EPA Risk Management Program
Questions & Answers

1Q. What is the EPA's RMP rule?

1A. Under EPA regulations, all owners and operators of chemical plants and facilities have a general duty to identify hazards that may result from accidental releases; to design and maintain safe facilities; and to minimize the consequences of releases when they occur.

In support of this general duty, a Risk Management Program (RMP) is required of owners/operators whose facilities use or produce certain hazardous materials — including 77 acutely toxic chemicals, 63 flammable gasses and volatile flammable liquids, and some high explosive substances — at or above EPA-specified threshold levels. RMPs for covered processes must be submitted to a central location, and be made available to the public, and to local and state planning agencies.

2Q. What must be included in a facility's Risk Management Program?

2A. The facility (or "stationary source" in EPA parlance) must describe its prevention and emergency response approach; its regulated substances; both its worst-case release scenario(s) and alternative release scenario(s), including any administrative controls applied to limit the release quantity; its general prevention program and chemical-specific prevention steps; its five year accident history; its emergency response program; and planned changes to improve safety.

It's important to understand: Both the "worst-case" and the "alternative release" scenario(s) are designed to be used as planning tools for emergency preparedness. The models are not intended to suggest that such releases are likely to occur. Rather, they're part of a comprehensive effort to ensure the safe operation of the plant or facility, and to protect the well-being of the surrounding community.

3Q. Most of Solutia's plants have been operating for decades. Why are we hearing so much about RMPs and "worst-case" scenarios today?

3A. The RMP requirement is relatively new. EPA has set a deadline of June 21, 1999 for each covered facility to submit a Risk Management Plan geared specifically to its processes and operations.

Over the years, Solutia's plants have made a concerted effort to develop and communicate emergency preparedness plans, similar to the RMP requirements. We work closely with local emergency response agencies and community advisory panels,

DSW 138196

STLCOPCB4038153

to create opportunities for open dialogue about our manufacturing processes — and to communicate the steps we take to operate our plants safely and responsibly.

4Q. What's the definition of a "worst-case" release scenario?

4A. EPA defines a "worst-case" release as the release of the largest quantity of a regulated substance from a vessel or process line failure that results in the greatest distance to an endpoint. In other words, the "worst-case" scenario is believed to represent the worst chemical release that could result from operations at the site. In general, a worst-case release is modeled as a circle, with its center at the process and with its radius equaling the distance to the endpoint concentration (i.e., the point at which hazardous levels of the material are no longer detectable.)

Depending on the processes and chemicals involved, some facilities may be required to analyze and report more than one "worst-case" scenario. In addition, the EPA stipulates that the "worst-case" scenario must conform to a number of specific assumptions (which vary by process and chemical). For example, a vessel or pipe containing a regulated toxic substance that is normally a gas at ambient temperatures, but is handled as a gas or liquid under pressure, must be assumed to release its entire contents over a ten-minute period for gasses, or instantaneously for liquids, during a worst-case event.

The "worst-case" scenario is intended to be used as a planning tool — a model that local emergency preparedness committees can use to define emergency response plans, and allocate local emergency resources.

5Q. How do you estimate how far hazardous chemicals will travel after a release?

5A. The EPA has published standardized estimates, predicting the distance a toxic cloud can travel and still be hazardous to people. In most cases, Solutia facilities will include these standard EPA estimates in their "worst-case" and "alternative release" scenarios. In some cases, we will also provide information generated by other, more sophisticated modeling techniques. Our goal — in every case — is to provide consistent, useful information that's easy for people to understand and helpful in forming emergency preparedness plans.

6Q. What are the odds of a worst-case scenario happening at any one of Solutia's sites?

6A. The probability of a worst-case scenario occurring is very remote. We take great care to design, build, operate and maintain manufacturing processes that are safe, and that have minimal impact on the environment. Our efforts have been focused on safety and prevention rather than on trying to calculate very low probabilities.

