Six years of technical experience, including supervisory or management experience
- Sound judgment and ability to work effectively with management and government officials.

**2.2.7. Nuclear Services Leader**

The Nuclear Services Leader is responsible for managing production functions associated with Honeywell's uranium processing operations, including maintaining compliance with applicable regulatory and license requirements. Requirements for the position of Nuclear Services Leader include:

- B.S. in Chemical Engineering or equivalent technical discipline
- At least five years chemical processing experience, including supervisory or management experience
- Knowledge of applicable regulations and other standards
- Sound judgment and ability to work effectively with management and government officials.

## **Honeywell Metropolis Works**

### **Application for Renewal of Source Material License SUB-526**

#### **Section 2 - General Organizational and Administrative Requirements**

##### **2.2.8. Health Physics Supervisor**

The Health Physics Supervisor's primary responsibility is to oversee development and implementation of the radiation protection program and monitor compliance with related NRC regulatory and licensing requirements. Responsibilities also include management liaison and supervision of Health Physics personnel. An indirect reporting relationship is provided to the corporate HSE staff. Requirements for the position of Health Physics Supervisor include:

- B.S. in Physical or Biological Science or related discipline
- Knowledge of applicable regulations and other standards
- Three years Health Physics or related experience sufficient to maintain an effective radiation safety program.

##### **2.3. Safety Review Committees**

Honeywell has established a primary management safety committee (the HSE Council) that provides oversight for the occupational and environmental safety programs. The HSE Council provides direction to three subordinate committees that are charged with carrying out the policies established by the HSE Council, investigating incidents, preparing reports, and evaluating plant performance. Each committee prepares records and reports related to its meetings, actions, investigations, and results and provides specified records and reports to the HSE Council for review and management action.

##### **2.3.1. HSE Council**

The HSE Council consists of the plant management team and provides overall leadership for HSE issue identification and correction. The HSE Council also provides management direction to its reporting committees. The HSE Council meets at least once each quarter.

##### **2.3.2. "A" Council Safety Committee**

The "A" Council Safety Committee establishes plant health and safety policy and reviews reports of significant accidents and injuries. Membership includes: the Plant Manager; HSE Manager; one to three additional selected managers; Safety Supervisor; and selected hourly employees. The "A" Council meets at least once each quarter.

##### **2.3.3. ALARA Committee**

The ALARA Committee supports planning and review of facility operations to ensure that occupational radiation exposures and effluent releases of radioactive material are effectively controlled. Membership includes: the Plant Manager; Regulatory Affairs Manager; one to three additional selected managers; Health Physics Supervisor; and selected hourly employees. The ALARA Committee meets at least once each quarter.



## **Honeywell Metropolis Works**

### **Application for Renewal of Source Material License SUB-526**

#### **Section 2 - General Organizational and Administrative Requirements**

##### **2.3.4. Environmental Committee**

The Environmental Committee supports planning and review of facility operations to ensure effective control of the facility's non-radiological impact on the surrounding environment. Membership of the Environmental Committee includes: the Plant Manager; HSE Manager; one to three additional selected managers; Environmental Supervisor; and selected hourly employees. The Environmental Committee meets at least once each quarter.

##### **2.3.5. "B" Council**

The "B" Council consists of first-line Supervisors and Forepersons, and all hourly personnel. "B" Council meetings are conducted monthly for employee training, and review of industrial, chemical, radiological, and environmental safety procedures.

#### **2.4. Approval Authority for Personnel Selection**

The Plant Manager has final approval authority for selection of personnel in safety-related staff positions and safety review committee membership.

#### **2.5. Training**

Honeywell shall implement the following training program for new employees and retraining for experienced personnel.

##### **2.5.1. Employee Initial Training and Refresher Training**

Training for new employees includes the following, at a minimum:

- An indoctrination in plant safety procedures, including issuance and demonstrations of proper use of personal safety equipment;
- Radiation safety training in accordance with 10 CFR 19.12 (Ref. 1) including, to the extent appropriate to the hazards, information from Regulatory Guide 8.13, "Instruction Concerning Prenatal Radiation Exposure," (Ref. 2) and Regulatory Guide 8.29, "Instruction Concerning Risks from Occupational Radiation Exposure" (Ref. 3)
- Chemical and industrial safety training in accordance with applicable sections of 29 CFR 1910 (Ref. 4)
- Environmental safety training, including waste handling and disposal
- Emergency response training in accordance with the Emergency Response Plan.

All experienced employees shall be periodically re-instructed in safety hazards and proper radiation protection procedures.

**Honeywell Metropolis Works**

**Application for Renewal of Source Material License SUB-526**

**Section 2 - General Organizational and Administrative Requirements**

**2.5.2. Emergency Response Team Training**

Honeywell shall provide training and refresher training to Emergency Response Team members in accordance with the MTW Emergency Response Plan.

**2.5.3. Plant Operator (Chemical Operator) Training**

**2.3.5.1 Initial Training**

Individuals who routinely monitor plant parameters and manipulate controls associated with licensed material processing are referred to as Chemical Operators. Honeywell shall provide initial training and continuing training for Chemical Operators in accordance with established plant policies and procedures. Honeywell shall specify training and qualification requirements in an appropriate qualification description document.

**2.3.5.2 Continuing Training**

Honeywell shall provide continuing training to maintain and enhance the ability of Chemical Operators to perform job assignments and to ensure facility safety and reliability. Honeywell shall specify continuing training requirements in an appropriate qualification description document.

**2.5.4. Other Training**

Honeywell shall provide the following training, to the extent appropriate to the areas entered and hazards encountered, to temporary contract workers, prior to authorizing unescorted access to the restricted area:

- Radiation safety training as required by 10 CFR 19.12;
- Chemical and industrial safety training in accordance with applicable sections of 29 CFR 1910;
- Emergency response training in accordance with the Emergency Response Plan.

