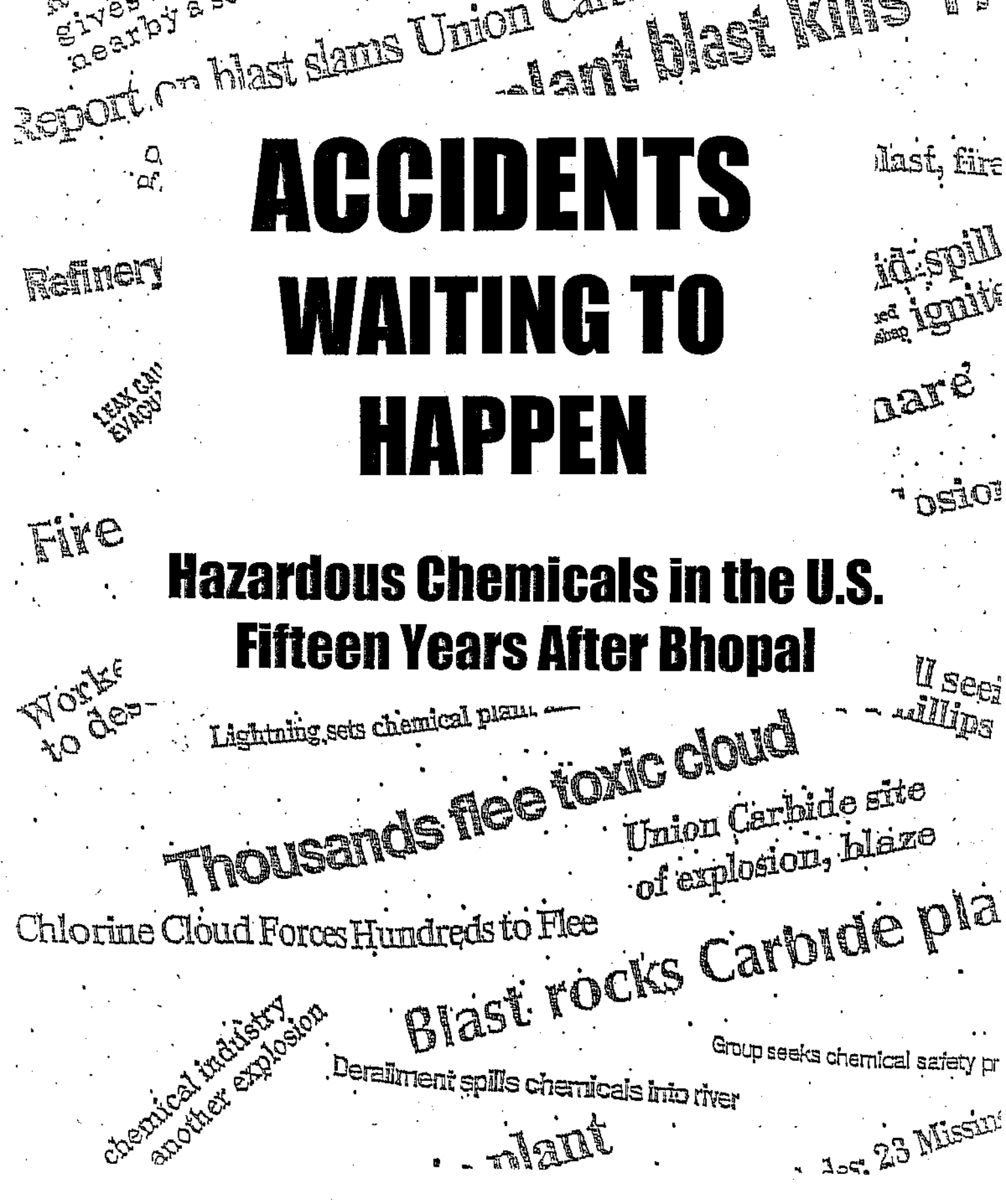
ACCIDENTS
WAITING TO
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chemical industry
another explosion

# *Accidents Waiting to Happen*

## Hazardous Chemicals in the U.S.
## Fifteen Years After Bhopal

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December 1999

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www.chemsafety.gov (for general information on chemical safety)
www.chemsafety.gov/circ (for recent listings of chemical accidents)
www.rtk.net/wcs (for information on public disclosure of worst-case accident scenarios)
www.rtk.net/ (for Risk Management Plans filed by chemical facilities)

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## Executive Summary

In the early morning hours of December 3, 1984, a Union Carbide pesticide factory in Bhopal, India, released 40 tons of methyl isocyanate, a highly toxic chemical. A dense, ground-hugging cloud passed through the sleeping city of Bhopal, exposing over 500,000 people. At least 2,000 died in the first days and 300,000 suffered injuries. On this fifteenth anniversary of the Bhopal catastrophe, this report asks: where do such chemical hazards exist in the United States and what safeguards ensure that we will not suffer our own American Bhopal?

Accidents do happen close to home, and all too frequently. A survey from the mid-1980s identified 17 accidents in the U.S. whose potential consequences could have been more severe than Bhopal (factors like wind direction and plant location prevented disastrous consequences). A recent inclusive study by the U.S. Chemical Safety Board found that **between 1987 and 1996 there were on average 60,000 commercial chemical incidents every year, killing more than 250 people each year.** These incidents include a range of events, not all of which necessarily resulted in consequences like injuries, deaths, or evacuations.

This report examines storage of extremely hazardous substances, as defined by the U.S. Environmental Protection Agency (EPA) under the Clean Air Act, Section 112(r). Facilities reported this storage as part of their Risk Management Plans, submitted to the EPA in the summer of 1999. From these reports we learned that **4,860 facilities in the U.S. each store at least 100,000 pounds of an extremely hazardous substance, or more than the amount of volatile toxic chemicals released at Bhopal** (some 90,000 pounds)**.** The potential for accidents is widespread: **every state except Vermont has at least one facility storing more than 100,000 pounds of an extremely hazardous substance.** Furthermore, **at least 100 facilities each store *more than 30 million pounds* of an extremely hazardous substance.**

Ammonia is more commonly stored in these large amounts, a characteristic of its uses as a fertilizer. This use concentrates storage in farm states: the ten **states with the highest number of facilities storing more than 100,000 pounds are Illinois, Iowa, Kansas, Nebraska, Texas, Minnesota, Indiana, North Dakota, Ohio, and California**. Over half of the facilities that store more than 100,000 pounds are in the top six states. Out of the almost 5,000 facilities storing more than 100,000 pounds of an extremely hazardous substance, 78 percent store ammonia.

For a broader look at chemical storage, we also analyzed storage data excluding ammonia. This analysis shows storage concentrated among traditional industrial states rather than farm states. The **states with the highest number of facilities storing more than 100,000 pounds of an extremely hazardous chemical *other than ammonia* are Texas, California, Louisiana, Ohio, Illinois, Pennsylvania, South Carolina, Georgia, New Jersey, Alabama, and Florida**. More than 100 facilities in the U.S. each store more than three million pounds of extremely hazardous substances other than ammonia.

This report also examines the possibility of chemical accidents related to the Year 2000 computer problem (Y2K). The federal government has done little to independently verify chemical industry Y2K readiness. Limited surveys suggest that the largest firms, especially the multinational companies, have been working to prepare for critical Y2K dates. However, experts are concerned that small and mid-sized chemical facilities may not be as aware or as able to prepare for Y2K-related problems. In fact, a recent survey of small and mid-sized chemical facilities found that **while 79 percent had begun a Y2K readiness project, 86 percent had not completed their projects. In addition, 86 percent had not coordinated emergency plans with local officials.** Senator Robert Bennett (R-UT), chair of the Senate Special Committee on the Year 2000 Technology Problem, summarized the findings by saying that these firms are not prepared for Y2K.

In the wake of Bhopal, a diverse coalition of public interest groups pushed for a greater public voice in decisions about chemical hazards. As a result, Congress reluctantly passed the Emergency Planning and Community Right to Know Act of 1986, which established the public's right-to-know about chemical storage and toxic pollution. However, the program focused largely on emergency planning (rather than accident prevention), and relied heavily on under-funded local emergency planning. Meanwhile, major accidents continued.

In 1990, environmental and labor groups won a major new chemical accident prevention program in amendments to the Clean Air Act. This program was intended to fully disclose chemical accident hazards and ensure that facilities effectively guard against an American Bhopal. This measure shifted the initial burden for assessing hazards from mostly volunteer local emergency planning committees to responsible industries. However, weak EPA regulations missed the opportunity to seriously encourage chemical facilities to use inherently safer technologies. Further, in August 1999, Congress restricted public access to these plans. (Some hazard scenario information is in plan summaries at www.rtk.net.)

The fact is that the storage and use of extremely hazardous chemicals poses significant risks to workers, communities, and the environment. Yet government and industry have to date avoided full right-to-know disclosure, thereby sidestepping public demands for community safety and accident *prevention*. Chemical accidents *can* and *do* happen in this country; they kill and injure people, as well as damaging property and the environment. Chemical accidents are preventable. We recommend the following measures:

**1. Honor the public's right to know.**
The federal government should make readily accessible to the public a complete, national database of Risk Management Plans, including worst-case scenarios. Full disclosure enables government, industry, and the public to establish baselines for progress in reducing chemical hazards. In addition, government and industry should focus on chemical *use*. Improving right-to-know reporting to include chemical use reporting (or "materials accounting") would encourage facilities to focus on ways to reduce chemical use, thereby reducing the need to produce, store, transport, and use large quantities of chemicals with Bhopal-scale accident potential. Proposed legislation before Congress, *The Children's Environmental Protection and Right to Know Act (H.R. 1657)*, would make this improvement.

**2. Put Inherent Safety first.**
Federal, state, and local governments should insist that chemical facilities eliminate or reduce the *possibility* of chemical accidents through inherently safer technologies as a first resort. The U.S. Chemical Safety and Hazard Investigation Board should develop model regulations for use by EPA to promote accident prevention through Inherent Safety. In addition, the Department of Justice should develop and recommend strict regulations to increase site security at chemical plants, including inherent safety in a "multiple barriers" hierarchy. Proposed legislation before Congress, *The Chemical Security Act (S.1470)*, incorporates inherent safety principles into site security and chemical accident prevention.

**3. Prepare for Y2K-related chemical safety problems.**
Since no one can predict if, or where, Year 2000 computer problems might occur, facilities should communicate openly with employees, communities, and emergency responders about the special hazards posed by Y2K-related chemical accidents. The federal government has done little to verify Y2K readiness in the chemical industry; local governments, journalists, and the public should use the sample survey provided in Appendix D to ask chemical companies about plans for "safety holidays" and other strategies for protecting workers and the public. Because of the ongoing potential for chemical accidents in the U.S., the Y2K computer problem should be seen as an opportunity to develop reliable contingency plans for accidents and to focus on preventing any accidents in the future.

## I. Tragedy in Bhopal

### The Union Carbide Catastrophe

In the early morning hours of December 3, 1984, at a Union Carbide pesticide factory in Bhopal, India, water entered a chemical storage tank through leaking valves, triggering a runaway chemical reaction. As the reaction progressed, the temperature and pressure in the tank rose until 40 tons of toxic gases, including highly toxic methyl isocyanate (MIC) and hydrogen cyanide, escaped from the tank.

Because the gases were heavier than the air, a toxic cloud formed and hung close to the ground. The toxic cloud, aided by a gentle northerly wind, moved across the city of Bhopal, spreading like a poisonous blanket over sleeping inhabitants. People awoke gasping for breath, their eyes burning. Seeking safety, thousands took to the streets, running, many carrying children. The toxic gases caused fluid to fill people's lungs, literally drowning many, who fell choking and dying in the streets.

That night, over 500,000 people were exposed to dangerous toxic fumes. At least 2,000 people died, and another 300,000 suffered injuries.[1] Fifteen years later, victims continue to suffer and die from long-term effects. By 1990, the death toll was estimated at over 8,000[2] and a 1997 estimate put the figure at 16,000. Thousands of survivors experience menstrual irregularities, spontaneous abortions, still births, infant mortality, and other health problems at rates dramatically higher than elsewhere in India.[3]

### The Blame Game: What went wrong?

Union Carbide officials claimed that the accident was the result of sabotage by disgruntled employees. However, Union Carbide knew of the potential for an accident but did not take essential steps to prevent it. In 1990, writer Peter Montague described Union Carbide's actions leading up to the Bhopal accident:

> Until 1978, Carbide made pesticides at Bhopal without using the supremely toxic chemical, MIC. But MIC was more profitable, so they switched. In 1979 and again in 1982, Carbide sent teams of experts from Danbury [Connecticut] to evaluate safety hazards at the Bhopal plant. The experts specifically warned of plant design deficiencies and the dangers of a "runaway reaction" inside an MIC tank – precisely the reaction that occurred in 1984. Corporate headquarters never followed up to see that the recommendations were implemented.[4]

Indeed, at the time of the accident, at least five major safety systems were either inadequately designed or failed at least partially (see Figure 1). For example, the MIC should have vented through a scrubber and flare tower, but because a vent line was leaking, the MIC leaked directly into the atmosphere. In addition, the MIC that did reach the scrubber was not removed from the waste stream because neither the scrubber nor the flare tower were operational at the time of the accident.[5]

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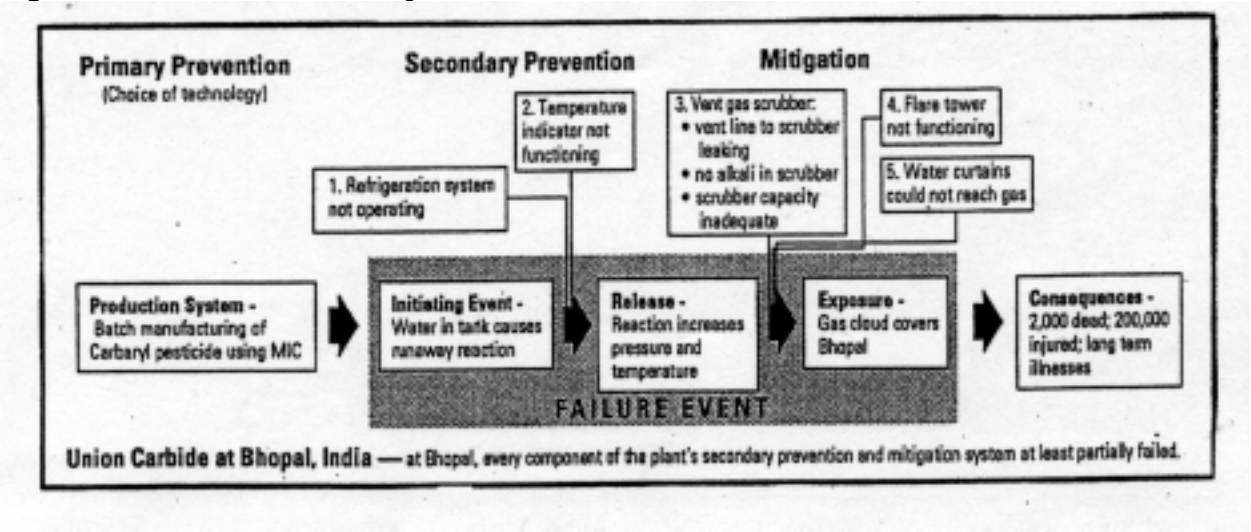
[1] Montague, P. Carbide Officials Face Homicide Charges in Bhopal, India, Court. *Rachel's Hazardous Waste News #58*. Environmental Research Foundation, 1988.
[2] Kurzman, D. *A Killing Wind: Inside Union Carbide and the Bhopal Catastrophe.* New York: McGraw-Hill, 1987. Cited in Montague, P. From Bhopal With Love. *Rachel's Hazardous Waste News #170*. Environmental Research Foundation, 1990.
[3] Both the 1997 estimate and documentation of long-term effects come from: 13th Anniversary Fact Sheet on the Union Carbide Disaster in Bhopal. Bhopal Group for Information and Action, 1997.
[4] Montague 1990.
[5] Bryce, A. Bhopal Disaster Spurs U.S. Industry, Legislative Action. Washington: U.S. Chemical Safety & Hazard Investigation Board (CSB), 1999.

**Figure 1. Union Carbide at Bhopal, India**[6]




This needless tragedy served as a wake-up call about the potential for major chemical accidents at industrial facilities. On this fifteenth anniversary of Bhopal, this report asks: where do such hazards exist in the United States and what safeguards ensure that we will not suffer our own Bhopal?

## II. It Could Happen Here: Chemical Accidents in the U.S.

While the accident in Bhopal may seem long ago and far away, accidents do happen close to home, and all too frequently. In fact, one month before the accident at Bhopal, an FMC Corporation facility in Middleport, New York, accidentally spilled MIC during a routine transfer. Vapors from the spill entered a neighboring elementary school, sending nine children and two teachers to the hospital, and requiring the evacuation of 500 students. One month before that, an American Cyanamid facility in New Jersey released just 12,000 pounds of the pesticide malathion. The resulting fumes extended over 20 miles and sent at least 100 people to the hospital.[7] Indeed, these accidents were not and are not unique. An analysis by the U.S. Environmental Protection Agency (EPA) found that in the early to mid 1980s, there were 17 accidents in the U.S. whose potential consequences could have been more severe than Bhopal, based on toxicity and volume of the chemicals released. Only circumstances like wind conditions and plant location prevented disastrous consequences.[8] Dangerous accidents continue to affect the lives of many Americans:

**In the early to mid 1980s, there were 17 accidents in the U.S. whose potential consequences could have been more severe than Bhopal.**

**Allentown, PA:** On February 19, 1999, a deadly blast at Concept Sciences, which was manufacturing hydroxylamine, leveled the plant and seriously damaged several buildings off-site, including a nearby day care center. Five people were killed in the blast, and several others seriously injured.

[6] Derived by the Working Group on Community Right-to-Know from: Ashford, N., et al. The Encouragement of Technological Change for Preventing Chemical Accidents: Moving Firms from Secondary Prevention and Mitigation to Primary Prevention. Boston: Massachusetts Institute of Technology, 1993. Call EPA's EPCRA Hotline at 1-800-535-0202 for a copy.
[7] Weir, David. *The Bhopal Syndrome*. San Francisco: Sierra Club Books: 1988.
[8] Bryce 1999.

**Sioux City, IA:** On December 13, 1994, an explosion destroyed a Terra Nitrogen Co. fertilizer plant, killing four and injuring more than 18. More than 2,500 people were evacuated as a noxious cloud of ammonia spread over 90 square miles. A safety audit six months earlier had failed to identify problems at the facility.

**Rodeo, CA:** During 16 days, from August 22 to September 6, 1994, a Unocal plant released some 125 tons of a caustic catalyst. The chemical release sickened an estimated 1,500 people, who experienced vomiting, headaches, and disorientation, among other problems. Some victims remained sick for more than a year after the Unocal release.

**Belpre, OH:** On May 27, 1994 a Shell Chemical Facility exploded, killing three workers and flushing tons of poisonous styrene into the Ohio River, closing drinking water intakes at towns for miles downstream.

**Richmond, CA:** On July 26, 1993, oleum from an overheated railroad tank car leaked during unloading at the General Chemical Corporation. The highly concentrated vapors were not captured by safety systems and formed a toxic plume of sulfuric acid which drifted about 15 miles downwind. Some 24,000 people sought help from local hospitals after breathing the acid mist.

**Pasadena, TX:** On October 23, 1989, an explosion at a Phillips Petroleum plastics manufacturing facility killed 23 workers and blew out windows at an elementary school a mile away. The blast caused workers to lose their jobs, some $675 million in immediate damages to the plant, and over $700 million in lost business over a two-year reconstruction period.

**Every year between 1987 and 1996 in the U.S. there were, on average:**

- 60,000 chemical incidents
- 417 evacuations of workers or the public
- 2,250 injuries in chemical incidents
- more than 250 deaths, the equivalent of two fully-loaded 737 passenger jets.

U.S. Chemical Safety Board

Chemical accidents occur frequently in the U.S., although the exact number is impossible to determine. Incidents involving hazardous materials are recorded in at least seven different federal reporting systems. A recent review by the U.S. Chemical Safety and Hazard Investigation Board (CSB) consolidated five of these reporting systems and screened out identifiable multiple listings in order to assess how many chemical incidents occur in the U.S. Their report included reported chemical incidents large and small, whether or not there were reported consequences (injuries, deaths, evacuations, etc.). This **inclusive accounting concluded that over a ten-year period between 1987 and 1996, more than 600,000 chemical spills, fires, and explosions occurred – on average over 60,000 incidents every year.**[9] Ninety-five percent of U.S. counties had at least one reported chemical incident (see Table 1 for a state-by-state breakdown). On average, more than 250 Americans were killed every year in chemical incidents.[10]

Chemical accidents *can* and *do* happen here. In order to look at Bhopal-scale chemical accident hazards in the U.S., this report examines hazardous chemicals stored in the largest quantities across the country.

[9] U.S. Chemical Safety and Hazard Investigation Board's baseline on commercial chemical incidents in the U.S.: "*The 600K Report" – Commercial Chemical Incidents in the United States 1987-1996.* Washington, 1999.

[10] It is important to note that the CSB study did not differentiate whether the chemical release involved in an incident directly caused reported deaths or injuries. Specifically, some deaths or injuries reported in transportation-related accidents may be attributed to physical impact rather than chemical exposure.

## III. Accidents Waiting to Happen: Hazardous Chemical Storage in the U.S.

An estimated 868,000 facilities across the country report hazardous chemical inventories to local and state emergency response authorities. Of these, some 13,800 or more chemical-using facilities – manufacturers, refineries, water treatment plants, chemical wholesalers, and others that have the largest amounts of extremely hazardous substances – were required to submit to the federal government "Risk Management Plans." These plans are intended to tell workers and facility neighbors about dangerous chemical hazards through calculated "worst-case scenarios," and to ensure that effective safety systems guard against an American Bhopal.

In the summer of 1999, however, Congress blocked public access, at least for one year, to worst-case accident scenarios in a national electronic database (see section V below for more details). By restricting public information on chemical danger zones, Congress deprived journalists and the public of a reliable means of comparing accident potential across the country.

**As a first step toward establishing vital public information about the potential for catastrophic chemical accidents, this report examines chemicals stored in large quantities at the 13,800 facilities that filed Risk Management Plans**; our analysis is based on EPA's database of these plans. Each chemical whose storage we analyzed has been labeled by EPA as an "extremely hazardous substance" not only because of its effects on human health (see Appendix C), but also because of its volatility, explosiveness, ability to form toxic clouds, or other indicators of high accident hazard. We excluded from our analysis chemicals listed only for flammability, because of inconsistencies in reporting on these chemicals,[11] and based our rankings on the amount reported by facilities as the maximum amount of an extremely hazardous substance in any single production process. We only included processes that the facility reported as having potential off-site consequences in a worst-case accident.

This report uses chemical storage as an indicator of inherent hazard for three reasons. First, Congress has this year blocked public access to more complete information. Second, worst-case scenarios by definition assume that add-on safety systems at facilities will fail, other than passive mitigation. Third, the simple fact is that the production, storage, and use of these chemicals pose inherent hazards to public health and safety. While state-of-the-art safety controls – such as leak detectors, double-walled vessels, supplemental temperature and pressure controls, high-tech valves, sprinklers, and emergency flares or scrubbers – may limit an accident's impacts, they do not prevent incidents from occurring and may even make complex operations more prone to accidents. Sociologist Charles Perrow noted the problems with relying on add-on safety systems in *Normal Accidents*, stating, "if a system is so complex and integrally meshed as to require superhuman operators to constrain the process within safe limits, then it needs some modification."[12]

> "No matter how effective conventional safety devices are, there is a form of accident that is inevitable."
> **Sociologist Charles Perrow, author of *Normal Accidents***

As at Bhopal, add-on safety systems can fail, and facility or corporate managers can fail to maintain safe conditions. In fact, a 1994 trade publication survey found that 75 percent of readers – mostly industry personnel – believed business competition and downsizing is forcing firms to cut safety spending.

[11] Congress de-listed a number of the chemicals that had been listed only for their flammability. However, by the time Congress listed those chemicals, some facilities had already submitted reports. Because we have no way of knowing which facilities did or did not report storage of these chemicals, we removed them from the analysis.

[12] Perrow, C. *Normal Accidents: Living with High-Risk Technologies.* New York: Basic Books, 1984.

Further, 78 percent believed accidents are more likely as employees work longer hours, handle new assignments, and fear for their jobs.[13]

Even fully functioning safety systems may not be adequate. After the tragedy in Bhopal, Union Carbide installed a $5 million computerized leak detection and early warning system at its facility in Institute, WV, which also used methyl isocyanate. On August 11, 1985 a cloud of mixed toxic chemicals escaped from a 500-gallon storage tank at the facility. The sophisticated leak detection system told managers that the cloud was hovering over the plant, with no threat to nearby communities. Meanwhile, it spread over four neighboring communities, exposing thousands of people and sending over 130 to hospitals.[14]

**Widespread Risks**

Comparing the maximum amount of a chemical[15] stored at a facility in any one process, we found that **4,860 facilities store at least 100,000 pounds of a chemical considered by EPA to be extremely hazardous** (see Table 2). By comparison, the estimated 40 metric tons of methyl isocyanate released at Bhopal amounted to slightly less than 90,000 pounds, so **each of these facilities stores more of an extremely hazardous chemical than was released in the Bhopal accident**. Every state except Vermont had at least one facility storing more than 100,000 pounds of an extremely hazardous substance. **Over 100 facilities store more than 30 million pounds *each*, or over 300 times the amount released at Bhopal**. Thirty million pounds is the amount held by about 165 ninety-ton railroad tank cars.[16]

The large number of facilities storing ammonia in very high quantities dominates this look at chemical storage. For 3,806 (78 percent) of the 4,860 facilities storing more than 100,000 pounds of an extremely hazardous substance in any one process, that substance is ammonia (compare Tables 2 and 3). Because ammonia is used as a fertilizer, its storage is highly concentrated in farm states: **the ten states with the most facilities storing more than 100,000 pounds of an extremely hazardous substance in any one process are Illinois, Iowa, Kansas, Nebraska, Texas, Minnesota, Indiana, North Dakota, Ohio, and California**. Moreover, storage is highly concentrated in a few states: the six states with the highest number of facilities storing over 100,000 pounds – Illinois, Iowa, Kansas, Nebraska, Texas, and Minnesota – contain more than half the facilities in the nation that store over that amount.

According to the Chlorine Institute, a full-scale release of chlorine from a single 90-ton railroad tank car would cause a worst-case gas plume 3 miles wide and 41 miles long.

In order to get a broader look at chemical storage, we also analyzed the distribution of facilities storing over 100,000 pounds of extremely hazardous substances other than ammonia (see Table 3). When ammonia is excluded, the distribution among states changes significantly – the storage is concentrated in heavily industrialized states. Without ammonia, **the eleven states (ten and eleven are tied) with the highest number of facilities storing over 100,000 pounds are Texas, California, Louisiana, Ohio, Illinois, Pennsylvania, South Carolina, Georgia, New Jersey, Alabama, and Florida**. As with ammonia storage, hazardous chemical storage in industrial states is highly concentrated in a few states: over half of the facilities storing over 100,000 pounds are located in nine states.

Table 4 lists the 100 facilities storing the highest amounts of extremely hazardous substances besides ammonia. It is clear that facilities store a broad range of chemicals in extremely high amounts – each of

[13] *Industrial Safety and Hygiene News*. May 1994, pp. 31-32.
[14] Weir 1988.
[15] In the context of our analysis, the term 'chemical' refers to an EPA-listed extremely hazardous substance under the Clean Air Act, Section 112(r).
[16] A 90-ton railcar is a standard means of transporting hazardous chemicals.

the facilities on the list is storing at least 3 million pounds of an extremely hazardous chemical, or 34 times the amount released at Bhopal.

While EPA has named each of the chemicals stored by these facilities an extremely hazardous substance, not every chemical has the same accident potential (some chemicals may be more volatile or more able to form toxic clouds than others). In order to examine where the chemicals of highest concern are stored in the greatest amounts, we ranked facilities storing the highest amounts of each of five chemicals with extremely high worst-case accident potential: ammonia, chlorine, hydrochloric acid, hydrogen fluoride (hydrofluoric acid), and formaldehyde[17] (Tables 5 through 9).

## IV. Cause for Concern: Y2K

**The Year 2000 (Y2K) and Chemical Accidents**

The Year 2000 problem refers to the inability of many computer systems to correctly interpret the date 2000, leading to computer malfunctions or failures. Because chemical plants often use computer systems to control operations, malfunction or failure could have serious consequences. Chemical facilities use computerized equipment in a variety of systems: process controllers, air monitors, security systems, safety shutdown equipment, and systems for controlling high pressures and temperatures. It is unknown what percentage of these systems may have Y2K problems programmed into them. In addition, even systems which do not rely on computers or whose computers are free of Y2K-related problems may be at risk if the power supply or other external factors are disrupted by Y2K. Malfunctions or failures of any of these systems have the potential to cause significant chemical accidents, but the degree to which problems will occur when key dates roll over is impossible to predict.

Some facilities' experiences suggest that real and serious computer problems may occur:

- In 1996, an aluminum smelter in New Zealand sustained $600,000 damages from overheating caused by computer problems. The computers failed to account for the "extra" 366$^{th}$ day at the end of 1996 – a leap year – and shut down at midnight on New Years Eve.[18]

- A safety system designed to detect emissions of deadly hydrogen sulfide gas shut down during a Y2K test on an oil rig in the North Sea.[19]

- A sewage treatment plant in Los Angeles ran a test of its Y2K contingency plan in June of 1999, which included the use of an emergency generator to supply power. When the facility cut the main power supply, the back-up generator worked, but for reasons unknown at the time, a diversion gate malfunctioned, resulting in 1.2 million gallons of sewage flowing into a city park.[20]

[17] These chemicals were estimated to have the highest worst-case disaster potential in the report *Too Close to Home*, published by U.S. PIRG and the National Environmental Law Center in July 1998.
[18] U.S. Environmental Protection Agency, Office of Solid Waste and Emergency Response. "Prevent Year 2000 Chemical Emergencies." *Chemical Safety Alert*. February 1999.
[19] Ibid.
[20] Wilson, J., Director of the Los Angeles Bureau of Sanitation, in a letter to John Ferraro, President of the Los Angeles City Council, summarizing the spill.

**Y2K Preparation Among Chemical Facilities**

The U.S. Chemical Safety and Hazard Investigation Board (CSB) has conducted outreach to the chemical industry to gauge the extent of Y2K readiness. Their initial work found that "the Y2K problem is one of major proportions and has the potential for causing disruption of normal operations and maintenance at the nation's chemical and petroleum facilities."[21] Small and mid-sized companies may present the greatest risk. The board noted that the larger companies, particular large multinationals, more often have the awareness, planning, financial and human resources to handle the problem, as long as there are no significant external problems such as utilities failures. Nonetheless, some of the largest chemical companies plan "safety holidays" – temporary shutdowns – around key dates. The CSB report emphasized that Y2K problems were much more likely at small and mid-sized facilities, as these facilities are likely to be less aware of the problem and have fewer resources for dealing with it.

Several corporations have announced plans to shut down or scale back operations. The Canadian subsidiary of Dow Chemical Corporation announced temporary production halts for New Year's Eve, joining two other Canadian chemical companies taking precautionary measures. The companies all emphasize that their facilities are ready for Y2K, but are scaling back operations so that the situation will be easier to control in the event of power failures. In West Virginia, managers for Rhone-Poulenc, DuPont, and Ashland Chemical corporations report that they will temporarily stop production during the Y2K transition. A Portland, Ore., plant operated by Elf Atochem North America, Inc., will put all but two processes on standby and have emergency generators and an oil-fired boiler on hand in case of a power failure.

**Chemical Accidents and Y2K**

"The computer year 2000 problem, unless properly addressed, poses significant world-wide chemical safety problems."
**Intergovernmental Forum on Chemical Safety**

"Even though we are less than 100 days from the year 2000, it is impossible to conclude that the majority of chemical companies are ready for Y2K"
**The Center for Y2K & Society**

**"**the assumption was made that [small chemical handlers and manufacturers] were not prepared for Y2K. To a large degree, that assumption has been confirmed."
**Senator Robert Bennett (R-UT), Chair, Senate Special Committee on the Year 2000 Technology Problem**

"The Y2K problem is one of major proportions and has the potential for causing disruption of normal operations and maintenance at the nation's chemical and petroleum facilities**."**
**U.S. Chemical Safety Board**

The bigger wild card is expected to be small and mid-sized chemical facilities. At the end of October 1999, Senators Robert Bennett (R-UT) and Christopher Dodd (D-CT), Chair and Vice-Chair of the Senate Special Committee on the Year 2000 Technology Problem, released new data on the lack of Y2K readiness among small and medium-sized chemical-handling facilities. The data were based on findings from a survey of firms with 200 or fewer employees in New Jersey, Kansas, California, and Texas. The survey found that:

- **79 percent of firms surveyed had begun a Y2K readiness project.**

- **86.5 percent had not completed their Y2K readiness projects.**

[21] U.S Chemical Safety and Hazard Investigation Board (CSB). *Year 2000 Issues – Technology Problems and Industrial Chemical Safety*. Report to the Senate Special Committee on the Year 2000 Problem, 1999.

- **85.6 percent had not coordinated emergency plans with local officials.**[22]

In response to the survey results, Senator Bennett said, "In the past, we have had very little information about small chemical handlers and manufacturers, and the assumption was made that they were not prepared for Y2K. To a large degree, that assumption has been confirmed."[23] The Senators said they are urging EPA and the Federal Emergency Management Agency (FEMA) to alert State Emergency Managers, State Emergency Response Commissions, and Local Emergency Planning Committees. The Senators emphasized that facilities should use the remaining time before New Year's Eve, the first critical Y2K date, to develop contingency plans in case of a Y2K malfunction, and to coordinate those plans with local officials. Senator Dodd said, "Time is running out, but it's still not too late if these firms act now. Developing viable Y2K contingency plans in conjunction with state and local officials must be a top priority in the chemical industry."

The plain fact is, however, that we have very little reliable public information on chemical industry preparedness for Y2K. With the exception of inquiries by the Chemical Safety Board and Senator Bennett's Committee, the federal government has done little to verify chemical industry Y2K readiness. In fact, in the summer of 1999, President Clinton signed into law a bill that limits corporate liability for Y2K-related damages, lessening the incentive for companies to act to prevent such damages. Neither EPA nor the Occupational Safety and Health Administration has collected systematic readiness information, and few states have picked up the slack. (California is an exception.)

In contrast, the Nuclear Regulatory Commission has ensured independent auditing at all of the nation's nuclear plants, and the Securities and Exchange Commission has required some 9,000 major businesses to report regularly on Y2K readiness. But we approach the year 2000 without basic information on the chemical industry's Y2K preparedness. For this reason, we have attached a simple survey (see Appendix D) with basic questions for chemical companies about plans for "safety holidays" and other strategies for protecting workers and the public.

