Monsanto

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FROM
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DATE: August 30, 1995 cc:

SUBJ: **REVISION OF PLEDGE GUIDELINES #2 AND #3**

REF:

TO: All Holders of Pledge Guidelines

The attached documents reflect minor revisions to Pledge Guidelines #2 and #3 to incorporate changes approved by the Manufacturing Leadership Council. In support of the corporate goal to reduce spill incidence by 50 percent by 1996, the Council has approved the addition of a program element to Guideline #3 to read as follows:

> All locations will develop and implement a system to reduce, track and investigate accidental releases and initiate continuous improvement actions to achieve zero effect from these releases.

Please review your site activities to assure that they act to support this requirement, and adjust your efforts as needed to comply.

The Release Reduction Analysis Technical Team under Phil Kirk (Carondelet) is working toward the inauguration of an improved tracking and reporting database that should offer assistance in your work on this goal. The team is planning training in September on the database, spill investigation techniques, and internal/external reporting procedures.

M. A. Pierle

DSW 108091

MONSANTO PLEDGE GUIDELINE

#3

PROCESS SAFETY AND EMERGENCY RESPONSE

The company will research, develop, design and operate processes in a manner that protects the health and safety of employees, site visitors, contractors and neighbors. Beyond compliance with appropriate governmental regulations, the company will apply such standards and programs as necessary to manage operational risks at a level that ensures its continuing right to operate. All company sites will complement this effort with strategies to mitigate risk in the event of an incident, including site emergency response and support of comparable efforts within the community.

KEY RESULTS

- Sustain no major losses from catastrophic incidents.
- Retain the company's preferred risk status with insurers.
- Reduce by 50 percent the company's 1991 level of accidental releases of hazardous materials from production operations by the end of 1996.
- Incur no major injuries to employees or neighbors from a plant process incident.

PROGRAM

3.1 Process Development and Design

Every new process will be characterized in a document (e.g., *Tentative Process, Red Book, Process for Engineering Design*) that describes all materials, equipment and processing conditions, including known safe limits. Design and engineering will be based on such documentation for a new process and on existing operations if there is already an established process. The basis for design of all major operating components and critical safety systems will be recorded in a design manual. Any new or expanded facility will be reviewed for its safety impact on the community.

3.2 Technical and Engineering Standards

The engineering organizations will maintain such standards as necessary to allow safe and effective designs. Designs should incorporate relevant consensus standards as appropriate. Additionally, the Safety and Property Protection (S&PP) staff shall provide supplemental guidance through Design Guides, Tecfacts and related documents (e.g., *Guidance Notes* as published by S&PP, Europe/Africa).

3.3 Project Reviews

All projects (new processes, products or facilities) will undergo safety reviews to ensure adherence to applicable internal and external standards as well as to examine the design for potential hazards. Major projects will undergo both a pre-project and a design stage review; new processes will undergo a research stage review. Appropriate participation from the Environmental, Health and Safety (ESH) staff is required for projects managed by an operating unit's engineering organization. All major projects should also have a pre-startup review to confirm that all recommendations from prior reviews and hazard analyses (if performed) have been addressed.

3.4 High Hazardous Materials (HHM) Program

High Hazardous Materials (HHM) are those materials, that if accidentally released would pose the greatest threat to neighbors and employees. A higher level of controls and operating standards are applied to these materials. The major elements of the HHM program include the use of Hazard and Operational Study (HAZOPs), the preparation of a guideline document for each HHM, and audits once every two years.

3.5 Operational Safety Management

Safe process operations on a continuing basis are maintained by each site by the company's commitment to a series of fundamental practices. Included are the following:

3.5.1 Operating Procedures

Written procedures are kept current for all processes. They cover necessary operating instructions, safe handling of materials, safe operating limits, and responses to deviations, including emergency steps.

3.5.2 Operator Training

All production and maintenance operators must undergo training to acquire the necessary skills and knowledge for safe execution of their responsibilities. Operators must adequately demonstrate their competence before they assume their positions; training must be periodically reinforced.

3.5.3 Contractor Safety

The company will provide contract employees with any required occupational health surveillance, and safety and industrial hygiene indoctrination in accordance with *Other Guideline No. 6, Contractor/ Guest Environmental, Health and Safety Guideline*. Sites will meet the requirements of the contractor environmental, health and safety guideline.

3.5.4 Management Of Change

Any change in equipment, process or procedures that goes beyond what is recognized as the safe operating regime shall be governed by a "management-of-change" protocol to ensure proper safety review, authorization, training and implementation. This protocol also will apply to capital projects on all changes made subsequent to the previous safety review. A separate protocol will apply to changes in the line organization.

3.5.5 Critical System Inspections

A program involving inspection, replacement and/or testing of critical equipment or safety systems must be maintained in order to ensure reliable operations and system integrity.

3.5.6 In-Depth Process Audits

At intervals not to exceed three years, all operations shall undergo intensive audits to examine areas of change, non-routine occurrences, new information and other unusual factors to ensure that no new hazards have been introduced and that appropriate safety margins have been maintained.

3.5.7 Incident Investigations

All significant incidents that threatened or could have threatened process integrity or the well-being of involved personnel will be investigated by a specially appointed team who will establish causes and make recommendations to prevent recurrence.

3.5.8 Spill Prevention Activities

All locations will develop and implement a system to reduce, track and investigate accidental releases and initiate continuous improvement actions to achieve zero effect from these releases.

3.6 Emergency Response

Effective emergency response includes not only those actions to mitigate and control the incident within the fenceline but also includes actions that address the potential impact on the community. Consequently, a site emergency response program should include the following elements:

3.6.1 Emergency Procedures

Written emergency procedures will be available and kept current for each process, as well as for the total site. They will cover actions at each stage of the emergency including shutdown and evacuation. All employees must be trained in these procedures.

Emergency Drills:
Site managers will test and audit their emergency plan annually and revise it as necessary. At intervals determined by the site, the emergency drill will include the active involvement of community resources associated with emergency management.

3.6.2 Community Preparedness

The site managers will review with appropriate community officials the nature and extent of potential incidents from the site and provide the community with assistance in emergency planning if requested.

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3.7 Measurements

The following indicators will be used to measure progress against this guideline:

- Annual progress reports on S&PP Compliance Audits, the HHM Report of the Monsanto Manufacturing Council (MMC) once every two years and site In-Depth Process Safety Audit Reports.
- Annual cost of property and business interruption insurance.
- Monthly reports on SARA Title III, Section 304, reportable releases against goals.
- S&PP quarterly property-loss reports.

3.8 Coordinator

Where clarification is required, the following coordinator should be contacted:

D. B. Redington, Director, Regulatory Management
A3NA (314) 694-6503

A. A. (Tony) Thompson, Safety and Property Protection
A2SA (314) 694-6029

3.9 Definitions

ESH: Environment, Safety and Health.

HAZOP: Hazard and Operability Study, a hazard identification technique.

HHM: Highly hazardous material (a Monsanto designation for substances posing an acute risk).

MMC: Manufacturing Management Council.

SARA: Superfund Amendments and Reauthorization Act.

(Revised and approved by the Environmental Policy Committee, October 22, 1992. Section 3.5.8 added by Manufacturing Leadership Council, September 27, 1994)