

WASTE MANAGEMENT

Design and operate facilities to minimize in waste streams the routine and accidental release of pollutants to the environment. Over the long term, work toward the ultimate goal of zero releases to all media. For wastes that remain, use waste disposal practices that achieve compliance with regulations and which achieve acceptable environmental impact, no health effects, minimum long-term liability and cost effectiveness. Continue waste management programs that establish Monsanto control of disposal and that favor alternatives to land disposal.

PROGRAM

Except as modified by item 5. below, this guideline applies to all worldwide Monsanto facilities.

1. Release Reduction

a) Routine Releases

Each operating unit will establish a program which targets multi-media reduction of releases in waste streams to the environment, establishing numerical reduction goals. Units will report progress annually.

In the selection of alternatives for pollutant release reduction from processes, the following order of preference will be used:

- Reduction of source generation through process design and modification.
- Reuse, recycle or co-product sale.
- Incineration or other treatment to reduce the volume or toxicity of pollutant streams.
- Responsible disposal of treatment residuals or wastes not amenable to the above.

The operating unit programs will integrate into release reduction plans a corporate goal to achieve a 90% reduction, worldwide, of 1987 SARA Section 313 reported air emissions by the end of 1992.

Releases to air, water or the land which continue in spite of reductions will be assessed as applicable through the programs outlined in Guideline #1 and in #2 (below) to assure no danger to health and the environment.

b) Accidental Releases

Accidental releases that are reportable to regulatory or response agencies, or that involve evacuation, significant community response or media coverage, will also be reported internally together with an action plan to prevent recurrence. The operating units will establish programs as necessary to eliminate such occurrences, working toward a goal of zero events. Progress against this goal will be reported annually through the Manufacturing Management Council to the ESH Committee.

c) Waste Databases

Operating units will develop and utilize multi-media databases on releases to the environment to enable reporting against operating unit goals and against the 90% SARA Section 313 air emission reduction target. A waste-stream based U.S. database will also be maintained to facilitate external reporting and as another internal measure of release reduction progress.

2. Waste Management

Landfill of "acutely hazardous" wastes¹ and "incinerables"² will not be practiced. Fixation of particularly mobile, persistent or bio-accumulative wastes will be accomplished wherever warranted and feasible, or where required by regulations.

Land disposed wastes which are not subjected to management as "hazardous" waste will be evaluated for present and future environmental risk and managed

¹As listed in 40 CFR 261.33(e), plus any mixtures containing greater than 5%.
²Wastes with a heat of combustion of greater than 6,000 BTU/#.

CONTINUOUS IMPROVEMENT

- **EXPANDED GUIDELINE FORMAT**

1. **KEY RESULTS**

2. **MEASUREMENT**

3. **DEFINITIONS**

4. **REFERENCES**

- **RISK ASSESSMENT/MANAGEMENT OF ALL STAGES OF A PRODUCT'S LIFE**

- **RISK REDUCTION**

EXPOSURES/RELEASES

HAZARD/EFFECT

2. **Waste Management** (continued)

in an appropriate manner which has been reviewed by the unit Director of Environmental Operations. (To be completed by 12/31/90.)

Waste contractors will be subject to contracting and assessment requirements (See Guideline #5). The number of off-site hazardous waste incinerators used will be minimized. In the U.S., off-site Class 1 landfills used will be approved by the ESH Committee and limited in number.

Medical wastes generated at Monsanto locations will be disposed of via incineration. Assurance of destruction will be obtained via manifest, or other equivalent approaches if manifest is not available. (For the purposes of Guideline #5, outside processors used will be considered Secondary Services.)

An evergreen record of both on-site and commercial waste treatment, storage and disposal sites will be maintained by each plant.

Monsanto will retain ownership of all property known to contain wastes with the potential to cause injury to health or the environment unless otherwise approved by the ESH committee. The use of company facilities to treat, store or dispose of non-Monsanto wastes is normally discouraged. Any such use or joint ventures for waste management must be reviewed and approved by the ESH Committee.

3. **Deepwell Injection Program**

Monsanto will continue to operate its deepwell disposal systems in a sound manner protective of public health and the environment. Each plant using on-site or off-site deepwell disposal will have and maintain contingency plans for exiting deepwells. There will be no new use of deepwells except as approved by the ESH Committee on an exception basis. All new project appropriation requests will be based on the economics of disposal technology other than deepwells.

4. **Corrective and Remedial Action**

When on-site abandoned waste or groundwater contamination is discovered, appropriate assessment and corrective action will be carried out. Any necessary projects will be scheduled to expedite remediation in a planned, orderly process.

When we become aware of possible involvement in "Superfund" sites, we will actively participate in generator group efforts to achieve settlement and

expedite cleanup. At sites where we are a/the major contributor, we will seek a leadership role when appropriate to facilitate resolution. The operating units will cooperate to establish responsibility for sites where several units contributed wastes. A goal of the corporation is to resolve as soon as reasonably possible our liability and remedial plans for sites where we have major responsibility.

We intend a lessened legalistic approach to site cleanup negotiations. Where our responsibility is fairly established, we will not delay cleanup unnecessarily by legal, yet negatively perceived litigious steps. We will pursue fair legislation and regulations on the general issues in the public arena, but minimizing legal risk will not be the determining factor in site-specific decisions.

5) **Ex-U.S. locations**

The above program elements and timing will be implemented at ex-U.S. locations, but with modifications as necessary to reflect local limitations, restraints to compliance, and the extent of Monsanto's operating control. Status and direction of local programs will be reviewed in planned environmental audits of these facilities.

(Revised and Approved by Environmental, Safety & Health Committee April 25, 1989.)

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