## V. After Bhopal: Addressing Chemical Safety

### A Right to Know Movement Forces Government Action

The Bhopal disaster contributed to a growing awareness of deadly chemical industry hazards. Bhopal added the specter of sudden chemical accidents to news about toxic dumping at Love Canal and nuclear meltdown at Chernobyl, which had raised the public visibility of large scale pollution problems. Starting at the local and state level, a broad movement of environmental and labor groups, grassroots activists, and social justice organizations pushed for a greater public voice in decisions about chemical hazards.

As a result, Congress passed the Emergency Planning and Community Right to Know Act of 1986 (EPCRA, or SARA Title III) as a freestanding title in Superfund legislation (a law for cleaning up abandoned toxic dumpsites). In effect, EPCRA codified the new philosophy of right-to-know, putting information into the hands of parties who need it to plan for and prevent pollution and emergencies. The law has three major functions: it enables people to participate in emergency planning; it lets people find out where dangerous chemicals are stored in communities; and it establishes the first publicly accessible, national database of toxic pollution ever mandated by a federal environmental law.

[22] Mary Kay O'Connor Process Safety Center, Texas A&M University System. Y2K Readiness of Small and Medium-sized Enterprises. October 1999.
[23] Senate Special Committee on the Year 2000 Technology Problem press release. "Study Says Small Chemical Businesses Not Y2K Ready, Bennett, Dodd Urge EPA, FEMA to Help Prepare Communities." October 21, 1999.

EPCRA's toxic pollution database, the Toxics Release Inventory (TRI) gave citizens and communities valuable information about pollution and gave the industry a public incentive to reduce toxic releases. In more than ten years since the first TRI data release, the EPA estimates that industries have reduced pollution by more than forty percent.[24] However, in the case of chemical accidents, EPCRA did not go far enough. Indeed, few of the mostly volunteer Local Emergency Planning Committees, set up under EPCRA, were capable of producing basic facility hazard assessments; even fewer were requesting necessary documents from industry, and almost none were telling the public about hazards in the community.

Meanwhile, chemical accidents continued. On October 23, 1989, an explosion at Phillips Petroleum in Pasadena, Texas decimated the plastics manufacturing facility, killing 23 workers and blowing out windows at an elementary school about a mile away. In addition to the tragic loss of human life, the blast had economic consequences: workers lost jobs, and the plant suffered some $675 million in immediate damages and more than $700 million in lost business over a two-year reconstruction period. These and other major accidents pointed to a continued slide in chemical safety.

In 1990, Congress again took steps to address the problem of chemical safety, with amendments to the Clean Air Act. This law included a major new prevention program, in which facilities that use large amounts of extremely hazardous substances prepare Risk Management Plans (the documents which provided the data for this report). In these plans, facility operators assess their own hazards and disclose to workers and the public a "worst-case scenario" of what could happen if safety systems fail – thereby shifting the initial hazard assessment burden from poorly funded Local Emergency Planning Committees to the responsible facilities. In addition, facilities must undertake a prevention program that addresses basic safety procedures such as training, maintenance, and safety audits, and must coordinate emergency response plans and drills with local planners.

Unfortunately, the EPA's weak implementation of the Clean Air Act amendments failed to focus on *preventing* chemical accidents, but has focused instead on add-on safety measures and on emergency response. Despite vigorous urging from labor and environmental groups, EPA repeatedly weakened the Risk Management Plan regulations and did not adequately encourage "Inherent Safety" practices – or practices that reduce hazards by making fundamental design choices to use materials and processes that pose little or no risk of a catastrophic accident.

The Clean Air Act was further compromised in the summer of 1999, when the chemical industry persuaded Congress to block public disclosure of worst-case chemical accident scenarios. These hazard scenarios are the most valuable portion of the Risk Management Plan for communicating risk to the public – an essential step in preventing chemical accidents. Right-to-know disclosure gives facilities a visible public incentive to reduce the hazards they pose to neighboring communities. Also, by relying on an assessment of what could happen if safety systems fail, the scenarios point to inherent safety practices as the best solution for accident prevention.

The chemical industry, however, lobbied hard to oppose public posting of worst-case scenarios on the Internet. The industry argued that such posting would render their facilities vulnerable to criminal activity. Congress adopted the industry's argument – but without taking any real steps to improve site security or reduce hazards. Instead Congress blocked public access to an electronic database of worst-case scenarios for at least one year. In the meantime, Congress restricted public disclosure to local, industry-controlled meetings. These local meetings, by design, prevent people from learning about hazards where relatives live or work, or where they might travel, relocate, or attend school. Perhaps more importantly, local-only access prevents people from learning about successful safety practices in

[24] U.S. EPA. *1996 Toxics Release Inventory*. June 1998.

other communities – successes that cost-cutting managers may wish to avoid at their own facilities. At the same time, however, many facilities reported details of worst-case scenarios in the Risk Management Plan summaries; these summaries, not subject to Congressional restriction, are available at www.rtk.net/.

The Clean Air Act also established an independent Chemical Safety and Hazard Investigation Board to investigate the root causes of chemical accidents and recommend improvements in safety regulations and practices (much as the National Transportation Safety Board investigates airplane crashes). The board's first investigation, into a deadly explosion at Sierra Chemical in Sparks, Nevada, showed the board's value. Sierra Chemical claimed sabotage, much as Union Carbide had done after Bhopal. However, the board's first report disproved this claim, and instead faulted Sierra Chemical's hazards analysis, training program, operating procedure, building design, safety inspection, and employee participation efforts -- as well as lax government oversight.

**The Responsible Care Program: Trust Us, Don't Track Us**

In the 1980's, the Chemical Manufacturers Association's (CMA) own surveys indicated that the public had little confidence in the industry and favored additional regulation combined with strict enforcement of environmental laws. CMA responded by developing the Responsible Care Initiative in 1988. Fundamentally, Responsible Care seeks to improve the public image of the chemical industry in order to avoid further environmental and safety regulations.

At the heart of Responsible Care are certain vague principles. Adherence to these principles is mandatory for CMA member companies, which commit to:

- Be safe and environmentally responsible in the manufacture, transportation, storage, use, and disposal of chemicals;
- Respond to community concerns about chemicals and operations;
- Help communities put emergency procedures in place to handle spills and other releases – procedures that also can be useful in responding to natural disasters; and
- Keep the public and government officials informed about chemical-related health and environmental hazards.

Nothing in Responsible Care, however, commits any facility to *measurable goals* or *timelines* to reduce chemical risks. Further, the public posture of openness often conflicts markedly with the industry's anti-right-to-know positions in lobbying state legislatures and Congress.

**Responsible Care?**
In response to a 1998 U.S. PIRG survey, more than 75 percent of chemical companies would not or could not provide answers to seven basic questions about chemicals used at their facilities.

Numerous CMA publications tout the effectiveness of Responsible Care. A yearly Progress Report claims great achievements,[25] yet basic delivery is often poor. For example, in a 1998 U.S. PIRG telephone survey, more than 75 percent of CMA companies would not or could not provide answers to seven basic questions about chemicals used at their facilities.[26]

Responsible Care requires member companies to engage in community dialogue, and recommends that facilities form Community Advisory Panels (CAPs). Some 400 facilities have formed CAPs. These panels establish dialogue with local community and opinion leaders in regular meetings in order to help companies anticipate and mold public opinion.

[25] *The Year in Review 1995-1996, A Responsible Care Progress Report*.
[26] *Trust Us. Don't Track Us. An Investigation of the Chemical Industry's Responsible Care Program*. Washington, DC: U.S. PIRG, 1998.

The CAPs are limited by design. These advisory panels:

- Have membership that is hand-picked by companies;
- Can be shut down at any time by those companies;
- Have no legally binding access to measurements and hard data;
- Have no ability to obtain credible, independent third-party audits;
- Have no decision-making authority;
- Operate without facility commitments to measurable goals or timelines for reducing chemical risks;
- Have no means to evaluate actual safety and environmental performance;
- Operate under management codes that contain only broad, vague language;
- Rely frequently on company-paid facilitators; and,
- Provide no accountability enforceable by law.
- Lack resources for outside advisors who can analyze technical information.

Without basic validation measures, Responsible Care lacks accountability and credibility. As a result of these weaknesses-by-design, there is little evidence that CAPs ever articulate and make real demands for progress toward measurable prevention goals. For example, CAPs may take up strategies such as how to "shelter in place" (or staying indoors during a short chemical release) in lieu of inherent safety and other prevention efforts. There are no real life examples, as of yet, that sheltering will work in a major release. Yet through CAPs, the industry keeps the focus on sheltering and emergency response, and off of efforts to reduce hazards at the source.

A survey conducted by the International Federation of Chemical, Energy, Mine and General Workers' Union indicates that the Responsible Care program also has had little impact on the majority of the world's chemical workers. The survey found that 35 percent of union employees contacted were not even aware of the Responsible Care program, and most unions that were aware of the program were skeptical of its value.[27]

A Tellus Institute study on Witco Corporation of New Jersey found skepticism of Responsible Care among the corporation's management. According to the plant manager, the Responsible Care program does very little to help achieve pollution prevention because of the lack of structured process inherent in the program. The facility manager pointed to the failure of Responsible Care to provide any assistance or direction in reaching pollution prevention goals.[28]

Since Responsible Care is voluntary, member companies do little more than comply with current environmental laws – laws that do not provide needed focus on *preventing* toxic pollution and chemical accidents.

[27] *Responsible Care: A Credible Industry Response?*, survey of International Federation of Chemical, Energy, Mine and General Workers' Union (ICEM), 1997.
[28] Tellus Institute. *New Jersey's Planning Process: Shaping a New Vision of Pollution Prevention*, Case Study Number 4 – Witco Corporation.

## VI. Promoting Inherent Safety and the Public's Right to Know

**Inherent Safety: Reducing Risks and Preventing Accidents**

To date, government and industry efforts to protect ecosystems, workers, and the public have focused on add-on safety systems, emergency response, and clean-up. As discussed in Section III, state-of-the-art safety systems (leak detectors, double-walled vessels, supplemental temperature and pressure controls, high-tech valves, sprinklers, and emergency flares or scrubbers) may limit an accident's impacts, but they do not prevent incidents from occurring and may even make an operation more prone to accidents.

Add-on safety systems can and do fail: at Bhopal, five separate safety systems failed to neutralize or contain the release of deadly methyl isocyanate gas. Following the Bhopal disaster, Union Carbide added state-of-the-art enhancements to its Institute, WV, facility. Nonetheless, in August, 1985 an accident occurred at the facility, proving the rule that add-on safety systems can never be as successful as front-end prevention

- The **Solon, Ohio**, wastewater treatment plant switched from volatile chlorine to safer ultraviolet light for disinfecting wastewater.

- DuPont in **Victoria, Texas** found a way to use up methyl isocyanate -- the Bhopal chemical -- such that no dangerous storage is required.

- **New Jersey**'s Toxic Catastrophe Prevention Act (with includes fees for on-site storage) has prompted a number of water treatment plants to switch from chlorine gas to less hazardous bleach.

The best solution is to prevent toxic chemical spills, fires, and other releases at every stage of toxic chemical production design and operation. Prevention can be most effectively achieved through the engineering design principle of Inherent Safety, which eliminates or reduces the possibility of an accident by modifying key aspects of the production system, such as technologies, products and raw materials (e.g., substitution of less hazardous chemicals or reductions in their use).

Experts from industry, government, labor, and environmental groups advocate Inherent Safety as a truly preventive approach to reducing chemical accident risks. An interview with Edward Munoz, former Managing Director of Union Carbide, India, provides a compelling example. Union Carbide officials claim that the Bhopal accident was an unusual event, and possibly a result of sabotage. Munoz agreed that it may well have been an unusual event, but that "it doesn't exonerate the guy who built the tank." His conclusion: "if you do something that is inherently dangerous and somebody does something foolish with it, still you are responsible for doing what was inherently dangerous."[29]

Dr. Trevor Kletz, a leader in promoting Inherent Safety, states, "whenever possible, hazards should be removed by a change in design…rather than by adding on protective equipment."[30] Bringing the concept of Inherent Safety down to understandable terms, Dr. Kletz notes, "If the meat of lions was good to eat, our farmers would be asked to keep lions and they could do so, though they would need cages around their fields instead of fences. By why keep lions when sheep or cattle will do instead?"

To be inherently safer (and cleaner), companies should analyze the hazards associated with the use of certain chemicals, products, and production processes, and search for benign alternatives. An EPA study completed by Nicholas Ashford et. al., of the Massachusetts Institute of Technology recommends that

[29] Karliner, J. *A conversation with Edward A. Munoz, former Managing Director of Union Carbide, India, Ltd.* Transnational Resource & Action Center, in association with the Bhopal Action Resource Center of the Council on International and Public Affairs. For the full interview; see www.corpwatch.org/bhopal.

[30] Kletz, T. *What Went Wrong*. Houston: Gulf Publishers, 1994.

toxic chemical producers and users be required to undertake a Technology Options Analysis (TOA), a concerted effort to identify safer and cleaner alternatives, which forms part of a continuous technology improvement process.[31] Through TOA planning, the facilities adopt inherently safer technologies with appropriate cost and performance characteristics and explain why any technically feasible options were not selected. Information contained in the TOA could be available to the public and could likely lead to dissemination of innovative technologies.

Technology Options Analysis is similar to its counterpart dealing with 'routine' toxic hazards: pollution prevention planning. Facilities planning for pollution prevention customarily analyze their hazardous chemical flows and identify cost-effective ways to reduce the use of toxic chemicals and generation of toxic waste. Inherent Safety and pollution prevention share a similar goal: change technologies, products, and raw materials to reduce toxics-related hazards at the source.

**Exposing the risks: the importance of the public's right to know**

Public information has greatly improved environmental protection efforts in the U.S. Perhaps the best-known success has been the federal Toxics Release Inventory (TRI), which EPA credits with a 46 percent decrease in toxic releases to the environment.[32] The TRI has done this by using the public spotlight to encourage pollution corporations to make voluntary decisions to reduce their toxic releases. In addition, it enables government agencies to target resources and strengthens citizen activism.

While the TRI is the best national publicly available source of information on toxic chemical pollution, there are many significant reporting gaps. Specifically, the federal right-to-know program does not include toxic chemical use reporting, or "materials accounting." Chemical use reporting would provide the public greater information on toxic chemicals used in the workplace, transported through communities, and placed in consumer products.

Strong right-to-know laws in Massachusetts and New Jersey already require companies to track and report toxic chemical use. These programs show that chemical use reporting and pollution prevention planning helps industries find ways to reduce pollution and in many cases save money in the process.

[31] Ashford N. et. al., 1993.
[32] U.S. EPA 1996.

## VII. Recommendations

The storage and use of extremely hazardous chemicals poses significant risks to workers, communities, and the environment. Chemical accidents *can* and *do* happen in this country; they kill and injure people, damage property, and foul the environment. Chemical accidents are preventable. Government, industry, and the public should take measures to prevent toxic chemical accidents and improve chemical safety in the United States:

**1. Honor the public's right to know.**
The federal government should make readily accessible to the public a complete, national database of Risk Management Plans, including worst-case scenarios. Full disclosure of chemical hazards enables government, industry, and the public to measure and evaluate progress on Inherent Safety at industrial facilities. Full disclosure enables people to hold government and industry accountable for real progress on improving site security and reducing chemical hazards.

Proposed legislation before Congress would broaden right-to-know reporting under the Toxics Release Inventory to help citizens, government, and industry obtain complete and accurate information on toxic chemical production and use. By requiring chemical use reporting, this bill, *The Children's Environmental Protection and Right to Know Act (H.R.1657)*, would close important gaps in right-to-know data and help industry work toward real pollution and accident prevention.

**2. Put Inherent Safety first.**
Federal, state, and local governments should insist that chemical facilities eliminate or reduce the *possibility* of chemical accidents by modifying technologies, products, and raw materials. These inherent safety practices are the best way to ensure community safety. EPA has the authority under Section 112(r) of the Clean Air Act to mandate accident reduction measures, but in nine years since the law was enacted, has not used that authority. The U.S. Chemical Safety Board should develop recommendations to EPA for the promotion of inherent safety. The Department of Justice should develop and recommend strict regulations to improve site security, *including through inherent safety*. State and local governments should integrate inherent safety into existing pollution prevention and chemical safety activities.

Proposed legislation before Congress, *The Chemical Security Act (S.1470)*, establishes a "multiple barriers" hierarchy for preventing chemical accidents and improving site security. First, identify and use inherently safer technologies where feasible. Second, where hazards remain, use secondary containment, control, or mitigation measures. Third, improve site security to address remaining hazards. Fourth, establish adequate buffer zones around facilities to protect residential areas, schools, and hospitals.

**3. Prepare for Y2K.**
With tens of thousands of facilities across the country handling hazardous chemicals, no one can predict for certain if or where Y2K-related accidents might occur. Recent surveys indicate that small and mid-sized facilities may not be prepared for the first critical Y2K date on January 1. In the short time remaining, facilities should communicate openly with workers and communities about the special risks to chemical operations posed by potential Y2K computer failures. Facilities should develop and coordinate contingency plans with employees, communities, and emergency responders. In addition, local governments and the public should contact chemical facilities to determine their Y2K readiness, including plans for safety holidays if preparations are not complete (see sample survey, Appendix D). Because of the ongoing potential for chemical accidents in the U.S., the Y2K computer problem should be seen as an opportunity to develop reliable contingency plans for accidents and to focus on preventing any accidents in the future.

## Table 1. Reported Chemical Incidents in the U.S., 1987-1996*

| | State | Total Reported Incidents |
|---|---|---|
| 1 | California | 100,579 |
| 2 | Texas | 55,209 |
| 3 | Ohio | 26,364 |
| 4 | New York | 25,660 |
| 5 | Louisiana | 24,920 |
| 6 | Illinois | 23,160 |
| 7 | Michigan | 19,970 |
| 8 | Pennsylvania | 17,870 |
| 9 | Florida | 17,758 |
| 10 | New Jersey | 13,491 |
| 11 | Massachusetts | 12,985 |
| 12 | Virginia | 12,224 |
| 13 | Maryland | 11,006 |
| 14 | Kansas | 9,964 |
| 15 | Tennessee | 9,770 |
| 16 | Georgia | 9,240 |
| 17 | Indiana | 9,156 |
| 18 | Kentucky | 8,915 |
| 19 | Missouri | 8,878 |
| 20 | Oregon | 7,905 |
| 21 | Colorado | 7,506 |
| 22 | Connecticut | 7,478 |
| 23 | Minnesota | 7,227 |
| 24 | West Virginia | 7,105 |
| 25 | North Carolina | 7,041 |
| 26 | Iowa | 7,039 |
| 27 | Oklahoma | 6,816 |
| 28 | Washington | 6,432 |
| 29 | Arkansas | 5,910 |
| 30 | South Carolina | 5,389 |
| 31 | Wisconsin | 5,183 |
| 32 | Utah | 5,040 |
| 33 | Alabama | 4,959 |
| 34 | Arizona | 4,825 |
| 35 | Nebraska | 3,374 |
| 36 | Wyoming | 3,244 |
| 37 | Nevada | 3,020 |
| 38 | Idaho | 2,986 |
| 39 | Mississippi | 2,950 |
| 40 | Maine | 2,505 |
| 41 | New Hampshire | 2,270 |
| 42 | Montana | 1,966 |
| 43 | New Mexico | 1,840 |
| 44 | DC | 1,639 |
| 45 | South Dakota | 1,529 |
| 46 | Alaska | 1,490 |
| 47 | Rhode Island | 1,370 |
| 48 | Delaware | 1,337 |
| 49 | Vermont | 1,123 |
| 50 | Hawaii | 799 |
| 51 | North Dakota | 727 |

**Note: The Chemical Safety Board compiled five federal databases in order to arrive at a total of 600,000 incidents over the ten-year period. Because of incomplete reports on some incidents, not all incidents had valid state identifications. This table includes only those incidents which did have valid state IDs, and for that reason, the total number of incidents listed on this table is not 600,000. Also, not all of these incidents resulted in serious consequences (injuries, deaths, or evacuations) -- see other information on these data in Section II.**

***Source: U.S. Chemical Safety Board's Baseline for Commercial Chemical Incidents in the U.S.**

**Table 2. Numbers of facilities storing more than 100,000 pounds of an extremely hazardous substance* in a single process.**

| | State | Number of facilities |
|---|---|---|
| 1 | Ilinois | 628 |
| 2 | Iowa | 524 |
| 3 | Kansas | 415 |
| 4 | Nebraska | 366 |
| 5 | Texas | 299 |
| 6 | Minnesota | 290 |
| 7 | Indiana | 245 |
| 8 | North Dakota | 227 |
| 9 | Ohio | 171 |
| 10 | California | 155 |
| 11 | Missouri | 139 |
| 12 | Oklahoma | 117 |
| 13 | Washington | 91 |
| 14 | Louisiana | 85 |
| 15 | Kentucky | 84 |
| 16 | Wisconsin | 72 |
| 17 | Colorado | 67 |
| 17 | Michigan | 67 |
| 19 | Florida | 59 |
| 20 | Georgia | 56 |
| 21 | Pennsylvania | 52 |
| 22 | South Dakota | 50 |
| 23 | North Carolina | 45 |
| 24 | South Carolina | 44 |
| 24 | Tennessee | 44 |
| 26 | Montana | 42 |
| 27 | New York | 40 |
| 28 | Alabama | 37 |
| 29 | New Jersey | 36 |
| 30 | Oregon | 34 |
| 31 | Idaho | 32 |
| 32 | Mississippi | 30 |
| 33 | Arkansas | 28 |
| 33 | Arizona | 28 |
| 35 | Virginia | 27 |
| 36 | West Virginia | 26 |
| 37 | Maryland | 19 |
| 38 | Utah | 15 |
| 39 | Wyoming | 10 |
| 40 | Delaware | 9 |
| 41 | Massachusetts | 8 |
| 41 | New Mexico | 8 |
| 41 | Nevada | 8 |
| 44 | Maine | 6 |
| 45 | Connecticut | 5 |
| 46 | Rhode Island | 4 |
| 47 | DC | 3 |
| 47 | Hawaii | 3 |
| 49 | New Hampshire | 2 |
| 50 | Alaska | 1 |
| 51 | Vermont | 0 |
| | Total | 4,860 |

**Table 3. Numbers of facilities storing more than 100,000 pounds of an extremely hazardous substance* *other than ammonia* in a single process.**

| | State | Number of facilities |
|---|---|---|
| 1 | Texas | 152 |
| 2 | California | 66 |
| 2 | Louisiana | 66 |
| 4 | Ohio | 56 |
| 5 | Illinois | 55 |
| 6 | Pennsylvania | 40 |
| 7 | South Carolina | 36 |
| 8 | Georgia | 32 |
| 9 | New Jersey | 31 |
| 10 | Alabama | 30 |
| 10 | Florida | 30 |
| 12 | North Carolina | 29 |
| 13 | New York | 28 |
| 13 | Tennessee | 28 |
| 15 | Kentucky | 26 |
| 16 | Indiana | 25 |
| 17 | West Virginia | 24 |
| 18 | Michigan | 23 |
| 19 | Arkansas | 20 |
| 19 | Missouri | 20 |
| 21 | Mississippi | 19 |
| 21 | Washington | 19 |
| 23 | Oregon | 18 |
| 24 | Minnesota | 17 |
| 24 | Virginia | 17 |
| 24 | Wisconsin | 17 |
| 27 | Kansas | 13 |
| 28 | Iowa | 11 |
| 29 | Arizona | 9 |
| 29 | Maryland | 9 |
| 31 | Delaware | 8 |
| 31 | Massachusetts | 8 |
| 31 | Utah | 8 |
| 34 | Nevada | 6 |
| 34 | Oklahoma | 6 |
| 36 | Connecticut | 5 |
| 36 | Maine | 5 |
| 36 | Montana | 5 |
| 36 | North Dakota | 5 |
| 36 | Nebraska | 5 |
| 41 | Colorado | 4 |
| 41 | New Mexico | 4 |
| 43 | DC | 3 |
| 43 | Rhode Island | 3 |
| 45 | Hawaii | 2 |
| 45 | Idaho | 2 |
| 45 | Wyoming | 2 |
| 48 | New Hampshire | 1 |
| 48 | South Dakota | 1 |
| 50 | Alaska | 0 |
| 51 | Vermont | 0 |
| | Total | 1,054 |

* Extremely hazardous substance as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r)

**Table 4. The 100 Faclities in the U.S. storing the largest amounts of a non-ammonia extremely hazardous substance [as defined by EPA in the Clean Air Act, Section 112(r)] in any single process**

| | Facility Name | City | State | Maximum amount in single process (lbs) | Chemical name for maximum amount |
|---|---|---|---|---|---|
| 1 | SAN JACINTO RIVER AUTHORITY WW PLANT - SO2 | THE WOODLANDS | TX | 800,012,000 | Sulfur dioxide (anhydrous) |
| 2 | VULCAN CHEMICALS | GEISMAR | LA | 190,000,000 | Chloroform |
| 3 | BP CHEMICALS, INC. | PORT LAVACA | TX | 70,000,000 | Acrylonitrile |
| 3 | BAYPORT MARINE TERMINAL | SEABROOK | TX | 70,000,000 | Vinyl acetate monomer |
| 5 | GEORGIA GULF CORPORATION - PLAQUEMINE FACILITY | PLAQUEMINE | LA | 36,000,000 | Chlorine |
| 6 | SOLUTIA - CHOCOLATE BAYOU | ALVIN | TX | 34,771,000 | Acrylonitrile |
| 7 | LYONDELL CHEMICAL - BAYPORT PLANT | PASADENA | TX | 34,500,000 | Propylene oxide |
| 7 | LYONDELL - CHANNELVIEW PLANT | CHANNELVIEW | TX | 34,500,000 | Propylene oxide |
| 9 | RHODIA, HOUSTON PLANT | HOUSTON | TX | 33,080,000 | Oleum (Fuming Sulfuric acid) |
| 10 | INTERCONTINENTAL TERMINALS COMPANY | DEER PARK | TX | 32,463,270 | Acrylonitrile |
| 11 | OLIN CORPORATION MCINTOSH, ALABAMA PLANT | MCINTOSH | AL | 31,000,000 | Chlorine |
| 12 | PAKTANK CORPORATION - DEER PARK TERMINAL | DEER PARK | TX | 28,006,860 | Chloroform |
| 13 | DUPONT WASHINGTON WORKS | PARKERSBURG | WV | 28,000,000 | Formaldehyde (solution) |
| 14 | OLIN CORPORATION, CHARLESTON TN PLANT | CHARLESTON | TN | 26,000,000 | Chlorine |
| 15 | BP CHEMICALS, INC. | LIMA | OH | 25,737,460 | Acrylonitrile |
| 16 | OCCIDENTAL CHEMICAL TAFT PLANT | HAHNVILLE | LA | 25,000,000 | Chlorine |
| 17 | LBC PETROUNITED/ BAYPORT TERMINAL | SEABROOK | TX | 24,897,600 | Vinyl acetate monomer |
| 18 | ALLIEDSIGNAL - HOPEWELL PLANT | HOPEWELL | VA | 24,400,000 | Oleum (Fuming Sulfuric acid) |
| 19 | THE DOW CHEMICAL COMPANY-LOUISIANA OPERATIONS | PLAQUEMINE | LA | 23,617,660 | Propylene oxide |
| 20 | UNION CARBIDE CORPORATION | TEXAS CITY | TX | 23,500,000 | Vinyl acetate monomer |
| 21 | ODFJELL TERMINALS (BAYTANK) INC. | SEABROOK | TX | 21,000,000 | Chloroform |
| 22 | INTERTRADE HOLDINGS, INC. | COPPERHILL | TN | 20,316,591 | Oleum (Fuming Sulfuric acid) |
| 23 | MAGIC WATERS | CHERRY VALLEY | IL | 20,002,000 | Chlorine |
| 24 | CYTEC-FORTIER PLANT | WAGGAMAN | LA | 19,500,000 | Acrylonitrile |
| 25 | DELTA TERMINAL SERVICES, INC. | HARVEY | LA | 19,000,000 | Toluene 2,4-diisocyanate |
| 26 | BASF CORPORATION GEISMAR SITE | GEISMAR | LA | 18,000,000 | Chlorine |
| 26 | DUPONT JOHNSONVILLE PLANT | NEW JOHNSONVILLE | TN | 18,000,000 | Chlorine |
| 28 | SOLUTIA INC. - DECATUR PLANT | DECATUR | AL | 17,776,000 | Acrylonitrile |
| 29 | OCCIDENTAL CHEMICAL CORPORATION - NIAGARA PLANT | NIAGARA FALLS | NY | 17,000,000 | Chlorine |
| 30 | STOLTHAVEN HOUSTON, INC. | HOUSTON | TX | 16,800,000 | Epichlorohydrin |
| 31 | CITGO PETROLEUM CORPORATION - LOUISVILLE TERMINAL | LOUISVILLE | KY | 15,805,818 | Chloroform |
| 32 | RHODIA, INC., BATON ROUGE FACILITY | BATON ROUGE | LA | 15,540,580 | Oleum (Fuming Sulfuric acid) |
| 33 | VULCAN CHEMICALS, WICHITA PLANT | WICHITA | KS | 14,931,000 | Chloroform |
| 34 | GENERAL CHEMICAL CORPORATION | AUGUSTA | GA | 14,400,000 | Oleum (Fuming Sulfuric acid) |

| | Facility Name | City | State | Maximum amount in single process (lbs) | Chemical name for maximum amount |
|---|---|---|---|---|---|
| 35 | STERLING CHEMICALS INCORPORATED | TEXAS CITY | TX | 14,400,000 | Acrylonitrile |
| 36 | NORCO CHEMICAL PLANT - WEST SITE | NORCO | LA | 14,000,000 | Epichlorohydrin |
| 37 | SHELL DEER PARK REFINING COMPANY | DEER PARK | TX | 13,700,000 | Epichlorohydrin |
| 38 | OLIN CORPORATION NIAGARA FALLS, NY - FOOTE YARD | NIAGARA FALLS | NY | 13,200,000 | Chlorine |
| 39 | DPC ENTERPRISES | MOBILE | AL | 13,000,000 | Chlorine |
| 40 | HUNTSMAN CORP., OLEFINS & OXIDES (O&O) PLANT | PORT NECHES | TX | 12,400,000 | Ethylene oxide |
| 41 | OXY VINYLS, LP - BATTLEGROUND CHLOR-ALKALI PLANT | LAPORTE | TX | 12,000,000 | Chlorine |
| 42 | AIR PRODUCTS AND CHEMICALS, INC. VAM DISTRIBUTION | CALVERT CITY | KY | 11,700,000 | Vinyl acetate monomer |
| 43 | THE DOW CHEMICAL COMPANY, TEXAS OPERATIONS | FREEPORT | TX | 11,149,000 | Chloroform |
| 44 | STANTRANS, INC. | TEXAS CITY | TX | 10,696,677 | Propylene oxide |
| 45 | BASF CORPORATION - FREEPORT SITE | FREEPORT | TX | 10,200,000 | Oleum (Fuming Sulfuric acid) |
| 46 | DUPONT BEAUMONT PLANT | BEAUMONT | TX | 10,000,000 | Acrylonitrile |
| 46 | BAYER ADDYSTON OHIO PLANT | ADDYSTON | OH | 10,000,000 | Acrylonitrile |
| 48 | DUPONT - EDGE MOOR, DE FACILITY | EDGE MOOR | DE | 9,825,600 | Chlorine |
| 49 | LYONDELL NORTH CHARLESTON DISTRIBUTION TERMINAL | CHARLESTON | WV | 9,763,000 | Propylene oxide |
| 50 | DUPONT SABINE RIVER WORKS | ORANGE | TX | 9,400,000 | Vinyl acetate monomer |
| 51 | DUPONT DOW ELASTOMERS L.L.C., PONTCHARTRAIN SITE | LAPLACE | LA | 9,000,000 | Chlorine |
| 52 | PIONEER CHLOR ALKALI COMPANY, INC. | ST. GABRIEL | LA | 8,930,000 | Chlorine |
| 53 | DUPONT DELISLE PLANT | PASS CHRISTIAN | MS | 8,800,000 | Chlorine |
| 54 | VON ROLL AMERICA, INC | EAST LIVERPOOL | OH | 8,700,000 | Chloroform |
| 55 | LYONDELL CHEMICAL WORLDWIDE, INC. | WESTLAKE | LA | 8,400,000 | Toluene diisocyanate (unspecified isomer) |
| 56 | GATX TERMINALS CORPORATION - PASADENA TERMINAL | PASADENA | TX | 7,879,536 | Vinyl acetate monomer |
| 57 | CLEAR LAKE PLANT | PASADENA | TX | 7,800,000 | Vinyl acetate monomer |
| 58 | LA PORTE PLANT | LA PORTE | TX | 7,600,000 | Vinyl acetate monomer |
| 59 | SPECIFIED FUELS & CHEMICALS | CHANNELVIEW | TX | 7,500,000 | Vinyl acetate monomer |
| 60 | PPG INDUSTRIES INC., LAKE CHARLES PLANT | LAKE CHARLES | LA | 6,800,000 | Chlorine |
| 61 | DOW CORNING -- MIDLAND PLANT | MIDLAND | MI | 6,738,122 | Hydrogen chloride (anhydrous) |
| 62 | GE PLASTICS - OTTAWA | OTTAWA | IL | 6,654,393 | Acrylonitrile |
| 63 | GENERAL CHEMICAL CORPORATION | CLAYMONT | DE | 6,630,000 | Oleum (Fuming Sulfuric acid) |
| 64 | ARCH CHEMICALS INC. | BRANDENBURG | KY | 6,500,000 | Propylene oxide |
| 64 | OCCIDENTAL CHEMICAL CORPORATION INGLESIDE PLANT | GREGORY | TX | 6,500,000 | Chlorine |
| 66 | UNION CARBIDE CORPORATION TAFT/ STAR COMPLEX | TAFT | LA | 6,277,353 | Ethylenediamine |
| 67 | QUEEN CITY TERMINALS, INC. | CINCINNATI | OH | 5,800,000 | Vinyl acetate monomer |
| 67 | MONSANTO COMPANY LULING PLANT | LULING | LA | 5,800,000 | Chlorine |
| 69 | NORTH CHARLESTON DISTRIBUTION TERMINAL | CHARLESTON | WV | 5,606,940 | Vinyl acetate monomer |
| 70 | SHELL CHEMICAL COMPANY | DEER PARK | TX | 5,566,642 | Epichlorohydrin |

| | Facility Name | City | State | Maximum amount in single process (lbs) | Chemical name for maximum amount |
|---|---|---|---|---|---|
| 71 | DUPONT BURNSIDE PLANT | DARROW | LA | 5,400,000 | Oleum (Fuming Sulfuric acid) |
| 72 | DUPONT LOUISVILLE WORKS | LOUISVILLE | KY | 5,300,000 | Hydrogen fluoride (conc >=50%) |
| 73 | BASF CORPORATION - WYANDOTTE SITE | WYANDOTTE | MI | 5,070,000 | Propylene oxide |
| 74 | PCS NITROGEN FERTILIZER, L. P.--GEISMAR, LA | GEISMAR | LA | 5,000,000 | Oleum (Fuming Sulfuric acid) |
| 74 | BAYER CORPORATION - BAYTOWN, TEXAS PLANT | BAYTOWN | TX | 5,000,000 | Toluene diisocyanate (unspecified isomer) |
| 74 | GENERAL CHEMICAL CORPORATION | NEWARK | NJ | 5,000,000 | Oleum (Fuming Sulfuric acid) |
| 74 | TITANIUM METALS CORPORATION | HENDERSON | NV | 5,000,000 | Titanium tetrachloride |
| 74 | ALIEDSIGNAL, GEISMAR PLANT | GEISMAR | LA | 5,000,000 | Hydrogen fluoride (conc >=50%) |
| 79 | DUPONT MEMPHIS PLANT | MEMPHIS | TN | 4,778,196 | Hydrocyanic acid |
| 80 | OCCIDENTAL CHEMICAL CORP. MUSCLE SHOALS PLANT | MUSCLE SHOALS | AL | 4,770,000 | Chlorine |
| 81 | DUPONT COMPANY - CORPUS CHRISTI PLANT | INGLESIDE | TX | 4,718,500 | Hydrogen fluoride (conc >=50%) |
| 82 | PPG INDUSTRIES, INC., NATRIUM | NEW MARTINSVILLE | WV | 4,717,755 | Carbon disulfide |
| 83 | SHELL CHEMICAL COMPANY | GEISMAR | LA | 4,610,000 | Ethylene oxide |
| 84 | BORDEN CHEMICALS AND PLASTICS, OLP - GEISMAR | GEISMAR | LA | 4,600,000 | Formaldehyde (solution) |
| 85 | TIN PRODUCTS, INC. | LEXINGTON | SC | 4,200,000 | Chlorine |
| 85 | HAMILTON FACILITY | HAMILTON | MS | 4,200,000 | Titanium tetrachloride |
| 85 | ESCAMBIA PLANT | PACE | FL | 4,200,000 | Cyclohexylamine |
| 88 | JOHANN HALTERMANN, LIMITED | HOUSTON | TX | 4,180,000 | Vinyl acetate monomer |
| 89 | DOW CORNING CORPORATION CARROLLTON SITE | CARROLLTON | KY | 4,167,500 | Dimethyldichlorosilane |
| 90 | CELANESE BAY CITY PLANT | BAY CITY | TX | 4,101,000 | Vinyl acetate monomer |
| 91 | GE PLASTICS - BAY ST. LOUIS | BAY ST. LOUIS | MS | 4,062,000 | Acrylonitrile |
| 92 | DU PONT VICTORIA PLANT | VICTORIA | TX | 4,000,000 | Vinyl acetate monomer |
| 92 | CELANESE CHEMICALS, INC. - BUCKS, ALABAMA | BUCKS | AL | 4,000,000 | Cyclohexylamine |
| 92 | ELF ATOCHEM NORTH AMERICA, INC. - RIVERVIEW, MI | RIVERVIEW | MI | 4,000,000 | Chlorine |
| 95 | ELF ATOCHEM NORTH AMERICA, INC. | BEAUMONT | TX | 3,900,000 | Methyl mercaptan |
| 95 | NATIONAL STARCH AND CHEMICAL COMPANY WOODRUFF | ENOREE | SC | 3,900,000 | Vinyl acetate monomer |
| 97 | INTERCOASTAL TERMINAL, INCORPORATED | TEXAS CITY | TX | 3,800,000 | Toluene diisocyanate (unspecified isomer) |
| 98 | GEORGIA-PACIFIC CORPORATION, PALATKA OPERATIONS | PALATKA | FL | 3,780,000 | Chlorine |
| 99 | UNION CARBIDE SEADRIFT PLANT | NORTH SEADRIFT | TX | 3,777,940 | Vinyl acetate monomer |
| 100 | ALBEMARLE CORPORATION WEST PLANT | MAGNOLIA | AR | 3,721,612 | Chlorine |