Honeywell shall provide annual refresher training for any contract worker performing long-term or repetitive work in the restricted area.

Honeywell shall require that at least one member of each unescorted railroad switching crew have a current indoctrination to cover the plant hazards next to the railroad tracks.

Honeywell shall provide to site visitors a briefing consistent with the areas to be entered and activities to be performed.

## Honeywell Metropolis Works

### Application for Renewal of Source Material License SUB-526

#### Section 2 - General Organizational and Administrative Requirements

## 2.6. Operating Procedures

### 2.6.1. Operating Procedures

Honeywell shall establish a process to identify those process operations that require procedural guidance to ensure proper execution and require that these process operations be conducted in accordance with approved procedures.

Written procedures shall govern the procedure control process. These procedures shall address operating procedure preparation, review, revision, approval, and implementation.

### 2.6.2. Conduct of Operations

#### 2.6.2.1 Operator Attentiveness

Honeywell shall establish procedures to address requirements for operator attentiveness. These procedures shall address the following:

- Operators shall monitor assigned controls and alarms in an alert and attentive manner. Indications shall be monitored and prompt action shall be taken to determine the cause of and correct abnormalities.
- Operators shall be fit for duty prior to assuming the watch and during the performance of shift duties.
- Additional duties assigned to operators shall not interfere with safe plant operations.
- Control room access shall be limited to those persons on official business only.
- Professional behavior shall be displayed at all times. Only activities essential to supporting plant operation and activities authorized by management shall be conducted in the control room. Potentially distracting activities that could adversely affect safe plant operation shall be prohibited.

#### 2.6.2.2 Shift Briefings and Shift Turnover

Honeywell shall establish procedures to ensure an orderly Operations shift turnover process is conducted. These procedures shall address the following:

- Use of turnover checklists
- Review of major components status, abnormal lineups, valid alarms, and planned evolutions
- Review of logs
- Necessary plant walkdowns
- Documentation of shift change review
- Formal acceptance of shift duties

## **Honeywell Metropolis Works**

### **Application for Renewal of Source Material License SUB-526**

#### **Section 2 - General Organizational and Administrative Requirements**

- Briefing of oncoming shift

##### **2.6.2.3 Pre-job Briefings**

Honeywell shall establish procedures to ensure pre-job briefings are conducted for significant activities that involve licensed material. These procedures shall address the following:

- Types of activities where pre-job briefings are required
- Items necessary to be addressed in pre-job briefings
- Required attendance at pre-job briefings
- Documentation of pre-job briefings

##### **2.6.2.4 Procedural Adherence**

Honeywell shall establish procedures governing use of and adherence to written procedures. These procedures shall address the following:

- Guidance to identify the manner in which procedures are to be implemented
- Types of procedures that shall be present and referred to directly
- Types of activities that do not require procedures or do not require procedures to be present.
- Methods by which changes to procedures can be made
- Actions to be taken to bring the facility to a safe condition in off-normal situations not covered by an approved procedure.

#### **2.7. Internal Audits and Inspections**

Honeywell shall establish a program of audits and inspections to ensure plant operations related to radiation protection, hazardous chemical safety, fire protection, and environmental protection are conducted safely and in accordance with applicable regulatory requirements, license conditions, and written procedures.

Audits are conducted to verify that operations are being conducted according to established criteria. Honeywell shall assign primary responsibility for the audit and inspection programs to the Quality Assurance Manager, who shall maintain written plans for implementing the programs. The QA Manager assigns personnel to perform required audits; the auditors do not bear responsibility for the function and area being audited. The QA Manager shall be delegated authority to shut down operations or require additional safety precautions as needed. Honeywell shall establish requirements to ensure audit findings, including deficiencies and suggested and completed corrective actions, are documented in a written report to the Plant Manager.

Inspections are performed to ensure operations are being conducted in accordance with approved procedures. Personnel responsible for performing inspections include all members of management and the Quality Assurance organization, specified supervisors,

## **Honeywell Metropolis Works**

### **Application for Renewal of Source Material License SUB-526**

#### **Section 2 - General Organizational and Administrative Requirements**

Safety, Environmental, and Health Physics personnel. As discussed in Section 2.1, QA, Regulatory Affairs, and HSE personnel report through a management chain that is independent of production functions. Managers and specified supervisors shall perform inspections of areas for which they do not have direct responsibility. Independent auditors from external organizations shall be retained as necessary to ensure appropriate technical expertise is applied to the various audits and inspections. Inspection findings shall be reported to the responsible manager or supervisor.

In addition to the plant audit and inspection program, corporate HS&E personnel also conduct plant audits to ensure compliance with company, federal, and state standards for occupational health, safety, and pollution control.

Honeywell shall establish requirements to ensure adverse conditions identified during audits and inspections that cannot be immediately corrected are entered into a corrective action tracking system and tracked to completion. Honeywell shall establish a tracking system that ensures appropriate management review, assignment of responsibility and action dates, and proper documentation and review of actions taken.

#### **2.8. Investigations and Reporting**

##### **2.8.1. Investigations**

Honeywell shall require that employees report incidents, regardless of severity, to their foreperson or supervisor. Potential hazards (near misses) require a written report for minor incidents. An investigation report shall be prepared for incidents resulting in personnel injury, equipment damage, or effects on the environment or members of the general public.

The HSE and Regulatory Affairs Managers are responsible for ensuring the proper and timely completion of required investigations, unless otherwise assigned by the Plant Manager.

