

**Responsible Care in North
America**

**Air Product Korea
J. F. Maharg**

Responsible Care

Thank you for inviting me to share an Air Products and Chemicals view of the Responsible Care initiative. Air Products is approximately a five billion dollar in sales, global chemical company, supplying chemical intermediates and industrial gases to the market place. We operate in over 40 countries world wide including two chemical plants here in Korea and 15 gas sites through out Asia. Our Korean subsidiaries consist of Korean Industry Gas, Korean Specialty Gas, Air Products Korea, and HYT, an electronics gas equipment supplier.

In 1988, the Chemical Manufacturers Association (CMA) launched Responsible Care® to respond to public concerns about the manufacture and use of chemicals. Through Responsible Care, member companies are committed to support a continuing effort to improve the industry's responsible management of chemicals. Responsible Care is an obligation of membership in CMA, and requires member companies to:

Improve performance in health, safety and environmental quality;

- **The Guiding Principles** -- the philosophy of Responsible Care -- outline each member company's commitment to environmental, health and safety responsibility in managing chemicals.
- Six Codes of Management Practices, which are the heart of Responsible Care, outline practices that cover virtually aspect of chemical manufacturing, transporting and handling.

Listen and respond to public concerns;

- CMA's National Public Advisory Panel, a group of environmental, health and safety thought leaders, provide the public perspective on Responsible Care and its activities.
- The Public Outreach Program targets key audiences, and develops means for helping member companies open dialogues with them.

Assist each other to achieve optimum performance;

- Executive Leadership Groups, where the key executives from member companies meet regularly to share experiences and review progress in Responsible Care;
- Mutual Assistance Network, which focuses on direct networking between companies at different levels to assist in implementation all the elements of Responsible Care

And report their progress to the public:

- Member Self Evaluations provide a measure of member company progress and are a valuable management tool;
- Performance Measures are being developed or exist already to show through external measures the progress CMA member companies are making in carrying out Responsible Care;
- Management Systems Verification will assist in member company improvement by including appropriate third party involvement.

Responsible Care at Air Products

As a member of CMA, Air Products is committed to the Guiding Principles of Responsible Care:

- To recognize and respond to community concerns about chemicals and our operations.
- To develop and produce chemicals that can be manufactured, transported, used, and disposed of safely.
- To make health, safety and environmental considerations a priority in our planning for all existing and new products and processes.
- To report promptly to officials, employees, customers and the public, information on chemicals related health or environmental hazards and to recommend protective measures.
- To counsel customers on the safe use, transportation and disposal of chemical products.
- To operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public.
- To extend knowledge by conducting or supporting research on the health, safety and environmental effects of our products, processes and waste materials.
- To work with others to resolve problems created by past handling and disposal of hazardous substances.
- To participate with government and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment.
- To promote the principles and practices of Responsible Care by sharing experiences and offering assistance to others who produce, handle, use, transport or dispose of chemicals.

Responsible Care® in the US

Responsible Care® is the most ambitious initiative ever undertaken in any manufacturing industry in the United States.

The members of Chemical Manufacturers Association, who make up 90% of the productive capacity of basic chemicals in the United States, recognized that the industry's "perception" problem as indicated above was really a performance problem. The fact is, the industry is not performing at the high levels the public expects and demands. The chemical industry needs to perform better. To take action. To involve the public.

And that's why CMA adopted Responsible Care®. And that's why we're committed to Responsible Care® as a company, and as an industry.

Responsible Care® has two key goals:

- First, to help the industry continuously improve its health, safety, and environmental performance to safely manage chemicals in every aspect of our operations.
- Second, to respond to public concerns about the safe management of chemicals.

There are ten key elements that make up the framework of Responsible Care®.

Guiding Principles - The Guiding Principles embody the underlying philosophy of Responsible Care®.

Codes of Management Practices - The Codes are the heart of the initiative. They are statements of expected performance developed by the industry, for the industry. The six Codes cover every aspect of chemical operations.

- Community Awareness and Emergency Response (CAER) Code places its emphasis on community outreach and dialogue and maintaining an effective emergency response program within the community.
- Pollution Prevention Code – this Code commits us to safely managing and reducing our wastes.
- Process Safety Code – designed to prevent incidents and accidental chemical release at plant sites.
- Distribution Code – focuses on reducing employee and public risks from the shipment of chemicals by addressing the transportation, storage, handling, transfer, and repackaging of chemicals.
- Employee Health and Safety Code – protects employees and visitors at plant sites
- Product Stewardship Code – manages chemicals from initial research through recycling and disposal.

Public Advisory Panel - The Public Advisory Panel provides the public comment so critical to the success of the Responsible Care® initiative.

Member Self-Evaluations - Each company is required to submit a self-evaluation once a year on their progress in implementing each of the Codes. Member companies use self-evaluations as management tools to evaluate their progress in implementing each Code. Air Products reached 100% implementation of all Responsible Care® Codes in 1998.

Measures of Performance - Each of the six Codes of Management Practices address key areas for industry improvement. A key to improving is measuring, so CMA is establishing performance measures for each of the codes.

Management Systems Verification - In 1996, the CMA Board adopted a management systems verification (MSV) process to assist members and Partners in continuously improving their management and implementation of Responsible Care®. The process gives those companies who participate an outside view of their company's progress, and helps demonstrate the integrity of the initiative to key audiences, including employees, local communities, public officials, and others. Air Products conducted an "MSV" of its Responsible Care® process in 1998.

Executive Leadership Groups - Leadership's commitment to the Responsible Care® initiative does not end with a signature on the Guiding Principles. It begins there. The executives of our industry, including Hap Wagner, meet at least once a year at Regional Executive Leadership Groups to share progress reports, keep the momentum going, and most important, help one another.

Mutual Assistance - A key to the Responsible Care® initiative is Mutual Assistance. Member companies must help each other in implementing all the elements of Responsible Care®.