DSW 138197

STLCOPCB4038154

7Q. How are "alternative case" release scenarios defined?

7A. Any facility which is subject to RMP regulations must also choose and analyze a scenario that is more likely to occur than the worst-case release scenario. When selecting the alternative release scenario, the facility is required to consider any releases which have been documented in its five-year accident history; or failure scenarios identified through process hazard analysis or hazard reviews.

The EPA gives facilities wide latitude in describing alternative case scenarios. The agency directs owners/operators to select scenarios that are most useful for communication with the public and first responders, and for emergency response preparedness and planning. By complying with this requirement, facility owners/operators provide a vital planning tool for local emergency preparedness.

In Solutia's case, such alternative release scenarios are developed as part of a comprehensive effort to ensure the safe operation of our plants, and to minimize our impact on the environment. Although EPA regulations do not require us to do so, Solutia chooses to define the "alternative case" scenario as a realistic worst case, with realistic maximum impacts on the surrounding environment. We believe this approach permits us to do the best possible job of preparing for a catastrophic release, even if the probability of such a release is extremely low.

8Q. How many Solutia sites are covered by the RMP rule?

8A. Solutia has eight manufacturing plants which have processes or handle substances that are covered by the RMP rule: Alvin, Texas (Chocolate Bayou); Augusta, Georgia; Bridgeport, New Jersey (Delaware River); Decatur, Alabama; Pensacola, Florida; Sauget, Illinois (W. G. Krummrich); Springfield, Massachusetts (Indian Orchard); and Trenton, Michigan.

All of these plants are preparing Risk Management Plans which conform to EPA guidelines. Where applicable, our plants are cooperating with neighboring manufacturing facilities to ensure that effective, well-coordinated emergency preparedness plans are in place area wide.

9Q. What about your plants that are not covered under the RMP rule?

9A. All of Solutia's manufacturing plants, offices and other sites around the world make safety their top priority. In addition to meeting or exceeding applicable government regulations, we adhere to the tenets of the Chemical Manufacturers Association Responsible Care program. This includes a commitment to ensure that our operations and distribution systems are safe for employees, contractors, guests, communities and the environment; and that we will foster open communications with the communities where we operate.

DSW 138198

STLCOPCB4038155

As part of our overall commitment to safe and responsible operations, some Solutia sites that are not legally required to comply with the RMP rule are preparing plans to address questions and concerns that may arise as neighboring plants/facilities submit their RMP materials to the community.

10Q. What is Solutia doing to decrease the risk of a worst-case scenario?

10A. We start by designing safety into our manufacturing processes. All capital projects and acquisitions are thoroughly reviewed for safety and environmental concerns before funding is approved and construction begins. Our processes are engineered to incorporate a variety of interlocks, alarms, computerized controls, manual and automatic shut-off valves, monitors and other devices — to provide multiple layers of protection against accidental releases. (The combination and number of devices depends on the process and the properties of the chemical involved.)

In addition, we follow an environment, safety and health (ES&H) management system designed to drive continuous improvement in our manufacturing processes, engineering techniques and other critical areas of performance. Key elements of our ES&H management system include:

> Employee training programs for compliance with environmental, health and safety guidelines. (All employees are required to receive from 32 to 80 hours of safety and emergency response training annually.)

> Training in new environmental and safety regulations as they are implemented.

> Safety training programs for outside contractors.

> Environmental evaluations conducted every 24 to 36 months at each manufacturing facility, covering all aspects of external and internal environmental requirements.

> Comprehensive emergency preparedness programs, designed specifically for each facility, covering risk and hazard identification and assessment; emergency response planning and reporting; and employee training, including cooperative exercises with local emergency responders (e.g., police and fire departments).

> High Hazard Materials guidelines using engineering standards which include proper piping specifications, control systems, and audit frequencies to ensure our operations are safe.