##### **2.8.2. Reports**

Honeywell shall maintain specific site procedures for investigating, recording, reporting, and following up on reportable incidents as outlined in Regulatory Guide 10.1, "Compilation of Reporting Requirements for Persons Subject to NRC Regulations" (Ref. 5). The Regulatory Affairs Manager is responsible for oversight of these activities in accordance with plant procedures and applicable regulatory requirements.

#### **2.9. Records**

Honeywell shall implement a program to ensure the proper completion, storage, and retention of records related to health and safety. Included in this program are records of (retention periods in parentheses):

- Management of Change Program records (5 years);
- Operational incidents (5 years);

## Honeywell Metropolis Works

### Application for Renewal of Source Material License SUB-526

#### Section 2 - General Organizational and Administrative Requirements

- Events involving releases of radioactive materials beyond regulatory limits (until license termination);
- Audits and inspections (5 years);
- Radiological monitoring instrument calibration (5 years);
- The ALARA Program (5 years);
- Employee training (5 years);
- Personnel radiation exposures (until authorized by NRC);
- Radiological surveys (5 years); and
- Environmental measurements (until authorized by NRC).

Honeywell shall retain records that relate directly to radiation exposure of employees or members of the public (e.g., external dose monitoring results, bioassay results, environmental air concentrations, etc.) until NRC authorizes disposition. Honeywell shall retain other records related indirectly to personnel exposures (e.g., contamination smears, daily air activity measurement, daily stack sampling, etc.) for a minimum of five (5) years; however, prior to their disposition a summary report shall be prepared. Honeywell shall retain these summary reports until NRC authorizes disposition.

On a semiannual basis, Honeywell shall prepare a report summarizing and evaluating the radiological measurements made at the facility, including airborne radioactivity, surface contamination, internal and external exposures, effluents, and environmental monitoring. This report shall be provided to the ALARA Committee, the Plant Manager, and other levels of supervision as necessary for appropriate action.

#### 2.10. References

1. Title 10, Code of Federal Regulations, Part 19, *Notices, instructions and reports to workers: inspection and investigations*, USNRC, as amended
2. Regulatory Guide 8.13, Revision 3, *Instruction Concerning Prenatal Radiation Exposure*, USNRC, June 1999
3. Regulatory Guide 8.29, Revision 2, *Instruction Concerning Risks from Occupational Radiation Exposure*, USNRC, February 1996
4. Title 29, Code of Federal Regulations, Part 1910, *Occupational Safety and Health Standards*, U.S. Department of Labor, Occupational Safety and Health Administration, as amended
5. Regulatory Guide 10.1, Revision 4, *Compilation of Reporting Requirements for Persons Subject to NRC Regulations*, USNRC, October 1981

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**3. Radiation Protection**

**3.1. Special Administrative Requirements**

**3.1.1. ALARA Policy**

Honeywell shall control workers' and members' of the public exposure to radiation and radioactive materials through a process that maintains those exposures below regulatory limits and further seeks to maintain those exposures as low as is reasonably achievable (ALARA). Honeywell shall implement an operating philosophy consistent with Regulatory Guide 8.10, "Operating Philosophy for Maintaining Occupational Radiation Exposures As Low as is Reasonably Achievable" (Ref. 1). To the extent practicable, worker and member of the public exposures shall be controlled through the use of design features and engineering controls. Administrative controls shall be implemented as needed to supplement the design features and engineering controls. The ALARA Committee shall provide oversight for the ALARA Program.

**3.1.2. Radiation Work Permit Procedures**

Certain maintenance operations may involve entry into tanks or other vessels containing licensed material where exposure rates exceeding 0.5 millirem per hour. In the absence of a specific written procedure that establishes the required precautions, Honeywell shall establish a permit system to ensure safe job performance in these areas.

The permit system shall include the following features:

- Preparation of the permit by the responsible foreperson/supervisor with assistance, as needed, from HP personnel;
- Delineation on the permit of specific instructions regarding the task, the necessary safety precautions, and any safety equipment required;
- Appropriate monitoring of the affected space;
- Approval and acknowledgement signatures.

In addition, Health Physics personnel shall be present whenever entry is made into containment structures, including ventilation baghouses, where the likelihood exists for exposure to airborne radioactivity.

Following elimination of the radiological hazard (by closure of the vessel, decontamination, or other process), the permit shall be terminated and routed for retention in accordance with plant procedures.

Records associated with the permit system shall include completed permits and records of area entry.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

### **3.2. Technical Requirements**

Operating experience indicates that beta-gamma monitoring instruments and techniques are capable of providing detection capabilities sufficient to satisfy the surface contamination monitoring guidance provided in Table 2 of Regulatory Guide 8.30 (Ref. 2). Due to the comparative ruggedness and reliability of the beta-gamma instruments, Honeywell uses beta-gamma measurements as a surrogate for alpha measurements for a variety of contamination monitoring activities, including personnel contamination monitoring, vehicle exit monitoring, and unrestricted release of materials from the restricted areas. Alpha measurements are used for other types of health physics surveys, such as routine contamination surveys and specified radioactive material shipment surveys.

#### **3.2.1. Restricted Area – Access Control**

Honeywell shall establish the boundaries of Radioactive Material Areas within the restricted area by erecting area postings as discussed in Section 1.7. These boundaries may be moved as needed to provide for personnel protection consistent with operational needs and changes in facility configuration. Routine authorized entry to the restricted area may occur through both the Main Gate and the Sampling Plant Gate. The Security force provides entrance gate surveillance and control through both direct and remote visual monitoring.

##### **3.2.1.1 Change Rooms**

Honeywell shall provide Change Rooms to facilitate donning, removal, and storage of protective clothing. There is no routine egress from the Change Rooms to areas outside of the restricted area. Entry into the Change Rooms from outside of the restricted area is controlled. Personnel exiting the Change Rooms pass the personnel monitoring station before they exit the facility.