Partnership Program - CMA's Responsible Care® Partnership Program is a vehicle for non-CMA member companies and allied associations to participate directly in the Responsible Care® process. Full implementation of Responsible Care® will necessarily involve our customers and suppliers. The Partnership Program allows those companies and associations closely associated with CMA member companies to join in Responsible Care's® commitment to continuously improving health, safety, and environmental performance.

Obligation of Membership - Participation in Responsible Care® is an obligation of CMA membership. This requires the Executive Contact of each member company to commit to the initiative by:

- Signing the Guiding Principles;
- Communicating that commitment to all employees;
- Instructing management to make good-faith efforts to implement the Codes of Management Practices, participate in the self-evaluation process, and meet the expectations of the initiative; and
- Using the Responsible Care® name and logo in accordance with CMA's guidelines.

Commitment and participation from everyone is vital to the success of the initiative. We recognize the need to manage chemicals responsibly and to continue to improve chemical industry practices. Responsible Care® is a long-term initiative that intends to improve industry's performance.

Only through improved performance will the public recognize that our industry is responsive and responsible.

Responsible Care®

Management Systems Verification

Air Products' commitment to Responsible Care was put to the test in January, 1998. That's when we became the 28th company in the Chemical Manufacturers Association and the 1st company in the industrial gas industry to complete a Management Systems Verification (or MSV) of our Responsible Care and EH&S programs.

What is MSV?

It's a voluntary process developed by members of CMA to help companies improve their Responsible Care programs. Companies volunteering for a MSV agree to a review of their environmental, health and safety management systems by a Verification Team. This Team, comprised of trained industry peers and members of the public, conducts extensive interviews of company personnel at multiple company facilities. During these interviews, the Verification Team identifies company strengths and opportunities for improvement.

Air Products' MSV

Seven verifiers -- two industry peers, four community representatives, and one facilitator -- conducted Air Products' MSV. They began their four-day evaluation at our corporate headquarters in Trexlertown, Pennsylvania with interviews of Senior Management and other employees who impact our Responsible Care efforts. The interviews continued at our Gases and Equipment Group facility in Convent, Louisiana and wrapped up at our Chemicals Group facility in Pasadena, Texas. The verifiers also contacted customers, suppliers, distributors and contractors of Air Products to validate the responses given during the interviews.

MSV Results

The Verification Team cited 18 features of Air Products' environmental, health and safety programs as strengths, including:

- A broad, deep management commitment to environmental, health, and safety excellence.
- Effective environmental, health, and safety management systems.
- The integration of EH&S concerns into Air Products' businesses.
- Business managers who value the Responsible Care ethic.
- Effective processes to address process and product risk.

*Air Products
external website.*

These strengths were validated by the third parties contacted during the MSV. Opportunities for improvement identified during the MSV primarily focused on increasing internal communications. Improvements are being made in these areas

SIX AIR PRODUCTS PRACTICES CITED AS EXAMPLES OF EXCELLENCE IN IMPLEMENTING RESPONSIBLE CARE®

LEHIGH VALLEY, Pa. (January 18, 1999) — Six practices developed by Air Products and Chemicals, Inc. (NYSE:APD) have been cited by the Chemical Manufacturers Association (CMA) as examples of excellence in implementing its Responsible Care initiative which is designed to improve environmental, health and safety performance.

These practices are among 34 documented in a recent CMA publication entitled *Examples of Excellence in the Chemical Industry*. They were observed at companies volunteering for a Management Systems Verification (MSV) of their Responsible Care activities. Last year, a team of industry peers and members of the public completed an MSV at Air Products. It is the only industrial gas company to have done so.

Air Products was cited for its:

- accident predictive technique process which keeps safety awareness high while plant employees identify, document and correct potentially unsafe acts and conditions before a near miss or accident occurs;
- employee involvement and empowerment systems throughout all levels of the organization;
- systems for assessing and reducing process risks at new and existing facilities;
- environmental, health and safety goal setting process that involves employees and community advisory panels;
- issue management system for identifying and monitoring environmental, health and safety developments at the state and federal levels;
- involvement of contract carriers in identifying product stewardship issues at customer facilities to improve the safe handling of its products.

The six practices were developed in keeping with the company's goal of being an industry leader in safety, health and environmental performance. Because of that commitment, Air Products is among the safest of companies in the chemical industry. During its fiscal year 1998, the company achieved its lowest recordable injury frequency rate ever—0.93 per 200,000 hours worked. Its lost-time injury frequency rate, a measure of more serious injuries, was just 0.14 per 200,000 hours worked. Air Products has also significantly reduced emissions to the environment, down 14 percent in 1997 from the prior year, and down almost 75 percent since reporting began in 1987.

Air Products and Chemicals, Inc. is a global industrial gas and chemical company with annual revenues approaching \$5 billion, operations in over 30 countries and 17,000 employees.

Corporate headquarters are in eastern Pennsylvania's Lehigh Valley, near Allentown.

For additional information on the six Air Products practices, contact Julie O'Brien at (610) 481-4364, or visit the company's World Wide Web site at www.airproducts.com.

Examples of Responsible Care ® Practices at Air Products

Included in the hand out are several examples of how Air Products practices the codes of Responsible Care and a section on responsibility within job functions in your hand outs. The note to make here is that all areas within a company are effected by Responsible Care. This is one reason why management must be committed to the initiative and communicate those requirements to all employees. When we had our audit, our frontline folks were interviewed. They had to display a knowledge of the initiative and how it affected their job responsibilities.