**Table 5. The 100 facilities storing the largest amounts of ammonia in any single process**

| | Facility Name | City | State | Maximum amount in single process (lbs.) |
|---|---|---|---|---|
| 1 | TAFT TERMINAL | TAFT | LA | 240,000,000 |
| 2 | FARMLAND INDUSTRIES, FORT DODGE NITROGEN PLANT | FORT DODGE | IA | 180,000,000 |
| 3 | HUNTINGTON TERMINAL | HUNTINGTON | IN | 150,000,000 |
| 3 | ALASKA NITROGEN PRODUCS LLC | KENAI | AK | 150,000,000 |
| 5 | ET-8 WALTON TERMINAL | WALTON | IN | 140,000,000 |
| 5 | ET-4 TRILLA TERMINAL | MATTOON | IL | 140,000,000 |
| 5 | WT-5 MARSHALLTOWN TERMINAL | MARSHALLTOWN | IA | 140,000,000 |
| 5 | ET-6 CRAWFORDSVILLE TERMINAL | CRAWFORDSVILLE | IN | 140,000,000 |
| 5 | FARMLAND INDUSTRIES, INC. - HASTINGS TERMINAL | HASTINGS | NE | 140,000,000 |
| 5 | WT-12 AURORA TERMINAL | AURORA | NE | 140,000,000 |
| 5 | WT-11 DAVID CITY TERMINAL | DAVID CITY | NE | 140,000,000 |
| 12 | FARMLAND INDUSTRIES, INC., BEATRICE NITROGEN PLANT | BEATRICE | NE | 132,000,000 |
| 13 | STERLINGTON FACILITY | STERLINGTON | LA | 130,000,000 |
| 13 | CF INDUSTRIES, INC. DONALDSONVILLE NITROGEN CMPLX | DONALDSONVILLE | LA | 130,000,000 |
| 15 | PCS NITROGEN OHIO L. P. | LIMA | OH | 125,938,200 |
| 16 | CF INDUSTRIES, INC. - ALBANYTERMINAL | ALBANY | IL | 120,000,000 |
| 16 | CF INDUSTRIES, INC. - GARNER TERMINAL | GARNER | IA | 120,000,000 |
| 16 | CF INDUSTRIES, INC. - GLENWOOD TERMINAL | GLENWOOD | MN | 120,000,000 |
| 16 | CF INDUSTRIES, INC. - SPENCER TERMINAL | SPENCER | IA | 120,000,000 |
| 16 | CF INDUSTRIES, INC. - PINE BEND TERMINAL | ROSEMOUNT | MN | 120,000,000 |
| 16 | CF INDUSTRIES, INC. - GRAND FORKS TERMINAL | GRAND FORKS | ND | 120,000,000 |
| 16 | FARMLAND INDUSTRIES, INC-DODGE CITY NITROGEN PLANT | DODGE CITY | KS | 120,000,000 |
| 16 | FARMLAND INDUSTRIES, INC., ENID NITROGEN PLANT | ENID | OK | 120,000,000 |
| 24 | RIVERGATE TERMINAL | PORTLAND | OR | 101,000,000 |
| 25 | KENNEWICK PLANT - HEDGES AREA | KENNEWICK | WA | 100,200,000 |
| 26 | TERRA NITROGEN LIMITED PARTNERSHIP, BLAIR TERMINAL | BLAIR | NE | 100,000,000 |
| 26 | IMC-AGRICO COMPANY, PORT SUTTON TERMINAL | TAMPA | FL | 100,000,000 |
| 26 | PCS NITROGEN FERTILIZER, L.P. CLINTON PLANT | CAMANCHE | IA | 100,000,000 |
| 29 | FARMLAND HYDRO, L.P. (TAMPA TERMINAL) | TAMPA | FL | 98,000,000 |
| 29 | PCS PHOSPHATE | GARDEN CITY | GA | 98,000,000 |
| 31 | TERRA NITROGEN LIMITED PARTNERSHIP, BLYTHEVILLE P | BLYTHEVILLE | AR | 90,000,000 |
| 31 | HENDERSON TERMINAL | HENDERSON | KY | 90,000,000 |
| 33 | NECHES INDUSTRIAL PARK,INC. | BEAUMONT | TX | 89,000,000 |
| 34 | CF INDUSTRIES, INC. - KINGSTON MINESTERMINAL | KINGSTON MINES | IL | 80,000,000 |
| 34 | TERRA NITROGEN COMPANY, WOODWARD PLANT | WOODWARD | OK | 80,000,000 |
| 34 | CALAMCO | STOCKTON | CA | 80,000,000 |
| 37 | WEST SACRAMENTO PLANT | WEST SACRAMENTO | CA | 79,000,000 |
| 38 | ROYSTER-CLARK NITROGEN EAST DUBUQUE FACILITY | EAST DUBUQUE | IL | 78,000,000 |
| 39 | MISSISSIPPI CHEMICAL CORPORATION | YAZOO CITY | MS | 76,000,000 |
| 40 | CF INDUSTRIES, INC., TAMPA TERMINAL | TAMPA | FL | 75,000,000 |
| 41 | WOOD RIVER TERMINAL | EAST ALTON | IL | 73,000,000 |
| 41 | PEKIN TERMINAL | CREVE COUER | IL | 73,000,000 |
| 43 | PCS NITROGEN FERTIIZER, L.P. AUGUSTA, GA PLANT | AUGUSTA | GA | 72,000,000 |
| 43 | T/A TERMINALS, INC./MEREDOSIA TERMINAL | MEREDOSIA | IL | 72,000,000 |
| 45 | BORDEN CHEMICALS AND PLASTICS, OLP - GEISMAR | GEISMAR | LA | 70,000,000 |
| 45 | WT-4 WASHINGTON TERMINAL | KEOTA | IA | 70,000,000 |
| 47 | FARMLAND INDUSTRIES BARNESVILLE AMMONIA TERMINAL | BARNESVILLE | MN | 68,868,682 |
| 48 | COASTAL CHEM, INC. - CHEYENNE WYOMING | CHEYENNE | WY | 67,000,000 |
| 49 | STERLING CHEMICALS INCORPORATED | TEXAS CITY | TX | 66,120,000 |
| 50 | GREAT PLAINS SYNFUELS PLANT | BEULAH | ND | 65,455,000 |
| 51 | FARMLAND INDUSTRIES INC.- MURDOCK AMMONIA TERMINAL | MURDOCK | MN | 63,580,928 |
| 52 | TERRA NITROGEN LIMITED PARTNERSHIP,VERDIGRIS PLANT | CLAREMORE | OK | 62,000,000 |

| | Facility Name | City | State | Maximum amount in single process (lbs.) |
|---|---|---|---|---|
| 53 | FARMLAND INDUSTRIES, INC. CONWAY AMMONIA TERMINAL | MCPHERSON | KS | 61,000,000 |
| 53 | SERGEANT BLUFF TERMINAL | SERGEANT BLUFF | IA | 61,000,000 |
| 55 | FARMLAND INDUSTRIES, INC. - GARNER IA TERMINAL | GARNER | IA | 60,357,000 |
| 56 | FARMLAND INDUSTRIES, INC. | FARNSWORTH | TX | 60,207,000 |
| 57 | LAROCHE INDUSTRIES, INC. CRYSTAL CITY OPERATIONS | FESTUS | MO | 60,012,570 |
| 58 | TERRA NITROGEN - PORT NEAL PLANT | SERGEANT BLUFF | IA | 60,000,000 |
| 58 | FARMLAND GREENWOOD AMMONIA FACILITY | GREENWOOD | NE | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - SENECA TERMINAL | SENECA | IL | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - RITZVILLE TERMINAL | RITZVILLE | WA | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - PORT HURON TERMINAL | KIMBALL | MI | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - HUNTINGTON TERMINAL | HUNTINGTON | IN | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - FRANKFORT TERMINAL | FRANKFORT | IN | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - COWDENTERMINAL | COWDEN | IL | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - TERRE HAUTE TERMINAL | ROSEDALE | IN | 60,000,000 |
| 58 | CF INDUSTRIES, INC. -VELVA TERMINAL | VELVA | ND | 60,000,000 |
| 58 | CF INDUSTRIES, INC. - PALMYRA TERMINAL | PALMYRA | MO | 60,000,000 |
| 58 | TRIAD NITROGEN, INC. | DONALDSONVILLE | LA | 60,000,000 |
| 58 | FARMLAND INDUSTRIES, INC. POLLOCK NITROGEN PLANT | POLLOCK | LA | 60,000,000 |
| 58 | BASF CORPORATION - FREEPORT SITE | FREEPORT | TX | 60,000,000 |
| 58 | BASF CORPORATION - FREEPORT TERMINAL | FREEPORT | TX | 60,000,000 |
| 73 | ROYSTER-CLARK NITROGEN NIOTA TERMINAL | NIOTA | IL | 59,200,000 |
| 74 | FARMLAND VERNON CENTER AMMONIA TERMINAL | VERNON CENTER | MN | 56,000,000 |
| 75 | FAUSTINA PLANT | ST. JAMES | LA | 50,000,000 |
| 75 | CYTEC-FORTIER PLANT | WAGGAMAN | LA | 50,000,000 |
| 77 | MISSISSIPPI PHOSPHATES CORPORATION | PASCAGOULA | MS | 48,200,000 |
| 78 | KENNEWICK PLANT - FINLEY AREA | KENNEWICK | WA | 44,000,000 |
| 78 | PCS NITROGEN FERTILIZER, L. P.--GEISMAR, LA | GEISMAR | LA | 44,000,000 |
| 80 | EL DORADO CHEMICAL COMPANY | EL DORADO | AR | 41,000,000 |
| 81 | AGRIUM U.S INC. HOMESTEAD NITROGEN OPERATIONS | BEATRICE | NE | 40,400,000 |
| 82 | FARMHUT CO., L.L.C. | HENRY | IL | 40,127,840 |
| 83 | ALLIEDSIGNAL - HOPEWELL PLANT | HOPEWELL | VA | 40,000,000 |
| 83 | CF INDUSTRIES, INC. - PERU TERMINAL | PERU | IL | 40,000,000 |
| 83 | CF INDUSTRIES, INC. - JOLIET TERMINAL | JOLIET | IL | 40,000,000 |
| 83 | CF INDUSTRIES, INC. - FREMONTTERMINAL | FREMONT | NE | 40,000,000 |
| 87 | ROYSTER-CLARK NITROGEN, NORTH BEND PLANT | NORTH BEND | OH | 36,000,000 |
| 88 | DUPONT BEAUMONT PLANT | BEAUMONT | TX | 34,000,000 |
| 89 | DU PONT VICTORIA PLANT | VICTORIA | TX | 30,000,000 |
| 89 | FARMLAND INDUSTRIES-LAWRENCE NITROGEN PLANT | LAWRENCE | KS | 30,000,000 |
| 89 | CF INDUSTRIES, INC. - MOUNT VERNON TERMINAL | MOUNT VERNON | IN | 30,000,000 |
| 89 | PCS NITROGEN FERTILIZER, L.P. LAPLATTE PLANT | LAPLATTE | NE | 30,000,000 |
| 89 | CF INDUSTRIES, INC. - AURORA TERMINAL | AURORA | NE | 30,000,000 |
| 89 | HOUSTON AMMONIA TERMINAL | PASADENA | TX | 30,000,000 |
| 95 | LAROCHE INDUSTRIES | CHEROKEE | AL | 25,235,004 |
| 96 | BP CHEMICALS, INC. | PORT LAVACA | TX | 23,000,000 |
| 97 | DUPONT BELLE PLANT | BELLE | WV | 20,000,000 |
| 98 | DYNO NOBEL INC. (DONORA PLANT) | DONORA | PA | 18,022,528 |
| 99 | WELLAND CHEMICAL, INC. | NEWELL | PA | 17,614,240 |
| 100 | CONTINENTAL NITROGEN & RESOURCES CORPORATION | ROSEMOUNT | MN | 16,800,000 |

**Table 6. The 100 facilities storing the highest amounts of chlorine in any single process**

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 1 | GEORGIA GULF CORPORATION - PLAQUEMINE FACILITY | PLAQUEMINE | LA | 36,000,000 |
| 2 | OLIN CORPORATION MCINTOSH, ALABAMA PLANT | MCINTOSH | AL | 31,000,000 |
| 3 | OLIN CORPORATION, CHARLESTON TN PLANT | CHARLESTON | TN | 26,000,000 |
| 4 | OCCIDENTAL CHEMICAL TAFT PLANT | HAHNVILLE | LA | 25,000,000 |
| 5 | MAGIC WATERS | CHERRY VALLEY | IL | 20,002,000 |
| 6 | DUPONT JOHNSONVILLE PLANT | NEW JOHNSONVILLE | TN | 18,000,000 |
| 6 | BASF CORPORATION GEISMAR SITE | GEISMAR | LA | 18,000,000 |
| 8 | OCCIDENTAL CHEMICAL CORPORATION - NIAGARA PLANT | NIAGARA FALLS | NY | 17,000,000 |
| 9 | OLIN CORPORATION NIAGARA FALLS, NY - FOOTE YARD | NIAGARA FALLS | NY | 13,200,000 |
| 10 | DPC ENTERPRISES | MOBILE | AL | 13,000,000 |
| 11 | OXY VINYLS, LP - BATTLEGROUND CHLOR-ALKALI PLANT | LAPORTE | TX | 12,000,000 |
| 12 | DUPONT - EDGE MOOR, DE FACILITY | EDGE MOOR | DE | 9,825,600 |
| 13 | DUPONT DOW ELASTOMERS L.L.C., PONTCHARTRAIN SITE | LAPLACE | LA | 9,000,000 |
| 14 | PIONEER CHLOR ALKALI COMPANY, INC. | ST. GABRIEL | LA | 8,930,000 |
| 15 | DUPONT DELISLE PLANT | PASS CHRISTIAN | MS | 8,800,000 |
| 16 | PPG INDUSTRIES INC., LAKE CHARLES PLANT | LAKE CHARLES | LA | 6,800,000 |
| 17 | OCCIDENTAL CHEMICAL CORPORATION INGLESIDE PLANT | GREGORY | TX | 6,500,000 |
| 18 | MONSANTO COMPANY LULING PLANT | LULING | LA | 5,800,000 |
| 19 | THE DOW CHEMICAL COMPANY-LOUISIANA OPERATIONS | PLAQUEMINE | LA | 5,500,000 |
| 20 | OCCIDENTAL CHEMICAL CORP. MUSCLE SHOALS PLANT | MUSCLE SHOALS | AL | 4,770,000 |
| 21 | TIN PRODUCTS, INC. | LEXINGTON | SC | 4,200,000 |
| 22 | ELF ATOCHEM NORTH AMERICA, INC. - RIVERVIEW, MI | RIVERVIEW | MI | 4,000,000 |
| 23 | THE DOW CHEMICAL COMPANY, TEXAS OPERATIONS | FREEPORT | TX | 3,840,000 |
| 24 | GEORGIA-PACIFIC CORPORATION, PALATKA OPERATIONS | PALATKA | FL | 3,780,000 |
| 25 | ALBEMARLE CORPORATION WEST PLANT | MAGNOLIA | AR | 3,721,612 |
| 26 | ALBEMARLE CORPORATION SOUTH PLANT | MAGNOLIA | AR | 3,600,000 |
| 27 | LAROCHE INDUSTRIES INC. - GRAMERCY FACILITY | GRAMERCY | LA | 3,523,000 |
| 28 | DXI INDUSTRIES, INC. | HOUSTON | TX | 3,500,000 |
| 29 | OLIN CORPORATION AUGUSTA, GEORGIA PLANT | AUGUSTA | GA | 3,400,000 |
| 30 | GILMAN PAPER COMPANY, ST, MARYS KRAFT DIVISION | ST. MARYS | GA | 3,240,000 |
| 31 | WESTLAKE MONOMERS/CA&O CORPORATION | CALVERT CITY | KY | 3,200,000 |
| 32 | OLIN CORPORATION NIAGARA FALLS, NEW YORK PLANT | NIAGARA FALLS | NY | 3,100,000 |
| 33 | OCCIDENTAL CHEMICAL CORPORATION CONVENT PLANT | CONVENT | LA | 3,040,000 |
| 34 | SOLUTIA W.G. KRUMMRICH PLANT | SAUGET | IL | 2,880,000 |
| 35 | HAMILTON FACILITY | HAMILTON | MS | 2,800,000 |
| 36 | DUPONT CHAMBERS WORKS | DEEPWATER | NJ | 2,710,000 |
| 37 | RAYONIER SPECIALTY PULP PRODUCTS, JESUP MILL | JESUP | GA | 2,520,000 |
| 37 | GB BIOSCIENCES CORPORATION / GREENS BAYOU PLANT | HOUSTON | TX | 2,520,000 |
| 39 | DUPONT DOW ELASTOMERS L.L.C. - BEAUMONT PLANT | BEAUMONT | TX | 2,500,000 |
| 39 | DPC INDUSTRIES, INC. | CLEBURNE | TX | 2,500,000 |
| 41 | VULCAN CHEMICALS, WICHITA PLANT | WICHITA | KS | 2,213,200 |
| 42 | OCCIDENTAL CHEMICAL CORP., DELAWARE CITY PLANT | NEW CASTLE | DE | 2,200,000 |
| 43 | DONOHUE INDUSTRIES SHELDON MILL | SHELDON | TX | 2,160,000 |
| 44 | OCCIDENTAL CHEMICAL CORPORATION, MOBILE PLANT | MOBILE | AL | 1,940,000 |
| 45 | PIONEER CHLOR ALKALI COMPANY, INC. | TACOMA | WA | 1,900,000 |
| 46 | OREMET WAH CHANG-NORTH PLANT | ALBANY | OR | 1,800,000 |
| 46 | HAWKINS POINT PLANT | BALTIMORE | MD | 1,800,000 |
| 46 | OXY VINYLS, LP - DEER PARK CHLOR-ALKALI PLANT | DEER PARK | TX | 1,800,000 |
| 49 | DPC INDUSTRIES, INC. | OMAHA | NE | 1,750,000 |
| 50 | P. B. & S. CHEMICAL COMPANY, INC (08) | CHATTANOOGA | TN | 1,664,900 |

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 51 | P. B. & S. CHEMICAL COMPANY, INC (52) | ORLANDO | FL | 1,659,170 |
| 52 | BUCKEYE FLORIDA, LIMITED PARTNERSHIP | PERRY | FL | 1,626,000 |
| 53 | PIONEER CHLOR ALKALI COMPANY INC. - HENDERSON | HENDERSON | NV | 1,536,000 |
| 54 | GEORGIA-PACIFIC WEST, INC. | BELLINGHAM | WA | 1,500,000 |
| 54 | DPC INDUSTRIES, INC. | SWEETWATER | TX | 1,500,000 |
| 56 | RHODIA INC. MORRISVILLE PLANT | MORRISVILLE | PA | 1,440,000 |
| 56 | SOLUTIA DELAWARE RIVER PLANT | BRIDGEPORT | NJ | 1,440,000 |
| 58 | CONDEA VISTA COMPANY | BALTIMORE | MD | 1,400,000 |
| 59 | VULCAN CHEMICALS | GEISMAR | LA | 1,300,000 |
| 59 | JCI JONES CHEMICALS, INC. - WARWICK PLANT | WARWICK | NY | 1,300,000 |
| 59 | KEMIRA PIGMENTS, INC. | SAVANNAH | GA | 1,300,000 |
| 62 | VERTEX CHEMICAL CORPORATION MEMPHIS, TN | MEMPHIS | TN | 1,283,494 |
| 63 | DPC INDUSTRIES, INC. | LONGVIEW | TX | 1,250,000 |
| 64 | P. B. & S. CHEMICAL COMPANY, INC. (64) | ST. ALBANS | WV | 1,247,444 |
| 65 | CHEMICAL UNLOADING FACILITY | PERRIS | CA | 1,230,000 |
| 66 | DPC INDUSTRIES, INC. | HUDSON | CO | 1,200,000 |
| 66 | DPC INDUSTRIES, INC | ROSEMOUNT | MN | 1,200,000 |
| 68 | LOS ANGELES AQUEDUCT FILTRATION PLANT | SYLMAR | CA | 1,136,000 |
| 69 | ULRICH CHEMICAL, INC. | TERRE HAUTE | IN | 1,131,050 |
| 70 | INFINEUM USA L.P. BAYWAY CHEMICAL PLANT | LINDEN | NJ | 1,100,000 |
| 71 | LYONDELL CHEMICAL WORLDWIDE, INC. | WESTLAKE | LA | 1,080,000 |
| 71 | POTLATCH CORP. IDAHO PULP AND PAPERBOARD DIVISION | LEWISTON | ID | 1,080,000 |
| 71 | SACRAMENTO REGIONAL WASTEWATER TREATMENT PLANT | ELK GROVE | CA | 1,080,000 |
| 71 | RAYONIER FERNANDINA BEACH DISSOLVING SULFITE MILL | FERNANDINA BEACH | FL | 1,080,000 |
| 71 | TOMEN AGRO, INC. | PERRY | OH | 1,080,000 |
| 71 | JOINT WATER POLLUTION CONTROL PLANT | CARSON | CA | 1,080,000 |
| 71 | NTMWD REGIONAL WATER TREATMENT PLANT | WYLIE | TX | 1,080,000 |
| 71 | KEMIRON PACIFIC, INC. - MOJAVE FACILITY | MOJAVE | CA | 1,080,000 |
| 79 | VERTEX CHEMICAL CORPORATION CAMANCHE, IA | CAMANCHE | IA | 1,079,950 |
| 80 | DPC ENTERPRISES | FESTUS | MO | 1,000,000 |
| 80 | DPC ENTERPRISES | CHATTANOOGA | TN | 1,000,000 |
| 80 | DPC ENTERPRISES | RESERVE | LA | 1,000,000 |
| 80 | DPC INDUSTRIES, INC. | CORPUS CHRISTI | TX | 1,000,000 |
| 80 | WILLOW SPRINGS TERMINAL | WILLOW SPRINGS | IL | 1,000,000 |
| 85 | KUEHNE CHEMICAL CO., INC. | SOUTH KEARNY | NJ | 999,999 |
| 86 | FORMOSA PLASTICS CORPORATION, LA | BATON ROUGE | LA | 960,000 |
| 87 | JCI JONES CHEMICALS, INC.-BARBERTON, OHIO | BARBERTON | OH | 900,000 |
| 87 | DETROIT WASTEWATER TREATMENT PLANT | DETROIT | MI | 900,000 |
| 87 | ALABAMA RIVER PULP COMPANY, INC. | PERDUE HILL | AL | 900,000 |
| 87 | ALLIEDSIGNAL INC. BATON ROUGE PLANT | BATON ROUGE | LA | 900,000 |
| 87 | TRINITY MANUFACTURING, INC. | HAMLET | NC | 900,000 |
| 92 | HERCULES - HOPEWELL PLANT | HOPEWELL | VA | 850,000 |
| 93 | P. B. & S. CHEMICAL COMPANY, INC (24) | HENDERSON | KY | 794,550 |
| 94 | HARCROS CHEMICALS INC. -- TAMPA | TAMPA | FL | 770,000 |
| 95 | GEORGIA-PACIFIC CROSSETT PAPER OPERATIONS | CROSSETT | AR | 760,000 |
| 96 | JAMES AUSTIN COMPANY | MARS | PA | 720,000 |
| 96 | CLEARON CORP. | SOUTH CHARLESTON | WV | 720,000 |
| 96 | CHAMPION INTL. CORP. COURTLAND MILL | COURTLAND | AL | 720,000 |
| 96 | WAUSAU-MOSINEE PAPER CORPORATION (BROKAW, WI) | BROKAW | WI | 720,000 |
| 96 | MIDDLESEX COUNTY UTILITIES AUTHORITY | SAYREVILLE | NJ | 720,000 |

**Table 7. Facilities storing more than 100,000 pounds of Hydrochloric acid (conc. >=37%)**

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 1 | BASF CORPORATION GEISMAR SITE | GEISMAR | LA | 14,000,000 |
| 2 | NORCO CHEMICAL PLANT - WEST SITE | NORCO | LA | 2,600,000 |
| 3 | OLIN CORPORATION AUGUSTA, GEORGIA PLANT | AUGUSTA | GA | 2,300,000 |
| 3 | ICI AMERICAS INC. - ST. GABRIEL SITE | ST. GABRIEL | LA | 2,300,000 |
| 5 | FORMOSA PLASTICS CORPORATION,TEXAS | POINT COMFORT | TX | 1,632,200 |
| 6 | OLIN CORPORATION, CHARLESTON TN PLANT | CHARLESTON | TN | 1,200,000 |
| 7 | ASARCO INC./ AMARILLO COPPER REFINERY | AMARILLO | TX | 340,000 |
| 8 | ASHLAND SPECIALTY CHEMICAL COMPANY-PUEBLO, CO | PUEBLO | CO | 300,000 |
| 8 | GENERAL CHEMICAL CORPORATION | PITTSBURG | CA | 300,000 |
| 10 | ULTRA PURE ONE (UP-1) PLANT | BRYAN | TX | 250,000 |
| 11 | ARCH CHEMICALS - MESA FACILITY | QUEEN CREEK | AZ | 230,000 |
| 12 | HOLTRACHEM MANUFACTURING COMPANY | ORRINGTON | ME | 216,000 |
| 13 | DOW CORNING CORPORATION CARROLLTON SITE | CARROLLTON | KY | 213,130 |
| 14 | SIVENTO, INC. | THEODORE | AL | 190,000 |
| 15 | CYTEC INDUSTRIES, WILLOW ISLAND PLANT | WILLOW ISLAND | WV | 180,000 |
| 16 | DOVER CHEMICAL CORPORATION | DOVER | OH | 160,000 |
| 16 | WITCO CORPORATION, SISTERSVILLE PLANT | FRIENDLY | WV | 160,000 |
| 18 | DETREX, CHEMICALS DIVISION | ASHTABULA | OH | 157,500 |
| 19 | MALLINCKRODT BAKER, INC. PHILLIPSBURG, NJ PLANT | PHILLIPSBURG | NJ | 157,472 |
| 20 | ASHLAND SPECIALTY CHEMICAL CO. - EASTON, PA | GLENDON | PA | 130,000 |
| 21 | TIPPECANOE LABORATORIES | LAFAYETTE | IN | 120,000 |
| 21 | ELF ATOCHEM NORTH AMERICA, INC. - WICHITA PLANT | WICHITA | KS | 120,000 |
| 23 | HICKSON DANCHEM CORPORATION | DANVILLE | VA | 107,404 |

**Table 8. Facilities storing more than 100,000 pounds of Hydrogen fluoride (hydroflouric acid, conc. >=50%)**

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 1 | DUPONT LOUISVILLE WORKS | LOUISVILLE | KY | 5,300,000 |
| 2 | ALIEDSIGNAL, GEISMAR PLANT | GEISMAR | LA | 5,000,000 |
| 3 | DUPONT COMPANY - CORPUS CHRISTI PLANT | INGLESIDE | TX | 4,718,500 |
| 4 | LA PORTE PLANT | LA PORTE | TX | 4,000,000 |
| 5 | VON ROLL AMERICA, INC | EAST LIVERPOOL | OH | 3,900,000 |
| 6 | ELF ATOCHEM NORTH AMERICA, INC. - WICHITA PLANT | WICHITA | KS | 3,400,000 |
| 7 | ICI AMERICAS INC. - ST. GABRIEL SITE | ST. GABRIEL | LA | 2,600,000 |
| 8 | CHALMETTE REFINING, L.L.C. | CHALMETTE | LA | 2,497,223 |
| 9 | AUSIMONT USA, INC.- THOROFARE PLANT | THOROFARE | NJ | 2,000,000 |
| 10 | MOBIL JOLIET REFINERY | CHANNAHON | IL | 1,752,910 |
| 11 | OCCIDENTAL CHEMICAL CORPORATION - NIAGARA PLANT | NIAGARA FALLS | NY | 1,200,000 |
| 11 | ELF ATOCHEM NORTH AMERICA, INC. - CALVERT CITY, KY | CALVERT CITY | KY | 1,200,000 |
| 13 | CHEMTECH PRODUCTS, INC. | ALORTON | IL | 1,196,435 |
| 14 | CORDOVA-3M COMPANY | CORDOVA | IL | 1,100,000 |
| 15 | MURPHY OIL USA, INC. MERAUX REFINERY | MERAUX | LA | 957,000 |
| 16 | DUPONT CHAMBERS WORKS | DEEPWATER | NJ | 900,000 |
| 17 | ALLIEDSIGNAL, INC., EL SEGUNDO WORKS | EL SEGUNDO | CA | 800,000 |
| 17 | BP AMOCO TEXAS CITY BUSINESS UNIT | TEXAS CITY | TX | 800,000 |
| 19 | MARATHON ASHLAND PETROLEUM, LLC LAREFININGDIVISION | GARYVILLE | LA | 700,000 |
| 20 | BP AMOCO ALLIANCE REFINERY | BELLE CHASSE | LA | 660,000 |
| 21 | GENERAL CHEMICAL CORPORATION | PITTSBURG | CA | 610,000 |
| 22 | ALLIEDSIGNAL/METROPOLIS WORKS | METROPOLIS | IL | 600,000 |
| 23 | PVD MIDWEST REFINING, LLC | LEMONT | IL | 544,600 |
| 24 | MATLACK BULK INTERMODAL SERVICES (DBA) MBIS | FAIRPORT HARBOR | OH | 540,000 |
| 24 | GENERAL CHEMICAL CORPORATION | CLAYMONT | DE | 540,000 |
| 26 | ALLIEDSIGNAL INC. BATON ROUGE PLANT | BATON ROUGE | LA | 480,000 |
| 27 | MARATHON ASHLAND PETROLEUM, LLC ILREFININGDIVISION | ROBINSON | IL | 440,000 |
| 28 | PHILLIPS PETROLEUM SWEENY COMPLEX | SWEENY | TX | 420,000 |
| 29 | KOCH PETROLEUM GROUP L.P. - CC WEST REFINERY | CORPUS CHRISTI | TX | 410,000 |
| 30 | SUNOCO, INC. (R&M) - PHILADELPHIA REFINERY | PHILADELPHIA | PA | 400,000 |
| 31 | FARMLAND INDUSTRIES INC. COFFEYVILLE REFINERY | COFFEYVILLE | KS | 382,000 |
| 32 | CLARK PORT ARTHUR REFINERY | PORT ARTHUR | TX | 380,000 |
| 33 | CONOCO REFINERY, PONCA CITY, OKLA | PONCA CITY | OK | 360,000 |
| 34 | MARATHON ASHLAND PETROLEUM TEXAS REFINING | TEXAS CITY | TX | 350,000 |
| 35 | LAROCHE INDUSTRIES INC. - GRAMERCY FACILITY | GRAMERCY | LA | 340,182 |
| 36 | DELTA DISTRIBUTORS, DALLAS | DALLAS | TX | 310,200 |
| 37 | THE DOW CHEMICAL COMPANY, PITTSBURG, CA SITE | PITTSBURG | CA | 300,000 |
| 38 | CHEVRON SALT LAKE REFINERY | SALT LAKE CITY | UT | 280,000 |
| 38 | VALERO REFINING COMPANY - TEXAS | TEXAS CITY | TX | 280,000 |
| 40 | GREAT LAKES CHEMICAL, SOUTH PLANT | EL DORADO | AR | 278,139 |
| 41 | ULTRAMAR INC., WILMINGTON REFINERY | WILMINGTON | CA | 270,000 |
| 42 | EL DORADO REFINING COMPANY | EL DORADO | KS | 260,000 |
| 43 | ARMCO INC BUTLER OPERATIONS - MAIN PLANT | BUTLER | PA | 250,000 |
| 43 | MOBIL OIL TORRANCE REFINERY | TORRANCE | CA | 250,000 |
| 45 | CLARK BLUE ISLAND REFINERY | BLUE ISLAND | IL | 245,000 |
| 46 | CATLETTSBURG REFINING, LLC | CATLETTSBURG | KY | 240,000 |
| 46 | VALERO REFINING CO. - NEW JERSEY | PAULSBORO | NJ | 240,000 |
| 48 | OHIO REFINING DIVISION | CANTON | OH | 238,000 |
| 49 | ARCH CHEMICALS - MESA FACILITY | QUEEN CREEK | AZ | 232,000 |
| 50 | CROWN CENTRAL PETROLEUM, HOUSTON REFINERY | PASADENA | TX | 230,000 |
| 51 | TRAINER REFINERY | TRAINER | PA | 220,000 |