##### **3.2.1.2 Protective Clothing**

Honeywell shall establish policies and/or procedures addressing requirements for use of protective clothing. Protective clothing shall be provided to individuals who enter areas where radioactive materials are processed. Honeywell may grant exceptions to the protective clothing policy for individuals who enter specified areas of the plant where the potential for contamination spread is low.

Prior to exiting the restricted area, individuals deposit protective clothing in appropriate containers for in-plant laundering and reuse or disposal.

##### **3.2.1.3 Personnel Monitoring Systems**

Honeywell shall require all individuals who have entered the potentially contaminated portions of the restricted area to perform personal contamination monitoring (minimum hand and foot frisk) upon exiting. Operational contamination survey instruments shall be provided for personnel contamination surveys at any exit in use. The survey instruments and techniques shall be adequate to ensure compliance with the guidance provided in Section 2.6 of Regulatory Guide 8.30.



**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

**3.2.1.4 Personnel Decontamination Policy**

Honeywell shall require decontamination efforts if skin or personal clothing contamination is detected at levels exceeding the guidance provided in Section 2.6 of Regulatory Guide 8.30. Decontamination facilities include sinks and personnel showers that are provided with mild soap and running water. If needed, more aggressive decontamination techniques shall be undertaken under the supervision of Health Physics and/or the Plant Nurse.

Honeywell shall not permit an individual to exit the restricted area with skin or clothing contamination at levels exceeding the guidance provided in Section 2.6 of Regulatory Guide 8.30 without specific Health Physics approval.

**3.2.1.5 Material Release**

Honeywell shall require that Health Physics personnel survey articles that have been used in the uranium process prior to release for unrestricted use to ensure contamination levels meet the criteria specified in Table 2 of Regulatory Guide 8.30.

Empty transport vehicles used to deliver ore concentrates into the plant shall be surveyed prior to release. Outgoing radioactive material shipments shall be surveyed to ensure compliance with applicable DOT radiological limits.

**3.2.2. Ventilation**

Equipment in the UF<sub>6</sub> process that produces dusts, mists, or fumes containing uranium or other toxic materials is provided with dust collectors and scrubbers or other ventilation equipment designed to reduce employee or environmental exposure to levels that are as low as is reasonably achievable. Honeywell shall establish a system to continuously sample the exhaust points to determine uranium content.

The ventilation system used in the UF<sub>6</sub> area consists of a series of fresh air intake units and a series of window fans and roof vents. Honeywell shall calculate environmental uranium losses based on workroom activity samples.

Additionally, the FMB Control Room has a separate air conditioning system. The Control Room is maintained under a slight positive pressure during a UF<sub>6</sub> release and has fresh air intakes located outside the UF<sub>6</sub> process building. Honeywell shall provide continuous workroom air sampling in this area.

Operating personnel shall monitor the operation of pollution control equipment. Additional samples, visual observation, and other precautions shall be taken as necessary to ensure effective performance of pollution control equipment.

Laboratory hoods that are routinely used to handle radioactive materials shall be checked periodically to measure face velocity. If the average face velocity does not exceed 100 linear feet per minute, the hood shall not be used for radioactive materials until proper operation has been restored.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

**3.2.3. Work Area Air Sampling**

The work area air sampling program relies primarily on routine continuous air sampling. Honeywell shall perform periodic breathing zone sampling to ensure the installed continuous air sampling system provides a reliable indication of workplace airborne radioactivity levels.

If the average airborne radioactivity concentration on any floor in the FMB is greater than 30% of the applicable Derived Air Concentration (DAC), or any four (4) of eight individual air samples exceed 30% of DAC, the entire floor shall be posted as an airborne radioactivity area and for precautionary use of respirators. The Production Foreperson shall correct the problem with Health Physics support. If any single air sample is greater than one (1) DAC, an investigation shall be initiated and documented by the Production Foreperson, with support from Health Physics.

Consistent with Section 2.2 of Regulatory Guide 8.30, Honeywell shall perform breathing zone (lapel) sampling at least once per year to ensure the fixed air sample results provide a reliable indication of actual workplace conditions. Lapel samples shall be used in specific exposure evaluations as specified by Health Physics.

**3.2.4. Radioactivity Measurement Instrumentation**

Honeywell shall maintain sufficient radiological monitoring instrumentation to ensure an effective Health Physics monitoring capability. Instruments routinely used in radiation surveys are shown in Table 3-1.

The thin window, scintillation, and internal proportional (IPC) counters shall be calibrated using a certified  $U_3O_8$  source. Exposure rate meters shall be calibrated using a  $Cs^{137}$  sealed source. Appropriate check sources shall be available to verify instrument response. In the event measurements beyond the capabilities of plant instrumentation are required, Honeywell shall use an outside vendor to perform the measurements.

**3.2.5. Radiation Exposures**

Honeywell shall maintain documented programs to ensure proper control, determination, validation, and control of occupational exposure to radiation and radioactive materials. These programs include the features discussed in the remainder of Section 3.2.5.

**3.2.5.1 Exposure Control**

Honeywell's program to control occupational exposure to radiation and radioactive material shall include:

- Employee training in accordance with 10 CFR 19.12 (Ref. 3) and Section 2.5 of this application
- Area posting in accordance with 10 CFR 20.1901 – 20.1904 (Ref. 4) and Section 1.7 of this application.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

- Specific facility and equipment design and engineering features.
- Implementation of the work permit system.
- Implementation of the ALARA Program.
- Maintenance and operation of the facility ventilation system.
- Control of facility contamination.