If you see one that you would like to discuss, please bring it up at the end of my talk as a question. I am sure other folks will have similar interests. I have picked one that is very important to the whole process, which is Product Stewardship as it brings all the other codes into play. I

CAER

Louisiana Employees Participate in Community Outreach

Employees from our St. Gabriel and Convent, Louisiana sites recently participated in the "ChemPals Expo" - a hands-on chemistry fair designed to teach students about the importance of chemicals in everyday life. The expo is sponsored by the Iberville Parish Public School System and the Iberville Chemical Council. Local students were treated to demonstrations of products from local industry and a special appearance from NASA astronaut Michael Anderson. Catherine Watts, a student at St. John's High School in Plaquemine, summed up the students' reaction, "You get to touch a lot of things and see a lot of things," Watts said. "It's a lot easier to learn like this

Hometown Emergency Response Training

Emergencies involving railcars containing hazardous materials can pose one of the most difficult problems for emergency responders. Not to mention the fact that railcar emergencies pose the greatest threat to personnel and the environment because of the amount of hazardous material that they carry. On June 1, 1998. The DuPont CAER Car arrived at the Hometown facility and training was conducted for all Hometown ER Team members as well as employees that load and unload hazardous materials on-site. Additionally, local Fire and Rescue and Emergency Management personnel were invited to attend the training.

As a part of Dupont's Responsible Care commitment, the CAER Car travels all over the United States providing critical training for customers and local community responders on how to mitigate rail emergencies. The three car unit includes a 180 foot long classroom car and a modified tank car that can simulate the various types of emergencies and equipment that may be encountered during those emergencies. The training is both classroom and hands-on with the emphasis on hands-on. Subjects

covered were; Incident Command, BLEVEs, installation of the "C" Kit, approaching the incident and PPE.

The instructors, John Smood and Ed Kosey, had a combined 70 years experience which was evident during their enthusiastic presentations. Both instructors commented favorably on the professionalism and training of the Hometown Emergency Responders that they worked with..

Schuylkill County Emergency Manager, Art Kaplan attended the training and thanked Air Products for providing the agency with the opportunity to attend this caliber of training. "This training will assist us in understanding the mechanics and terminology used in rail emergencies and thus allow us to perform better should a rail emergency occur in the county." Art said.

ER Team members felt that the training was well worth the time and effort. Certificates of completion were awarded to participating ER Team Members.

South Brunswick CAP homepage

Air Products has 18 Community Advisory Panels (CAPs) across the U.S., but only one CAP has a homepage, South Brunswick, NJ.

Travelers Rest Plant Donates \$1,000 to Poinsett Park Project

Travelers Rest has donated \$1,000 to help fund the development of a local park.

According to plant manager Steve Pekarsky, the donation to the Poinsett Park Project was the plant's way of giving something back to the community.

St. Gabriel CAERs

For many years, the employees of the St. Gabriel facility have been going door to door, and meeting with their neighbors face to face. The purpose of their visits is three-fold - to answer questions, to provide emergency information, and to gather information for use by local emergency responders. The plant also supports local CAER activities such as "Safety Town" where a gym in Plaquemine is turned into a little town with streets, road signs, lights, and railroad crossings. Over a three week period, first and second graders ride bigwheels around the town and learn about street safety. Wally Wise Guy, a costumed turtle, attends the event to teach the children how to shelter-in-place in case of a chemical emergency.

Pollution Prevention

Geismar, LA

Although construction of the new DNT plant in Geismar, Louisiana has not been completed, the plant has already signed on to the state's Environmental Leadership Pollution Prevention Program. This voluntary program encourages Louisiana facilities to reduce their waste and emissions beyond the levels required by environmental regulations.

Resinas, Mexico

The Air Products Resinas emulsion facility in San Juan Del Rio, Queretaro, Mexico volunteered for a safety and environmental audit conducted by independent consultants for PROFEPA, the Mexican Federal Secretariat of Environmental Protection. In April, the Governor of Queretaro and Federal and local officials awarded the plant the "Certificate of Clean Industry," the first awarded to any industry in the State.

Recovered Methyl Isobutyl Ketone

When Rogelio Quezada became a Foreman at the Los Angeles plant, he came up with the idea of drying and reusing recovered MIBK in place of new MIBK. By implementing this idea, Rogelio has saved the LA plant approximately \$300,000 per year in waste disposal and production costs.

Distribution

First Delivery Training

Don Ragland (Pensacola) and Frank Mujica (Pasadena) have developed and implemented a process for qualifying customers to handle our hazardous chemical products. As part of this process, Don and Frank accompany the first shipment to every new customer site to ensure it is handled properly.

Chem Distribution Outreach to Sheridan School

Members of Chemicals Distribution (Susan Leith, Mary Beth Myford, Connie Seyfried, Glenn Acker, and Bill Kernan) visit Sheridan Elementary School each year to teaching the fourth grade students about transportation and transportation safety. The children play a game called Banana Land, created by the group, to learn basic information on ships, trains, and trucks as well as safety considerations associated with each transportation mode. Our carriers have even gotten involved in the project, with Jevic and Chemical Leayman donating gifts and prizes for the students.

Transportation of HF

A GEG/Corporate joint transportation risk analysis of HF shipments to Hometown showed that the safest way to ship the product was by tank trucks. Based on this analysis, APCI got its HF vendor to switch to tank truck shipment by highway.

Process Safety

Wichita Reduces Ammonia Inventory

The new Risk Management Program rule from the EPA will require 49 Air Products facilities to identify potential accident scenarios involving certain chemicals. While evaluating the accident scenarios as Wichita, plant personnel determined that the quantity of ammonia on-site could be reduced, therefore reducing the potential risk of an accident with off-site consequences.

Employee Health & Safety

Summer Safety in South Carolina

Two of our plants in South Carolina, Piedmont and Travelers Rest, have a cool way to emphasize safety in the summer. As part of their Summer Safety Program, two employees are paired up each day to do a one hour walk around the plant. During this time, the employees conduct inspections, look for unsafe conditions, and talk to other employees about safety. In addition, every week an employee brings in a cool treat for the plant, like ice cream or water ice. These short breaks are a chance for people to cool off, as well as refocus on being safe.