> Employee teams on call 24 hours a day at most manufacturing facilities, ready to respond to releases or distribution incidents involving our products, and trained to help other companies or local authorities in responding to chemical emergencies.

DSW 138199

STLCOPCB4038156

11Q. Are Solutia's plants equipped to handle a worst-case scenario if it should happen?

11A. We take many steps to ensure that each plant has appropriate plans and procedures for responding to potential catastrophes. To test the adequacy of these plans, we regularly conduct disaster drills involving plant employees — and where possible, local emergency officers and members of the community.

Each drill is preceded by months of planning and coordination. A detailed, written procedure outlines the mock event, as well as objectives and contingency plans. Such drills give employees and emergency responders an opportunity to test whether employees understand emergency shut-down procedures; whether plans adequately account for people in the plant; and other critical factors for minimizing the impact of a catastrophic event. Afterwards, Solutia employees conduct debriefings, allowing participants to report observations and make suggestions for improvements.

While disaster drills and other safety measures cannot guarantee that a worst-case scenario will never occur, they do give us a valuable opportunity to check and double-check our emergency procedures. This is the best way we know to ensure that our plants — and the communities where they operate — are well prepared to minimize damage in the unlikely event of a major catastrophe.

12Q. Are you doing anything to reduce the potential for chemical spills outside the plant, during transportation?

12A. We take a number of steps to ensure that our raw materials, finished products and wastes are transported safely. Before any chemicals are shipped to or leave our plants, we conduct detailed transportation risk assessments. We consider the relative safety of the mode of transportation (rail, truck, barge); accident rates on a variety of transportation routes; population density along the routes; and the design of packaging and transportation equipment. In addition to these risk assessments, we regularly audit all transportation carriers and perform pre-trip equipment inspections. We also routinely follow inclement weather procedures.

13Q. Is it true that several of your plants are listed in the nation's top "vulnerable zones" for chemical accidents?

13A. Neither the U.S. Environmental Protection Agency nor any other federal or state regulatory agency compiles or maintains such a list.

The "vulnerable zone" concept was invented by an advocacy organization (U.S. Public Interest Research Group - USPIRG), using questionable research methodology. USPIRG began by using EPA data to estimate the amount of hazardous chemicals on site at some 7,600 facilities nationwide. The organization then drew what they call

DSW 138200

STLCOPCB4038157

"vulnerable zones" around the facilities, and published a list of states, cities and companies which had the greatest number of these self-styled "vulnerable zones."

Because several of our plants are located near other companies' chemical manufacturing sites, they appear on USPIRG's list. We believe this list is misleading and ultimately detracts from the spirit of open communication — one of the cornerstones of an effective emergency preparedness plan.

14Q. Isn't it dangerous to make information — such as hazardous substances and worst-case scenarios — widely available? What if it falls into the hands of terrorists?

14A. We think it's important to strike a balance between keeping the community informed and managing threats to national security. That's why we support the efforts of the Federal Bureau of Investigation, the Central Intelligence Agency and the Chemical Manufacturers Association to limit Internet or on-line access to the information contained in EPA RMP filings. At the local level, however, we support and encourage efforts to make RMP information easily accessible to the community.

15Q. How will the year 2000 computer issue effect the safe operations of your plants?

15A. Solutia engineers have been working to ensure that our main process control systems will function correctly when internal calendars change from 1999 to year 2000. Each Solutia plant is conducting a thorough inventory and evaluation of every device to determine if it will operate properly at the turn of the century. If the device is not fully year 2000 compliant in any way that will impact operations, we are either working with the vendor to correct it, fixing it ourselves, or replacing the device altogether. All of our plants are designed in such a way that if there is a single failure of any electronic system, it will not cause a safety or environmental incident. And for added security, we are developing contingency plans for every plant so that at a minimum we can shut down the plant safely, even if we have missed a year 2000 problem that would upset operations.

###

DSW 138201

STLCOPCB4038158