Honeywell shall perform routine gamma radiation surveys consistent with the guidance provided in Section 2.4 of Regulatory Guide 8.30. Beta-gamma instrument surveys shall be conducted when a process or procedural change is made that could result in a significant increase in employee exposure. Exposure rate and occupancy factors are used as appropriate to determine if additional precautions are needed. Additionally, Health Physics shall conduct a radiation survey upon initial entry into a radioactive material vessel.

**3.2.5.2 Respiratory Protection Program**

Honeywell shall implement a Respiratory Protection Program consistent with the guidance provided in Regulatory Guide 8.15 (Ref. 5). Individuals who work in specified areas shall carry a half-face respirator for potential emergency use. Honeywell shall require the use of respirators by any individual entering a posted Airborne Radioactivity Area (other than incidental entry) and during operations that are likely to release significant levels of airborne contamination. When conditions indicate that the protection provided by a half-face respirator may be inadequate, respiratory equipment that provides greater protection shall be used. For purposes of calculating individual exposure to airborne radioactivity, protection credit may be taken when the concentration exceeds the applicable DAC value. Honeywell shall use the respiratory protection factors provided in 10 CFR Part 20, Appendix A.

**3.2.5.3 Determination of Personnel Doses**

**External Exposures**

Honeywell shall implement an external dosimetry program that includes the following features:

- Use of a Honeywell-issued personnel dosimeter by each individual who enters an area where external exposures are likely to exceed 25% of the deep dose equivalent limits established in 10 CFR 20.
- Processing of personnel dosimeters by a dosimetry processor holding current NVLAP accreditation. Processing shall be completed on a quarterly basis for salaried employees and a monthly basis for hourly employees.
- Notification of Health Physics by the processor of any whole body exposure exceeding 125 millirem per month.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

- For any whole body exposures exceeding 125 millirem per month, completion of an investigation to determine the source of the exposure and corrective actions to prevent further unusual exposures.

**Internal Exposures**

Internal exposures are determined primarily through implementation of the bioassay program, including both routine and special urinary sampling and analysis. Honeywell shall enroll in the program all individuals who are likely to receive a committed dose equivalent (CDE) exceeding 0.5 rem per year or committed effective dose equivalent (CEDE) exceeding 0.1 rem per year. For purposes of practicality, the routine bioassay program typically includes all individuals who routinely access areas where unsealed quantities of uranium are used or processed. The bioassay program shall include the following features:

- Routine urinalysis on an established schedule
- Special urinalysis following specified events and evolutions

The evaluation level used is 15 µg/L urinary uranium. Employees whose urinary excretion rate exceeds 15 µg/L shall be resampled for confirmation.

The investigation level is 60 µg/L urinary uranium (200 µg/L for UF<sub>6</sub> exposure). Any exposure resulting in an excretion rate exceeding the applicable investigation level shall be investigated. Typically, daily urinary uranium samples are collected until the results are less than the evaluation level.

Work restrictions shall be considered if the bioassay data indicate the intake exceeds 30% of the Annual Limit on Intake (ALI) for mixed solubility material ("Y", "W", and "D"). Honeywell shall impose work restrictions if results exceed the weekly intake limit (10 mg) for class "D" uranium.

The program utilizes guidance provided in Regulatory Guide 8.9 (Ref 6). Intakes are calculated using the methodology provided in NUREG/CR-4884, "Interpretation of Bioassay Measurements" (Ref. 7), in conjunction with the computer program "INDOS" developed by Skrable Enterprises Inc.

**3.2.6. Surface Contamination**

For purposes of contamination monitoring and control, areas within the restricted area are designated as follows:

**Controlled Areas:** Plant areas in which uranium is processed and could be present in unencapsulated form.

**Intermediate Areas:** Production areas for non-radioactive fluorine based chemicals, and plant support facilities.

**Uncontrolled Areas:** Plant areas where food may be consumed, locker rooms, and entrance/exit areas from the plant.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

Surface contamination will be identified by a combination of routine visual observation (not normally documented unless related to a specific unplanned event) and swipe surveys.

The area designations, action levels, and contamination survey frequencies are provided below:

Surface Contamination Control		
Uncontrolled Areas	Intermediate Areas	Controlled Areas
Removable Contamination Action Level: 200 dpm/100 cm <sup>2</sup> (alpha)	Removable Contamination Action Level: 200 dpm/100 cm <sup>2</sup> (alpha)	Removable Contamination Action Level: 5,000 dpm/100 cm <sup>2</sup> (alpha)
Survey Frequency: Weekly	Survey Frequency: Quarterly	Survey Frequency: Monthly

Any area found to exceed the specified action level shall be scheduled for decontamination. Follow-up surveys shall be conducted following decontamination of the area.

### 3.3. References

1. Regulatory Guide 8.10, Revision 1-R, *Operating Philosophy for Maintaining Occupational Radiation Exposures As Low as is Reasonably Achievable*, USNRC, May 1977
2. Regulatory Guide 8.30, Revision 1, *Health Physics Surveys in Uranium Recovery Facilities*, USNRC, May 2002
3. Title 10, Code of Federal Regulations, Part 19, *Notices, instructions and reports to workers: inspection and investigations*, USNRC, as amended
4. Title 10, Code of Federal Regulations, Part 20, *Standards for protection against radiation*, Appendix B, Table 1, USNRC, as amended
5. Regulatory Guide 8.15, Revision 1, *Acceptable Programs for Respiratory Protection*, USNRC, October 1999
6. Regulatory Guide 8.9, *Revision Acceptable Concepts, Models, Equations, and Assumptions For A Bioassay Program*, USNRC, July 1993
7. NUREG/CR-4884, *Interpretation of Bioassay Measurements*, USNRC, June 1987

