

Monsanto *Background*

SAFETY AT MONSANTO

Safety is Monsanto's number one priority. An important component of the Monsanto Pledge, the company's environmental, health and safety platform, is to ensure no Monsanto operation poses any undue risk to employees or the community.

Manufacturing locations have had safety programs and goals since the 1940s. In 1977, the company established worldwide environmental, safety and health guidelines. In 1984, following the tragedy in Bhopal, India, a high hazard materials (HHM) task force was formed to study the handling, manufacturing, storage and transport of certain priority chemicals. An audit program was later implemented which resulted in many important changes. Monsanto opened its plants to the public and made its safety data sheets publicly available prior to any community right to know legislation from Congress.

Today, the evolution continues with a wide range of state-of-the-art programs designed to protect workers:

Pre-Construction Review

Plans for the construction of new Monsanto plants or processes are subjected to several safety reviews. The purpose is to make certain that various national safety codes and construction requirements are met as well as Monsanto's own, often more stringent, standards. These reviews sometimes lead to construction changes or process modifications to reduce risk.

Safety Audits and Reviews

Review of safety programs at Monsanto's operations is a continuous process. A rigorous compliance auditing program is in place which focuses on a site's adherence to both regulatory and Monsanto requirements. The audits review training, equipment inspection schedules, safety procedures and overall management of the site's effort.

The audits not only review compliance but also analyze the management systems intended to generate and sustain that compliance.

(more)

Safety audits point out changes which can be made to the process or control systems at a site to make them safer. For instance:

- Monsanto stresses the use of "redundant features" in its safety system so that if one control mechanism fails, another will activate.
- Many of Monsanto's existing processes have been converted to computer controls. In addition to quality and yield improvements, these systems have many safety advantages. They allow operators to better control the process and better analyze data which allows quicker response to abnormalities.
- Where appropriate, electrically operated safety controls on certain processes are "hard wired" -- that is, interlocks that sense abnormal conditions are connected independently from the computer controls.

The company also regularly inspects its storage tanks to ensure their integrity. Acoustical emission testing, developed by Monsanto, is used to detect any weaknesses or cracks in a tank before they become problems by emitting and reading sound waves.

Monsanto inspectors also check annually the safety procedures of major non-company warehouses and terminals that handle large volumes of our materials.

High Hazard Materials (HHM) Audits

The HHM program focuses on identification and management of risks associated with the handling of certain hazardous chemicals. Guidelines are developed for each material which incorporate state-of-the-art technology for handling and processing the chemicals. The program also includes auditing, inventory control and emergency response reviews. The audits have resulted in many changes in the way Monsanto makes, uses, stores and transports these high hazard chemicals.

Emergency Response Training

Monsanto employees who work with hazardous materials are given detailed training on how to do so safely and how to respond to an emergency. New employees receive this training before they begin work, and safety information is regularly reviewed with existing employees. Operating manuals, available at our manufacturing processes, provide information on potential hazards and safety procedures. These manuals are updated as new information is developed.

(more)

At larger Monsanto plants, a number of employees are given special training to become in-house fire fighters and emergency rescue personnel. They drill regularly. In addition, the company maintains teams of employees schooled in firefighting, spill containment and cleanup, and emergency medical procedures. They are on 24-hour-a-day call, both to react to problems at our plants and to help other companies or local responders handle chemical accidents.

Protecting Worker Health

A team of more than 100 physicians, toxicologists and epidemiologists, and another 50 industrial hygienists work closely with management to protect employee health. This includes ensuring chemical exposure levels are below government and Monsanto's own usually more rigid standards. Worker health protection programs at all locations are evaluated with a formal audit process. A computerized system stores employee data and provides rapid access to data about potential health and environmental effects.

Contractor Safety

Monsanto has a program to improve the safety performance of contract workers. This program pre-qualifies contractors by reviewing their safety performance record and other criteria before the selection and approval processes. The program applies rigorous safety standards to our contractors and guests. By 1993, the program was in place companywide and worldwide.

By monitoring and managing all Monsanto's guests and contractors, the company has placed itself in a leadership role in the industry. The industry's injury recordable rate for construction, maintenance and service contractors is 11.6 cases per 100 workers, and Monsanto's contractor rate was 2.8 in 1993, down from 2.96 in 1992. The company will continue to strive for improvement on its way toward fulfilling its safety vision of an injury and incident-free workplace for its employees and all its guests.

Responsible Care

In 1989, Monsanto Company joined with other major chemical companies to establish the Chemical Manufacturers Association's Responsible Care initiative. Responsible Care is the most ambitious environmental, safety and health commitment ever undertaken by a manufacturing industry in the United States. Monsanto extended this commitment worldwide and is one of the leading companies encouraging the adoption of this type of initiative throughout the world.

(more)

Many of the Responsible Care guiding principles involve the safe manufacture, transportation, use and disposal of chemicals. Many of Monsanto's programs to fulfill elements of the Monsanto Pledge, also fulfill goals set by Responsible Care.

For example, a safety provision of the Monsanto Pledge includes safe transportation of chemicals from our facilities to our customers. This is also a Responsible Care guideline.

Monsanto developed a procedure for certain high hazard materials to ensure the safest shipment possible. The company reduced the number of transporters; trained the drivers of trucks transporting those chemicals about properties of the product and emergency response procedures; installed satellite transponders in the cabs of each vehicle by which the location of each tanktruck may be pinpointed to within one-tenth of a mile -- a great help to emergency responders; with customers, designed low bed trailers to provide greater stability of the shipment containers during transport; and are now working to ensure the tanktrucks follow the safest routes possible.

Community Communications

To ensure its communities, particularly around its operations, are well informed about its processes, products and even releases to the environment, Monsanto conducts a variety of programs including: plant tours for emergency response officials and often for members of the public; coordinated emergency response training between the plant and outside agencies; open houses; community meetings; and the newest route of public access, community advisory committees.

Voluntary Protection Program

On February 4, 1992, Monsanto announced a commitment to participate in the Occupational Safety and Health Administration's Voluntary Protection Program (VPP). Further, it will strive for "Star" status, the highest level of recognition given by the agency for outstanding safety performance, for all its U.S. facilities within five years. To earn Star status, each facility must undergo a rigorous OSHA audit that shows its safety programs and practices reach various levels of excellence and its accident rate is below the rest of the industry. Approximately 30 Monsanto operating facilities in the U.S. are striving to qualify for VPP certification. Although facilities in other world areas are not subject to OSHA review, they are applying similar standards.

(more)

Measurements of Success

These programs are meaningless unless they result in fewer injuries. The record demonstrates that these programs are doing a good job. The chemical industry continues to be a leader among the major industries monitored by the National Safety Council and Monsanto's occupational injury and illness rate is among the lowest in the chemical industry.

In 1994 worldwide Monsanto and its U.S.-based subsidiaries had 1.64 cases of work-related injury or illness per 100 workers. According to the latest Bureau of Labor Statistics (BLS) publication, this same measure for the chemical industry as a whole was 6.0 cases per 100 workers. For U.S. manufacturing, the BLS figure for injuries and illness was 12.5 cases per 100 workers.

Safety can never be taken for granted. Monsanto believes its programs are on the right track and will stop at nothing less than an injury free environment.

-o0o-

07/95

For more information, contact:
Monsanto Environmental Communications
(314) 694-2652

DSW 135867

STLCOPCB4035839