Product Stewardship

Product Safety Training

The Product Stewardship Department in GEG has seen a resurgence in safety training

over the past year. Two members of the Product Stewardship team, Bob Martrich and Carmen Gugliemini, conduct multiple training sessions per month for customers such as Motorola, HP and NASA. In fact, some of these companies now require that their employees take Air Products' product safety training.

New Uses for Old Waste

The bottoms stream from PACM manufacturing at Wichita, KS used to be disposed of, but new uses have been developed for the material and now it is being sold and used as a product.

HF Cylinder Safety

When employees in GEG identified a potential for overpressure of HF cylinders in long term storage, they not only addressed the problem internally, they also sent a mailing all customers from the past 15 years to warn them of the potential problem.

Responsible Care ®

and Your Job

Responsible Care is the umbrella over all of our EH&S, Product Stewardship and Distribution Safety activities. It is involved in every stage of the life cycles of our products, and since we're all working to support that production in some way, we're all involved in Responsible Care.

Responsible Care in R&D

When we're researching or developing new products and processes, we practice Responsible Care by:

- Developing "green" products (those with reduced environmental impact) for our customers
- Developing safe and environmentally friendly processes
- Following safe work practices and using appropriate safety equipment in the lab
- Properly disposing of waste materials
- Recycling solvents
- Providing accurate chemical, physical, and toxicological properties data for our MSDS
- Improving process yields to minimize by-product and waste formation
- Gathering information for and participating in risk reviews
- Participating in safety meeting
- Working directly with customers, at their facilities or ours, to show them how to use our products safely as well as for maximizing performance
- Using the computer and Email to record and transmit data to minimize unnecessary paper use
- Telling our friends and neighbors about the chemical industry and Responsible Care

Responsible Care in Engineering

Like in R&D, when we're developing or modifying processes, we practice Responsible Care by:

- Evaluating environmental, health and safety impacts of new processes and changes to processes through hazard reviews
- Designing inherently safe processes, and safe equipment
- Executing source control projects to stop wastes from being generated so they do not have to be disposed
- Developing procedures to safely operate equipment

Responsible Care in Manufacturing

Responsible Care has the most impact in manufacturing. We practice Responsible Care in manufacturing by:

- Operating our facilities in a safe and environmentally responsible manner
- Reaching out to our local communities to talk about our operations and their concerns
- Being prepared in the event of an emergency

- Helping our local emergency responders and communities be prepared for emergencies
- Following our safety rules and requirements
- Ensuring contractors follow safety rules too
- Doing maintenance on our equipment so that it runs safely and properly
- Reporting safety and environmental incidents, so they can be investigated and corrective action taken
- Conducting required training so that everyone can do their job safely
- Gathering information for and participating in risk reviews
- Selecting storage vessels and packaging materials to prevent chemical leaks during storage and transport
- Telling our friends and neighbors about the chemical industry and Responsible Care

Responsible Care in Distribution

Getting our products safely from our facilities to our customers is the focus of the Distribution Code of Responsible Care. We practice Responsible Care in distribution by:

- Reviewing the safety of the routes and containers used to ship our products
- Ensuring loading and unloading procedures are available and followed
- Reaching out to carriers, distributors, warehouses and contractors so that they know about our products, and we know how they're handling them
- Making information about our products available to emergency responders in the event of an emergency
- Investigating distribution incidents and implementing corrective actions
- Telling our friends and neighbors about the chemical industry and Responsible Care

Responsible Care in our Businesses

Whether you're in sales, marketing, customer service or product management, you're practicing Responsible Care. Here are some of those practices:

- Providing customers with product safety information like MSDS
- Responding to customers questions about the safety and environmental impacts of our products
- Following up with customers to find out if they're using our products safely
- Conducting product risk reviews to identify the risks of our products, and taking actions to minimize them
- Reaching out to distributors, tollers, and others who handle our products to make sure they're informed
- Demanding that our suppliers provide us with the safety information we need to handle their products properly
- Telling our friends and neighbors about the chemical industry and Responsible Care

Responsible Care in Every Job

While the examples given above are fairly specific to the jobs listed, everyone practices Responsible Care by:

- Being as safe as possible at work, on the road, and at home
- Learning about and following safety and emergency procedures
- Recycling in the office and at home
- Telling our friends and neighbors about the chemical industry and Responsible Care

Responsible Care - Product Stewardship

Unlike the other codes of Responsible Care, which deal mainly with manufacturing and transporting chemical products, the Product Stewardship Code covers a product's entire life cycle. Product Stewardship is not a new concept to the chemical industry. For years it has provided Material Safety Data Sheets (MSDS), warning labels, and information on handling, storage, and use of its products. Many companies have worked closely with their customers on safe handling and use of their products, especially if the product was recognized as having unique hazards.

The Product Stewardship Code, however, takes companies further. In addition to providing information required by regulations, companies will now systematically review products and their uses, to be sure that all information necessary for safe handling, use and disposal of the product is known and communicated.

Companies will also systematically review each step in the product life cycle for every product family to see if additional actions can be taken to reduce further the possibility of an accident or injury.

Product stewardship requires that a producer understand all the hazards and risks associated with his products. During a product's manufacture, we try to prevent exposures to employees by using good engineering controls at our plants. We assure that our employees use the proper personal protective equipment to protect against unexpected exposures.

We ship our products in appropriate packaging materials, assuring that leaks are minimized in an accident. We use only certified transportation companies to ship our products from plants to warehouses to customers.

Product stewardship demands that we understand how our customers use our chemical products. We want to work with our customers to prevent exposures of our chemical products during use. We can learn a lot from our customers about how our products are used. We want to know if customers are having difficulties handling our products safely so we can improve recommended practices.

Finally, we want to assure that customers are disposing of unused products or containers in a responsible fashion. For example, we are willing to work with customers to identify approved waste disposal sites or drum recyclers.

The key element of Product Stewardship is the requirement that companies systematically review products and their uses, to be sure that all information necessary for design, development, marketing, safe handling, transportation, use, and disposal of the product is known and communicated.