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 3 - Radiation Protection**

<b>Table 3-1 – Radiological Monitoring Instruments</b>				
<b>Type (Min. Number)</b>	<b>Use</b>	<b>Sensitivity</b>	<b>Range</b>	<b>Calibration Frequency</b>
Geiger Mueller Count Rate Meter (5)	Personnel and material exit monitoring	Beta/Gamma > 40 KeV	0-50,000 CPM	Quarterly
Exposure Rate Meters (3)	Exposure Rates	Beta/Gamma	0-5 rem/hr	Quarterly
Scintillation Alpha Counter (1)	Smears, Air Filters	Alpha	0 – 1E6 CPM	Monthly
Kinetic Phosphorescence Analyzer (KPA) (1)	Uranium urinalysis	Uranium	1 ppb (upper range determined by analytical techniques)	As needed (based on performance monitoring)
Internal Proportional Counter (IPC) (1)	Air Filters, Smears	Alpha/Beta	0 – 1E6 CPM	Quarterly
Portable air samplers (2)	Grab air sampling	NA	NA	Monthly
Lapel Air samplers (3)	Breathing zone air sampling	NA	NA	Before use

#### 4. Environmental Protection

##### 4.1. Effluent Control System

###### 4.1.1. Effluent Sampling

The process stacks shall be continuously sampled to measure the uranium emission rate. Each twenty-four hours the individual filters for each sample point shall be composited and analyzed for total uranium emissions. An investigation limit shall be established for each dust collector stack (usually 5,000 DPM for secondary dust collectors). If the stack limit is exceeded on three (3) successive samples, an investigation shall be conducted to identify the source and required corrective actions. Due to the large number of individual emission sources, an additional investigation level for gaseous uranium emissions is utilized based on the average of four (4) continuous air samples collected at the restricted area fence line which are changed weekly. The investigation level is based on the average quarterly uranium concentration that would produce an annualized dose of 10 mrem (EDE), if an individual were continuously present at the fence line.

###### 4.1.2. Compliance with 40 CFR 190

Honeywell shall determine compliance with the 40 CFR 190 dose limits for members of the public as follows:

If the average concentration of total alpha radioactivity (the sum of natural uranium, radium-226, and thorium-230) measured from samples collected from existing Station No. NR-7 (adjacent to the home of the nearest residence north-northeast of the plant) exceeds  $3.0 \times 10^{-14}$   $\mu\text{Ci/ml}$  over any calendar quarter, Honeywell shall, within 30 days, prepare and submit to the NRC a written report that identifies the cause for exceeding the limit and the corrective actions to be taken to reduce radioactivity release rates. If the parameters important to a dose assessment change, a report shall be submitted within 30 days that describes the changes in parameters and includes an estimate of the resultant change in dose commitment.

If projections indicate that the calculated dose to any member of the public in any consecutive 12-month period will exceed the limits specified in 40 CFR 190.10, Honeywell shall:

- Take immediate steps to reduce emissions so as to comply with 40 CFR 190.10;  
or
- Petition the NRC for a variance from the requirements of 40 CFR 190.10.

If a petition for a variance is anticipated, Honeywell shall submit the request at least ninety (90) days prior to exceeding the limits specified in 40 CFR 190.10.

The actual material solubilities, and air concentrations, determined as required in this license condition shall be used to calculate the dose to the public for purposes of demonstrating compliance with 40 CFR 190.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**  
**Section 4 – Environmental Protection**

Liquid effluents from the facility are discharged via natural drainage into the Ohio River. The main plant effluent is continuously sampled and the composite sample shall be analyzed daily for uranium. The investigation level for uranium in the liquid effluent shall be 1.0 ppm Uranium as a monthly average. This concentration would produce an individual ingestion dose of <1 mrem/yr (EDE) at the nearest downstream municipality that could, but does not, use Ohio River water as a drinking water source.

#### **4.2. Environmental Monitoring**

##### **4.2.1. Air Monitoring**

The environmental air monitoring program shall include the following:

- Continuous air samples (low volume) collected at four points along the restricted area fence line.
- Two additional samplers located near the site boundary in the prevailing wind direction. One sampler is located off-site approximately one mile down wind of the FMB. An additional (high volume) continuous air sampler is installed at the location of the nearest prevailing downwind residence.

Each low volume sample filter shall be collected weekly and analyzed for uranium and fluoride content. Results shall be reported as  $\mu\text{Ci/ml}$  uranium and  $\mu\text{g/m}^3$  fluoride. Additionally, a quarterly composite of the weekly samples shall be sent to a vendor analytical laboratory to determine the airborne concentrations of  $\text{Ra}^{226}$  and  $\text{Th}^{230}$ .

##### **4.2.2. Liquid and Sediment Monitoring**

The main liquid effluent shall be continuously sampled and a daily composite analyzed for uranium content. The daily samples shall be composited into a monthly composite sample that shall be analyzed for uranium and several non-radiological constituents. Quarterly composites of the monthly samples shall be analyzed for  $\text{Ra}^{226}$  and  $\text{Th}^{230}$  concentration.

Environmental water and sediment samples shall be taken semi-annually from four locations on the Ohio River as follows:

- One sample upstream relative to the plant outflow;
- One sample downstream relative to the plant outflow;
- One sample at the point of plant outflow; and
- One sample from the opposite side of the river.

In addition, three inland samples shall be collected from area lakes and ponds. These samples shall be analyzed for uranium and fluoride content. In addition, on a semiannual basis, Honeywell shall take samples and perform uranium and fluoride analyses of bottom sediment from the liquid effluent drainage ditch at locations approximately 700 and 1400 feet downstream of Outfall 002 monitoring station.