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 52 | ULTRA PURE ONE (UP-1) PLANT | BRYAN | TX | 210,000 |
| 52 | VALERO REFINING COMPANY - TEXAS, CORPUS CHRISTI | CORPUS CHRISTI | TX | 210,000 |
| 54 | CLARK REFINING & MARKETING, INC. | HARTFORD | IL | 200,000 |
| 54 | AIR PRODUCTS, HOMETOWN | TAMAQUA | PA | 200,000 |
| 56 | MARATHON ASHLAND PETROLEUM LLC MNREFINING DIVISION | ST. PAUL PARK | MN | 190,000 |
| 56 | ARMCO INC BUTLER OPERATIONS - STAINLESS PLANT | BUTLER | PA | 190,000 |
| 58 | TPI PETROLEUM INC. | ARDMORE | OK | 185,016 |
| 59 | CABOT PERFORMANCE MATERIALS | BOYERTOWN | PA | 180,000 |
| 60 | PHILLIPS 66 WOODS CROSS REFINERY | WOODS CROSS | UT | 170,000 |
| 60 | WILLOUGHBY QUARTZ PLANT | WILLOUGHBY | OH | 170,000 |
| 62 | WILLIAMS REFINING LLC | MEMPHIS | TN | 163,000 |
| 63 | TOSCO REFINING COMPANY | FERNDALE | WA | 154,734 |
| 64 | CITGO CORPUS CHRISTI REFINERY EAST PLANT | CORPUS CHRISTI | TX | 150,000 |
| 64 | WASHINGTON STEEL - MASSILLON PLANT | MASSILLON | OH | 150,000 |
| 66 | FRONTIER REFINING INC. | CHEYENNE | WY | 146,000 |
| 67 | KENTUCKY GLASS PLANT | LEXINGTON | KY | 140,000 |
| 68 | CONOCO BILLINGS REFINERY | BILLINGS | MT | 130,000 |
| 68 | CONDEA VISTA COMPANY | WESTLAKE | LA | 130,000 |
| 68 | COASTAL REFINING & MARKETING INC. | CORPUS CHRISTI | TX | 130,000 |
| 68 | CENEX HARVEST STATES LAUREL REFINERY | LAUREL | MT | 130,000 |
| 68 | NATIONAL COOPERATIVE REFINERY ASSOCIATION | MCPHERSON | KS | 130,000 |
| 73 | HUKILL CHEMICAL CORPORATION | BEDFORD | OH | 126,000 |
| 74 | P. B. & S. CHEMICAL COMPANY, INC (24) | HENDERSON | KY | 121,680 |
| 75 | WASHINGTON STEEL - WASHINGTON PLANT | CANTON TOWNSHIP | PA | 110,000 |
| 76 | ALLEGHENY LUDLUM CORPORATION BRACKENRIDGE FACILITY | BRACKENRIDGE | PA | 107,500 |
| 77 | BPAMOCO MANDAN REFINERY | MANDAN | ND | 107,000 |
| 78 | ALLEGHENY LUDLUM CORPORATION WEST LEECHBURG | WEST LEECHBURG | PA | 103,300 |
| 79 | TEXTILE CHEMICAL COMPANY, INC | READING | PA | 101,500 |
| 80 | SOCO-LYNCH VERNON FACILITY | LOS ANGELES | CA | 100,000 |
| 80 | DIAMOND SHAMROCK REFINING - THREE RIVERS | THREE RIVERS | TX | 100,000 |
| 80 | BORDEN & REMINGTON | FALL RIVER | MA | 100,000 |
| 80 | SOLUTIA - CHOCOLATE BAYOU | ALVIN | TX | 100,000 |

**Table 9. The 100 facilities storing the highest amounts of formaldehyde in a single process**

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 1 | DUPONT WASHINGTON WORKS | PARKERSBURG | WV | 28,000,000 |
| 2 | BORDEN CHEMICALS AND PLASTICS, OLP - GEISMAR | GEISMAR | LA | 4,600,000 |
| 3 | ISP TECHNOLOGIES INC, TEXAS CITY | TEXAS CITY | TX | 3,596,000 |
| 4 | BORDEN CHEMICAL, INC., FAYETTEVILLE PLANT | FAYETTEVILLE | NC | 3,000,000 |
| 5 | CELANESE ACETATE - CELRIVER SITE | ROCK HILL | SC | 2,800,000 |
| 6 | NEW MEXICO ADHESIVES, L.L.C. | LAS VEGAS | NM | 2,675,000 |
| 7 | NESTE RESINS CORPORATION - MONCURE, NC | MONCURE | NC | 2,467,500 |
| 8 | PRAXAIR - GEISMAR, LA | GEISMAR | LA | 2,300,000 |
| 8 | BORDEN CHEMICAL, INC. | LOUISVILLE | KY | 2,300,000 |
| 10 | TICONA POLYMERS, INC. | BISHOP | TX | 2,100,000 |
| 11 | CYTEC INDUSTRIES INC., WALLINGFORD CT PLANT | WALLINGFORD | CT | 2,080,500 |
| 12 | ISP TECHNOLOGIES INC, SEADRIFT | LONG MOTT | TX | 2,024,100 |
| 13 | NOVARTIS CROP PROTECTION, INC. - ST. GABRIEL PLANT | ST. GABRIEL | LA | 2,000,000 |
| 14 | SOLUTIA - CHOCOLATE BAYOU | ALVIN | TX | 1,862,880 |
| 15 | TENNESSEE EASTMAN DIVISION | KINGSPORT | TN | 1,700,000 |
| 15 | WRIGHT CHEMICAL CORPORATION | RIEGELWOOD | NC | 1,700,000 |
| 15 | MONSANTO COMPANY LULING PLANT | LULING | LA | 1,700,000 |
| 18 | NESTE RESINS CORPORATION - SPRINGFIELD, OR | SPRINGFIELD | OR | 1,660,746 |
| 19 | HERCULES INCORPORATED - MCW PLANT | LOUISIANA | MO | 1,500,000 |
| 20 | REILLY INDUSTRIES | INDIANAPOLIS | IN | 1,384,500 |
| 21 | BORDEN CHEMCAL, INC. - FREMONT PLANT | FREMONT | CA | 1,300,000 |
| 21 | BORDEN CHEMICAL, INC. HOPE PLANT | HOPE | AR | 1,300,000 |
| 21 | BORDEN CHEMICAL, INC. BAYTOWN PLANT | BAYTOWN | TX | 1,300,000 |
| 24 | LA PORTE PLANT | LA PORTE | TX | 1,260,000 |
| 25 | GEORGIA PACIFIC RESINS INC. HOUSTON, TEXAS PLANT | HOUSTON | TX | 1,222,000 |
| 26 | GEORGIA-PACIFIC RESINS, INC. | ALBANY | OR | 1,200,000 |
| 26 | GEORGIA-PACIFIC RESINS, INC. | VIENNA | GA | 1,200,000 |
| 26 | GEORGIA-PACIFIC RESINS, INC. | TAYLORSVILLE | MS | 1,200,000 |
| 26 | GEORGIA-PACIFIC RESINS, INC. | RUSSELLVILLE | SC | 1,200,000 |
| 30 | BORDEN CHEMICAL, INC., MISSOULA PLANT | MISSOULA | MT | 1,100,000 |
| 31 | NESTE RESINS CORPORATION - TOLEDO, OH | TOLEDO | OH | 1,048,310 |
| 32 | BAYER ADDYSTON OHIO PLANT | ADDYSTON | OH | 1,000,000 |
| 32 | DEGUSSA-HULS CORPORATION | THEODORE | AL | 1,000,000 |
| 34 | GEORGIA-PACIFIC RESINS, INC. | DENTON | NC | 986,800 |
| 35 | BORDEN CHEMICAL, INC., MALVERN PLANT | MALVERN | AR | 950,000 |
| 36 | INTERMOUNTAIN ADHESIVES, L.L.C. | RAPID CITY | SD | 900,000 |
| 37 | NESTE RESINS CORPORATION - ANDALUSIA, AL | ANDALUSIA | AL | 857,560 |
| 38 | THE DOW CHEMICAL COMPANY, TEXAS OPERATIONS | FREEPORT | TX | 853,220 |
| 39 | BORDEN CHEMICAL, INC. DIBOLL PLANT | DIBOLL | TX | 845,000 |
| 40 | BORDEN CHEMICAL, INC. - MOREAU | SOUTH GLENS FALLS | NY | 840,000 |
| 41 | BORDEN CHEMICAL, INC., DEMOPOLIS PLANT | DEMOPOLIS | AL | 800,000 |
| 41 | BORDEN CHEMICAL, INC., SPRINGFIELD PLANT | SPRINGFIELD | OR | 800,000 |
| 41 | BASF CORPORATION - FREEPORT SITE | FREEPORT | TX | 800,000 |
| 44 | SOLUTIA INC., INDIAN ORCHARD PLANT | SPRINGFIELD | MA | 780,000 |
| 45 | BORDEN CHEMICAL, INC., SHEBOYGAN PLANT | SHEBOYGAN | WI | 750,000 |
| 46 | BAYER CORPORATION - NEW MARTINSVILLE PLANT | NEW MARTINSVILLE | WV | 650,000 |
| 47 | BORDEN CHEMICAL, INC. - VICKSBURG | VICKSBURG | MS | 615,000 |
| 48 | D. B. WESTERN MINNESOTA, L.L.C. | VIRGINIA | MN | 595,000 |

| | Facility Name | City | State | Maximum amount in a single process (lbs.) |
|---|---|---|---|---|
| 49 | CYTEC KALAMAZOO, MICHIGAN PLANT | KALAMAZOO | MI | 590,000 |
| 50 | BAYER CORPORATION - BAYTOWN, TEXAS PLANT | BAYTOWN | TX | 540,000 |
| 51 | GEORGIA-PACIFIC RESINS, INC. CROSSETT, AR PLANT | CROSSETT | AR | 537,560 |
| 52 | BORDEN CHEMICAL, INC. - LA GRANDE PLANT | LA GRANDE | OR | 510,000 |
| 53 | MORTON INTERNATIONAL MOSS POINT ACS | MOSS POINT | MS | 500,000 |
| 54 | GATX TERMINALS CORPORATION - CARTERET TERMINAL | CARTERET | NJ | 494,210 |
| 55 | BORDEN CHEMICAL, INC. - KENT PLANT | KENT | WA | 490,000 |
| 56 | EASTMAN CHEMICAL COMPANY, TEXAS EASTMAN DIVISION | LONGVIEW | TX | 480,000 |
| 57 | HAMPSHIRE CHEMICAL CORPORATION | DEER PARK | TX | 402,004 |
| 58 | SCHENECTADY INTERNATIONAL INC. | ROTTERDAM JUNCTION | NY | 390,000 |
| 59 | HAMPTON FACILITY | HAMPTON | SC | 384,000 |
| 59 | GEORGIA-PACIFIC RESINS, INC. | ELK GROVE | CA | 384,000 |
| 61 | OCCIDENTAL CHEMICAL CORP. - KENTON FACILITY | KENTON | OH | 378,000 |
| 62 | AKZO NOBEL CHEMICALS INC. | MORRIS | IL | 361,000 |
| 63 | PLASTICS ENG. CO. NORTH AVE. PLANT | SHEBOYGAN | WI | 340,000 |
| 63 | SIMPSON TIMBER COMPANY, OREGON OVERLAYS DIVISION | PORTLAND | OR | 340,000 |
| 65 | OCCIDENTAL CHEMICAL CORPORATION, DUREZ PLANT | NIAGARA FALLS | NY | 339,000 |
| 66 | CAPITAL RESIN CORPORATION | COLUMBUS | OH | 337,400 |
| 67 | GEO SPECIALTY CHEMICALS, INC. | CEDARTOWN | GA | 305,000 |
| 68 | GEORGIA-PACIFIC RESINS, INC. | LOUISVILLE | MS | 293,400 |
| 69 | GEORGIA-PACIFIC RESINS, INC. | UKIAH | CA | 288,000 |
| 70 | OWENS CORNING KANSAS CITY PLANT | KANSAS CITY | KS | 280,000 |
| 71 | BORDEN CHEMICAL, INC., PMC PLANT | DALLAS | TX | 275,000 |
| 72 | BORDEN CHEMICAL, INC. - MOUNT JEWETT | MT JEWETT | PA | 270,000 |
| 73 | AKZO NOBEL CHEMICALS INC. | LIMA | OH | 268,000 |
| 74 | GEORGIA-PACIFIC RESINS, INC. | PORT WENTWORTH | GA | 265,000 |
| 75 | HAMPTON, SOUTH CAROLINA PLANT | HAMPTON | SC | 253,440 |
| 76 | ANGUS CHEMICAL CO.-STERLINGTON PLANT | STERLINGTON | LA | 250,000 |
| 76 | HOUSTON PLANT | PASADENA | TX | 250,000 |
| 78 | GEORGIA-PACIFIC RESINS, INC. | WHITE CITY | OR | 247,820 |
| 79 | GEORGIA-PACIFIC RESINS, INC. | GRAYLING | MI | 243,650 |
| 79 | COLUMBUS, OH PLANT | COLUMBUS | OH | 243,650 |
| 81 | MUSCATINE PLANT - MONSANTO COMPANY | MUSCATINE | IA | 240,000 |
| 81 | HUNTSMAN PETROCHEMICAL CORPORATION CONROE PLANT | CONROE | TX | 240,000 |
| 83 | NESTE RESINS CORPORATION - WINNFIELD, LA | WINNFIELD | LA | 225,000 |
| 84 | GEORGIA-PACIFIC RESINS, INC. | EUGENE | OR | 195,500 |
| 85 | GEORGIA-PACIFIC RESINS, INC. VIRGINIA, MINNESOTA | VIRGINIA | MN | 194,900 |
| 86 | GENCORP PERFORMANCE CHEMICALS, CHESTER PLANT | CHESTER | SC | 193,131 |
| 87 | BORDEN CHEMICAL, INC. | MORGANTON | NC | 192,762 |
| 88 | SPAULDING COMPOSITES COMPANY | DEKALB | IL | 190,000 |
| 89 | INDSPEC CHEMICAL CORPORATION | PETROLIA | PA | 184,700 |
| 90 | UNION CARBIDE SOUTH CHARLESTON PLANT | SOUTH CHARLESTON | WV | 161,000 |
| 91 | WITCO CORPORATION - MAPLETON PLANT | MAPLETON | IL | 160,000 |
| 92 | NEPERA, INC. | HARRIMAN | NY | 150,000 |
| 93 | BUCKMAN LABORATORIES, INCORPORATED | CADET | MO | 150,000 |
| 94 | ALLIEDSIGNAL FRICTION MATERIALS - GREEN ISLAND | GREEN ISLAND | NY | 144,000 |
| 95 | NESTE RESINS CORPORATION - SPOKANE, WA | SPOKANE | WA | 142,500 |
| 96 | OWENS CORNING NEWARK PLANT | NEWARK | OH | 142,000 |
| 97 | DUPONT BELLE PLANT | BELLE | WV | 140,000 |
| 97 | ALBRIGHT & WILSON AMERICAS - CHARLESTON, SC PLANT | CHARLESTON | SC | 140,000 |
| 97 | PERSTORP COMPOUNDS, INC. | FLORENCE | MA | 140,000 |
| 100 | BAYPORT MARINE TERMINAL | SEABROOK | TX | 135,520 |

**The 25 Facilities in Alabama storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | OLIN CORPORATION MCINTOSH, ALABAMA PLANT | MCINTOSH | 31,000,000 | Chlorine |
| 2 | LAROCHE INDUSTRIES | CHEROKEE | 25,235,004 | Ammonia (anhydrous) |
| 3 | SOLUTIA INC. - DECATUR PLANT | DECATUR | 17,776,000 | Acrylonitrile |
| 4 | DPC ENTERPRISES | MOBILE | 13,000,000 | Chlorine |
| 5 | OCCIDENTAL CHEMICAL CORP. MUSCLE SHOALS PLANT | MUSCLE SHOALS | 4,770,000 | Chlorine |
| 6 | CELANESE CHEMICALS, INC. - BUCKS, ALABAMA | BUCKS | 4,000,000 | Cyclohexylamine |
| 7 | CIBA SPECIALTY CHEMICALS CORP. - MCINTOSH PLANT | MCINTOSH | 3,400,000 | Epichlorohydrin |
| 8 | OCCIDENTAL CHEMICAL CORPORATION, MOBILE PLANT | MOBILE | 1,940,000 | Chlorine |
| 9 | DEGUSSA-HULS CORPORATION | THEODORE | 1,000,000 | Formaldehyde (solution) |
| 10 | ALABAMA RIVER PULP COMPANY, INC. | PERDUE HILL | 900,000 | Chlorine |
| 11 | TANNER INDUSTRIES, INC. | LINCOLN | 865,000 | Ammonia (anhydrous) |
| 12 | NESTE RESINS CORPORATION - ANDALUSIA, AL | ANDALUSIA | 857,560 | Formaldehyde (solution) |
| 13 | ACORDIS CELLULOSIC FIBERS INC. | AXIS | 820,000 | Carbon disulfide |
| 14 | BORDEN CHEMICAL, INC., DEMOPOLIS PLANT | DEMOPOLIS | 800,000 | Formaldehyde (solution) |
| 15 | CHAMPION INTL. CORP. COURTLAND MILL | COURTLAND | 720,000 | Chlorine |
| 16 | HARCROS CHEMICALS INC. -- MUSCLE SHOALS | MUSCLE SHOALS | 700,000 | Chlorine |
| 17 | HEXCEL CORPORATION | DECATUR | 684,000 | Acrylonitrile |
| 18 | GE PLASTICS - BURKVILLE | BURKVILLE | 620,000 | Chlorine |
| 19 | ZENECA AG PRODUCTS - COLD CREEK PLANT | BUCKS | 620,000 | Phosphorus trichloride |
| 20 | TESSENDERLO KERLEY, INC. - EUFAULA FACILITY | EUFAULA | 579,360 | Ammonia (anhydrous) |
| 21 | BENJAMIN MOORE & COMPANY, PELL CITY, ALABAMA PLANT | PELL CITY | 380,000 | Vinyl acetate monomer |
| 22 | DEMOPOLIS MILL | DEMOPOLIS | 360,000 | Chlorine |
| 23 | M&M CHEMICAL COMPANY | ATTALA | 256,000 | Vinyl acetate monomer |
| 24 | ROBERTSDALE | ROBERTSDALE | 252,352 | Ammonia (anhydrous) |
| 25 | FLORENCE | FLORENCE | 200,000 | Ammonia (conc >=20%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**Facilities in Alaska storing the largest amounts of extremely hazardous substances.***

| Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|
| ALASKA NITROGEN PRODUCS LLC | KENAI | 150,000,000 | Ammonia (anhydrous) |
| GREAT WESTERN CHEMICAL COMPANY - ANCHORAGE | ANCHORAGE | 88,000 | Chlorine |
| WESTWARD SEAFOODS, INC. | DUTCH HARBOR | 80,000 | Ammonia (anhydrous) |
| TRIDENT SEAFOODS CORPORATION AKUTAN, ALASKA | AKUTAN | 60,000 | Ammonia (anhydrous) |
| PETERSBURG FISHERIES, INC. | PETERSBURG | 54,413 | Ammonia (anhydrous) |
| JOHN M. ASPLUND WASTEWATER TREATMENT FACILITY | ANCHORAGE | 50,000 | Chlorine |
| E C PHILLIPS & SON | KETCHIKAN | 47,000 | Ammonia (anhydrous) |
| ALYESKA SEAFOODS, INC. | UNALASKA | 46,000 | Ammonia (anhydrous) |
| DUTCH HARBOR | DUTCH HARBOR | 35,000 | Ammonia (anhydrous) |
| TRIDENT SEAFOODS CORPORATION - ST. PAUL, ALASKA | ST. PAUL | 30,000 | Ammonia (anhydrous) |
| TRIDENT SEAFOODS CORPORATION SAND POINT, ALASKA | SAND POINT | 30,000 | Ammonia (anhydrous) |
| EKUK PLANT | DILLINGHAM | 25,000 | Ammonia (anhydrous) |
| TYSON FOODS, INC. KODIAK, AK. | KODIAK | 19,000 | Ammonia (anhydrous) |
| EXCURSION INLET PLANT | EXCURSION INLET | 19,000 | Ammonia (anhydrous) |
| PETER PAN SEAFOODS INC. - KING COVE PLANT | KING COVE | 17,000 | Ammonia (anhydrous) |
| GREAT WESTERN CHEMICAL COMPANY - FAIRBANKS | FAIRBANKS | 4,900 | Chlorine |
| KETCHIKAN CHLORINATION PLANT | KETCHIKAN | 4,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Arizona storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | APACHE NITROGEN PRODUCTS, INC. | BENSON | 9,175,000 | Ammonia (anhydrous) |
| 2 | FERTIZONA COOLIDGE - LLC | COOLIDGE | 898,000 | Ammonia (anhydrous) |
| 3 | HILL BROTHERS CHEMICAL CO. - PHOENIX FACILITY | PHOENIX | 550,000 | Chlorine |
| 4 | DPC ENTERPRISES | GLENDALE | 400,000 | Chlorine |
| 5 | 91ST AVENUE WWTP | TOLLESON | 330,000 | Chlorine |
| 6 | THE DUNE COMPANY OF YUMA, ARIZONA | YUMA | 300,000 | Ammonia (anhydrous) |
| 7 | CASA GRANDE CHEMICALS, INCORPORATED | CASA GRANDE | 275,000 | Ammonia (anhydrous) |
| 8 | ARCH CHEMICALS - MESA FACILITY | QUEEN CREEK | 232,000 | Hydrogen fluoride (conc >=50% |
| 9 | ALKEMIN, S. DE R.L. DE C.V. | SAHUARITA | 230,000 | Carbon disulfide |
| 10 | 23RD AVENUE WASTEWATER TREATMENT PLANT | PHOENIX | 210,000 | Chlorine |
| 11 | FERTIZONA CASA GRANDE - LLC | CASA GRANDE | 206,723 | Ammonia (anhydrous) |
| 12 | FERTIZONA WILLCOX - LLC | WILLCOX | 206,723 | Ammonia (anhydrous) |
| 13 | FERTIZONA SAN TAN - LLC | SACATON | 206,723 | Ammonia (anhydrous) |
| 14 | FERTIZONA FENNEMORE - LLC | WADDELL | 206,723 | Ammonia (anhydrous) |
| 15 | FERTIZONA ROLL - LLC | ROLL | 206,723 | Ammonia (anhydrous) |
| 16 | FERTIZONA YUMA - LLC | YUMA | 206,723 | Ammonia (anhydrous) |
| 17 | FERTIZONA BUCKEYE - LLC | BUCKEYE | 206,723 | Ammonia (anhydrous) |
| 18 | HASA INC | ELOY | 180,000 | Chlorine |
| 19 | THE DUNE COMPANY OF ROLL, ARIZONA | ROLL | 170,000 | Ammonia (anhydrous) |
| 20 | THE DUNE COMPANY OF POSTON, ARIZONA | POSTON | 170,000 | Ammonia (anhydrous) |
| 21 | WESTERN FARM SERVICE, WELLTON | WELLTON | 170,000 | Ammonia (anhydrous) |
| 22 | WILBUR-ELLIS COMPANY, SACATON | SACATON | 160,000 | Ammonia (anhydrous) |
| 23 | BOC EDWARDS - PHOENIX | PHOENIX | 156,000 | Hydrogen chloride (anhydrous) |
| 24 | TESSENDERLO KERLEY, INC. - PHOENIX FACILITY | PHOENIX | 150,000 | Ammonia (anhydrous) |
| 25 | WESTERN FARM SERVICE, SOMERTON | SOMERTON | 142,500 | Ammonia (conc >=20%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Arkansas storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | TERRA NITROGEN LIMITED PARTNERSHIP, BLYTHEVILLE P | BLYTHEVILLE | 90,000,000 | Ammonia (anhydrous) |
| 2 | EL DORADO CHEMICAL COMPANY | EL DORADO | 41,000,000 | Ammonia (anhydrous) |
| 3 | ALBEMARLE CORPORATION WEST PLANT | MAGNOLIA | 3,721,612 | Chlorine |
| 4 | ALBEMARLE CORPORATION SOUTH PLANT | MAGNOLIA | 3,600,000 | Chlorine |
| 5 | GREAT LAKES CHEMICAL, WEST PLANT | MAGNOLIA | 1,500,000 | Bromine |
| 6 | GREAT LAKES CHEMICAL, CENTRAL PLANT | EL DORADO | 1,326,000 | Bromine |
| 7 | BORDEN CHEMICAL, INC. HOPE PLANT | HOPE | 1,300,000 | Formaldehyde (solution) |
| 8 | GREAT LAKES CHEMICAL, SOUTH PLANT | EL DORADO | 1,125,000 | Bromine |
| 9 | GREAT LAKES CHEMICAL, NEWELL PLANT | EL DORADO | 1,040,000 | Bromine |
| 10 | BORDEN CHEMICAL, INC., MALVERN PLANT | MALVERN | 950,000 | Formaldehyde (solution) |
| 11 | GEORGIA-PACIFIC CROSSETT PAPER OPERATIONS | CROSSETT | 760,000 | Chlorine |
| 12 | GEORGIA-PACIFIC RESINS, INC. CROSSETT, AR PLANT | CROSSETT | 537,560 | Formaldehyde (solution) |
| 13 | POTLATCH CORPORATION, ARKANSAS PULP AND PAPERBOARD | MCGEHEE | 360,000 | Chlorine |
| 14 | CIBA SPECIALTY CHEMICALS WATER TREATMENTS, INC. | WEST MEMPHIS | 341,000 | Methyl chloride |
| 15 | VISKASE CORPORATION | OSCEOLA | 320,000 | Carbon disulfide |
| 16 | TETRA CHEMICALS - WEST MEMPHIS FACILITY | WEST MEMPHIS | 260,500 | Bromine |
| 17 | CONAGRA FROZEN FOODS | RUSSELLVILLE | 256,494 | Ammonia (anhydrous) |
| 18 | CYPRESS CHEMICAL COMPANY | HELENA | 255,685 | Ammonia (anhydrous) |
| 19 | ARKANSAS EASTMAN DIVISION | BATESVILLE | 246,000 | Oleum (Fuming Sulfuric acid) |
| 20 | ALLIED UNIVERSAL CORPORATION | W. MEMPHIS | 180,000 | Chlorine |
| 21 | GEORGIA-PACIFIC ASHDOWN OPERATIONS | ASHDOWN | 180,000 | Chlorine |
| 22 | CONAGRA FROZEN FOODS | BATESVILLE | 170,000 | Ammonia (anhydrous) |
| 23 | CEDAR CHEMICAL CORPORATION | HELENA | 153,000 | Nitric acid (conc >=80%) |
| 24 | TYSON FOODS, INC. PINE BLUFF, AR. (FP-JP) | PINE BLUFF | 144,122 | Ammonia (anhydrous) |
| 25 | U. S. VANADIUM CORPORAITON | HOT SPRINGS | 140,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in California storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | CALAMCO | STOCKTON | 80,000,000 | Ammonia (anhydrous) |
| 2 | WEST SACRAMENTO PLANT | WEST SACRAMENTO | 79,000,000 | Ammonia (anhydrous) |
| 3 | WESTERN FARM SERVICE, IMPERIAL | IMPERIAL | 7,144,000 | Ammonia (conc >=20%) |
| 4 | BUTTE COUNTY RICE GROWERS ASSOCIATION | RICHVALE | 6,108,170 | Ammonia (anhydrous) |
| 5 | JOHN TAYLOR FERTILIZERS COMPANY, INC. - RIO LINDA | RIO LINDA | 5,107,200 | Ammonia (conc >=20%) |
| 6 | SYCAMORE | GRIMES | 3,600,000 | Ammonia (conc >=20%) |
| 7 | AGRIFORM - WOODLAND | WOODLAND | 3,120,000 | Ammonia (conc >=20%) |
| 8 | COLUSA COUNTY FARM SUPPLY | WILLIAMS | 3,000,000 | Ammonia (conc >=20%) |
| 9 | CHEVRON EL SEGUNDO REFINERY | EL SEGUNDO | 2,210,000 | Ammonia (conc >=20%) |
| 10 | GLENN FERTILIZER COMPANY | WILLOWS | 1,800,000 | Ammonia (conc >=20%) |
| 11 | COLUSA SIMPLOT SOILBUILDERS | COLUSA | 1,600,000 | Ammonia (conc >=20%) |
| 12 | WESTERN FARM SERVICE, SANTA FE GRADE, FIREBAUGH | FIREBAUGH | 1,549,725 | Ammonia (conc >=20%) |
| 13 | UNION CARBIDE CORPORATION | TORRANCE | 1,445,220 | Vinyl acetate monomer |
| 14 | BORDEN CHEMCAL, INC. - FREMONT PLANT | FREMONT | 1,300,000 | Formaldehyde (solution) |
| 15 | TOSCO SAN FRANCISCO AREA REFINERY AT AVON | MARTINEZ | 1,300,000 | Ammonia (anhydrous) |
| 16 | CHEMICAL UNLOADING FACILITY | PERRIS | 1,230,000 | Chlorine |
| 17 | WESTWAY TERMINAL COMPANY, INC. | SAN PEDRO | 1,207,611 | Vinyl acetate monomer |
| 18 | LOS ANGELES AQUEDUCT FILTRATION PLANT | SYLMAR | 1,136,000 | Chlorine |
| 19 | FOAMEX, LP | ORANGE | 1,118,858 | Toluene diisocyanate (unspecified isomer) |
| 20 | MARTINEZ REFINING COMPANY, EQUILON ENTERPRISES LLC | MARTINEZ | 1,100,000 | Oleum (Fuming Sulfuric acid) |
| 21 | SACRAMENTO REGIONAL WASTEWATER TREATMENT PLANT | ELK GROVE | 1,080,000 | Chlorine |
| 22 | JOINT WATER POLLUTION CONTROL PLANT | CARSON | 1,080,000 | Chlorine |
| 23 | KEMIRON PACIFIC, INC. - MOJAVE FACILITY | MOJAVE | 1,080,000 | Chlorine |
| 24 | JOHN TAYLOR FERTILIZER COMPANY INC., - MAXWELL | MAXWELL | 1,065,000 | Ammonia (conc >=20%) |
| 25 | CHEVRON RICHMOND REFINERY | RICHMOND | 960,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Colorado storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | STATELINE ANHYDROUS AMMONIA PLANT | HOLYOKE | 2,590,673 | Ammonia (anhydrous) |
| 2 | HAXTUN ANHYDROUS AMMONIA PLANT | HAXTUN | 1,944,248 | Ammonia (anhydrous) |
| 3 | BURLINGTON ANHYDROUS AMMONIA PLANT | BURLINGTON | 1,936,350 | Ammonia (anhydrous) |
| 4 | CENTER ANHYDROUS AMMONIA PLANT | CENTER | 1,919,996 | Ammonia (anhydrous) |
| 5 | THREE MILE LOCATION | MONTE VISTA | 1,715,520 | Ammonia (anhydrous) |
| 6 | STRATTON ANHYDROUS AMMONIA PLANT | STRATTON | 1,551,420 | Ammonia (anhydrous) |
| 7 | BURLINGTON RETAIL FERTILIZER CO. | BURLINGTON | 1,425,000 | Ammonia (anhydrous) |
| 8 | DPC INDUSTRIES, INC. | HUDSON | 1,200,000 | Chlorine |
| 9 | FRUITA ANHYDROUS AMMONIA PLANT | FRUITA | 716,040 | Ammonia (anhydrous) |
| 10 | STERLING DEALER FERTILIZER (SDF) | STERLING | 670,000 | Ammonia (anhydrous) |
| 11 | ECKLEY : NH3 PLT | ECKLEY | 493,000 | Ammonia (anhydrous) |
| 12 | KIRK ANHYDROUS AMMONIA PLANT | KIRK | 457,470 | Ammonia (anhydrous) |
| 13 | COORS BREWERY, GOLDEN | GOLDEN | 410,000 | Ammonia (anhydrous) |
| 14 | CHEMPAK INDUSTRIES / HI-LEX CORPORATION | DENVER | 360,000 | Chlorine |
| 15 | IDALIA ANHYDROUS AMMONIA PLANT | IDALIA | 351,000 | Ammonia (anhydrous) |
| 16 | CHEYENNE WELLS AMMONIA FACILITY | CHEYENNE WELLS | 336,000 | Ammonia (anhydrous) |
| 17 | ANTON ANHYDROUS AMMONIA PLANT | ANTON | 328,185 | Ammonia (anhydrous) |
| 18 | ASHLAND SPECIALTY CHEMICAL COMPANY-PUEBLO, CC | PUEBLO | 300,000 | Hydrochloric acid (conc >=37%) |
| 19 | ROGGEN : NH3 PLT | ROGGEN | 289,000 | Ammonia (anhydrous) |
| 20 | SCHRAMM : NH3 PLT | YUMA | 263,000 | Ammonia (anhydrous) |
| 21 | FARMLAND COOP, INC. | BRUSH | 261,699 | Ammonia (anhydrous) |
| 22 | CLARKVILLE : NH3 PLT | YUMA | 257,000 | Ammonia (anhydrous) |
| 23 | HIGH PLAINS CO-OP | STERLING | 240,576 | Ammonia (anhydrous) |
| 24 | FARMERS ELEV. CO. OVID - NH3 | OVID | 240,000 | Ammonia (anhydrous) |
| 25 | IDALIA SATELLITE LOCATION | IDALIA | 230,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Connecticut storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | CYTEC INDUSTRIES INC., WALLINGFORD CT PLANT | WALLINGFORD | 2,080,500 | Formaldehyde (solution) |
| 2 | DOW CHEMICAL, ALLYN'S POINT PLANT | GALES FERRY | 641,000 | Acrylonitrile |
| 3 | STANCHEM, INC. | EAST BERLIN | 312,000 | Vinyl acetate monomer |
| 4 | H. KREVIT & CO., INC. | NEW HAVEN | 180,000 | Chlorine |
| 5 | KING INDUSTRIES, INC. | NORWALK | 150,000 | Oleum (Fuming Sulfuric acid) |
| 6 | BRIDGEPORT ENERGY LLC | BRIDGEPORT | 94,000 | Ammonia (conc >=20%) |
| 7 | VANDERBILT CHEMICAL CORPORATION | BETHEL | 84,134 | Carbon disulfide |
| 8 | UNIROYAL CHEMICAL COMPANY, INC | NAUGATUCK | 80,000 | Carbon disulfide |
| 9 | BAYER CORP.-PHARMA DIVISION, WEST HAVEN CT | WEST HAVEN | 70,000 | Ammonia (anhydrous) |
| 10 | MACDERMID, INC. | WATERBURY | 52,000 | Formaldehyde (solution) |
| 11 | ATLANTIC COAST POLYMERS, INC. | PLAINFIELD | 48,880 | Formaldehyde (solution) |
| 12 | LAKE GAILLARD WATER TREATMENT PLANT | NORTH BRANFORD | 48,000 | Chlorine |
| 13 | PFIZER GLOBAL MANUFACTURING - GROTON PLANT | GROTON | 47,000 | Bromine |
| 14 | H.P. HOOD INC.. | SUFFIELD | 44,000 | Ammonia (conc >=20%) |
| 15 | BOZZUTO'S, INC. WAREHOUSE DISTRIBUTION FACILITY | CHESHIRE | 40,000 | Ammonia (anhydrous) |
| 16 | CITY OF WATERBURY WATER TREATMENT PLANT | THOMASTON | 36,000 | Chlorine |
| 17 | HARTFORD WATER POLLUTION CONTROL FACILITY | HARTFORD | 36,000 | Chlorine |
| 18 | SYBRON CHEMICALS | NORWICH | 33,300 | Formaldehyde (solution) |
| 19 | WEST HARTFORD FILTER PLANT | WEST HARTFORD | 32,000 | Chlorine |
| 20 | BHC EASTON LAKETREATMENT PLANT | EASTON | 26,000 | Chlorine |
| 21 | BHC TRAP FALLS WATER TREATMENT PLANT | SHELTON | 24,000 | Chlorine |
| 22 | PUTNAM FILTER PLANT | GREENWICH | 24,000 | Chlorine |
| 23 | THE STOP & SHOP NORTH HAVEN DISTRIBUTION CENTEI | NORTH HAVEN | 22,600 | Ammonia (anhydrous) |
| 24 | WEST RIVER WATER TREATMENT PLANT | WOODBRIDGE | 20,000 | Chlorine |
| 25 | CLEAN HARBORS OF CONNECTICUT, INC. | BRISTOL | 20,000 | Acrylonitrile |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