We tell the users of our products what the recommended safe handling practices are. Generally we communicate this basic information in on our labels and MSDSs; we present supplementary information in product brochures. We also will be spending more formal time with customers discussing EHS issues and learning any specific questions or concerns they have.

During these discussions we will also work together with our customers to assure that safe handling practices are fully implemented.

Companies will also systematically review each step in the product life cycle for every product family to see if additional actions can be taken to reduce further the possibility of an accident or injury.

As a result of Product Stewardship, we will provide EHS support as part of our ongoing business practice. The EHS information in MSDS's and on labels will continue to be current and accurate. We will provide helpful, supplementary information, when appropriate, in newsletters, safe handling bulletins, and personal visits. We will be increasingly knowledgeable of how our products impact your industry's regulatory obligations.

For example, Air Products communicated new information to customers about the hazards of Epilink 660 and 700 and recommended additional personal protective equipment when we learned of these issues. We made sure the MSDSs and labels for these products were in the native language of the end users.

Reviewing customer product handling, containment and work place ventilation practices should be on going. Advice and assistance to our customers is a Responsible Care practice. Our customers are expected to use products with reasonable care for the environment and safety and health of their employees. It is our responsibility to assure that sound engineering and product handling practices are in place.

Our sales, marketing, and technical service personnel will be prepared to discuss EHS issues with you during all visits to your facilities. Be aware that you have an opportunity to raise questions about any EHS aspect of our products during any of these visits.

The discussions may be as straightforward as reviewing updates to MSDS's or changes to personal protective equipment recommendations. We might not be able to answer every question on-the-spot, but Air Product's customer contact personnel can access functional experts in many areas to address a whole host of concerns.

As you might expect, providing this level of Product Stewardship service is an add-on to existing product services, requires specialized skills, and has obligated us to add new resources.

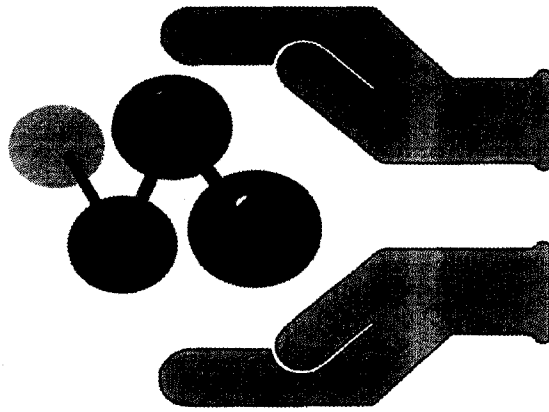
As a Responsible Care member, we expect our customers to follow reasonable Safety, Health and Environmental practices. Meeting regulations at a minimum and providing for the the protection of people and the environment. Air Products will provide recommendations and when appropriate training on an on going basis to our customers to assist them.

When Air Products provides equipment or tanks at a customers facility, it will meet APCI standard design criteria which meets or exceeds all regulatory requirements. Our customers are valuable to us but this does not exceed the requirements for Safety, Health and Environmental protections for our customer's employee's and surrounding communities. We will assist our customers in their responsibilities but if they decide not to meet reasonable standards or practices, then APCI will has the obligation under our Corporate standards and as a Responsible Care member not to do business with this customer.

Is all the effort directed at Product Stewardship worthwhile? The answer is a resounding, "Yes!" Customers will see several direct benefits immediately. Suppliers will

demonstrate an increased willingness to work directly with you to address all EHS issues. The quality and quantity of relevant EHS information will increase as product risk reviews are carried out. This improved EHS information, incorporated in your training programs, will assure your employees of the safest possible working environment. Air Products recognizes the value of these efforts, is committed to implement Product Stewardship completely, and is allocating the necessary resources. It's clear Product Stewardship will increase our understanding of product hazards, uses and disposal requirements. Product Stewardship also has business value, for many reasons already discussed. Product Stewardship will be one factor in enhancing customer relationships. Customers will incorporate a suppliers ability to provide product stewardship information in their purchasing decisions. Product Stewardship will assist our ability to manage liability. Product Stewardship will enhance our perception by the public.

Responsible Care®



**James Maharg
Chemicals Group
Air Products Asia, Inc.**

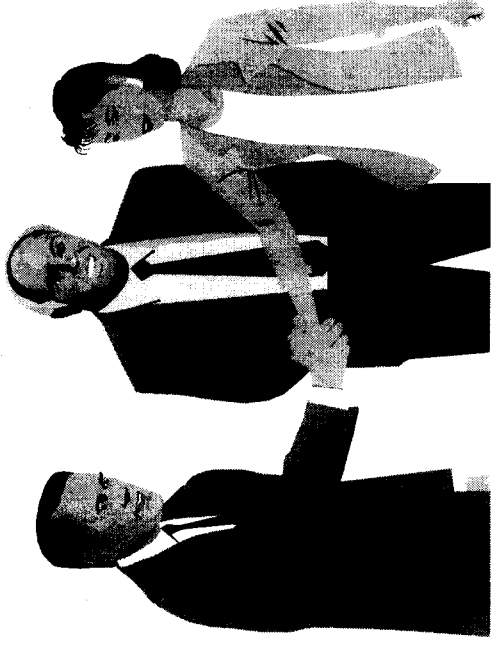
This Presentation Will Discuss

- **Responsible Care as a component of the US Chemicals Manufacturing Association.**
- **Requirements for complying with the CMA initiative.**
- **How Air Products complies with the requirements and examples**
- **CMA's Management System Verification**
- **Product Stewardship**