**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**Section 4 – Environmental Protection**

**4.2.3. Soil and Vegetation Monitoring**

Environmental soil and vegetation samples shall be collected semi-annually. Six sample stations shall be located on site at the same location as the low volume air samplers. Seven additional stations shall be located off-site in the surrounding areas of Illinois and Kentucky covering a radius of about eight miles from the plant. Each sample shall be analyzed for uranium and fluoride content. Additionally, direct radiation shall be continuously monitored using environmental TLDs. An environmental TLD shall be located on the restricted area fence on each side of the plant. Other TLDs shall be located as follows:

- One TLD at the nearest property boundary;
- Two TLDs at the nearest residence monitor; and
- One TLD at the Metropolis airport, approximately one mile NE of the facility.

The TLDs shall be exchanged quarterly for analysis.

**4.2.4. Groundwater Monitoring**

There are numerous groundwater monitoring and investigation wells drilled on the plant site. Of these, eight (8) are used for landfill monitoring; ten (10) are used for RCRA compliance monitoring; and nine (9) are sampled quarterly for pH, fluoride, specific conductance, turbidity, gross alpha activity, and gross beta radioactivity. One additional well is utilized for groundwater surface elevation measurements only.

**4.2.5. Environmental Monitoring Program Results**

Results from the radiological environmental monitoring program shall be reviewed by Health Physics and evaluated by considering applicable NRC environmental criteria, or other applicable Federal or State criteria relating to environmental quality. Management shall be notified of the results, noting any undesirable trends or results that may indicate non-compliance with applicable environmental standards and take appropriate corrective actions.

**4.3. Licenses, Permits, and Other Approvals**

Honeywell's NPDES permit (No. IL 0004421) has been renewed by the Illinois Environmental Protection Agency, effective through January 31, 2006. The plant liquid effluent is monitored in accordance with the terms and conditions of the permit.

The Illinois Environmental Protection Agency has issued a RCRA permit to Honeywell for storage and treatment of hazardous waste generated on-site. This permit is in effect from March 11, 2003 until March 11, 2013. This permit regulates operation of the EPF Ponds and storage of drummed hazardous waste on the waste storage pad. Some of the drummed hazardous waste is "mixed waste" in that it contains both RCRA hazardous waste and low concentrations of uranium. This waste must remain stored on-site until a facility for treatment and/or disposal is permitted. The remaining drummed waste is periodically shipped off-site for appropriate disposal.

**Honeywell Metropolis Works**

**Application for Renewal of Source Material License SUB-526**

**Section 4 – Environmental Protection**

The Illinois Environmental Protection Agency has issued a Title V Clean Air Act Permit to Honeywell, which expires on July 14, 2008.

## 5. Special Processes

### **5.1. Proprietary Information**

Portions of the UF<sub>6</sub> conversion process are considered proprietary. Safety, Health, and Environmental data and methods are not considered proprietary.

### **5.2. Process Vents – Radioactive and Hazardous Chemical Controls**

Pollution control devices are operated where the gases could contain significant quantities of uranium and/or hazardous chemicals. Radioactive release limits and controls are listed in Section 4.1 (Effluent Control System). In addition, each gaseous emission source is operated in accordance with an individual air permit obtained from the Illinois Environmental Protection Agency. Honeywell shall implement operational and administrative controls as needed to shut down and repair the emission source to prevent violation of the established limits.

### **5.3. Occupational Safety**

#### 5.3.1. Chemical Safety

Honeywell has implemented a Process Safety Management (PSM) System that complies with the requirements of 29 CFR 1910.119 (Ref. 1). Action levels and corrective actions for employee exposure to radioactive materials are shown in Section 3 (Radiation Protection). Industrial hygiene sampling and monitoring is performed as required by OSHA regulations. Current Threshold Limit Values (TLVs) and Permissible Exposure Limits (PELs), or other appropriate physical hazard limits, as established in 29 CFR 1910 (Ref. 2), shall be utilized to control employee exposure. Evaluations are performed for new chemicals or physical hazards that may be introduced into the workplace due to new or revised processes.

Honeywell has implemented a Hazard Communication Program consistent with 29 CFR 1910.1200 (Ref. 3) to ensure employee awareness of chemical hazards in the plant. Annual physical examinations and medical monitoring are provided for exposed employees. Additionally, urinary fluoride monitoring is provided for employees working in the fluorine products areas of the plant to document fluoride exposure in these non-uranium manufacturing areas.

#### 5.3.2. Fire Protection System

The fire protection system includes the following:

- A 250,000 gallon above-ground reservoir dedicated to the fire protection system. Fire pump suction can also be taken directly from the process water system through appropriate valving.
- A pump operating at approximately 1000 gpm at 100 psig.
- A jockey pump that maintains static pressure in the fire mains and compensates for minor pressure variations due to leaks in the system.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**Section 5 – Special Processes**

Water for fire protection in the Administration Building, Laboratory and Sampling Plant is provided from the process water system. These buildings are not connected to the primary plant fire system.

The Liquefied Petroleum Gas (Propane) Unit tanks are provided with deluge protection. Hose houses and standpipes are located in various areas of the plant.

Honeywell also maintains appropriate supplies of portable fire extinguishers. These are distributed and maintained in accordance with NFPA 10, "Portable Fire Extinguishers" (Ref. 4).

**5.4. Standby Utilities**

Standby utilities shall be maintained to facilitate a safe and orderly shutdown of the process units during a complete power failure. The following sections describe the standby utilities.

**5.4.1. Standby Electrical Power**

Standby electrical power is provided from a diesel-powered electrical generator that delivers 480 volts AC. In the event that electrical power is interrupted, the standby generator automatically starts and comes to a "standby" mode. The standby power is then distributed, as required, to pre-defined loads, including specified lighting, water supply, instrumentation, and pollution control devices.