Appendix B

# DISTRICT OF COLUMBIA

**Facilities in the District of Columbia storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | BLUE PLAINS WASTEWATER TREATMENT PLANT | WASHINGTON | 180,000 | Chlorine |
| 2 | DALECARLIA WATER TREATMENT PLANT | WASHINGTON | 130,000 | Chlorine |
| 3 | MCMILLAN WATER TREATMENT PLANT | WASHINGTON | 110,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Delaware storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | DUPONT - EDGE MOOR, DE FACILITY | EDGE MOOR | 9,825,600 | Chlorine |
| 2 | GENERAL CHEMICAL CORPORATION | CLAYMONT | 6,630,000 | Oleum (Fuming Sulfuric acid) |
| 3 | OCCIDENTAL CHEMICAL CORP., DELAWARE CITY PLANT | NEW CASTLE | 2,200,000 | Chlorine |
| 4 | UNIQEMA | NEW CASTLE | 357,000 | Ethylene oxide |
| 5 | ALLIEDSIGNAL INC. - DELAWARE PLANT | CLAYMONT | 290,000 | Boron trifluoride |
| 6 | REICHHOLD, INC. | CHESWOLD | 240,000 | Vinyl acetate monomer |
| 7 | FORMOSA PLASTICS CORPORATION, DELAWARE | DELAWARE CITY | 240,000 | Vinyl acetate monomer |
| 8 | TERRA INTERNATIONAL, INC. - BRIDGEVILLE, DE | BRIDGEVILLE | 160,000 | Ammonia (anhydrous) |
| 9 | CHLORAMONE, INC. | DELAWARE CITY | 128,000 | Chlorine |
| 10 | MOTIVA ENTERPRISES LLC - DELAWARE CITY REFINERY | DELAWARE CITY | 65,000 | Ammonia (anhydrous) |
| 11 | E.A.R. SPECIALTY COMPOSITES CORPORATION | NEWARK | 57,000 | Toluene diisocyanate (unspecified isomer) |
| 12 | ROYSTER - CLARK MILFORD | MILFORD | 50,000 | Ammonia (conc >=20%) |
| 13 | BURRIS RETAIL LOGISTICS | HARRINGTON | 50,000 | Ammonia (anhydrous) |
| 14 | UNITED STATES COLD STORAGE, MILFORD | MILFORD | 44,900 | Ammonia (anhydrous) |
| 15 | TOWNSENDS INC. | MILLSBORO | 40,000 | Ammonia (anhydrous) |
| 16 | CITY OF WILMINGTON WATER POLLUTION CONTROL FAC. | WILMINGTON | 40,000 | Chlorine |
| 17 | MOUNTAIRE FARMS OF DELMARVA, INC.-PROCESSING PLANT | SELBYVILLE | 31,500 | Ammonia (anhydrous) |
| 18 | CANNON COLD STORAGE | BRIDGEVILLE | 26,000 | Ammonia (anhydrous) |
| 19 | BURRIS REFRIGERATED LOGISTICS, NEW CASTLE DE. | NEW CASTLE | 21,000 | Ammonia (anhydrous) |
| 20 | ALLEN FAMILY FOODS, INC.- HARBESON | HARBESON | 18,000 | Ammonia (anhydrous) |
| 21 | PERDUE FARMS INCORPORATED | GEORGETOWN | 14,656 | Ammonia (anhydrous) |
| 22 | AGRILINK FOODS-BRIDGEVILLE | BRIDGEVILLE | 14,000 | Ammonia (anhydrous) |
| 23 | PERDUE FARMS INCORPORATED | MILFORD | 13,900 | Ammonia (anhydrous) |
| 24 | DELAWARE REFRIGERATED SERVICES | NEW CASTLE | 12,280 | Ammonia (anhydrous) |
| 25 | TOWN OF SELBYVILLE WASTEWATER TREATMENT FACILITY | SELBYVILLE | 8,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Florida storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | IMC-AGRICO COMPANY, PORT SUTTON TERMINAL | TAMPA | 100,000,000 | Ammonia (anhydrous) |
| 2 | FARMLAND HYDRO, L.P. (TAMPA TERMINAL) | TAMPA | 98,000,000 | Ammonia (anhydrous) |
| 3 | CF INDUSTRIES, INC., TAMPA TERMINAL | TAMPA | 75,000,000 | Ammonia (anhydrous) |
| 4 | SOLUTIA INC - PENSACOLA PLANT | GONZALEZ | 7,600,000 | Ammonia (anhydrous) |
| 5 | ESCAMBIA PLANT | PACE | 4,200,000 | Cyclohexylamine |
| 6 | GEORGIA-PACIFIC CORPORATION, PALATKA OPERATIONS | PALATKA | 3,780,000 | Chlorine |
| 7 | WSA, INC. DBA PCS PHOSPHATE - WHITE SPRINGS | WHITE SPRINGS | 2,300,000 | Ammonia (anhydrous) |
| 8 | P. B. & S. CHEMICAL COMPANY, INC (52) | ORLANDO | 1,659,170 | Chlorine |
| 9 | BUCKEYE FLORIDA, LIMITED PARTNERSHIP | PERRY | 1,626,000 | Chlorine |
| 10 | U. S. AGRI-CHEMICALS, BARTOW PLANT | BARTOW | 1,440,000 | Ammonia (anhydrous) |
| 11 | CARGILL FERTLIZER, INC. | BARTOW | 1,400,000 | Ammonia (anhydrous) |
| 12 | IMC-AGRICO COMPANY NEW WALES PLANT | MULBERRY | 1,400,000 | Ammonia (anhydrous) |
| 13 | RAYONIER FERNANDINA BEACH DISSOLVING SULFITE MILL | FERNANDINA BEACH | 1,080,000 | Chlorine |
| 14 | NITRAM, INC. | TAMPA | 910,000 | Ammonia (anhydrous) |
| 15 | FARMLAND HYDRO, L.P. (GREEN BAY PLANT) | BARTOW | 900,000 | Ammonia (anhydrous) |
| 16 | FOAMEX - ORLANDO, FLORIDA | ORLANDO | 793,042 | Toluene diisocyanate (unspecified isomer) |
| 17 | HARCROS CHEMICALS INC. -- TAMPA | TAMPA | 770,000 | Chlorine |
| 18 | FLEXIBLE FOAM PRODUCTS, INC. | MIAMI | 750,000 | Toluene 2,4-diisocyanate |
| 19 | STERLING FIBERS, INC. | PACE | 745,000 | Acrylonitrile |
| 20 | PINEY POINT PHOSPHATES, INC. | PALMETTO | 640,000 | Ammonia (anhydrous) |
| 21 | TANNER INDUSTRIES, INC. | APOPKA | 535,000 | Ammonia (conc >=20%) |
| 22 | MULBERRY PHOSPHATES, INC. | MULBERRY | 500,000 | Ammonia (anhydrous) |
| 23 | DPC ENTERPRISES | TAMPA | 450,000 | Chlorine |
| 24 | TROPICANA PRDUCTS, INC. | BRADENTON | 400,000 | Ammonia (anhydrous) |
| 25 | TRADEMARK NITROGEN | TAMPA | 388,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Georgia storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | PCS PHOSPHATE | GARDEN CITY | 98,000,000 | Ammonia (anhydrous) |
| 2 | PCS NITROGEN FERTIIZER, L.P. AUGUSTA, GA PLANT | AUGUSTA | 72,000,000 | Ammonia (anhydrous) |
| 3 | GENERAL CHEMICAL CORPORATION | AUGUSTA | 14,400,000 | Oleum (Fuming Sulfuric acid) |
| 4 | OLIN CORPORATION AUGUSTA, GEORGIA PLANT | AUGUSTA | 3,400,000 | Chlorine |
| 5 | GILMAN PAPER COMPANY, ST, MARYS KRAFT DIVISION | ST. MARYS | 3,240,000 | Chlorine |
| 6 | DSM CHEMICALS NORTH AMERICA, INC. | AUGUSTA | 3,000,000 | Oleum (Fuming Sulfuric acid) |
| 7 | RAYONIER SPECIALTY PULP PRODUCTS, JESUP MILL | JESUP | 2,520,000 | Chlorine |
| 8 | H.B. FULLER - COVINGTON PLANT | COVINGTON | 1,600,000 | Vinyl acetate monomer |
| 9 | KEMIRA PIGMENTS, INC. | SAVANNAH | 1,300,000 | Chlorine |
| 10 | GEORGIA-PACIFIC RESINS, INC. | VIENNA | 1,200,000 | Formaldehyde (solution) |
| 11 | SOUTHERN STATES- CLYO, GA (7610) | CLYO | 1,040,400 | Ammonia (anhydrous) |
| 12 | MCKENZIE SERVICE COMPANY- BAINBRIDGE, GA (6100) | BAINBRIDGE | 780,300 | Ammonia (anhydrous) |
| 13 | THE PROCTER & GAMBLE MANUFACTURING COMPANY | AUGUSTA | 650,000 | Oleum (Fuming Sulfuric acid) |
| 14 | SOUTHERN STATES COOPERATIVE- CORDELE, GA (7620) | CORDELE | 520,200 | Ammonia (anhydrous) |
| 15 | LAROCHE INDUSTRIES INC. | COLUMBUS | 425,650 | Ammonia (anhydrous) |
| 16 | AMERICUS | AMERICUS | 400,000 | Ammonia (conc >=20%) |
| 17 | MARTIN RESOURCES, INC. | ROCHELLE | 390,000 | Ammonia (anhydrous) |
| 18 | GEO SPECIALTY CHEMICALS, INC. | CEDARTOWN | 361,000 | Oleum (Fuming Sulfuric acid) |
| 19 | PVS TECHNOLOGIES, INC. (AUGUSTA) | AUGUSTA | 360,000 | Chlorine |
| 20 | THE CLOWHITE COMPANY | HAMPTON | 360,000 | Chlorine |
| 21 | CALLAWAY CHEMICAL COMPANY | DALTON | 350,000 | Ammonia (anhydrous) |
| 22 | GRIFFIN WAREHOUSE, INC. HWY 32 | DOUGLAS | 339,900 | Ammonia (anhydrous) |
| 23 | WEST OAK PLANT | MARIETTA | 320,000 | Carbon disulfide |
| 24 | KENSINGTON PLANT | CHICKAMAUGA | 300,000 | Acrylonitrile |
| 25 | CALLAWAY CHEMICAL COMPANY - LOS PLANT | COLUMBUS | 300,000 | Epichlorohydrin |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**Facilities in Hawaii storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | BREWER ENVIRONMENTAL INDUSTRIES, LLC -BARBERS PT | KAPOLEI | 120,000 | Chlorine |
| 2 | BREWER ENVIRONMENTAL INDUSTRIES, LLC - WAIKAPU | WAILUKU | 120,000 | Chlorine |
| 3 | AES HAWAII INC. | KAPOLEI | 109,012 | Ammonia (anhydrous) |
| 4 | BREWER ENVIRONMENTAL INDUSTRIES, LLC - HILO | HILO | 70,000 | Chlorine |
| 5 | BREWER ENVIRONMENTAL INDUSTRIES, LLC - KAHULUI | KAHULUI | 60,000 | Ammonia (anhydrous) |
| 6 | BREWER ENVIRONMENTAL INDUSTRIES, LLC - PORT ALLEN | ELEELE | 50,000 | Ammonia (anhydrous) |
| 7 | BREWER ENVIRONMENTAL INDUSTRIES, LLC - PUHI | LIHUE | 48,000 | Chlorine |
| 8 | WAILUKU/KAHULUI WWRF | KAHULUI | 18,000 | Chlorine |
| 9 | KIHEI WWRF | KIHEI | 18,000 | Chlorine |
| 10 | LAHAINA WWRF | LAHAINA | 16,000 | Chlorine |
| 11 | UNICOLD CORPORATION | HONOLULU | 11,000 | Ammonia (anhydrous) |
| 12 | EAST HONOLULU WASTEWATER TREATMENT PLANT | HONOLULU | 10,000 | Chlorine |
| 13 | MEADOW GOLD DAIRIES-HONOLULU | HONOLULU | 9,943 | Ammonia (anhydrous) |
| 14 | U.S. ARMY GARRISON, HAWAII | SCHOFIELD BARRACKS | 8,000 | Chlorine |
| 15 | RESORT WATER RECLAMATION PLANT | WAIKOLOA | 6,000 | Chlorine |
| 16 | WAIMEA WATER TREATMENT PLANT | KAMUELA | 4,000 | Chlorine |
| 17 | KAUNAKAKAI WWRF | KAUNAKAKAI | 1,500 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Idaho storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | AGRIUM CONDA PHOSPHATE OPERATIONS | SODA SPRINGS | 1,220,000 | Ammonia (anhydrous) |
| 2 | POTLATCH CORP. IDAHO PULP AND PAPERBOARD DIVISION | LEWISTON | 1,080,000 | Chlorine |
| 3 | UNION WAREHOUSE & SUPPLY COMPANY | GRANGEVILLE | 760,000 | Ammonia (conc >=20%) |
| 4 | SUNDANCE AG. | BURLEY | 414,182 | Carbon disulfide |
| 5 | UNITED CO-OP AGRONOMY CENTER | PAUL | 410,000 | Ammonia (anhydrous) |
| 6 | BINGHAM COOP | BLACKFOOT | 320,000 | Ammonia (anhydrous) |
| 7 | WESTERN FARM SERVICE, CALDWELL | CALDWELL | 300,000 | Ammonia (conc >=20%) |
| 8 | CENEX/LAND O'LAKES AGRONOMY CENTER - REXBURG | REXBURG | 290,000 | Ammonia (anhydrous) |
| 9 | WESTERN FARM SERVICE, BANCROFT | BANCROFT | 265,200 | Ammonia (anhydrous) |
| 10 | WESTERN FARM SERVICE, RUPERT | RUPERT | 246,720 | Ammonia (anhydrous) |
| 11 | CENEX/LAND O'LAKES AGRONOMY CENTER - FILER | FILER | 220,000 | Ammonia (anhydrous) |
| 12 | (35) THE MCGREGOR COMPANY GENESEE RETAIL | GENESEE | 190,000 | Ammonia (anhydrous) |
| 13 | WESTERN FARM SERVICE, ROBERTS | ROBERTS | 188,530 | Ammonia (anhydrous) |
| 14 | UAP NORTHWEST, BLACKFOOT | BLACKFOOT | 160,000 | Ammonia (anhydrous) |
| 15 | UAP NORTHWEST, BURLEY | BURLEY | 160,000 | Ammonia (anhydrous) |
| 16 | WESTERN FARM SERVICE, CRAIGMONT | CRAIGMONT | 153,000 | Ammonia (anhydrous) |
| 17 | WESTERN FARM SERVICE, BUHL | BUHL | 150,000 | Ammonia (conc >=20%) |
| 18 | DON SIDING COMPLEX, SOUTH OF HIGHWAY 30 | POCATELLO | 150,000 | Ammonia (anhydrous) |
| 19 | LEWISTON GRAIN GROWERS-NEZ PERCE | NEZ PERCE | 140,000 | Ammonia (anhydrous) |
| 20 | LAMB-WESTON, INC. TWIN FALLS PLANT | TWIN FALLS | 137,833 | Ammonia (anhydrous) |
| 21 | WESTERN FARM SERVICE, CULDESAC | CULDESAC | 132,600 | Ammonia (anhydrous) |
| 22 | VIRGINIA STORAGE FACILITY | VIRGINIA | 132,600 | Ammonia (anhydrous) |
| 23 | (38) THE MCGREGOR COMPANY PRAIRIE RETAIL | NEZ PERCE | 130,000 | Ammonia (anhydrous) |
| 24 | (36) THE MCGREGOR COMPANY GRANGEVILLE RETAIL | GRANGEVILLE | 130,000 | Ammonia (anhydrous) |
| 25 | (37) THE MCGREGOR COMPANY TAMMANY RETAIL | LEWISTON | 130,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Illinois storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | ET-4 TRILLA TERMINAL | MATTOON | 140,000,000 | Ammonia (anhydrous) |
| 2 | CF INDUSTRIES, INC. - ALBANYTERMINAL | ALBANY | 120,000,000 | Ammonia (anhydrous) |
| 3 | CF INDUSTRIES, INC. - KINGSTON MINESTERMINAL | KINGSTON MINES | 80,000,000 | Ammonia (anhydrous) |
| 4 | ROYSTER-CLARK NITROGEN EAST DUBUQUE FACILITY | EAST DUBUQUE | 78,000,000 | Ammonia (anhydrous) |
| 5 | WOOD RIVER TERMINAL | EAST ALTON | 73,000,000 | Ammonia (anhydrous) |
| 6 | PEKIN TERMINAL | CREVE COUER | 73,000,000 | Ammonia (anhydrous) |
| 7 | T/A TERMINALS, INC./MEREDOSIA TERMINAL | MEREDOSIA | 72,000,000 | Ammonia (anhydrous) |
| 8 | CF INDUSTRIES, INC. - COWDENTERMINAL | COWDEN | 60,000,000 | Ammonia (anhydrous) |
| 9 | CF INDUSTRIES, INC. - SENECA TERMINAL | SENECA | 60,000,000 | Ammonia (anhydrous) |
| 10 | ROYSTER-CLARK NITROGEN NIOTA TERMINAL | NIOTA | 59,200,000 | Ammonia (anhydrous) |
| 11 | FARMHUT CO., L.L.C. | HENRY | 40,127,840 | Ammonia (anhydrous) |
| 12 | CF INDUSTRIES, INC. - JOLIET TERMINAL | JOLIET | 40,000,000 | Ammonia (anhydrous) |
| 13 | CF INDUSTRIES, INC. - PERU TERMINAL | PERU | 40,000,000 | Ammonia (anhydrous) |
| 14 | MAGIC WATERS | CHERRY VALLEY | 20,002,000 | Chlorine |
| 15 | GE PLASTICS - OTTAWA | OTTAWA | 6,654,393 | Acrylonitrile |
| 16 | ROYSTER-CLARK NITROGEN, MEREDOSIA TERMINAL | MEREDOSIA | 3,850,000 | Ammonia (anhydrous) |
| 17 | ROYSTER-CLARK NITROGEN, MARSEILLES TERMINAL | MARSEILLES | 3,850,000 | Ammonia (anhydrous) |
| 18 | SOLUTIA W.G. KRUMMRICH PLANT | SAUGET | 2,880,000 | Chlorine |
| 19 | CABOT CORPORATION | TUSCOLA | 2,500,000 | Methyltrichlorosilane |
| 20 | NATIONAL STARCH AND CHEMICAL COMPANY | MEREDOSIA | 2,325,000 | Vinyl acetate monomer |
| 21 | ADM EAST COMPLEX | DECATUR | 1,800,000 | Ammonia (anhydrous) |
| 22 | MOBIL JOLIET REFINERY | CHANNAHON | 1,752,910 | Hydrogen fluoride (conc >=50%) |
| 23 | GATX ARGO TERMINAL | ARGO | 1,400,000 | Vinyl acetate monomer |
| 24 | CHEMTECH PRODUCTS, INC. | ALORTON | 1,196,435 | Hydrogen fluoride (conc >=50%) |
| 25 | KANKAKEE POLYMER PLANT | KANKAKEE | 1,118,000 | Vinyl acetate monomer |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Indiana storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | HUNTINGTON TERMINAL | HUNTINGTON | 150,000,000 | Ammonia (anhydrous) |
| 2 | ET-8 WALTON TERMINAL | WALTON | 140,000,000 | Ammonia (anhydrous) |
| 3 | ET-6 CRAWFORDSVILLE TERMINAL | CRAWFORDSVILLE | 140,000,000 | Ammonia (anhydrous) |
| 4 | CF INDUSTRIES, INC. - TERRE HAUTE TERMINAL | ROSEDALE | 60,000,000 | Ammonia (anhydrous) |
| 5 | CF INDUSTRIES, INC. - FRANKFORT TERMINAL | FRANKFORT | 60,000,000 | Ammonia (anhydrous) |
| 6 | CF INDUSTRIES, INC. - HUNTINGTON TERMINAL | HUNTINGTON | 60,000,000 | Ammonia (anhydrous) |
| 7 | CF INDUSTRIES, INC. - MOUNT VERNON TERMINAL | MOUNT VERNON | 30,000,000 | Ammonia (anhydrous) |
| 8 | JCC 70S | SHELBY | 15,000,000 | Ammonia (anhydrous) |
| 9 | JCC 40 | KERSEY | 15,000,000 | Ammonia (anhydrous) |
| 10 | JCC 80 | TEFFT | 15,000,000 | Ammonia (anhydrous) |
| 11 | JCC 34 | FOWLER | 15,000,000 | Ammonia (anhydrous) |
| 12 | JCC 45 | OTTERBEIN | 12,000,000 | Ammonia (anhydrous) |
| 13 | JCC 78 | KENTLAND | 12,000,000 | Ammonia (anhydrous) |
| 14 | JCC 70 | ROSELAWN | 9,300,000 | Ammonia (anhydrous) |
| 15 | WALTON WHOLESALE AND RETAIL FARM CENTER | WALTON | 7,400,000 | Ammonia (conc >=20%) |
| 16 | REILLY INDUSTRIES | INDIANAPOLIS | 1,384,500 | Formaldehyde (solution) |
| 17 | RICHLAND | CHRISNEY | 1,181,425 | Ammonia (anhydrous) |
| 18 | CHRISNEY BRANCH | CHRISNEY | 1,181,425 | Ammonia (anhydrous) |
| 19 | ULRICH CHEMICAL, INC. | TERRE HAUTE | 1,131,050 | Chlorine |
| 20 | FOAMEX INTERNATIONAL, INC. | FORT WAYNE | 960,000 | Toluene diisocyanate (unspecified isomer) |
| 21 | FOAMEX L.P. | AUBURN | 940,000 | Toluene diisocyanate (unspecified isomer) |
| 22 | FOAMEX L.P. | ELKHART | 900,000 | Toluene diisocyanate (unspecified isomer) |
| 23 | CARPENTER CO., ELKHART DIV. | ELKHART | 800,000 | Toluene diisocyanate (unspecified isomer) |
| 24 | GE PLASTICS - MT. VERNON | MT. VERNON | 660,000 | Chlorine |
| 25 | LAROCHE INDUSTRIES INC. | JEFFERSONVILLE | 531,882 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Iowa storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | FARMLAND INDUSTRIES, FORT DODGE NITROGEN PLANT | FORT DODGE | 180,000,000 | Ammonia (anhydrous) |
| 2 | AGRIUM U.S. INC. EARLY TERMINAL | EARLY | 160,540,000 | Ammonia (conc >=20%) |
| 3 | WT-5 MARSHALLTOWN TERMINAL | MARSHALLTOWN | 140,000,000 | Ammonia (anhydrous) |
| 4 | CF INDUSTRIES, INC. - GARNER TERMINAL | GARNER | 120,000,000 | Ammonia (anhydrous) |
| 5 | CF INDUSTRIES, INC. - SPENCER TERMINAL | SPENCER | 120,000,000 | Ammonia (anhydrous) |
| 6 | PCS NITROGEN FERTILIZER, L.P. CLINTON PLANT | CAMANCHE | 100,000,000 | Ammonia (anhydrous) |
| 7 | WT-4 WASHINGTON TERMINAL | KEOTA | 70,000,000 | Ammonia (anhydrous) |
| 8 | SERGEANT BLUFF TERMINAL | SERGEANT BLUFF | 61,000,000 | Ammonia (anhydrous) |
| 9 | FARMLAND INDUSTRIES, INC. - GARNER IA TERMINAL | GARNER | 60,357,000 | Ammonia (anhydrous) |
| 10 | TERRA NITROGEN - PORT NEAL PLANT | SERGEANT BLUFF | 60,000,000 | Ammonia (anhydrous) |
| 11 | COLWELL CO-OP | CHARLES CITY | 2,900,000 | Ammonia (conc >=20%) |
| 12 | PRAIRIE LAND COOPERATIVE HUBBARD NH3 | HUBBARD | 2,000,000 | Ammonia (anhydrous) |
| 13 | FARMERS ELEVATOR COMPANY - BONDURANT NH3 | BONDURANT | 1,618,700 | Ammonia (anhydrous) |
| 14 | CENEX/LAND O'LAKES AGRONOMY CENTER - BATAVIA | BATAVIA | 1,300,000 | Ammonia (anhydrous) |
| 15 | VERTEX CHEMICAL CORPORATION CAMANCHE, IA | CAMANCHE | 1,079,950 | Chlorine |
| 16 | CEDAR VALLEY FS, INC. JANESVILLE | JANESVILLE | 860,000 | Ammonia (anhydrous) |
| 17 | NEW COOPERATIVE INC.-ROELYN | MOORLAND | 759,100 | Ammonia (anhydrous) |
| 18 | SWIFT & COMPANY | MARSHALLTOWN | 715,862 | Ammonia (anhydrous) |
| 19 | PRAIRIE LAND COOPERATIVE ELLSWORTH NH3 | ELLSWORTH | 639,000 | Ammonia (anhydrous) |
| 20 | FARMERS COOPERATIVE EXCHANGE PRAIRIE CITY NH3 | PRAIRIE CITY | 634,000 | Ammonia (anhydrous) |
| 21 | NORTHWOOD COOPERATIVE ELEVATOR NORTHWOOD NH | NORTHWOOD | 621,000 | Ammonia (anhydrous) |
| 22 | MUSCATINE PLANT - MONSANTO COMPANY | MUSCATINE | 620,000 | Acrylonitrile |
| 23 | GATEWAY COOPERATIVE - CONROY NH3 | CONROY | 604,000 | Ammonia (anhydrous) |
| 24 | FARMER'S COOP SOCIETY SIOUX CENTER | SIOUX CENTER | 600,000 | Ammonia (anhydrous) |
| 25 | FARMERS COOPERATIVE ELEVATOR - BUFFALO CTR NH3 | BUFFALO CENTER | 563,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Kansas storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | FARMLAND INDUSTRIES, INC-DODGE CITY NITROGEN PLANT | DODGE CITY | 120,000,000 | Ammonia (anhydrous) |
| 2 | FARMLAND INDUSTRIES, INC. CONWAY AMMONIA TERMINAL | MCPHERSON | 61,000,000 | Ammonia (anhydrous) |
| 3 | AGRIUM U.S. INC. FRIEND TERMINAL | SCOTT CITY | 40,450,000 | Ammonia (conc >=20%) |
| 4 | FARMLAND INDUSTRIES-LAWRENCE NITROGEN PLANT | LAWRENCE | 30,000,000 | Ammonia (anhydrous) |
| 5 | VULCAN CHEMICALS, WICHITA PLANT | WICHITA | 14,931,000 | Chloroform |
| 6 | ELF ATOCHEM NORTH AMERICA, INC. - WICHITA PLANT | WICHITA | 3,400,000 | Hydrogen fluoride (conc >=50%) |
| 7 | HARCROS CHEMICALS INC - KANSAS CITY | KANSAS CITY | 1,440,000 | Ethylene oxide |
| 8 | REICHHOLD, INC. | KANSAS CITY | 790,000 | Vinyl acetate monomer |
| 9 | WRIGHT | WRIGHT | 525,000 | Ammonia (anhydrous) |
| 10 | SENECA FERTILIZER, INC. | SENECA | 400,000 | Ammonia (anhydrous) |
| 11 | FARMLAND INDUSTRIES INC. COFFEYVILLE REFINERY | COFFEYVILLE | 382,000 | Hydrogen fluoride (conc >=50%) |
| 12 | GOODLAND : NH3 PLT | GOODLAND | 377,000 | Ammonia (anhydrous) |
| 13 | BROWN COUNTY COOPERATIVE ASSOCIATION | ROBINSON | 377,000 | Ammonia (anhydrous) |
| 14 | FARMERS COOPERATIVE ELEVATOR COMPANY | HALSTEAD | 359,000 | Ammonia (anhydrous) |
| 15 | FARMERS COOP ELEVATOR CO. | GARDEN PLAIN | 350,000 | Ammonia (anhydrous) |
| 16 | DODGE CITY COOPERATIVE EXCHANGE(FORD) | FORD | 350,000 | Ammonia (anhydrous) |
| 17 | UCB FILMS, INC. | TECUMSEH | 340,000 | Carbon disulfide |
| 18 | OBERLIN : NH3 PLT | OBERLIN | 320,000 | Ammonia (anhydrous) |
| 19 | 13 MI. NORTH NH3 PLT | TRIBUNE | 316,000 | Ammonia (anhydrous) |
| 20 | LAROCHE INDUSTRIES INC. | KANSAS CITY | 315,415 | Ammonia (anhydrous) |
| 21 | FARMERS COOP GRAIN ASSOCIATION | CONWAY SPRINGS | 307,000 | Ammonia (anhydrous) |
| 22 | MIDWEST COOPERATIVE | STUDLEY | 306,500 | Ammonia (anhydrous) |
| 23 | FARMERS COOPERATIVE GRAIN COMPANY | CALDWELL | 306,000 | Ammonia (anhydrous) |
| 24 | HERKIMER COOP BUSINESS ASSOCIATION | MARYSVILLE | 306,000 | Ammonia (anhydrous) |
| 25 | HELENA CHEMICAL COMPANY - GARDEN CITY | GARDEN CITY | 305,127 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Kentucky storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | HENDERSON TERMINAL | HENDERSON | 90,000,000 | Ammonia (anhydrous) |
| 2 | CITGO PETROLEUM CORPORATION - LOUISVILLE TERMINAL | LOUISVILLE | 15,805,818 | Chloroform |
| 3 | AIR PRODUCTS AND CHEMICALS, INC. VAM DISTRIBUTION | CALVERT CITY | 11,700,000 | Vinyl acetate monomer |
| 4 | ARCH CHEMICALS INC. | BRANDENBURG | 6,500,000 | Propylene oxide |
| 5 | DUPONT LOUISVILLE WORKS | LOUISVILLE | 5,300,000 | Hydrogen fluoride (conc >=50%) |
| 6 | DOW CORNING CORPORATION CARROLLTON SITE | CARROLLTON | 4,167,500 | Dimethyldichlorosilane |
| 7 | WESTLAKE MONOMERS/CA&O CORPORATION | CALVERT CITY | 3,200,000 | Chlorine |
| 8 | BORDEN CHEMICAL, INC. | LOUISVILLE | 2,300,000 | Formaldehyde (solution) |
| 9 | CARPENTER CO. - RUSSELLVILLE DIVISION | RUSSELLVILLE | 1,225,000 | Toluene diisocyanate (unspecified isomer) |
| 10 | ELF ATOCHEM NORTH AMERICA, INC. - CALVERT CITY, KY | CALVERT CITY | 1,200,000 | Hydrogen fluoride (conc >=50%) |
| 11 | P. B. & S. CHEMICAL COMPANY, INC (24) | HENDERSON | 1,070,715 | Sulfur dioxide (anhydrous) |
| 12 | ROHM AND HAAS COMPANY - LOUISVILLE PLANT | LOUISVILLE | 600,000 | Ammonia (conc >=20%) |
| 13 | HAMPSHIRE CHEMICAL CORPORATION | OWENSBORO | 500,977 | Vinyl acetate monomer |
| 14 | AIR PRODUCTS AND CHEMICALS, INC. - MAIN PLANT | CALVERT CITY | 433,000 | Vinyl acetate monomer |
| 15 | DUPONT DOW ELASTOMERS L.L.C. - LOUISVILLE PLANT | LOUISVILLE | 360,000 | Chlorine |
| 16 | FANCY FARM | FANCY FARM | 308,431 | Ammonia (anhydrous) |
| 17 | ELF ATOCHEM NORTH AMERICA, INC. CARROLLTON PLANT | CARROLLTON | 292,000 | Methyl chloride |
| 18 | THE ENSIGN-BICKFORD COMPANY - GRAHAM, KY | GRAHAM | 280,000 | Nitric acid (conc >=80%) |
| 19 | AGRI-CHEM, INC. | HOPKINSVILLE | 280,000 | Ammonia (anhydrous) |
| 20 | AGRI-CHEM, INC. | HOPKINSVILLE | 280,000 | Ammonia (anhydrous) |
| 21 | MILES FARM SUPPLY | OWENSBORO | 280,000 | Ammonia (anhydrous) |
| 22 | CROP PRODUCTION SERVICES | MORGANFIELD | 280,000 | Ammonia (anhydrous) |
| 23 | AGRI-CHEM, INC. | HOPKINSVILLE | 280,000 | Ammonia (anhydrous) |
| 24 | ISP CHEMICALS, INC. | CALVERT CITY | 260,000 | Ammonia (anhydrous) |
| 25 | ADAIRVILLE | ADAIRVILLE | 252,353 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Louisiana storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | TAFT TERMINAL | TAFT | 240,000,000 | Ammonia (anhydrous) |
| 2 | VULCAN CHEMICALS | GEISMAR | 190,000,000 | Chloroform |
| 3 | STERLINGTON FACILITY | STERLINGTON | 130,000,000 | Ammonia (anhydrous) |
| 4 | CF INDUSTRIES, INC. DONALDSONVILLE NITROGEN CMPLX | DONALDSONVILLE | 130,000,000 | Ammonia (anhydrous) |
| 5 | BORDEN CHEMICALS AND PLASTICS, OLP - GEISMAR | GEISMAR | 70,000,000 | Ammonia (anhydrous) |
| 6 | FARMLAND INDUSTRIES, INC. POLLOCK NITROGEN PLANT | POLLOCK | 60,000,000 | Ammonia (anhydrous) |
| 7 | TRIAD NITROGEN, INC. | DONALDSONVILLE | 60,000,000 | Ammonia (anhydrous) |
| 8 | FAUSTINA PLANT | ST. JAMES | 50,000,000 | Ammonia (anhydrous) |
| 9 | CYTEC-FORTIER PLANT | WAGGAMAN | 50,000,000 | Ammonia (anhydrous) |
| 10 | PCS NITROGEN FERTILIZER, L. P.--GEISMAR, LA | GEISMAR | 44,000,000 | Ammonia (anhydrous) |
| 11 | GEORGIA GULF CORPORATION - PLAQUEMINE FACILITY | PLAQUEMINE | 36,000,000 | Chlorine |