Responsible Care® is

A CMA requirement

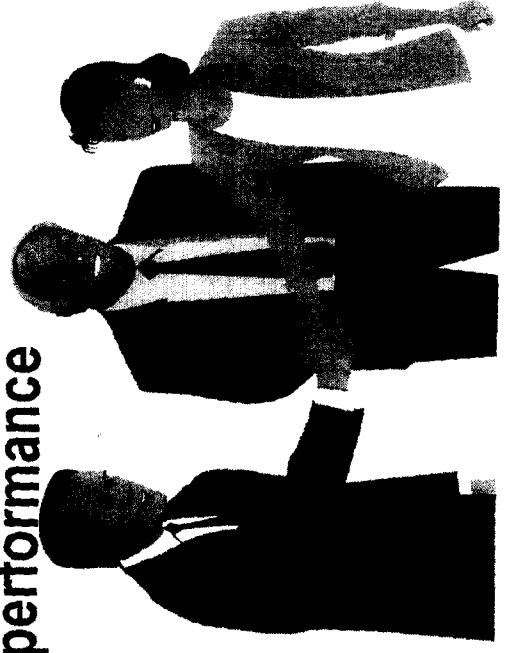
- **The CMA began the Responsible Care® initiative in 1988.**
- **CMA members are required to participate in the initiative as a requirement for continued membership in the association.**



Responsible Care®

CMA's minimum compliance requirements
are:

- Improve the health, safety and environmental performance of the industry
- Listen and respond to public concerns
- Assist each other in the industry and those associated with the industry to achieve optimum performance
- Report progress to the Public



Responsible Care® is

A Public Commitment to

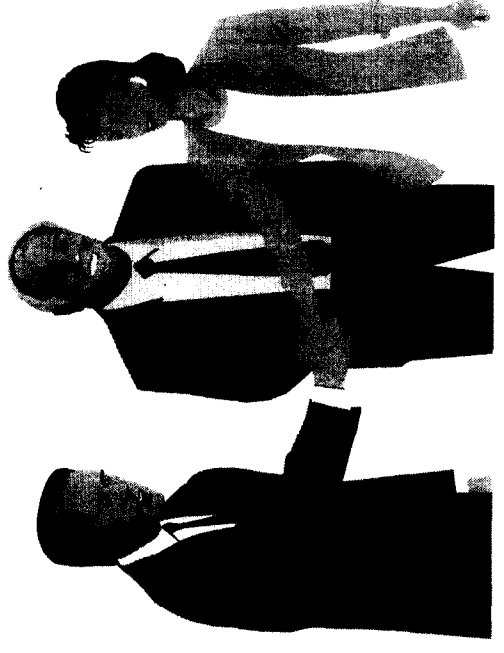
- Continuously improve the health, safety, and environmental performance of the chemical industry
- Respond better to public concerns about chemical products and operations
- Members of the CMA, who account for Over 90% of the productive capacity of the chemical industry, acknowledge a public perception issue and support the initiative



Responsible Care®

10 key elements

- Guiding Principles
- Codes of Management Practices
- Public Advisory Panel
- Member Self Evaluations
- Measures of Performances
- Management Systems Verifications
- Executive Leadership Groups
- Mutual Assistance
- Partnership Programs
- Obligations of Membership

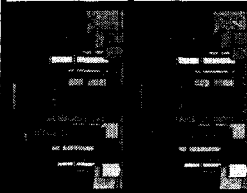
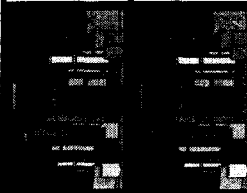
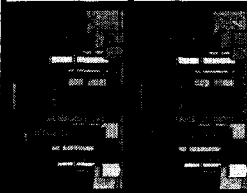
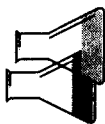












The Six Codes of Responsible Care®

CODES

PRODUCT LIFE CYCLE

Design Develop Manufacture Transport Sell Use Dispose

	Design	Develop	Manufacture	Transport	Sell	Use	Dispose
Community Awareness Emergency Response							
Process Safety							
Employee Health Safety							
Pollution Prevention							
Distribution							
Product Stewardship							

Responsible Care[®] at Air Products

As a member of CMA, Air Products is committed to the Guiding Principles of Responsible Care:

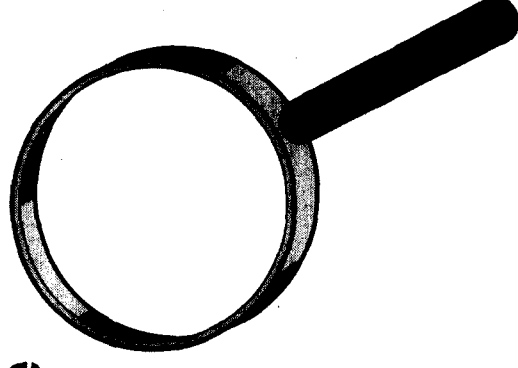
- **To recognize and respond to community concerns about chemicals and our operations.**
- **To develop and produce chemicals that can be manufactured, transported, used, and disposed of safely.**
- **To make health, safety and environmental considerations a priority in our planning for all existing and new products and processes.**
- **To report promptly to officials, employees, customers and the public, information on chemicals related health or environmental hazards and to recommend protective measures.**
- **To counsel customers on the safe use, transportation and disposal of chemical products.**

Responsible Care® at Air Products (continued)

- To operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public.
- To extend knowledge by conducting or supporting research on the health, safety and environmental effects of our products, processes and waste materials.
- To work with others to resolve problems created by past handling and disposal of hazardous substances.
- To participate with government and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment.
- To promote the principles and practices of Responsible Care by sharing experiences and offering assistance to others who produce, handle, use, transport or dispose of chemicals.