**5.4.2. Liquid Nitrogen System**

A nitrogen system provides pressure for pneumatic instrumentation and an inert gas for purging process piping and vessels. During a loss of air pressure, the liquid nitrogen supply source is automatically routed through a pair of ambient air vaporizers that require no external source of power. The system is completely self-sufficient and requires no external source of electrical power.

**5.5. Radioactive Waste Management**

**5.5.1. Liquid Wastes**

Liquid wastes from the facility are discharged via natural drainage into the Ohio River. In the event of a spill that could significantly increase effluent water concentrations of uranium or other chemicals, controls such as diking or neutralization shall be utilized to minimize contamination of the liquid effluent.

The Environmental Protection Facility (EPF) removes chemical pollutants (primarily fluoride) from the main plant effluent stream. The facility process uses calcium hydroxide to precipitate fluorides as insoluble calcium fluoride. The precipitated "synthetic" calcium fluoride solids are separated, recovered, and recycled to any commercial organization that can use synthetic  $\text{CaF}_2$ . The average concentration of uranium in calcium fluoride released to each commercial organization, for any consecutive 12-month period, shall not exceed 212 pCi/gram.

Honeywell Metropolis Works

Application for Renewal of Source Material License SUB-526

Section 5 – Special Processes

The effluent from the EPF is combined with other treated wastewater and then mixed with uncontaminated cooling water, stormwater, and the effluent from the uranium settling ponds before being discharged into the Ohio River.

Wastewater that is known to contain uranium, and does not contain significant quantities of fluorides, is routed to settling ponds. The effluent is then mixed with the remainder of the facility effluent before discharging into the Ohio River.

5.5.2. Solid Wastes

Radioactive solid wastes are generated from routine operation of the UF<sub>6</sub> conversion facility. The routine wastes generated consist primarily of contaminated filters, paper, wood, plastic, cloth, rubber, and scrap metal. These materials are normally shipped to a licensed disposal site or processor.

The solid bed materials and filter fines radioactive wastes generated in the fluorination process consist primarily of inorganic insoluble material (calcium fluoride) that contains small quantities of natural uranium as UF<sub>4</sub>. These materials shall be appropriately packaged, stored in designated areas, and then either shipped to a licensed off-site facility for recovery of contained uranium or disposed of at a radioactive waste disposal site.

Contaminated pieces of process equipment, piping, and other metals being discarded may be decontaminated or shipped to a licensed disposal site or licensed disposal broker for processing and disposal. Other items that may be recyclable or useful to members of the public, such as scrap wood, may be released if residual radioactivity levels are less than the release criteria established in Table 2 of Regulatory Guide 8.30 (Ref. 4).

**5.6. References**

1. Title 29, Code of Federal Regulations, Part 1910.119, *Process Safety Management*, U.S. Department of Labor, Occupational Safety and Health Administration, as amended
2. Title 29, Code of Federal Regulations, Part 1910, *Occupational Safety and Health Standards*, U.S. Department of Labor, Occupational Safety and Health Administration, as amended
3. Title 29, Code of Federal Regulations, Part 1910.1200, *Hazard Communication*, U.S. Department of Labor, Occupational Safety and Health Administration, as amended
4. NFPA 10, *Portable Fire Extinguishers*, National Fire Protection Association, 2002

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**6. Decommissioning Plan**

At the end of the plant life, the facility and site shall be decontaminated and decommissioned in accordance with an NRC-approved Decommissioning Plan. Financial Assurance for decommissioning cost has been provided through a Honeywell International Inc. Corporate self-guarantee, dated June 2, 2000. The self-guarantee financial assurance mechanism was approved by the NRC as License Amendment No. 17 on May 26, 1994 and updated in License Amendment No. 14, May 24, 2001. The Honeywell International Inc. Financial Assurance self-guarantee was last updated April 5, 2002.

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**7. Emergency Response/Radiological Contingency Plan**

**7.1. Emergency Response Plan**

The Metropolis Works Emergency Response Plan/Radiological Contingency Plan was revised on June 1, 2004 (Ref. 1). The Metropolis Works Emergency Response Plan has since been updated to incorporate pertinent material from, and allow elimination of, the Radiological Contingency Plan. These changes do not reduce the effectiveness of the plan. Therefore, Honeywell requests that the Honeywell's USNRC license SUB-526 be amended to incorporate by reference the revised Emergency Response Plan, dated May 27, 2005 (Ref 2). The revised Emergency Response Plan will be implemented following NRC approval of Honeywell's Source Material License Renewal Application.

**7.2. References**

1. Metropolis Works Emergency Response Plan/Radiological Contingency Plan, July 2004
2. Metropolis Works Emergency Response Plan, May 2005

**Honeywell Metropolis Works**  
**Application for Renewal of Source Material License SUB-526**

**8. Other Submittals**

**8.1. Interim Compensatory Measures**

Honeywell's Interim Compensatory Measures have been incorporated by reference into this license renewal application. Because the Interim Compensatory Measures contain Safeguards Information, they have been provided to the NRC under separate cover.

**8.2. Safety Demonstration Report**

The Safety Demonstration Report, submitted separately, contains safety information and descriptive information that demonstrates Honeywell's adherence to the conditions established in the Source Materials License Renewal Application. The Safety Demonstration Report is not part of the license application, but provides information that supports the license application.

The Safety Demonstration Report is a living document that will be updated as necessary to reflect changes to the facility or procedures. Written procedures shall establish the methods for updating the Safety Demonstration Report. Any change to the Safety Demonstration Report that may reduce the level of safety shall require prior approval of the USNRC. Changes that do not reduce the level of safety may be made without prior USNRC approval.