| 12 | OCCIDENTAL CHEMICAL TAFT PLANT | HAHNVILLE | 25,000,000 | Chlorine |
| 13 | THE DOW CHEMICAL COMPANY-LOUISIANA OPERATIONS | PLAQUEMINE | 23,617,660 | Propylene oxide |
| 14 | DELTA TERMINAL SERVICES, INC. | HARVEY | 19,000,000 | Toluene 2,4-diisocyanate |
| 15 | BASF CORPORATION GEISMAR SITE | GEISMAR | 18,000,000 | Chlorine |
| 16 | RHODIA, INC., BATON ROUGE FACILITY | BATON ROUGE | 15,540,580 | Oleum (Fuming Sulfuric acid) |
| 17 | NORCO CHEMICAL PLANT - WEST SITE | NORCO | 14,000,000 | Epichlorohydrin |
| 18 | DUPONT DOW ELASTOMERS L.L.C., PONTCHARTRAIN SITE | LAPLACE | 9,000,000 | Chlorine |
| 19 | PIONEER CHLOR ALKALI COMPANY, INC. | ST. GABRIEL | 8,930,000 | Chlorine |
| 20 | LYONDELL CHEMICAL WORLDWIDE, INC. | WESTLAKE | 8,400,000 | Toluene diisocyanate (unspecified isomer) |
| 21 | PPG INDUSTRIES INC., LAKE CHARLES PLANT | LAKE CHARLES | 6,800,000 | Chlorine |
| 22 | UNION CARBIDE CORPORATION TAFT/ STAR COMPLEX | TAFT | 6,277,353 | Ethylenediamine |
| 23 | MONSANTO COMPANY LULING PLANT | LULING | 6,000,000 | Ammonia (anhydrous) |
| 24 | DUPONT BURNSIDE PLANT | DARROW | 5,400,000 | Oleum (Fuming Sulfuric acid) |
| 25 | ALIEDSIGNAL, GEISMAR PLANT | GEISMAR | 5,000,000 | Hydrogen fluoride (conc >=50%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Maine storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | HOLTRACHEM MANUFACTURING COMPANY | ORRINGTON | 416,000 | Chlorine |
| 2 | S.D WARREN (WESTBROOK MILL) | WESTBROOK | 360,000 | Chlorine |
| 3 | A.E. STALEY MANUFACTURING COMPANY- HOULTON | HOULTON | 310,000 | Propylene oxide |
| 4 | GENERAL ALUM & CHEMICAL CORP | SEARSPORT | 237,000 | Ammonia (conc >=20%) |
| 5 | FORT JAMES CORPORATION, OLD TOWN MILL | OLD TOWN | 180,000 | Chlorine |
| 6 | PIONEER PLASTICS CORPORATION | AUBURN | 135,000 | Formaldehyde (solution) |
| 7 | MONSON COMPANIES, INC. | SOUTH PORTLAND | 87,950 | Chlorine |
| 8 | MCCAIN FOODS USA, INC. - EASTON, ME FACILITY | EASTON | 55,000 | Ammonia (anhydrous) |
| 9 | NATIONAL STARCH AND CHEMICAL CO. | ISLAND FALLS | 42,900 | Propylene oxide |
| 10 | GEORGIA-PACIFIC CORP. PULP & BLEACHED BOARD DIV. | BAILEYVILLE | 41,100 | Chlorine dioxide |
| 11 | S.D. WARREN CO. (SOMERSET MILL) | SKOWHEGAN | 36,684 | Chlorine dioxide |
| 12 | BOWATER/GREAT NORTHERN PAPER, INC. | MILLINOCKET | 32,000 | Chlorine |
| 13 | PORTLAND WASTEWATER TREATMENT PLANT | PORTLAND | 32,000 | Chlorine |
| 14 | JASPER WYMAN & SON | MILBRIDGE | 21,549 | Ammonia (anhydrous) |
| 15 | ANDROSCOGGIN MILL | JAY | 20,000 | Chlorine dioxide |
| 16 | BOWATER/GREAT NORTHERN PAPER, INC. | EAST MILLINOCKET | 20,000 | Chlorine |
| 17 | JASPER WYMAN & SON C&D DIVISION | DEBLOIS | 19,333 | Ammonia (anhydrous) |
| 18 | HANCOCK FOODS INC. | ELLSWORTH | 19,000 | Ammonia (anhydrous) |
| 19 | ATLANTIC CUSTOM PROCESSORS, LLC | FORT FAIRFIELD | 19,000 | Ammonia (anhydrous) |
| 20 | STANDISH WATER TREATMENT FACILITY | STANDISH | 16,000 | Chlorine |
| 21 | AMERICOLD LOGISTICS PLANT # 80573 | PORTLAND | 14,500 | Ammonia (anhydrous) |
| 22 | BARBER FOODS | PORTLAND | 13,000 | Ammonia (anhydrous) |
| 23 | LAKE AUBURN INTAKE FACILITY | AUBURN | 12,000 | Chlorine |
| 24 | CHERRYFIELD FOODS | CHERRYFIELD | 10,200 | Ammonia (anhydrous) |
| 25 | BIDDEFORD AND SACO WATER COMPANY - PUMPING STATION | BIDDEFORD | 9,800 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Maryland storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | HAWKINS POINT PLANT | BALTIMORE | 1,800,000 | Chlorine |
| 2 | CONDEA VISTA COMPANY | BALTIMORE | 1,400,000 | Chlorine |
| 3 | TANNER INDUSTRIES, INC. | HAVRE DE GRACE | 1,171,000 | Ammonia (anhydrous) |
| 4 | DELTA CHEMICAL CORPORATION | BALTIMORE | 600,000 | Chlorine |
| 5 | FMC CORPORATION AGRICULTURAL PRODUCTS GROUP | BALTIMORE | 480,000 | Oleum (Fuming Sulfuric acid) |
| 6 | INDIAN HEAD DIVISION, NAVAL SURFACE WARFARE CENTER | INDIAN HEAD | 418,535 | Oleum (Fuming Sulfuric acid) |
| 7 | BACK RIVER WASTEWATER TREATMENT FACILITY | BALTIMORE | 360,000 | Chlorine |
| 8 | WILLARD AGRI-SERVICE OF FREDERICK, INC. | FREDERICK | 330,000 | Ammonia (conc >=20%) |
| 9 | CROP PRODUCTION SERVICES | CENTREVILLE | 310,000 | Ammonia (anhydrous) |
| 10 | MEYERS LIQUID FERTILIZER CO., INC. | MT.AIRY | 300,000 | Ammonia (conc >=20%) |
| 11 | LEBANON CHEMICAL CORPORATION - BALTIMORE | BALTIMORE | 290,000 | Ammonia (anhydrous) |
| 12 | CROP PRODUCTION SERVICES | WORTON | 250,000 | Ammonia (anhydrous) |
| 13 | CLEAN HARBORS OF BALTIMORE, INC. | BALTIMORE | 207,770 | Carbon disulfide |
| 14 | AIR PRODUCTS POLYMERS, L.P. | ELKTON | 195,000 | Vinyl acetate monomer |
| 15 | WILLARD AGRI-SERVICE OF LYNCH | LYNCH | 175,000 | Ammonia (anhydrous) |
| 16 | TERRA INTERNATIONAL, INC. - NEWARK, MD | NEWARK | 140,000 | Ammonia (anhydrous) |
| 17 | HASTINGS GARAGE, INC | EAST NEW MARKET | 131,000 | Ammonia (anhydrous) |
| 18 | POTOMAC WATER FILTRATION PLANT | POTOMAC | 120,000 | Chlorine |
| 19 | RED STAR YEAST & PRODUCTS, BALTIMORE PLANT | BALTIMORE | 116,000 | Ammonia (anhydrous) |
| 20 | BETHLEHEM STEEL CORP. - SPARROWS POINT DIVISION | BALTIMORE | 82,500 | Sulfur dioxide (anhydrous) |
| 21 | RHTNE-POULENC SURFACTANTS AND SPECIALTIES, LP | BALTIMORE | 80,000 | Ammonia (conc >=20%) |
| 22 | PATAPSCO WASTEWATER TREATMENT FACILITY | BALTIMORE | 80,000 | Chlorine |
| 23 | IPI NORTH EAST, INC. | ELKTON | 74,000 | Toluene diisocyanate (unspecified isomer) |
| 24 | PATUXENT WATER FILITRATION PLANT | LAUREL | 72,000 | Chlorine |
| 25 | ASHBURTON FILTRATION PLANT | BALTIMORE | 70,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Massachusetts storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | SOLUTIA INC., INDIAN ORCHARD PLANT | SPRINGFIELD | 2,600,000 | Vinyl acetate monomer |
| 2 | BORDEN & REMINGTON | FALL RIVER | 345,000 | Ammonia (conc >=20%) |
| 3 | HERCULES - CHICOPEE PLANT | CHICOPEE | 210,000 | Epichlorohydrin |
| 4 | PERSTORP COMPOUNDS, INC. | FLORENCE | 140,000 | Formaldehyde (solution) |
| 5 | CREST FOAM | NEWBURYPORT | 122,000 | Toluene 2,4-diisocyanate |
| 6 | MONSON COMPANIES, INC. | LEOMINSTER | 120,000 | Toluene diisocyanate (unspecified isomer) |
| 7 | THE DODGE COMPANY | CAMBRIDGE | 109,145 | Formaldehyde (solution) |
| 8 | CLEAN HARBORS OF BRAINTREE, INC. | BRAINTREE | 101,807 | Carbon disulfide |
| 9 | THE TRUESDALE COMPANY | BRIGHTON | 94,000 | Toluene diisocyanate (unspecified isomer) |
| 10 | LYNN REGIONAL WASTEWATER TREATMENT PLANT | LYNN | 64,000 | Chlorine |
| 11 | ATTLEBORO REFINING COMPANY, INC. | ATTLEBORO | 62,833 | Hydrochloric acid (conc >=37%) |
| 12 | C&S WHOLESALE GROCERS INC. WEST | WESTFIELD | 56,000 | Ammonia (anhydrous) |
| 13 | C&S WHOLESALE GOCERS INC. HATFIELD | HATFIELD | 54,000 | Ammonia (anhydrous) |
| 14 | NORUMBEGA CHEMICAL FEED FACILITY | WESTON | 52,500 | Chlorine |
| 15 | WYMAN-GORDON COMPANY NORTH GRAFTON PLANT | NORTH GRAFTON | 52,000 | Hydrogen fluoride (conc >=50%) |
| 16 | VAN WATERS & ROGERS INC. | SALEM | 50,000 | Ethylenediamine |
| 17 | GOOD HUMOR CORPORATION FRAMINGHAM | FRAMINGHAM | 50,000 | Ammonia (anhydrous) |
| 18 | POLYMETALLURGICAL CORP. | NORTH ATTLEBORO | 46,000 | Ammonia (anhydrous) |
| 19 | HOLLAND COMPANY, INC. | ADAMS | 45,100 | Ammonia (anhydrous) |
| 20 | SPRINGFIELD REGIONAL WASTEWATER TREATMENT FACILITY | AGAWAM | 40,000 | Chlorine |
| 21 | GORTON'S | GLOUCESTER | 40,000 | Ammonia (anhydrous) |
| 22 | FRIENDLY ICE CREAM CORPORATION - WILBRAHAM | WILBRAHAM | 40,000 | Ammonia (anhydrous) |
| 23 | LOWELL WASTEWATER TREATMENT PLANT | LOWELL | 40,000 | Chlorine |
| 24 | WEST LYNN CREAMERY | LYNN | 39,000 | Ammonia (anhydrous) |
| 25 | TECHALLOY COMPANY, INC. - NORTHAMPTON WIIRE PLANT | NORTHAMPTON | 34,204 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Michigan storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | CF INDUSTRIES, INC. - PORT HURON TERMINAL | KIMBALL | 60,000,000 | Ammonia (anhydrous) |
| 2 | DOW CORNING -- MIDLAND PLANT | MIDLAND | 6,738,122 | Hydrogen chloride (anhydrous) |
| 3 | BASF CORPORATION - WYANDOTTE SITE | WYANDOTTE | 5,070,000 | Propylene oxide |
| 4 | ELF ATOCHEM NORTH AMERICA, INC. - RIVERVIEW, MI | RIVERVIEW | 4,000,000 | Chlorine |
| 5 | DETROIT WASTEWATER TREATMENT PLANT | DETROIT | 900,000 | Chlorine |
| 6 | SOLUTIA TRENTON PLANT | TRENTON | 719,000 | Vinyl acetate monomer |
| 7 | CYTEC KALAMAZOO, MICHIGAN PLANT | KALAMAZOO | 590,000 | Formaldehyde (solution) |
| 8 | LAROCHE INDUSTRIES INC. | OWOSSO | 455,713 | Ammonia (anhydrous) |
| 9 | PVS TECHNOLOGIES, INC. (DETROIT) | DETROIT | 360,000 | Chlorine |
| 10 | JCI JONES CHEMICALS INC RIVERVIEW FACILITY | RIVERVIEW | 360,000 | Chlorine |
| 11 | S.D. WARREN CO. ( MUSKEGON MILL) | MUSKEGON | 360,000 | Chlorine |
| 12 | PATTERSON LABORATORIES, INC | DETROIT | 360,000 | Chlorine |
| 13 | WOODBRIDGE CORPORATION - WHITMORE LAKE PLANT | WHITMORE LAKE | 337,000 | Toluene diisocyanate (unspecified isomer) |
| 14 | BASF CORPORATION LIVONIA SITE | LIVONIA | 330,000 | Toluene diisocyanate (unspecified isomer) |
| 15 | TANNER INDUSTRIES, INC. | INKSTER | 319,000 | Ammonia (anhydrous) |
| 16 | BLISSFIELD | BLISSFIELD | 310,800 | Ammonia (conc >=20%) |
| 17 | MENDON | MENDON | 252,352 | Ammonia (anhydrous) |
| 18 | GEORGIA-PACIFIC RESINS, INC. | GRAYLING | 243,650 | Formaldehyde (solution) |
| 19 | HEMLOCK SEMICONDUCTOR CORP. | HEMLOCK | 233,376 | Hydrogen chloride (anhydrous) |
| 20 | BIOLAB INCORPORATED | ADRIAN | 225,000 | Bromine |
| 21 | HAMILTON FARM BUREAU COOPERATIVE, INC. | HAMILTON | 224,400 | Ammonia (anhydrous) |
| 22 | CROP PRODUCTION SERVICES | LAKE ODESSA | 220,000 | Ammonia (anhydrous) |
| 23 | ZEELAND FARM SERVICES | ZEELAND | 216,000 | Ammonia (anhydrous) |
| 24 | BIL MAR FOODS - ZEELAND, MICHIGAN | ZEELAND | 215,000 | Ammonia (anhydrous) |
| 25 | CN CARGOFLO | WARREN | 213,671 | Toluene diisocyanate (unspecified isomer) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Minnesota storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | CF INDUSTRIES, INC. - GLENWOOD TERMINAL | GLENWOOD | 120,000,000 | Ammonia (anhydrous) |
| 2 | CF INDUSTRIES, INC. - PINE BEND TERMINAL | ROSEMOUNT | 120,000,000 | Ammonia (anhydrous) |
| 3 | FARMLAND INDUSTRIES BARNESVILLE AMMONIA TERMINAL | BARNESVILLE | 68,868,682 | Ammonia (anhydrous) |
| 4 | FARMLAND INDUSTRIES INC.- MURDOCK AMMONIA TERMINAL | MURDOCK | 63,580,928 | Ammonia (anhydrous) |
| 5 | FARMLAND VERNON CENTER AMMONIA TERMINAL | VERNON CENTER | 56,000,000 | Ammonia (anhydrous) |
| 6 | CONTINENTAL NITROGEN & RESOURCES CORPORATION | ROSEMOUNT | 16,800,000 | Ammonia (anhydrous) |
| 7 | DPC INDUSTRIES, INC | ROSEMOUNT | 1,200,000 | Chlorine |
| 8 | BELLE PLAINE COOPERATIVE | BELLE PLAINE | 768,000 | Ammonia (anhydrous) |
| 9 | FARMERS COOP ASSN | JACKSON | 720,000 | Ammonia (anhydrous) |
| 10 | CRYSTAL COOPERATIVE - LAKE CRYSTAL | LAKE CRYSTAL | 670,000 | Ammonia (anhydrous) |
| 11 | WATONWAN FARM SERVICE CO. | ST. JAMES | 610,000 | Ammonia (anhydrous) |
| 12 | FARMERS UNION COOP OIL ASSOCIATION | RANDOLPH | 600,000 | Ammonia (anhydrous) |
| 13 | D. B. WESTERN MINNESOTA, L.L.C. | VIRGINIA | 595,000 | Formaldehyde (solution) |
| 14 | FARMERS COOPERATIVE OF HANSKA | HANSKA | 580,000 | Ammonia (anhydrous) |
| 15 | CENTRAL CO-OP | OWATONNA | 570,000 | Ammonia (anhydrous) |
| 16 | LA SALLE FARMERS GRAIN COMPANY (MAD AG) | MADELIA | 550,000 | Ammonia (anhydrous) |
| 17 | CENTRAL CO-OP | HAYFIELD | 520,000 | Ammonia (anhydrous) |
| 18 | COOPERATIVE OIL ASSN OF MT. LAKE | MT. LAKE | 515,000 | Ammonia (anhydrous) |
| 19 | ARGYLE CO-OP WHSE ASSN. | ARGYLE | 510,000 | Ammonia (anhydrous) |
| 20 | CENTRAL CO-OP | BLOOMING PRAIRIE | 503,000 | Ammonia (anhydrous) |
| 21 | NEW VISION COOP | BREWSTER | 500,000 | Ammonia (anhydrous) |
| 22 | HUTCHINSON CO-OP | HUTCHINSON | 493,000 | Ammonia (anhydrous) |
| 23 | COTONWOOD COOP OIL CO. | COTTONWOOD | 490,000 | Ammonia (anhydrous) |
| 24 | FARMERS UNION COOP OIL ASSOCIATION | HASTINGS | 490,000 | Ammonia (anhydrous) |
| 25 | FARMERS UNION COOP OIL ASSOCIATION | HAMPTON | 480,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Mississippi storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | MISSISSIPPI CHEMICAL CORPORATION | YAZOO CITY | 76,000,000 | Ammonia (anhydrous) |
| 2 | MISSISSIPPI PHOSPHATES CORPORATION | PASCAGOULA | 48,200,000 | Ammonia (anhydrous) |
| 3 | DUPONT DELISLE PLANT | PASS CHRISTIAN | 8,800,000 | Chlorine |
| 4 | HAMILTON FACILITY | HAMILTON | 4,200,000 | Titanium tetrachloride |
| 5 | GE PLASTICS - BAY ST. LOUIS | BAY ST. LOUIS | 4,062,000 | Acrylonitrile |
| 6 | LEAF RIVER PULP OPERATIONS | NEW AUGUSTA | 3,452,760 | Chlorine dioxide |
| 7 | CARPENTER CO., TUPELO DIVISION | VERONA | 3,250,000 | Toluene diisocyanate (unspecified isomer) |
| 8 | VICKSBURG CHEMICAL COMPANY | VICKSBURG | 1,800,000 | Ammonia (anhydrous) |
| 9 | SFA, INC. DBA FIVE COUNTY FARMERS | CLARKSDALE | 1,575,900 | Ammonia (anhydrous) |
| 10 | TRI S FERTILIZER PLANT | SCHLATER | 1,320,000 | Ammonia (anhydrous) |
| 11 | GEORGIA-PACIFIC RESINS, INC. | TAYLORSVILLE | 1,200,000 | Formaldehyde (solution) |
| 12 | CHEVRON PASCAGOULA REFINERY | PASCAGOULA | 800,000 | Ammonia (anhydrous) |
| 13 | FOAMEX,TUPELO WEST | VERONA | 740,000 | Toluene diisocyanate (unspecified isomer) |
| 14 | BORDEN CHEMICAL, INC. - VICKSBURG | VICKSBURG | 615,000 | Formaldehyde (solution) |
| 15 | ZEON CHEMICALS L.P. - MISSISSIPPI PLANT | HATTIESBURG | 584,000 | Epichlorohydrin |
| 16 | FIRST CHEMICAL CORPORATION | PASCAGOULA | 510,000 | Ammonia (anhydrous) |
| 17 | MORTON INTERNATIONAL MOSS POINT ACS | MOSS POINT | 500,000 | Formaldehyde (solution) |
| 18 | VITAFOAM, INCORPORATED | TUPELO | 450,000 | Toluene diisocyanate (unspecified isomer) |
| 19 | ETHYL PETROLEUM ADITIVES, INC. | NATCHEZ | 436,800 | Oleum (Fuming Sulfuric acid) |
| 20 | BRYAN FOODS, INC. | WEST POINT | 400,000 | Ammonia (anhydrous) |
| 21 | SOUTHERN STATES COOPERATIVE- GREENVILLE, MS (7640) | GREENVILLE | 390,150 | Ammonia (anhydrous) |
| 22 | INTERNATIONAL PAPER - NATCHEZ MILL | NATCHEZ | 360,000 | Chlorine |
| 23 | GEORGIA-PACIFIC RESINS, INC. | LOUISVILLE | 293,400 | Formaldehyde (solution) |
| 24 | TALLAHATCHIE FARMERS SUPPLY, INC. | CHARLESTON | 288,915 | Ammonia (anhydrous) |
| 25 | HERCULES INCORPORATED, HATTIESBURG, MS. PLANT | HATTIESBURG | 277,000 | Epichlorohydrin |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Missouri storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | LAROCHE INDUSTRIES, INC. CRYSTAL CITY OPERATIONS | FESTUS | 60,012,570 | Ammonia (anhydrous) |
| 2 | CF INDUSTRIES, INC. - PALMYRA TERMINAL | PALMYRA | 60,000,000 | Ammonia (anhydrous) |
| 3 | ICI EXPLOSIVES USA INC | JOPLIN | 2,103,500 | Ammonia (anhydrous) |
| 4 | DYNO NOBEL, INC. | LOUISIANA | 1,600,000 | Ammonia (anhydrous) |
| 5 | HERCULES INCORPORATED - MCW PLANT | LOUISIANA | 1,500,000 | Formaldehyde (solution) |
| 6 | DPC ENTERPRISES | FESTUS | 1,000,000 | Chlorine |
| 7 | BAYER, AGRICULTURE DIVISION | KANSAS CITY | 509,000 | Carbon disulfide |
| 8 | KANSAS CITY FOAM | RIVERSIDE | 429,562 | Toluene diisocyanate (unspecified isomer) |
| 9 | KANSAS CITY, MISSOURI WATER TREATMENT PLANT | KANSAS CITY | 426,000 | Chlorine |
| 10 | JOHNSON CONTROLS, INC | JEFFERSON CITY | 420,000 | Toluene diisocyanate (unspecified isomer) |
| 11 | GLASGOW COOP ASSN. GLASGOW BRANCH | GLASGOW | 390,000 | Ammonia (anhydrous) |
| 12 | CRAIG SUPPLY CO. | CRAIG | 375,600 | Ammonia (anhydrous) |
| 13 | ANHEUSER-BUSCH, INC. ST. LOUIS BREWERY | ST. LOUIS | 340,000 | Ammonia (anhydrous) |
| 14 | TYSON FOODS, INC SEDALIA, MO. | SEDALIA | 319,961 | Ammonia (anhydrous) |
| 15 | ARCHIMICA (MISSOURI) INC. | SPRINGFIELD | 312,100 | Bromine |
| 16 | DYNO NOBEL CARTHAGE PLANT | CARTHAGE | 300,000 | Nitric acid (conc >=80%) |
| 17 | LINCOLN COUNTY FARMERS COOP | TROY | 280,000 | Ammonia (anhydrous) |
| 18 | BREHMER FERTILIZER SERVICES | DEXTER | 280,000 | Ammonia (anhydrous) |
| 19 | BUCKMAN LABORATORIES, INCORPORATED | CADET | 270,000 | Carbon disulfide |
| 20 | TANNER INDUSTRIES, INC. | NEOSHO | 260,400 | Ammonia (anhydrous) |
| 21 | CONSUMERS OIL COMPANY, INC. | MARYVILLE | 260,000 | Ammonia (anhydrous) |
| 22 | ST. LOUIS COUNTY WATER COMPANY CENTRAL PLANT | ST. LOUIS | 260,000 | Chlorine |
| 23 | BIOKYOWA, INC. | CAPE GIRARDEAU | 250,000 | Ammonia (anhydrous) |
| 24 | RICKETTS FARM SERVICE, INC ANHYDROUS AMMONIA PLANT | SALISBURY | 244,950 | Ammonia (anhydrous) |
| 25 | MACZUK - BRUNSWICK | BRUNSWICK | 233,660 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Montana storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | MONTANA SULPHUR & CHEMICAL COMPANY | NE OF BILLINGS | 3,080,000 | Hydrogen sulfide |
| 2 | BORDEN CHEMICAL, INC., MISSOULA PLANT | MISSOULA | 1,100,000 | Formaldehyde (solution) |
| 3 | DPC INDUSTRIES, INC. | BILLINGS | 500,000 | Chlorine |
| 4 | MOUNTAIN VIEW - CO-OP - DUTTON ELEVATOR | DUTTON | 300,000 | Ammonia (anhydrous) |
| 5 | CENEX HARVEST STATES-CHESTER | CHESTER | 280,000 | Ammonia (anhydrous) |
| 6 | AG GRAIN, INC. @ PLENTYWOOD MONTANA | PLENTYWOOD | 240,762 | Ammonia (anhydrous) |
| 7 | JUPITER SULPHUR, LLC. - BILLINGS | BILLINGS | 220,000 | Ammonia (anhydrous) |
| 8 | BOOTLEGGER PLANT | N. OF GREAT FALLS | 180,000 | Ammonia (anhydrous) |
| 9 | HIGHWOOD PLANT | N. OF HIGHWOOD | 180,000 | Ammonia (anhydrous) |
| 10 | MOUNTAIN VIEW CO-OP - POWER | POWER | 150,000 | Ammonia (anhydrous) |
| 11 | MOUNTAIN VIEW CO-OP - BRADY | BRADY | 150,000 | Ammonia (anhydrous) |
| 12 | LEWISTOWN PROPANE & FERTILIZER CO-WINIFRED PLANT | WINIFRED | 149,175 | Ammonia (anhydrous) |
| 13 | CENEX HARVEST STATES-CONRAD | CONRAD | 140,000 | Ammonia (anhydrous) |
| 14 | CENEX HARVEST STATES-CHOTEAU | CHOTEAU | 140,000 | Ammonia (anhydrous) |
| 15 | CENEX HARVEST STATES-SUNBURST | SUNBURST | 140,000 | Ammonia (anhydrous) |
| 16 | CENEX HARVEST STATES-HAVRE | HAVRE | 140,000 | Ammonia (anhydrous) |
| 17 | CENEX HARVEST STATES-WINIFRED | WINIFRED | 140,000 | Ammonia (anhydrous) |
| 18 | CENEX HARVEST STATES-BROADVIEW | BROADVIEW | 140,000 | Ammonia (anhydrous) |
| 19 | CENEX HARVEST STATES-VALIER | VALIER | 140,000 | Ammonia (anhydrous) |
| 20 | CENEX HARVEST STATES-CHESTER (LEASED) | CHESTER | 140,000 | Ammonia (anhydrous) |
| 21 | CENEX HARVEST STATES-CUT BANK | CUT BANK | 140,000 | Ammonia (anhydrous) |
| 22 | CENEX HARVEST STATES-RUDYARD | RUDYARD | 140,000 | Ammonia (anhydrous) |
| 23 | AG WISE, INC. | KREMLIN | 138,000 | Ammonia (anhydrous) |
| 24 | UAP NORTHWEST, BIG SANDY | BIG SANDY | 135,000 | Ammonia (anhydrous) |
| 25 | UAP NORTHWEST, CHESTER | HAVRE | 134,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Nebraska storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | FARMLAND INDUSTRIES, INC. - HASTINGS TERMINAL | HASTINGS | 140,000,000 | Ammonia (anhydrous) |
| 2 | WT-11 DAVID CITY TERMINAL | DAVID CITY | 140,000,000 | Ammonia (anhydrous) |
| 3 | WT-12 AURORA TERMINAL | AURORA | 140,000,000 | Ammonia (anhydrous) |
| 4 | FARMLAND INDUSTRIES, INC., BEATRICE NITROGEN PLANT | BEATRICE | 132,000,000 | Ammonia (anhydrous) |
| 5 | TERRA NITROGEN LIMITED PARTNERSHIP, BLAIR TERMINAL | BLAIR | 100,000,000 | Ammonia (anhydrous) |
| 6 | FARMLAND GREENWOOD AMMONIA FACILITY | GREENWOOD | 60,000,000 | Ammonia (anhydrous) |
| 7 | AGRIUM U.S INC. HOMESTEAD NITROGEN OPERATIONS | BEATRICE | 40,400,000 | Ammonia (anhydrous) |
| 8 | CF INDUSTRIES, INC. - FREMONTTERMINAL | FREMONT | 40,000,000 | Ammonia (anhydrous) |
| 9 | PCS NITROGEN FERTILIZER, L.P. LAPLATTE PLANT | LAPLATTE | 30,000,000 | Ammonia (anhydrous) |
| 10 | CF INDUSTRIES, INC. - AURORA TERMINAL | AURORA | 30,000,000 | Ammonia (anhydrous) |
| 11 | CARGILL AGHORIZONS - HOLDREGE WHOLESALE | HOLDREGE | 3,000,000 | Ammonia (anhydrous) |
| 12 | CENEX/LAND O'LAKES AGRONOMY CENTER - BRULE | BRULE | 3,000,000 | Ammonia (anhydrous) |
| 13 | GRANT ANHYDROUS AMMONIA PLANT | GRANT | 1,956,679 | Ammonia (anhydrous) |
| 14 | VENANGO ANHYDROUS AMMONIA PLANT | VENANGO | 1,956,679 | Ammonia (anhydrous) |
| 15 | DPC INDUSTRIES, INC. | OMAHA | 1,750,000 | Chlorine |
| 16 | CENEX/LAND O'LAKES AGRONOMY CENTER - GOTHENBURG | GOTHENBURG | 1,500,000 | Ammonia (anhydrous) |
| 17 | PERRY FERTILIZER PLANT | MCCOOK | 1,460,000 | Ammonia (anhydrous) |
| 18 | CENEX/LAND O'LAKES AGRONOMY CENTER- GRANT (MAIN) | GRANT | 1,350,000 | Ammonia (anhydrous) |
| 19 | FARMLAND SERVICE COOP GOTHENBURG | GOTHENBURG | 1,300,000 | Ammonia (anhydrous) |
| 20 | FARMLAND IND. INC. GRANT NE. | GRANT | 1,115,010 | Ammonia (anhydrous) |
| 21 | CENEX/LAND O'LAKES AGRONOMY CENTER - COZAD | COZAD | 1,050,000 | Ammonia (anhydrous) |
| 22 | FARMLAND SERVICE COOP COZAD | COZAD | 880,000 | Ammonia (anhydrous) |
| 23 | CENEX/LAND O'LAKES AGRONOMY CENTER - EUSTIS | EUSTIS | 750,000 | Ammonia (anhydrous) |
| 24 | FRENCHMAN VALLEY COOP | IMPERIAL | 730,000 | Ammonia (anhydrous) |
| 25 | BATTLE CREEK FARMERS COOPERATIVE - OSMOND, NE | OSMOND | 692,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**Facilities in Nevada storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | COASTAL CHEM, INC. - BATTLE MOUNTAIN, NEVADA | BATTLE MOUNTAIN | 6,100,000 | Ammonia (anhydrous) |
| 2 | TITANIUM METALS CORPORATION | HENDERSON | 5,000,000 | Titanium tetrachloride |
| 3 | PIONEER CHLOR ALKALI COMPANY INC. - HENDERSON | HENDERSON | 1,536,000 | Chlorine |
| 4 | THATCHER COMPANY OF NEVADA, LLC | HENDERSON | 540,000 | Chlorine |
| 5 | CYANCO | WINNEMUCCA | 410,000 | Ammonia (anhydrous) |
| 6 | SOUTHERN NEVADA WATER SYSTEM | BOULDER CITY | 204,000 | Chlorine |
| 7 | SIERRA CHEMICAL CO., SPARKS | SPARKS | 202,150 | Chlorine |
| 8 | KERR-MCGEE CHEMICAL LLC (HENDERSON, NV) | HENDERSON | 200,000 | Boron trichloride |
| 9 | TRUCKEE MEADOWS WATER RECLAMATION FACILITY | RENO | 68,000 | Chlorine |
| 10 | SAGUARO POWER COMPANY | HENDERSON | 51,237 | Ammonia (anhydrous) |
| 11 | GOOD HUMOR CORPORATION HENDERSON | HENDERSON | 48,000 | Ammonia (anhydrous) |
| 12 | ADVANCED SPECIALTY GASES | DAYTON | 36,000 | Hydrogen fluoride (conc >=50%) |
| 13 | US FOODSERVICE - LAS VEGAS | NORTH LAS VEGAS | 24,000 | Ammonia (anhydrous) |
| 14 | POOL CHLOR OF NEVADA INC. | LAS VEGAS | 16,000 | Chlorine |
| 15 | NEVADA CHEMICAL COMPANY | LAS VEGAS | 16,000 | Chlorine |
| 16 | LAS VEGAS ICE & COLD STORAGE CO., INC. | LAS VEGAS | 13,600 | Ammonia (anhydrous) |
| 17 | HAWTHORNE ARMY DEPOT | HAWTHORNE | 4,300 | Chlorine |
| 18 | NEW AMERICAN TEC | FALLON | 934 | Nickel carbonyl |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