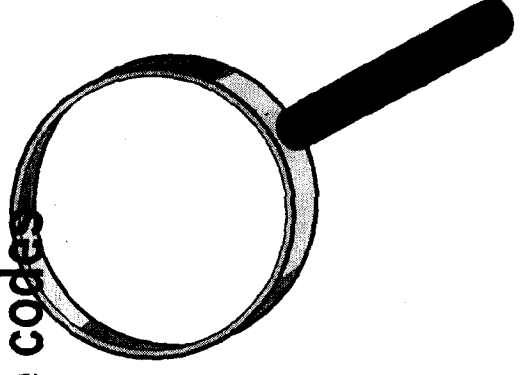
CMA's Management Systems Verification Program

- **Voluntary process developed by CMA members to assist one another**
- **Designed to assist in improving safety, health and environmental performance of the industry.**
- **Air Products was the 28 chemical company the 1st industrial gas producer to participate.**



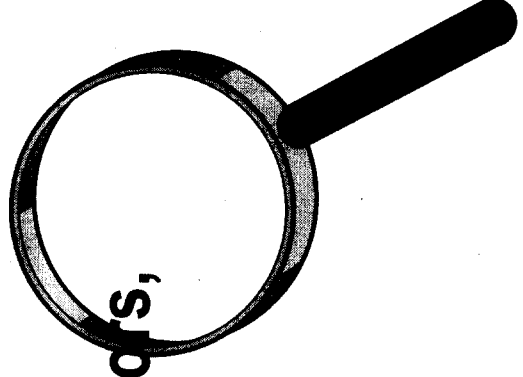
CMA's Management Systems Verification Program_(continued)

- **Air Products met all the CMA criteria with six areas identified as industry models of excellence.**
- **Air Products is 100% in compliance with codes in North America and very close in all other global locations.**
- **At APK, we are about 90% in compliance to the codes and have a goal to be 100% by FY 01**



CMA's Management Systems Verification Process

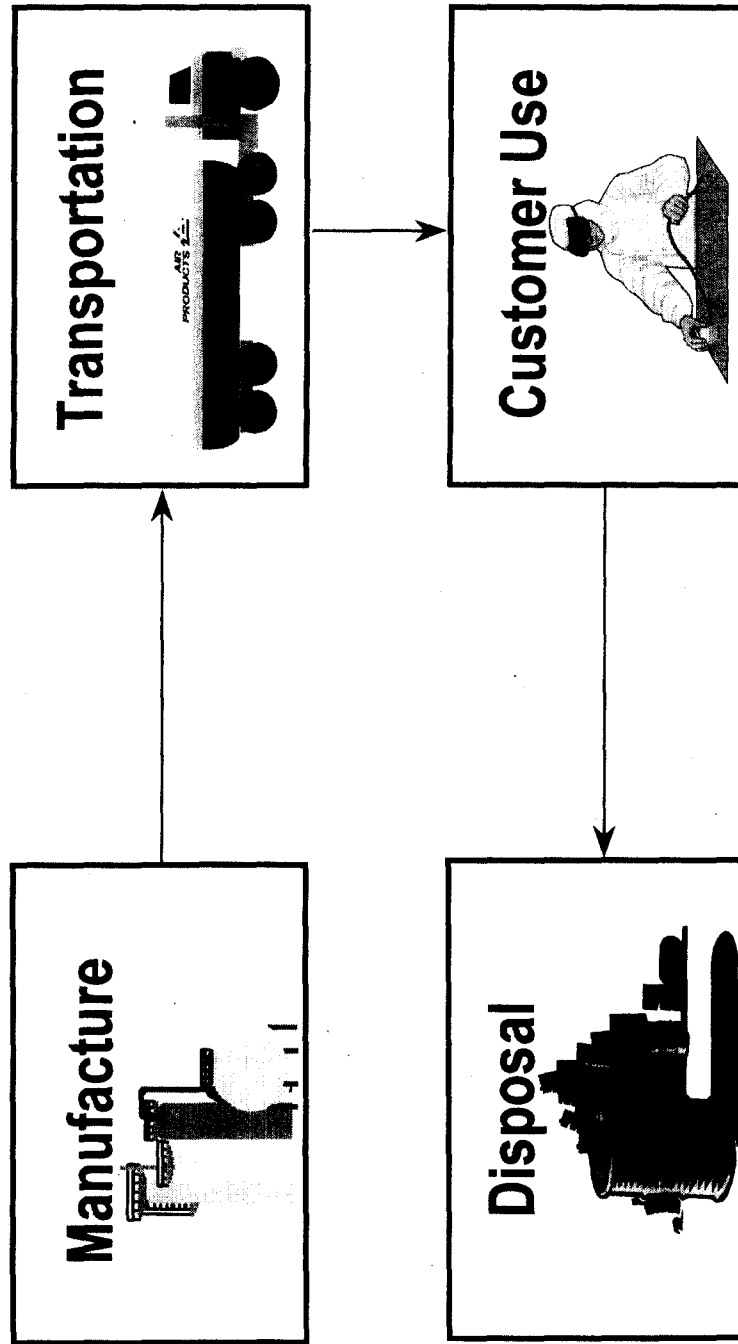
- **The process consisted of:**
 - **Seven independent inspectors**
 - Two industrial peers
 - Four community representatives
 - One facilitator
- **Interviews were carried out with random manufacturers, suppliers, contractors, distributors, customers and community members**



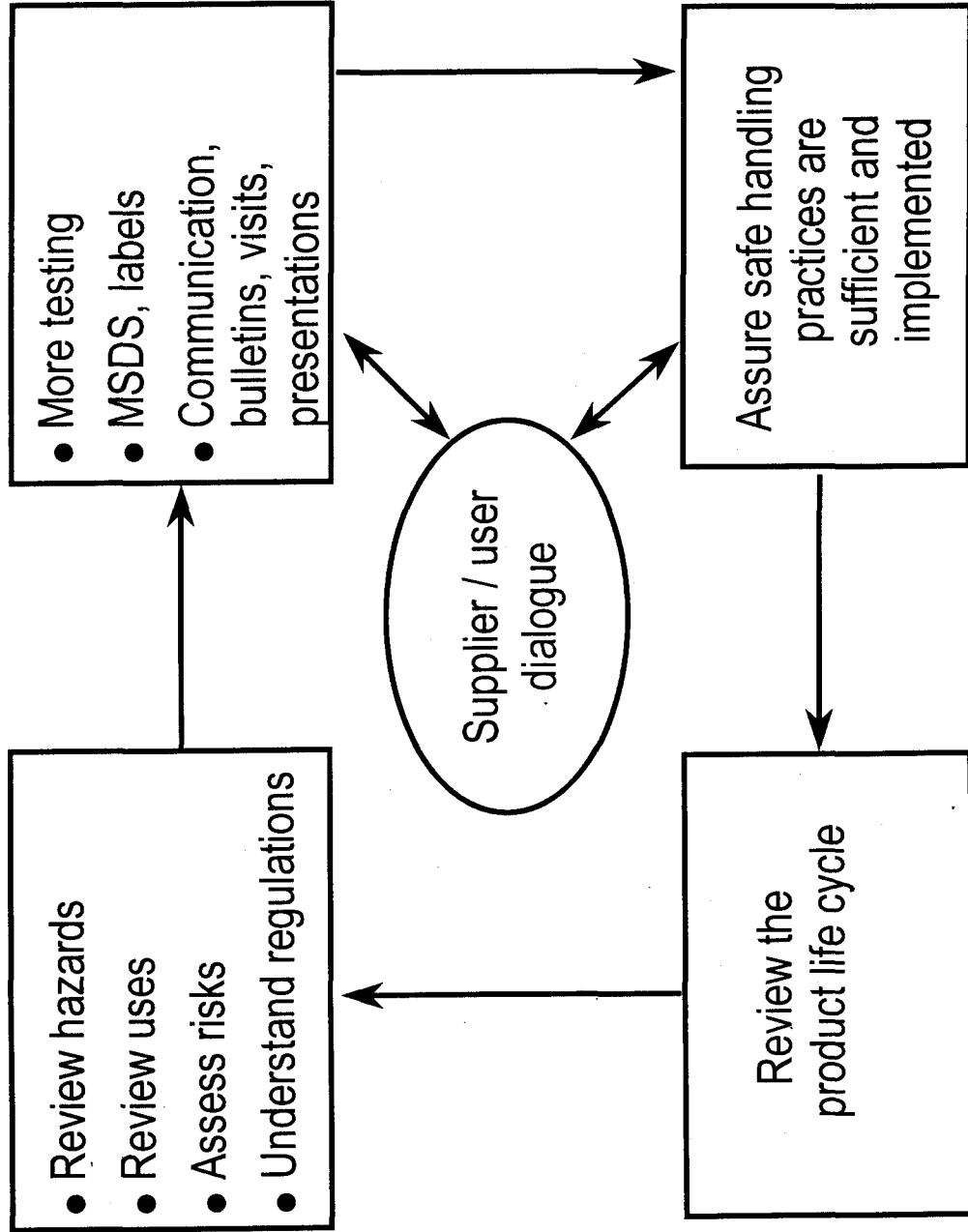
Responsible Care® In Practice

- **Examples have been provided hand outs of Responsible Care in practice at Air Products.**
- **As you can see all of the codes are represented with examples.**
- **Air Products considered this a way of doing business**
- **Product Stewardship**

Product Stewardship - Product Life Cycle

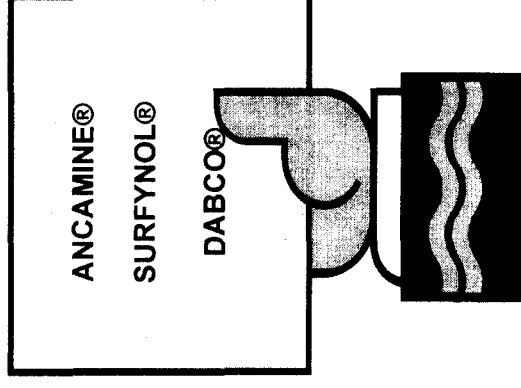


The Product Stewardship Process



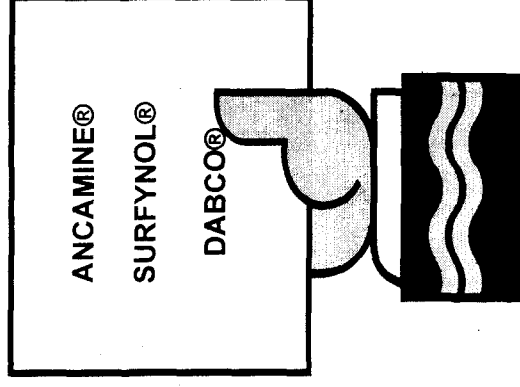
To Implement Product Stewardship at Customers, We Will

- Provide EHS support as part of our ongoing business
- Provide supplementary information in newsletters, bulletins, and personal visits
- Expand our knowledge of how our products impact your industry's regulatory obligations
- Make available trained personnel to discuss EHS issues



To Implement Product Stewardship at Customers, We Will

- Examples are:
 - Review of product containment practices and make recommendations.
 - Review work place ventilation for products with TLV exposure limits per MSDS information.
 - Offer PPE and MSDS training to customers.
 - If we provide equipment or tanks, the design must meet APCI engineering standards and regulatory requirements.



Customers Have Product Stewardship Obligations

- **Provide employees most current EHS information**
- **Train employees and contractors for unloading, storage, handling, use, and disposal**
- **Communicate EHS incidents and concerns with suppliers**

Product Stewardship Helps Customers

- **Increased willingness of suppliers to address EHS issues**
- **Increased understanding of product hazards, uses, and disposal**
- **Better preparation for discussion with OSHA or EPA**
- **Improved customer relationships**
- **Enhanced liability management**



Responsible Care®

- Air Products is not unique in the US Chemical Industry, we are one of many performing at an increasing high level.
- Cost is always a concern but in compliance with the codes and accepted practices, cost will be lowered and additional business
- Additional information can be found on Air Products and the CMA web sites. (www.airproducts.com,)