# NEW HAMPSHIRE

**Facilities in New Hampshire storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | HAMPSHIRE CHEMICAL CORPORATION | NASHUA | 945,655 | Hydrocyanic acid |
| 2 | PSNH MERRIMACK GENERATING STATION | BOW | 480,000 | Ammonia (anhydrous) |
| 3 | NASHUA CORPORATION - MERRIMACK FACILITY | MERRIMACK | 84,000 | Vinyl acetate monomer |
| 4 | OSRAM SYLVANIA PRODUCTS, INC. - EXETER FACILITY | EXETER | 43,800 | Hydrogen fluoride (conc >=50%) |
| 5 | HIGH LINER FOODS, INC. | PORTSMOUTH | 38,000 | Ammonia (anhydrous) |
| 6 | ANHEUSER-BUSCH, INC. MERRIMACK BREWERY | MERRIMACK | 36,000 | Ammonia (anhydrous) |
| 7 | COLD REGIONS RESEARCH AND ENGINEERING LABORATORY | HANOVER | 20,000 | Ammonia (anhydrous) |
| 8 | COCA-COLA BOTTLING COMPANY, NNE, INC. LPC | LONDONDERRY | 13,300 | Ammonia (anhydrous) |
| 9 | WYMAN GORDON TITANIUM CASTINGS, LLC | FRANKLIN | 1,211 | Hydrogen fluoride (conc >=50%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in New Jersey storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | GENERAL CHEMICAL CORPORATION | NEWARK | 5,000,000 | Oleum (Fuming Sulfuric acid) |
| 2 | GATX TERMINALS CORPORATION - CARTERET TERMINAL | CARTERET | 3,505,302 | Vinyl acetate monomer |
| 3 | BASF CORPORATION WASHINGTON NJ SITE | WASHINGTON | 3,200,000 | Propylene oxide |
| 4 | AIR PRODUCTS POLYMERS LP | DAYTON | 3,000,000 | Vinyl acetate monomer |
| 5 | DUPONT CHAMBERS WORKS | DEEPWATER | 2,710,000 | Chlorine |
| 6 | AUSIMONT USA, INC.- THOROFARE PLANT | THOROFARE | 2,000,000 | Hydrogen fluoride (conc >=50%) |
| 7 | HERCULES INCORPORATED - PARLIN PLANT | PARLIN | 1,700,000 | Nitric acid (conc >=80%) |
| 8 | IMTT-BAYONNE | BAYONNE | 1,649,935 | Ethylenediamine |
| 9 | SOLUTIA DELAWARE RIVER PLANT | BRIDGEPORT | 1,440,000 | Chlorine |
| 10 | VALERO REFINING CO. - NEW JERSEY | PAULSBORO | 1,200,000 | Hydrogen sulfide |
| 11 | INFINEUM USA L.P. BAYWAY CHEMICAL PLANT | LINDEN | 1,100,000 | Chlorine |
| 12 | KUEHNE CHEMICAL CO., INC. | SOUTH KEARNY | 999,999 | Chlorine |
| 13 | AKZO NOBEL CHEMICALS INC. | EDISON | 750,000 | Titanium tetrachloride |
| 14 | MIDDLESEX COUNTY UTILITIES AUTHORITY | SAYREVILLE | 720,000 | Chlorine |
| 15 | COGEN TECHNOLOGIES LINDEN VENTURE, LP | LINDEN | 560,000 | Ammonia (conc >=20%) |
| 16 | AIR PRODUCTS AND CHEMICALS, INC. | PAULSBORO | 410,000 | Toluene diisocyanate (unspecified isomer) |
| 17 | FISHER SCIENTIFIC COMPANY - SOMERVILLE SITE -USEPA | BRIDGEWATER | 400,000 | Chloroform |
| 18 | BFGOODRICH PEDRICKTOWN PLANT | PEDRICKTOWN | 370,000 | Acrylonitrile |
| 19 | SCHWEITZER-MAUDUIT INTERNATIONAL, INC. | SPOTSWOOD | 360,000 | Chlorine |
| 20 | GENERAL FOAM -EAST RUTHERFORD, LLC | EAST RUTHERFORD | 360,000 | Toluene diisocyanate (unspecified isomer) |
| 21 | UNION CARBIDE CORPORATION - UCAR EMULSION SYSTEMS | SOMERSET | 312,800 | Vinyl acetate monomer |
| 22 | BENJAMIN MOORE & COMPANY, NEWARK, NJ PLANT | NEWARK | 310,800 | Vinyl acetate monomer |
| 23 | HETERENE CHEMICAL CO., INC. | PATERSON | 250,000 | Ethylene oxide |
| 24 | COLORITE POLYMERS | BURLINGTON | 224,000 | Vinyl acetate monomer |
| 25 | CIBA SPECIALTY CHEMICALS WATER TREATMENTS, INC. | OLD BRIDGE | 210,000 | Methyl chloride |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in New Mexico storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | NEW MEXICO ADHESIVES, L.L.C. | LAS VEGAS | 2,675,000 | Formaldehyde (solution) |
| 2 | FOAMEX, L.P. | SANTA TERESA | 810,000 | Toluene diisocyanate (unspecified isomer) |
| 3 | DPC INDUSTRIES, INC. | ALBUQUERQUE | 600,000 | Chlorine |
| 4 | BOC GASES - LOVINGTON | LOVINGTON | 350,000 | Hydrogen chloride (anhydrous) |
| 5 | TERRA INTERNATIONAL, INC. - VADO, NM | VADO | 160,000 | Ammonia (anhydrous) |
| 6 | POOLE CHEMICAL - CLOVIS, NM | CLOVIS | 160,000 | Ammonia (anhydrous) |
| 7 | TESSENDERLO KERLEY, INC. - ARTESIA FACILITY | ARTESIA | 156,000 | Ammonia (anhydrous) |
| 8 | CURRY COUNTY FERTILIZER, LLC. - PRINCE | CLOVIS | 140,000 | Ammonia (anhydrous) |
| 9 | SOUTHSIDE WATER RECLAMATION PLANT | ALBUQUERQUE | 100,000 | Chlorine |
| 10 | FRIONA WHEATGROWERS, GRADY LOCATION | GRADY | 70,860 | Ammonia (anhydrous) |
| 11 | LEPRINO FOODS COMPANY ROSWELL, NM PLANT | ROSWELL | 70,200 | Ammonia (anhydrous) |
| 12 | CINIZA REFINERY | JAMESTOWN | 66,546 | Hydrogen fluoride (conc >=50%) |
| 13 | SPRA-GREEN INC. | PORTALES | 56,000 | Ammonia (anhydrous) |
| 14 | WILBUR-ELLIS COMPANY, FORREST | FORREST | 52,000 | Ammonia (anhydrous) |
| 15 | CURRY COUNTY FERTILIZER, LLC. - NORTH | CLOVIS | 51,000 | Ammonia (anhydrous) |
| 16 | TAOS WASTEWATER TREATMENT PLANT | TAOS | 50,000 | Ammonia (anhydrous) |
| 17 | HIGH PLAINS ETHANOL INC., PORTALES FACILITY | PORTALES | 46,000 | Ammonia (anhydrous) |
| 18 | JOHNSON SPACE CENTER WHITE SANDS TEST FACILITY | LAS CRUCES | 46,000 | Methyl hydrazine |
| 19 | AERO FARM CHEMICAL | TEXICO | 40,000 | Ammonia (anhydrous) |
| 20 | WAL-MART DISTRIBUTION CENTER #6084 | LOS LUNAS | 38,600 | Ammonia (anhydrous) |
| 21 | DPC INDUSTRIES, INC. | HOBBS | 30,000 | Sulfur dioxide (anhydrous) |
| 22 | RINCHEM COMPANY, INC. - EAST WAREHOUSE | ALBUQUERQUE | 29,000 | Hydrochloric acid (conc >=37%) |
| 23 | REUBEN PREPARED FOODS | SANTA TERESA | 27,000 | Ammonia (anhydrous) |
| 24 | CREAMLAND DAIRIES, INC. | ALBUQUERQUE | 26,000 | Ammonia (anhydrous) |
| 25 | GRIFFITH MICRO SCIENCE - SANTA TERESA | SANTA TERESA | 20,000 | Ethylene oxide |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in New York storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | OCCIDENTAL CHEMICAL CORPORATION - NIAGARA PLANT | NIAGARA FALLS | 17,000,000 | Chlorine |
| 2 | OLIN CORPORATION NIAGARA FALLS, NY - FOOTE YARD | NIAGARA FALLS | 13,200,000 | Chlorine |
| 3 | KRAFT FOODS, INC. | WALTON | 7,664,417 | Ammonia (anhydrous) |
| 4 | OLIN CORPORATION NIAGARA FALLS, NEW YORK PLANT | NIAGARA FALLS | 3,100,000 | Chlorine |
| 5 | GE SILICONES | WATERFORD | 2,700,000 | Dimethyldichlorosilane |
| 6 | JCI JONES CHEMICALS, INC. - WARWICK PLANT | WARWICK | 1,300,000 | Chlorine |
| 7 | PVS CHEMICALS, INC. (NEW YORK) | BUFFALO | 1,000,000 | Oleum (Fuming Sulfuric acid) |
| 8 | BORDEN CHEMICAL, INC. - MOREAU | SOUTH GLENS FALI | 840,000 | Formaldehyde (solution) |
| 9 | BUCKBEE-MEARS CORTLAND | CORTLAND | 720,000 | Chlorine |
| 10 | JCI JONES CHEMICALS, INC. CALEDONIA PLANT | CALEDONIA | 720,000 | Chlorine |
| 11 | LAROCHE INDUSTRIES INC. | LYONS | 651,052 | Ammonia (anhydrous) |
| 12 | GENERAL CHEMICAL CORPORATION | SOLVAY | 455,000 | Ammonia (anhydrous) |
| 13 | INDEPENDENCE STATION | OSWEGO | 450,000 | Ammonia (conc >=20%) |
| 14 | AES SOMERSET L.L.C. | BARKER | 405,450 | Ammonia (anhydrous) |
| 15 | SCHENECTADY INTERNATIONAL INC. | ROTTERDAM JUNCT | 390,000 | Formaldehyde (solution) |
| 16 | ARCH CHEMICALS, INC | ROCHESTER | 360,000 | Chlorine |
| 17 | FINCH PRUYN & CO., INC. | GLENS FALLS | 360,000 | Ammonia (anhydrous) |
| 18 | THATCHER COMPANY OF NEW YORK | WILLIAMSON | 360,000 | Sulfur dioxide (anhydrous) |
| 19 | OCCIDENTAL CHEMICAL CORPORATION, DUREZ PLANT | NIAGARA FALLS | 339,000 | Formaldehyde (solution) |
| 20 | GENOA AG CENTER INC. | GENOA | 300,000 | Ammonia (anhydrous) |
| 21 | TONAWANDA - 3M COMPANY | TONAWANDA | 300,000 | Carbon disulfide |
| 22 | BENJAMIN MOORE & COMPANY, JOHNSTOWN, NY PLANT | JOHNSTOWN | 240,000 | Vinyl acetate monomer |
| 23 | ELMER'S PRODUCTS GUILFORD ROAD FACILITY | BAINBRIDGE | 233,000 | Vinyl acetate monomer |
| 24 | NUTRITE CORP. | COHOCTON | 196,600 | Ammonia (anhydrous) |
| 25 | CITY OF NIAGARA FALLS WASTEWATER TREATMENT PLANT | NIAGARA FALLS | 180,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in North Carolina storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | BORDEN CHEMICAL, INC., FAYETTEVILLE PLANT | FAYETTEVILLE | 3,000,000 | Formaldehyde (solution) |
| 2 | NESTE RESINS CORPORATION - MONCURE, NC | MONCURE | 2,467,500 | Formaldehyde (solution) |
| 3 | VITAFOAM INCORPORATED - OLYMPIC PLANT | GREENSBORO | 2,040,000 | Toluene diisocyanate (unspecified isomer) |
| 4 | WILMINGTON FACILITY | WILMINGTON | 2,000,000 | Oleum (Fuming Sulfuric acid) |
| 5 | WRIGHT CHEMICAL CORPORATION | RIEGELWOOD | 1,700,000 | Formaldehyde (solution) |
| 6 | GEORGIA-PACIFIC RESINS, INC. | DENTON | 986,800 | Formaldehyde (solution) |
| 7 | TRINITY MANUFACTURING, INC. | HAMLET | 900,000 | Chlorine |
| 8 | ELIZABETH CITY | ELIZABETH CITY | 799,200 | Ammonia (conc >=20%) |
| 9 | LAROCHE INDUSTRIES INC. | CONCORD | 741,015 | Ammonia (anhydrous) |
| 10 | JCI JONES CHEMICALS, INC. - CHARLOTTE PLANT | CHARLOTTE | 720,000 | Chlorine |
| 11 | ROYSTER-CLARK, INC. SHAWBORO #1 | SHAWBORO | 510,000 | Ammonia (anhydrous) |
| 12 | VITAFOAM INCORPORATED - HIGH POINT | HIGH POINT | 509,000 | Toluene diisocyanate (unspecified isomer) |
| 13 | SMITHFIELD PACKING CO. (TARHEEL) | TARHEEL | 460,000 | Ammonia (anhydrous) |
| 14 | ROHM AND HAAS COMPANY - CHARLOTTE PLANT | CHARLOTTE | 420,000 | Vinyl acetate monomer |
| 15 | FOAMEX L.P. | CONOVER | 400,000 | Toluene diisocyanate (unspecified isomer) |
| 16 | PCS PHOSPHATE CO., INC. | AURORA | 390,000 | Ammonia (anhydrous) |
| 17 | ROYSTER-CLARK, INC. WILMINGTON | WILMINGTON | 368,000 | Ammonia (anhydrous) |
| 18 | HARVIN REACTION TECHNOLOGY, INC. | GREENSBORO | 344,000 | Propylene oxide |
| 19 | MALLINCKRODT INC. | RALEIGH | 293,760 | Ammonia (anhydrous) |
| 20 | HENKEL CORPORATION/CHARLOTTE, NC MFG. PLAN | CHARLOTTE | 290,000 | Ethylene oxide |
| 21 | INTERNATIONAL PAPER COMPANY - RIEGELWOOD M | RIEGELWOOD | 280,600 | Sulfur dioxide (anhydrous) |
| 22 | HIGH POINT CHEMICAL CORPORATION | HIGH POINT | 280,000 | Ethylene oxide |
| 23 | CARPENTER CO., CONOVER DIVISION | CONOVER | 280,000 | Toluene diisocyanate (unspecified isomer) |
| 24 | SOUTHERN STATES COOP- STATESVILLE, NC (5900) | STATESVILLE | 260,100 | Ammonia (anhydrous) |
| 25 | WILSON | WILSON | 236,060 | Ammonia (conc >=20%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in North Dakota storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | CF INDUSTRIES, INC. - GRAND FORKS TERMINAL | GRAND FORKS | 120,000,000 | Ammonia (anhydrous) |
| 2 | AGRIUM U.S. INC. LEAL TERMINAL | ROGERS | 80,600,000 | Ammonia (conc >=20%) |
| 3 | GREAT PLAINS SYNFUELS PLANT | BEULAH | 65,455,000 | Ammonia (anhydrous) |
| 4 | CF INDUSTRIES, INC. -VELVA TERMINAL | VELVA | 60,000,000 | Ammonia (anhydrous) |
| 5 | CARGILL INCORPORATED | LAKOTA | 660,000 | Ammonia (anhydrous) |
| 6 | SOURIS NH3 PLANT | SOURIS | 480,000 | Ammonia (anhydrous) |
| 7 | NEWBURG FERTILIZER PLANT | NEWBURG | 400,000 | Ammonia (anhydrous) |
| 8 | FINLEY FARMERS GRAIN AND ELEVATOR COMPANY | FINLEY | 360,000 | Ammonia (anhydrous) |
| 9 | GWINNER FACILITY | GWINNER | 343,848 | Ammonia (anhydrous) |
| 10 | OAKES FACILITY, STATION #28 | OAKES | 340,000 | Ammonia (anhydrous) |
| 11 | KRAMER NH3 PLANT | KRAMER | 340,000 | Ammonia (anhydrous) |
| 12 | S&S AGRI SERVICE, INC. | PETERSBURG | 320,000 | Ammonia (anhydrous) |
| 13 | DAKOTA QUALITY GRAIN COOPERATIVE -PARSHALL, ND | PARSHALL | 300,000 | Ammonia (anhydrous) |
| 14 | KENMARE ANHYDROUS PLANT | KENMARE | 300,000 | Ammonia (anhydrous) |
| 15 | MOTT EQUITY EXCHANGE | MOTT | 298,560 | Ammonia (anhydrous) |
| 16 | FARMERS OIL COMPANY ANHYDROUS PLANT-COOPERSTOWN | COOPERSTOWN | 298,560 | Ammonia (anhydrous) |
| 17 | RAUB AG SERVICE LLC | RYDER | 298,350 | Ammonia (anhydrous) |
| 18 | LYNCHBURG PLANT | DURBIN | 295,000 | Ammonia (anhydrous) |
| 19 | WOODS PLANT | LEONARD | 295,000 | Ammonia (anhydrous) |
| 20 | OSNABROCK FARMERS COOP ELEVATOR | OSNABROCK | 293,480 | Ammonia (anhydrous) |
| 21 | SUN PRAIRIE GRAIN-COTEAU | COTEAU | 280,000 | Ammonia (anhydrous) |
| 22 | CENEX HARVEST STATES-HORACE | HORACE | 280,000 | Ammonia (anhydrous) |
| 23 | CENEX HARVEST STATES-COURTENAY | COURTENAY | 280,000 | Ammonia (anhydrous) |
| 24 | CRYSTAL CO-OP | CRYSTAL | 270,000 | Ammonia (anhydrous) |
| 25 | FREGIEN'S FERTILIZER INC. | JUD | 270,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Ohio storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | PCS NITROGEN OHIO L. P. | LIMA | 125,938,200 | Ammonia (anhydrous) |
| 2 | ROYSTER-CLARK NITROGEN, NORTH BEND PLANT | NORTH BEND | 36,000,000 | Ammonia (anhydrous) |
| 3 | BP CHEMICALS, INC. | LIMA | 25,737,460 | Acrylonitrile |
| 4 | BAYER ADDYSTON OHIO PLANT | ADDYSTON | 10,000,000 | Acrylonitrile |
| 5 | VON ROLL AMERICA, INC | EAST LIVERPOOL | 8,700,000 | Chloroform |
| 6 | QUEEN CITY TERMINALS, INC. | CINCINNATI | 5,800,000 | Vinyl acetate monomer |
| 7 | DUPONT FORT HILL PLANT | NORTH BEND | 2,000,000 | Oleum (Fuming Sulfuric acid) |
| 8 | ARISTECH CHEMICAL CORPORATION | HAVERHILL | 1,720,000 | Ammonia (anhydrous) |
| 9 | MARSULEX, INC. OREGON REFINERY SERVICES | OREGON | 1,200,000 | Oleum (Fuming Sulfuric acid) |
| 10 | TOMEN AGRO, INC. | PERRY | 1,080,000 | Chlorine |
| 11 | NESTE RESINS CORPORATION - TOLEDO, OH | TOLEDO | 1,048,310 | Formaldehyde (solution) |
| 12 | DOW CHEMICAL COMPANY | IRONTON | 912,000 | Acrylonitrile |
| 13 | JCI JONES CHEMICALS, INC.-BARBERTON, OHIO | BARBERTON | 900,000 | Chlorine |
| 14 | MILL CREEK WWTP | CINCINNATI | 720,000 | Chlorine |
| 15 | FRANKLIN INTERNATIONAL - POLYMER DIVISION | COLUMBUS | 700,220 | Vinyl acetate monomer |
| 16 | TANNER INDUSTRIES, INC. | PAINESVILLE | 676,000 | Ammonia (anhydrous) |
| 17 | SCOTT EQUITY EXCHANGE CO. - VAN WERT BRANCH | VAN WERT | 636,666 | Ammonia (anhydrous) |
| 18 | AK STEEL CORPORATION | MIDDLETOWN | 625,320 | Ammonia (anhydrous) |
| 19 | WENSINK FARM SEEDS , INC | MONROEVILLE | 575,000 | Ammonia (anhydrous) |
| 20 | H.B. FULLER -BLUE ASH PLANT | BLUE ASH | 560,000 | Vinyl acetate monomer |
| 21 | MATLACK BULK INTERMODAL SERVICES (DBA) MBIS | FAIRPORT HARBOR | 540,000 | Hydrogen fluoride (conc >=50%) |
| 22 | DOVER CHEMICAL CORPORATION | DOVER | 540,000 | Chlorine |
| 23 | NYLONGE CORPORATION | ELYRIA | 498,200 | Carbon disulfide |
| 24 | THE GLIDDEN COMPANY | HURON | 468,720 | Vinyl acetate monomer |
| 25 | BFGOODRICH PERFORMANCE MATERIALS AKRON PLANT | AKRON | 450,000 | Acrylonitrile |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Oklahoma storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | FARMLAND INDUSTRIES, INC., ENID NITROGEN PLANT | ENID | 120,000,000 | Ammonia (anhydrous) |
| 2 | TERRA NITROGEN COMPANY, WOODWARD PLANT | WOODWARD | 80,000,000 | Ammonia (anhydrous) |
| 3 | TERRA NITROGEN LIMITED PARTNERSHIP,VERDIGRIS PLANT | CLAREMORE | 62,000,000 | Ammonia (anhydrous) |
| 4 | ADVANCE CHEMICAL DISTRIBUTION, INC. (N) | NOWATA | 700,000 | Chlorine |
| 5 | ADVANCE CHEMICAL DISTRIBUTION, INC. (PC) | CATOOSA | 600,000 | Chlorine |
| 6 | JUPITER SULPHUR, LLC - PONCA CITY FACILITY | PONCA CITY | 393,975 | Ammonia (anhydrous) |
| 7 | CONOCO REFINERY, PONCA CITY, OKLA | PONCA CITY | 360,000 | Hydrogen fluoride (conc >=50%) |
| 8 | FARMERS GRAIN COMPANY | POND CREEK | 329,600 | Ammonia (anhydrous) |
| 9 | TODDS' ELEVATOR | GEARY | 316,000 | Ammonia (anhydrous) |
| 10 | FARMERS GRAIN COMPANY | KREMLIN | 306,425 | Ammonia (anhydrous) |
| 11 | BAKER PETROLITE CORPORATION - SAND SPRINGS PLANT | SAND SPRINGS | 300,000 | Propylene oxide |
| 12 | HOOKER EQUITY EXCHANGE | HOOKER | 296,564 | Ammonia (anhydrous) |
| 13 | FARMERS COOPERATIVE ELEVATOR & SUPPLY CO. | BENDER | 280,160 | Ammonia (anhydrous) |
| 14 | BLACKWELL COOPERATIVE ELEVATOR ASSOCIATION | BLACKWELL | 262,650 | Ammonia (anhydrous) |
| 15 | FARMERS COOPERATIVE ELEVATOR & SUPPLY CO. | KILDARE | 262,650 | Ammonia (anhydrous) |
| 16 | NORTH CADDO COOPERATIVE | HINTON | 260,000 | Ammonia (anhydrous) |
| 17 | COOP SERVICES INC., CHATTANOOGA | CHATTANOOGA | 260,000 | Ammonia (anhydrous) |
| 18 | UNITED COOPERATIVE INC | MARSHALL | 260,000 | Ammonia (anhydrous) |
| 19 | STATE LINE GRAIN COMPANY | MANCHESTER | 260,000 | Ammonia (anhydrous) |
| 20 | CRESCENT COOPERATIVE ASSOCIATION | CRESCENT | 260,000 | Ammonia (anhydrous) |
| 21 | PERRYTON EQUITY EXCHANGE - TURPIN OKLAHOMA BRANCH | TURPIN | 251,277 | Ammonia (anhydrous) |
| 22 | FARMERS COOPERATIVE MILL AND ELEVATOR, CARNEGIE | CARNEGIE | 250,000 | Ammonia (anhydrous) |
| 23 | FARMERS COOPERATIVE ASSOCIATION | PONCA CITY | 245,140 | Ammonia (anhydrous) |
| 24 | FARMERS COOPERATIVE ASSOCIATION | PERRY | 245,140 | Ammonia (anhydrous) |
| 25 | ELKHART COOP KEYES BRANCH | KEYES | 240,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Oregon storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | RIVERGATE TERMINAL | PORTLAND | 101,000,000 | Ammonia (anhydrous) |
| 2 | COASTAL ST. HELENS CHEMICAL | ST. HELENS | 3,300,000 | Ammonia (anhydrous) |
| 3 | OREMET WAH CHANG-NORTH PLANT | ALBANY | 1,800,000 | Chlorine |
| 4 | NESTE RESINS CORPORATION - SPRINGFIELD, OR | SPRINGFIELD | 1,660,746 | Formaldehyde (solution) |
| 5 | OREMET-WAH CHANG SOUTH CAMPUS | ALBANY | 1,300,000 | Titanium tetrachloride |
| 6 | GEORGIA-PACIFIC RESINS, INC. | ALBANY | 1,200,000 | Formaldehyde (solution) |
| 7 | PENDLETON GRAIN GROWERS-MCKENNON STATION | PENDLETON | 810,000 | Ammonia (anhydrous) |
| 8 | BORDEN CHEMICAL, INC., SPRINGFIELD PLANT | SPRINGFIELD | 800,000 | Formaldehyde (solution) |
| 9 | BOISE CASCADE | ST. HELENS | 720,000 | Chlorine |
| 10 | POPE & TALBOT, INC. HALSEY PULP MILL | HALSEY | 720,000 | Chlorine |
| 11 | BORDEN CHEMICAL, INC. - LA GRANDE PLANT | LA GRANDE | 510,000 | Formaldehyde (solution) |
| 12 | TIDEWATER UMATILLA TERMINAL | UMATILLA | 435,000 | Ammonia (anhydrous) |
| 13 | THE AMALGAMATED SUGAR COMPANY, LLC | NYSSA | 360,000 | Sulfur dioxide (anhydrous) |
| 14 | SIMPSON TIMBER COMPANY, OREGON OVERLAYS DIVISION | PORTLAND | 340,000 | Formaldehyde (solution) |
| 15 | WILCO FARMERS | STAYTON | 320,000 | Ammonia (anhydrous) |
| 16 | HERCULES INCORPORATED -- PORTLAND PLANT | PORTLAND | 307,700 | Epichlorohydrin |
| 17 | WESTERN FARM SERVICE, LAGRANDE | LAGRANDE | 300,000 | Ammonia (conc >=20%) |
| 18 | CENEX/LAND O'LAKES AGRONOMY CENTER - HARRISBURG | HARRISBURG | 300,000 | Ammonia (anhydrous) |
| 19 | GEORGIA-PACIFIC RESINS, INC. | WHITE CITY | 247,820 | Formaldehyde (solution) |
| 20 | ELF ATOCHEM NORTH AMERICA, INC. | PORTLAND | 220,000 | Chlorine |
| 21 | GEORGIA-PACIFIC RESINS, INC. | EUGENE | 195,500 | Formaldehyde (solution) |
| 22 | WESTERN FARM SERVICE, ATHENA | ATHENA | 190,000 | Ammonia (conc >=20%) |
| 23 | OREGON CHERRY GROWERS, INC - THE DALLES | THE DALLES | 180,000 | Sulfur dioxide (anhydrous) |
| 24 | OREGON CHERRY GROWERS, INC. - SALEM | SALEM | 180,000 | Sulfur dioxide (anhydrous) |
| 25 | CASCADE FRUIT COMPANY | THE DALLES | 180,000 | Sulfur dioxide (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Pennsylvania storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | DYNO NOBEL INC. (DONORA PLANT) | DONORA | 18,022,528 | Ammonia (anhydrous) |
| 2 | WELLAND CHEMICAL, INC. | NEWELL | 17,614,240 | Ammonia (anhydrous) |
| 3 | INDSPEC CHEMICAL CORPORATION | PETROLIA | 2,524,100 | Oleum (Fuming Sulfuric acid) |
| 4 | SUNOCO, INC. (R&M) MARCUS HOOK REFINERY | MARCUS HOOK | 2,300,000 | Ethylene oxide |
| 5 | RHODIA INC. MORRISVILLE PLANT | MORRISVILLE | 1,600,000 | Phosphorus trichloride |
| 6 | FLEXSYS AMERICA L.P. | MONONGAHELA | 1,482,000 | Carbon disulfide |
| 7 | FOAMEX EDDYSTONE PLANT | EDDYSTONE | 1,291,800 | Toluene diisocyanate (unspecified isomer) |
| 8 | TANNER INDUSTRIES, INC. | PHILADELPHIA | 1,240,000 | Ammonia (conc >=20%) |
| 9 | JAMES AUSTIN COMPANY | MARS | 720,000 | Chlorine |
| 10 | CHEMPLY DIV. OF E+E (US) INC. | BUNOLA | 704,000 | Chlorine |
| 11 | LAROCHE INDUSTRIES INC. | DONORA | 702,078 | Ammonia (anhydrous) |
| 12 | MANLEY-REGAN CHEMICALS DIV. OF E+E (US) INC. | MIDDLETOWN | 690,000 | Chlorine |
| 13 | FOAMEX CORRY PLANT | CORRY | 590,000 | Toluene diisocyanate (unspecified isomer) |
| 14 | SAMUEL S. BAXTER WATER TREATMENT PLANT | PHILADELPHIA | 540,000 | Chlorine |
| 15 | LONZA INC. | WILLIAMSPORT | 540,000 | Chlorine |
| 16 | OCCIDENTAL CHEMICAL CORP. - POTTSTOWN PLANT | POTTSTOWN | 412,600 | Vinyl acetate monomer |
| 17 | SUNOCO, INC. (R&M) - PHILADELPHIA REFINERY | PHILADELPHIA | 400,000 | Hydrogen fluoride (conc >=50%) |
| 18 | ROHM AND HAAS PHILADELPHIA PLANT | PHILADELPHIA | 380,000 | Oleum (Fuming Sulfuric acid) |
| 19 | APPLETON PAPERS INC. - SPRING MILL | ROARING SPRING | 360,000 | Chlorine |
| 20 | TANNER INDUSTRIES, INC. | MORRISVILLE | 316,000 | Ammonia (anhydrous) |
| 21 | LEBANON CHEMICAL CORPORATION - LEBANON | LEBANON | 290,000 | Ammonia (anhydrous) |
| 22 | BORDEN CHEMICAL, INC. - MOUNT JEWETT | MT JEWETT | 270,000 | Formaldehyde (solution) |
| 23 | ARMCO INC BUTLER OPERATIONS - MAIN PLANT | BUTLER | 250,000 | Hydrogen fluoride (conc >=50%) |
| 24 | OSRAM SYLVANIA PRODUCTS, INC. TOWANDA | TOWANDA | 240,000 | Ammonia (conc >=20%) |
| 25 | CARTEX CORPORATION - FAIRLESS HILLS PLANT | FAIRLESS HILLS | 224,000 | Toluene diisocyanate (unspecified isomer) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

# RHODE ISLAND

**Facilities in Rhode Island storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | TANNER INDUSTRIES, INC. | EAST PROVIDENCE | 514,000 | Ammonia (anhydrous) |
| 2 | GEORGE MANN & COMPANY, INC. | PROVIDENCE | 180,000 | Chlorine |
| 3 | CLARIANT CORPORATION - COVENTRY | COVENTRY | 128,000 | Sulfur trioxide |
| 4 | AIR PRODUCTS AND CHEMICALS, INC. | CUMBERLAND | 115,000 | Epichlorohydrin |
| 5 | OSRAM SYLVANIA PRODUCTS, INC. | CENTRAL FALLS | 46,200 | Hydrogen fluoride (conc >=50%) |
| 6 | A. T. WALL COMPANY | WARWICK | 35,356 | Ammonia (anhydrous) |
| 7 | HAYES HEAT TREATING | CRANSTON | 35,000 | Ammonia (conc >=20%) |
| 8 | PAWTUCKET POWER | PAWTUCKET | 27,680 | Ammonia (conc >=20%) |
| 9 | WEST WARWICK REGIONAL WASTEWATER TREATMENT FAC. | WEST WARWICK | 24,000 | Chlorine |
| 10 | PROVIDENCE WATER TREATMENT PLANT | HOPE | 24,000 | Chlorine |
| 11 | TANNER INDUSTRIES, INC. | EAST PROVIDENCE | 23,000 | Ammonia (anhydrous) |
| 12 | PAWTUCKET WATER SUPPLY BOARD | CUMBERLAND | 18,000 | Chlorine |
| 13 | SUPERVALU, INC. | CRANSTON | 17,000 | Ammonia (anhydrous) |
| 14 | WARWICK WASTEWATER TREATMENT FACILITY | WARWICK | 14,000 | Chlorine |
| 15 | DYSTAR L.P. - COVENTRY | COVENTRY | 12,000 | Chlorine |
| 16 | BERCEN, INC. | CRANSTON | 10,000 | Formaldehyde (solution) |
| 17 | WOONSOCKET REGIONAL WASTEWATER COMMISSION | WOONSOCKET | 6,000 | Chlorine |
| 18 | CHARLES HAMMAN WATER TREATMENT PLANT | WOONSOCKET | 5,250 | Chlorine |
| 19 | QUONSET POINT WASTEWATER TREATMENT FACILITY | NORTH KINGSTOWN | 4,000 | Chlorine |
| 20 | WATER POLLUTION CONTROL | NEWPORT | 2,000 | Chlorine |
| 21 | CITY OF NEWPORT STATION #1 | NEWPORT | 2,000 | Chlorine |
| 22 | LAWTON VALLEY WATER TREATMENT PLANT | PORTSMOUTH | 2,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in South Carolina storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | TIN PRODUCTS, INC. | LEXINGTON | 4,200,000 | Chlorine |
| 2 | NATIONAL STARCH AND CHEMICAL COMPANY WOODRUFF | ENOREE | 3,900,000 | Vinyl acetate monomer |
| 3 | CELANESE ACETATE - CELRIVER SITE | ROCK HILL | 2,800,000 | Formaldehyde (solution) |
| 4 | GEORGIA-PACIFIC RESINS, INC. | RUSSELLVILLE | 1,200,000 | Formaldehyde (solution) |
| 5 | TANNER INDUSTRIES, INC. | SWANSEA | 1,126,000 | Ammonia (anhydrous) |
| 6 | BASF CORPORATION WHITESTONE SITE | SPARTANBURG | 1,100,000 | Ethylene oxide |
| 7 | GENCORP PERFORMANCE CHEMICALS, CHESTER PLANT | CHESTER | 940,000 | Vinyl acetate monomer |
| 8 | ALBRIGHT & WILSON AMERICAS - CHARLESTON, SC PLANT | CHARLESTON | 730,000 | Phosphorus trichloride |
| 9 | BOWATER INCORPORATED COATED PAPER DIVISION | CATAWBA | 720,000 | Chlorine |
| 10 | CLARIANT CORPORATION, LEEDS PLANT | CARLISLE | 560,000 | Sulfur dioxide (anhydrous) |
| 11 | WILLAMETTE INDUSTRIES, INC., MARLBORO MILL | BENNETTSVILLE | 540,000 | Chlorine |
| 12 | GIANT CEMENT COMPANY | HARLEYVILLE | 490,000 | Vinyl acetate monomer |
| 13 | ALBEMARLE CORPORATION | ORANGEBURG | 430,000 | Phosphorus trichloride |
| 14 | HAMPTON FACILITY | HAMPTON | 384,000 | Formaldehyde (solution) |
| 15 | RHONE-POULENC SURFACTANTS & SPECIALTIES, L.P. | SPARTANBURG | 350,000 | Ethylene oxide |
| 16 | ARCHIMICA INC. | ELGIN | 336,000 | Bromine |
| 17 | AIR PRODUCTS POLYMERS, L. P. | PIEDMONT | 330,000 | Vinyl acetate monomer |
| 18 | NESTLE FROZEN FOOD DIVISON | GAFFNEY, | 301,831 | Ammonia (anhydrous) |
| 19 | PARA-CHEM SOUTHERN, INC. | SIMPSONVILLE | 299,898 | Vinyl acetate monomer |
| 20 | HAMPTON, SOUTH CAROLINA PLANT | HAMPTON | 253,440 | Formaldehyde (solution) |
| 21 | HARTSVILLE | HARTSVILLE | 226,320 | Ammonia (conc >=20%) |
| 22 | ORANGEBURG | ORANGEBURG | 224,313 | Ammonia (anhydrous) |
| 23 | HENKEL CORPORATION/MAULDIN, SC MANUFACTURING PLANT | MAULDIN | 220,000 | Ethylene oxide |
| 24 | BP AMOCO POLYMERS, INC. | PIEDMONT | 220,000 | Acrylonitrile |
| 25 | GOLD KIST SUMTER PROCESSING PLANT | SUMTER | 200,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in South Dakota storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | BATH FACILITY, STATION #19 | ABERDEEN | 2,000,000 | Ammonia (anhydrous) |
| 2 | INTERMOUNTAIN ADHESIVES, L.L.C. | RAPID CITY | 900,000 | Formaldehyde (solution) |
| 3 | TULARE FACILITY, STATION #18 | TULARE | 620,000 | Ammonia (anhydrous) |
| 4 | FARMERS COOPERATIVE COMPANY | BROOKINGS | 370,000 | Ammonia (anhydrous) |
| 5 | MINNKOTA FARMERS COOPERATIVE | BALTIC | 350,000 | Ammonia (anhydrous) |
| 6 | CONDE FACILITY, STATION #14 | CONDE | 343,848 | Ammonia (anhydrous) |
| 7 | BRISTOL FACILITY, STATION #06 | BRISTOL | 340,000 | Ammonia (anhydrous) |
| 8 | COLUMBIA FACILITY, STATION #07 | COLUMBIA | 320,000 | Ammonia (anhydrous) |
| 9 | GROTON FACILITY, STATION #12 | GROTON | 310,000 | Ammonia (anhydrous) |
| 10 | HURON FACILITY, STATION #20 | HURON | 302,000 | Ammonia (anhydrous) |
| 11 | JOHN MORRELL & CO. | SIOUX FALLS | 300,000 | Ammonia (anhydrous) |
| 12 | LANGFORD FACILITY, STATION #29 | LANGFORD | 300,000 | Ammonia (anhydrous) |
| 13 | MCLAUGHLIN FACILITY, STATION #36 | MCLAUGHLIN | 282,189 | Ammonia (anhydrous) |
| 14 | NORTHERN PLAINS COOPERATIVE-SELBY | SELBY | 280,000 | Ammonia (anhydrous) |
| 15 | FRANKFORT FACILITY, STATION #09 | FRANKFORT | 280,000 | Ammonia (anhydrous) |
| 16 | REDFIELD FACILITY, STATION #24 | REDFIELD | 280,000 | Ammonia (anhydrous) |
| 17 | BERESFORD FARMERS CO-OP ELEVATOR | BERESFORD | 210,000 | Ammonia (anhydrous) |
| 18 | CHAMBERLAIN FACILITY, STATION #36 | CHAMBERLAIN | 180,000 | Ammonia (anhydrous) |
| 19 | MELLETTE FACILITY, STATION #11 | MELLETTE | 176,000 | Ammonia (anhydrous) |
| 20 | BRENTFORD FACILITY, STATION #05 | BRENTFORD | 176,000 | Ammonia (anhydrous) |
| 21 | CENEX HARVEST STATES-CORSICA | CORSICA | 170,000 | Ammonia (anhydrous) |
| 22 | VIBORG COOP ELEVATOR - FERTILIZER FACILITY | VIBORG | 160,555 | Ammonia (anhydrous) |
| 23 | CLARK COMMUNITY OIL FERTILIZER PLANT | CLARK | 160,000 | Ammonia (anhydrous) |
| 24 | HAMLIN COUNTY COOP OIL COMPANY | HAYTI | 160,000 | Ammonia (anhydrous) |
| 25 | EASTERN FARMERS COOP-GARRETSON | GARRETSON | 160,000 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Tennessee storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | OLIN CORPORATION, CHARLESTON TN PLANT | CHARLESTON | 26,000,000 | Chlorine |
| 2 | INTERTRADE HOLDINGS, INC. | COPPERHILL | 20,316,591 | Oleum (Fuming Sulfuric acid) |
| 3 | DUPONT JOHNSONVILLE PLANT | NEW JOHNSONVILLE | 18,000,000 | Chlorine |
| 4 | DUPONT MEMPHIS PLANT | MEMPHIS | 4,778,196 | Hydrocyanic acid |
| 5 | HOLSTON ARMY AMMUNITION PLANT | KINGSPORT | 3,147,388 | Nitric acid (conc >=80%) |
| 6 | ICI ACRYLICS | MEMPHIS | 3,000,000 | Oleum (Fuming Sulfuric acid) |
| 7 | TENNESSEE EASTMAN DIVISION | KINGSPORT | 1,700,000 | Formaldehyde (solution) |
| 8 | P. B. & S. CHEMICAL COMPANY, INC (08) | CHATTANOOGA | 1,664,900 | Chlorine |
| 9 | VERTEX CHEMICAL CORPORATION MEMPHIS, TN | MEMPHIS | 1,283,494 | Chlorine |
| 10 | DPC ENTERPRISES | CHATTANOOGA | 1,000,000 | Chlorine |
| 11 | FOAMEX MORRISTOWN PLANT #1 | MORRISTOWN | 900,000 | Toluene diisocyanate (unspecified isomer) |
| 12 | ALCO CHEMICAL DIV. OF NATIONAL STARCH & CHEMICAL C | CHATTANOOGA | 553,000 | Carbon disulfide |
| 13 | FOAMEX MILAN PLANT | MILAN | 500,000 | Toluene 2,4-diisocyanate |
| 14 | WORTH CHEMICAL CORPORATION | CHATTANOOGA | 450,000 | Chlorine |
| 15 | ZENECA SPECIALTIES MT. PLEASANT SITE | MT. PLEASANT | 431,000 | Phosphorus trichloride |
| 16 | WOODBRIDGE FOAM FABRICATING, INC. | CHATTANOOGA | 420,000 | Toluene diisocyanate (unspecified isomer) |
| 17 | ALLTRISTA ZINC PRODUCTS, L.P. | GREENEVILLE | 360,000 | Chlorine |
| 18 | TANNER INDUSTRIES, INC. | NASHVILLE | 342,000 | Ammonia (anhydrous) |
| 19 | INLAND PAPERBOARD & PACKAGING, INC. | NEW JOHNSONVILLE | 300,000 | Ammonia (anhydrous) |
| 20 | VISKASE CORPORATION | LOUDON | 290,000 | Carbon disulfide |
| 21 | CARGILL, INC. | MEMPHIS | 262,300 | Sulfur dioxide (anhydrous) |
| 22 | GREAT LAKES CHEMICAL NEWPORT PLANT | NEWPORT | 260,000 | Bromine |
| 23 | ROHM AND HAAS COMPANY - KNOXVILLE PLANT | KNOXVILLE | 250,000 | Vinyl acetate monomer |
| 24 | SPONTEX, INC. | COLUMBIA | 220,700 | Carbon disulfide |
| 25 | AMERICAN CROP SERVICES, INC. - UNION CITY, TN | UNION CITY | 196,274 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Texas storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | SAN JACINTO RIVER AUTHORITY WW PLANT - SO2 | THE WOODLANDS | 800,012,000 | Sulfur dioxide (anhydrous) |
| 2 | NECHES INDUSTRIAL PARK,INC. | BEAUMONT | 89,000,000 | Ammonia (anhydrous) |
| 3 | BP CHEMICALS, INC. | PORT LAVACA | 70,000,000 | Acrylonitrile |
| 4 | BAYPORT MARINE TERMINAL | SEABROOK | 70,000,000 | Vinyl acetate monomer |
| 5 | STERLING CHEMICALS INCORPORATED | TEXAS CITY | 66,120,000 | Ammonia (anhydrous) |
| 6 | FARMLAND INDUSTRIES, INC. | FARNSWORTH | 60,207,000 | Ammonia (anhydrous) |
| 7 | BASF CORPORATION - FREEPORT TERMINAL | FREEPORT | 60,000,000 | Ammonia (anhydrous) |
| 8 | BASF CORPORATION - FREEPORT SITE | FREEPORT | 60,000,000 | Ammonia (anhydrous) |
| 9 | SOLUTIA - CHOCOLATE BAYOU | ALVIN | 34,771,000 | Acrylonitrile |
| 10 | LYONDELL - CHANNELVIEW PLANT | CHANNELVIEW | 34,500,000 | Propylene oxide |
| 11 | LYONDELL CHEMICAL - BAYPORT PLANT | PASADENA | 34,500,000 | Propylene oxide |
| 12 | DUPONT BEAUMONT PLANT | BEAUMONT | 34,000,000 | Ammonia (anhydrous) |
| 13 | RHODIA, HOUSTON PLANT | HOUSTON | 33,080,000 | Oleum (Fuming Sulfuric acid) |
| 14 | INTERCONTINENTAL TERMINALS COMPANY | DEER PARK | 32,463,270 | Acrylonitrile |
| 15 | DU PONT VICTORIA PLANT | VICTORIA | 30,000,000 | Ammonia (anhydrous) |
| 16 | HOUSTON AMMONIA TERMINAL | PASADENA | 30,000,000 | Ammonia (anhydrous) |
| 17 | PAKTANK CORPORATION - DEER PARK TERMINAL | DEER PARK | 28,006,860 | Chloroform |
| 18 | LBC PETROUNITED/ BAYPORT TERMINAL | SEABROOK | 24,897,600 | Vinyl acetate monomer |
| 19 | UNION CARBIDE CORPORATION | TEXAS CITY | 23,500,000 | Vinyl acetate monomer |
| 20 | ODFJELL TERMINALS (BAYTANK) INC. | SEABROOK | 21,000,000 | Chloroform |
| 21 | STOLTHAVEN HOUSTON, INC. | HOUSTON | 16,800,000 | Epichlorohydrin |
| 22 | AGRIFOS FERTILIZE L P | PASADENA | 15,000,000 | Ammonia (anhydrous) |
| 23 | SHELL DEER PARK REFINING COMPANY | DEER PARK | 13,700,000 | Epichlorohydrin |
| 24 | HUNTSMAN CORP., OLEFINS & OXIDES (O&O) PLANT | PORT NECHES | 12,400,000 | Ethylene oxide |
| 25 | OXY VINYLS, LP - BATTLEGROUND CHLOR-ALKALI PLANT | LAPORTE | 12,000,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Utah storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | LAROCHE INDUSTRIES, INC. - GENEVA NITROGEN PLANT | OREM | 8,558,812 | Ammonia (anhydrous) |
| 2 | THATCHER COMPANY | SALT LAKE CITY | 1,200,000 | Sulfur dioxide (anhydrous) |
| 3 | THE ENSIGN-BICKFORD COMPANY - SPANISH FORK, UT | SPANISH FORK | 630,000 | Nitric acid (conc >=80%) |
| 4 | AMERICAN PACIFIC CORPORATION, UTAH OPERATIONS | CEDAR CITY | 423,740 | Ammonia (anhydrous) |
| 5 | CHEVRON SALT LAKE REFINERY | SALT LAKE CITY | 280,000 | Hydrogen fluoride (conc >=50%) |
| 6 | WHITE MESA URANIUM MILL | BLANDING | 280,000 | Ammonia (anhydrous) |
| 7 | GARLAND BRANCH | GARLAND | 270,000 | Ammonia (anhydrous) |
| 8 | CENTRAL VALLEY WATER RECLAMATION | SALT LAKE CITY | 180,000 | Chlorine |
| 9 | WESTERN ZIRCONIUM | OGDEN | 180,000 | Chlorine |
| 10 | BRUSH WELLMAN, INC. | DELTA | 180,000 | Ammonia (anhydrous) |
| 11 | PHILLIPS 66 WOODS CROSS REFINERY | WOODS CROSS | 170,000 | Hydrogen fluoride (conc >=50%) |
| 12 | NESTLE FROZEN DIVISION | SPRINGVILLE | 160,000 | Ammonia (anhydrous) |
| 13 | UTAH WINTER SPORTS PARK | PARK CITY | 135,000 | Ammonia (anhydrous) |
| 14 | THE ALTA GROUP - SALT LAKE CITY OPERATIONS | SALT LAKE CITY | 130,000 | Titanium tetrachloride |
| 15 | KENNECOTT UTAH COPPER CORP. SMELTER AND REFINERY | MAGNA | 119,000 | Sulfur dioxide (anhydrous) |
| 16 | SOUTH VALLEY WATER RECLAMATION FACILITY | WEST JORDAN | 80,000 | Chlorine |
| 17 | NORTH DAVIS COUNTY SEWER DISTRICT | SYRACUSE | 70,000 | Chlorine |
| 18 | BIG WEST OIL LLC | NORTH SALT LAKE | 70,000 | Hydrogen fluoride (conc >=50%) |
| 19 | LEWISTON BRANCH | LEWISTON | 62,000 | Ammonia (anhydrous) |
| 20 | LITTLE COTTONWOOD WATER TREATMENT PLANT | SANDY | 40,000 | Chlorine |
| 21 | JORDAN VALLEY WATER TREATMENT PLANT | BLUFFDALE | 32,000 | Chlorine |
| 22 | ALBERTSON'S INCORPORATED REFRIGERATED DISTRIBUTION | NORTH SALT LAKE | 31,000 | Ammonia (anhydrous) |
| 23 | E. A. MILLER | HYRUM | 30,000 | Ammonia (anhydrous) |
| 24 | CENTRAL WEBER SEWER IMPROVEMENT DISTRICT | OGDEN | 28,000 | Chlorine |
| 25 | SFI-LOGAN | LOGAN | 26,688 | Ammonia (anhydrous) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**Facilities in Vermont storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | ST. ALBANS PLANT | ST. ALBANS | 31,410 | Ammonia (anhydrous) |
| 2 | WATERBURY FACILITY | WATERBURY | 16,500 | Ammonia (anhydrous) |
| 3 | AGRIMARK | MIDDLEBURY | 12,900 | Ammonia (anhydrous) |
| 4 | NORTH SPRINGFIELD PLANT | NORTH SPRINGFIELD | 12,000 | Ammonia (anhydrous) |
| 5 | MONTPELIER WATER POLLUTION CONTROL FACILITY | MONTPELIER | 8,000 | Chlorine |
| 6 | NEWPORT WASTEWATER TREATMENT FACILITY | NEWPORT | 1,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Virginia storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | ALLIEDSIGNAL - HOPEWELL PLANT | HOPEWELL | 40,000,000 | Ammonia (anhydrous) |
| 2 | RADFORD ARMY AMMUNITION PLANT | RADFORD, VA | 2,100,000 | Nitric acid (conc >=80%) |
| 3 | HERCULES - HOPEWELL PLANT | HOPEWELL | 850,000 | Chlorine |
| 4 | PRILLAMAN CHEMICAL, SUFFOLK DIVISION | SUFFOLK | 600,000 | Chlorine |
| 5 | LAROCHE INDUSTRIES INC. | SUFFOLK | 545,710 | Ammonia (anhydrous) |
| 6 | CIBA SPECIALTY CHEMICALS WATER TREATMENTS, INC. | SUFFOLK | 535,000 | Acrylonitrile |
| 7 | DUPONT SPRUANCE PLANT | CHESTERFIELD | 520,000 | Chloroform |
| 8 | ROYSTER - CLARK WEST POINT | WEST POINT | 500,000 | Ammonia (anhydrous) |
| 9 | SOLITE CORP., DBA VIRGINIA SOLITE | CASCADE | 460,000 | Vinyl acetate monomer |
| 10 | JCI JONES CHEMICALS INC MILFORD PLANT | MILFORD | 360,000 | Chlorine |
| 11 | SEWELL PRODUCTS, INC. - SALEM PLANT | SALEM | 360,000 | Chlorine |
| 12 | ROYSTER - CLARK NORFOLK | CHESAPEAKE | 339,300 | Ammonia (anhydrous) |
| 13 | STONEWALL PLANT | ELKTON | 300,000 | Hydrogen chloride (anhydrous) |
| 14 | CITY OF RICHMOND WATER PURIFICATION PLANT | RICHMOND | 265,000 | Chlorine |
| 15 | CITY OF RICHMOND WASTEWATER TREATMENT PLANT | RICHMOND | 237,000 | Chlorine |
| 16 | HERCULES INCORPORATED FRANKLIN VIRGINIA | COURTLAND | 210,000 | Phosphorus trichloride |
| 17 | INTERNATIONAL PAPER-FRANKLIN, VIRGINIA | FRANKLIN | 180,000 | Chlorine |
| 18 | CONAGRA FROZEN FOODS | CROZET | 177,565 | Ammonia (anhydrous) |
| 19 | ANHEUSER-BUSCH, INC. WILLIAMSBURG BREWERY | WILLIAMSBURG | 170,000 | Ammonia (anhydrous) |
| 20 | CELANESE CHEMICAL DIVISION - AMINES PLANT | PORTSMOUTH | 140,000 | Ammonia (anhydrous) |
| 21 | SMITHFIELD PACKING CO. (SMIITHFIELD, VA) | SMITHFIELD | 130,000 | Ammonia (anhydrous) |
| 22 | HOPEWELL WATER TREATMENT PLANT | HOPEWELL | 120,000 | Chlorine |
| 23 | ROYSTER - CLARK CHESAPEAKE | CHESAPEAKE | 119,000 | Ammonia (conc >=20%) |
| 24 | GWALTNEY OF SMITHFIELD | SMITHFIELD | 110,000 | Ammonia (anhydrous) |
| 25 | HICKSON DANCHEM CORPORATION | DANVILLE | 107,404 | Hydrochloric acid (conc >=37%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Washington storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | KENNEWICK PLANT - HEDGES AREA | KENNEWICK | 100,200,000 | Ammonia (anhydrous) |
| 2 | CF INDUSTRIES, INC. - RITZVILLE TERMINAL | RITZVILLE | 60,280,000 | Ammonia (conc >=20%) |
| 3 | KENNEWICK PLANT - FINLEY AREA | KENNEWICK | 44,000,000 | Ammonia (anhydrous) |
| 4 | KENNEWICK PLANT - KENNEWICK AREA | KENNEWICK | 6,400,000 | Ammonia (anhydrous) |
| 5 | (21) BOETTCHER | CENTRAL FERRY | 4,500,000 | Ammonia (anhydrous) |
| 6 | PIONEER CHLOR ALKALI COMPANY, INC. | TACOMA | 1,900,000 | Chlorine |
| 7 | GEORGIA-PACIFIC WEST, INC. | BELLINGHAM | 1,500,000 | Chlorine |
| 8 | NUCHEM | POMEROY | 930,000 | Ammonia (anhydrous) |
| 9 | WALLA WALLA FARMERS COOP - WALLA WALLA FERTILIZER | WALLA WALLA | 866,400 | Ammonia (conc >=20%) |
| 10 | BOISE CASCADE WALLULA MILL | WALLULA | 720,000 | Chlorine |
| 11 | ALL-PURE CHEMICAL - TACOMA PLANT | TACOMA | 720,000 | Chlorine |
| 12 | COLUMBIA COUNTY FARM BUREAU | DAYTON | 686,000 | Ammonia (conc >=20%) |
| 13 | BORDEN CHEMICAL, INC. - KENT PLANT | KENT | 490,000 | Formaldehyde (solution) |
| 14 | WILBUR-ELLIS COMPANY | WALLA WALLA | 483,327 | Ammonia (conc >=20%) |
| 15 | WESTERN FARM SERVICE, HARRINGTON | HARRINGTON | 450,000 | Ammonia (conc >=20%) |
| 16 | TIDEWATER SNAKE RIVER TERMINAL | PASCO | 435,000 | Ammonia (anhydrous) |
| 17 | GRANGE SUPPLY COMPANY OF ODESSA - FERTILIZER | ODESSA | 433,200 | Ammonia (conc >=20%) |
| 18 | (01) THE MCGREGOR COMPANY COLFAX RETAIL | COLFAX | 430,000 | Ammonia (anhydrous) |
| 19 | FOAMEX LP - KENT FACILITY | KENT | 400,000 | Toluene diisocyanate (unspecified isomer) |
| 20 | WESTERN FARM SERVICE, REARDAN | REARDAN | 375,000 | Ammonia (conc >=20%) |
| 21 | JCI - JONES CHEMICALS, INC. TACOMA PLANT | TACOMA | 360,000 | Chlorine |
| 22 | EAST SECTION RECLAMATION PLANT | RENTON | 360,000 | Chlorine |
| 23 | WASHOUGAL PLANT | WASHOUGAL | 350,000 | Carbon disulfide |
| 24 | TESSENDERLO KERLEY, INC. - FINLEY FACILITY | KENNEWICK | 348,600 | Ammonia (anhydrous) |
| 25 | POMEROY GRAIN GROWERS, INC. | POMEROY | 340,000 | Ammonia (conc >=20%) |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in West Virginia storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | DUPONT WASHINGTON WORKS | PARKERSBURG | 28,000,000 | Formaldehyde (solution) |
| 2 | DUPONT BELLE PLANT | BELLE | 20,000,000 | Ammonia (anhydrous) |
| 3 | LYONDELL NORTH CHARLESTON DISTRIBUTION TERMINAL | CHARLESTON | 9,763,000 | Propylene oxide |
| 4 | NORTH CHARLESTON DISTRIBUTION TERMINAL | CHARLESTON | 5,606,940 | Vinyl acetate monomer |
| 5 | PPG INDUSTRIES, INC., NATRIUM | NEW MARTINSVILLE | 4,717,755 | Carbon disulfide |
| 6 | GE PLASTICS - WASHINGTON | WASHINGTON | 3,700,000 | Acrylonitrile |
| 7 | BAYER CORPORATION - NEW MARTINSVILLE PLANT | NEW MARTINSVILLE | 3,000,000 | Toluene diisocyanate (unspecified isomer) |
| 8 | LYONDELL SOUTH CHARLESTON PLANT | SOUTH CHARLESTON | 2,275,000 | Propylene oxide |
| 9 | UNION CARBIDE INSTITUTE PLANT | INSTITUTE | 1,744,200 | Ethylene oxide |
| 10 | P. B. & S. CHEMICAL COMPANY, INC. (64) | ST. ALBANS | 1,247,444 | Chlorine |
| 11 | FMC CORPORATION - NITRO, WV PLANT | NITRO | 750,000 | Phosphorus trichloride |
| 12 | CLEARON CORP. | SOUTH CHARLESTON | 720,000 | Chlorine |
| 13 | RHONE POULENC INSTITUTE PLANT | INSTITUTE | 670,000 | Ammonia (anhydrous) |
| 14 | FLEXSYS NITRO PLANT | NITRO | 430,000 | Carbon disulfide |
| 15 | AKZO NOBEL CHEMICALS, INC. | GALLIPOLIS FERRY | 400,000 | Phosphorus trichloride |
| 16 | TANNER INDUSTRIES, INC. | KENOVA | 336,000 | Ammonia (anhydrous) |
| 17 | CITY OF WHEELING WATER POLLUTION CONTROL FACILITY | WHEELING | 220,000 | Chlorine |
| 18 | WITCO CORPORATION, SISTERSVILLE PLANT | FRIENDLY | 200,000 | Acrylonitrile |
| 19 | LYONDELL ACN RAILCAR AT UCC MASSEY RAILYARD | SOUTH CHARLESTON | 190,000 | Acrylonitrile |
| 20 | TANNER INDUSTRIES, INC. | MORGANTOWN | 180,230 | Ammonia (anhydrous) |
| 21 | CYTEC INDUSTRIES, WILLOW ISLAND PLANT | WILLOW ISLAND | 180,000 | Hydrochloric acid (conc >=37%) |
| 22 | UNION CARBIDE SOUTH CHARLESTON PLANT | SOUTH CHARLESTON | 161,000 | Formaldehyde (solution) |
| 23 | GE SPECIALTY CHEMICALS INC. MORGANTOWN SOUTH PLANT | MORGANTOWN | 146,000 | Phosphorus trichloride |
| 24 | GE SPECIALTY CHEMICALS INC. MORGANTOWN NORTH PLANT | MORGANTOWN | 146,000 | Phosphorus trichloride |
| 25 | CENTURY ALUMINUM OF WEST VIRGINIA, INC. | RAVENSWOOD | 110,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Wisconsin storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | BORDEN CHEMICAL, INC., SHEBOYGAN PLANT | SHEBOYGAN | 750,000 | Formaldehyde (solution) |
| 2 | WAUSAU-MOSINEE PAPER CORPORATION (BROKAW, WI) | BROKAW | 720,000 | Chlorine |
| 3 | VULCAN CHEMICALS | PORT EDWARDS | 600,000 | Chlorine |
| 4 | HYDRITE CHEMICAL CO. - OSHKOSH | OSHKOSH | 593,000 | Chlorine |
| 5 | P. H. GLATFELTER COMPANY - BERGSTROM DIVISION | NEENAH | 360,000 | Chlorine |
| 6 | WISCONSIN TISSUE MILLS, INC. | MENASHA | 360,000 | Chlorine |
| 7 | PLASTICS ENG. CO. NORTH AVE. PLANT | SHEBOYGAN | 340,000 | Formaldehyde (solution) |
| 8 | WOODBRIDGE CORPORATION - BRODHEAD | BRODHEAD | 328,000 | Toluene diisocyanate (unspecified isomer) |
| 9 | GENCORP PERFORMANCE CHEMICALS-GREENBAY LATEX PLANT | GREEN BAY | 313,000 | Acrylonitrile |
| 10 | HERCULES INCORPORATED - MILWAUKEE PLANT | MILWAUKEE | 305,000 | Epichlorohydrin |
| 11 | REDDY AG SERVICE, INC. (MAIN OFFICE) | STITZER | 303,051 | Ammonia (anhydrous) |
| 12 | ROYSTER - CLARK MADISON | MADISON | 290,000 | Ammonia (anhydrous) |
| 13 | NORTHERN FS, INC - ELKHORN | ELKHORN | 280,000 | Ammonia (anhydrous) |
| 14 | ABITEC CORPORATION | JANESVILLE | 270,000 | Ethylene oxide |
| 15 | KRAFT FOODS, INC. | MADISON | 239,255 | Ammonia (anhydrous) |
| 16 | FARMERS CO-OP S & S ASSOC-GALESVILLE AGRONOMY PLT. | GALESVILLE | 238,000 | Ammonia (anhydrous) |
| 17 | TOMAH PRODUCTS, INCORPORATED | MILTON | 230,000 | Methyl chloride |
| 18 | COTTAGE GROVE COOPERATIVE - HIGHWAY N COMPLEX | COTTAGE GROVE | 222,300 | Ammonia (anhydrous) |
| 19 | GRAND RIVER COOPERATIVE - ANHYDROUS AMMONIA | MARKESAN | 210,000 | Ammonia (anhydrous) |
| 20 | REDDY AG SERVICE, INC. (STORAGE LOT) | STITZER | 198,603 | Ammonia (anhydrous) |
| 21 | EAST TROY - NH3 | EAST TROY | 190,540 | Ammonia (anhydrous) |
| 22 | POYNETTE AGRONOMY | POYNETTE | 181,860 | Ammonia (anhydrous) |
| 23 | WABASH ALLOYS, L.L.C | OAK CREEK | 180,000 | Chlorine |
| 24 | ONLINE PACKAGING, INC. | PLOVER | 180,000 | Chlorine |
| 25 | FRASER PAPERS INC - PARK FALLS OPERATIONS | PARK FALLS | 180,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

**The 25 Facilities in Wyoming storing the largest amounts of extremely hazardous substances.***

| | Facility Name | City | Maximum amount in a single process (lbs) | Chemical |
|---|---|---|---|---|
| 1 | COASTAL CHEM, INC. - CHEYENNE WYOMING | CHEYENNE | 67,000,000 | Ammonia (anhydrous) |
| 2 | SF PHOSPHATES LIMITED COMPANY | ROCK SPRINGS | 5,130,000 | Ammonia (anhydrous) |
| 3 | RIVERTON FACILITY | RIVERTON | 1,200,000 | Oleum (Fuming Sulfuric acid) |
| 4 | FMC CORPORATION, GREEN RIVER, WYOMING FACILITY | GREEN RIVER | 360,000 | Ammonia (anhydrous) |
| 5 | COLORADO INTERSTATE GAS CO. - TABLE ROCK PLANT | ROCK SPRINGS | 240,000 | Ammonia (anhydrous) |
| 6 | FRONTIER REFINING INC. | CHEYENNE | 146,000 | Hydrogen fluoride (conc >=50%) |
| 7 | TORRINGTON SIMPLOT SOILBUILDERS | TORRINGTON | 145,000 | Ammonia (anhydrous) |
| 8 | ANSCHUTZ RANCH EAST GAS PLANT | EVANSTON | 143,723 | Ammonia (anhydrous) |
| 9 | PANHANDLE COOPERATIVE FERTILIZER (TORRINGTON) | TORRINGTON | 130,000 | Ammonia (anhydrous) |
| 10 | HIGH PLAINS COOP FERTILIZER (PINE BLUFF, WY) | PINE BLUFF | 130,000 | Ammonia (anhydrous) |
| 11 | POWER RESOURCES, INC. - HIGHLAND URANIUM PROJECT | DOUGLAS | 90,000 | Ammonia (anhydrous) |
| 12 | EXXON COMPANY, U.S.A. SHUTE CREEK FACILITY | KEMMERER | 80,000 | Hydrogen sulfide |
| 13 | JIRDON AGRI CHEMICALS, INC. | TORRINGTON | 63,000 | Ammonia (anhydrous) |
| 14 | BAIROIL OC CO2 PLANT | BAIROIL | 51,667 | Ammonia (anhydrous) |
| 15 | SINCLAIR WYOMING REFINERY | SINCLAIR | 42,000 | Chlorine |
| 16 | UAP NORTHWEST, BASIN | WORLAND | 40,000 | Ammonia (anhydrous) |
| 17 | EXXON COMPANY, U.S.A. BLACK CANYON DEHY. FACILITY | LABARGE | 19,000 | Hydrogen sulfide |
| 18 | EVANSTON WATER TREATMENT PLANT | EVANSTON | 16,000 | Chlorine |
| 19 | RAY L. SHERARD WATER TREATMENT PLANT | CHEYENNE | 10,000 | Chlorine |
| 20 | DRY CREEK WASTEWATER FACILITY | CHEYENNE | 10,000 | Chlorine |
| 21 | CROW CREEK WASTEWATER FACILITY | CHEYENNE | 10,000 | Chlorine |
| 22 | ROUNDTOP WATER TREATMENT PLANT | CHEYENNE | 8,000 | Chlorine |
| 23 | BIG GOOSE WATER TREATMENT PLANT | SHERIDAN | 8,000 | Chlorine |
| 24 | SHERIDAN WATER TREATMENT PLANT | SHERIDAN | 8,000 | Chlorine |
| 25 | GILLETTE WASTEWATER TREATMENT FACILITY | GILLETTE | 8,000 | Chlorine |

*Extremely hazardous substances as defined by the U.S. Environmental Protection Agency under the Clean Air Act, Section 112(r).

# Appendix C

## Health Hazards of Selected Extremely Hazardous Substances*

**ACRYLONITRILE**
Acrylonitrile is a flammable and reactive liquid, clear or slightly yellowish in color, with a faint odor. It is used to make synthetic fibers and polymers. Acute exposure irritates the eyes, nose, throat and lungs. High exposure levels can cause weakness, headache, confusion, nausea, vomiting, and collapse. At the highest exposure levels fluid build-up in the lungs (pulmonary edema) may lead to death. Chronic exposure may interfere with the thyroid gland. Acrylonitrile is a probable human carcinogen.

**AMMONIA**
Ammonia is a corrosive colorless gas with a strong odor. It is used in making fertilizer, plastics, dyes, textiles, detergents, and pesticides. Acute ammonia exposure can irritate the skin; burn the eyes, causing temporary or permanent blindness; and cause headaches, nausea, and vomiting. High levels can cause fluid in the respiratory system (pulmonary or laryngeal edema) which may lead to death. Chronic exposure damages the lungs; repeated exposure can lead to bronchitis with coughing or shortness of breath.

**CARBON DISULFIDE**
Carbon disulfide is a flammable colorless or faintly yellow liquid with a strong, disagreeable odor. It is used in manufacturing viscose rayon, cellophane, carbon tetrachloride, and flotation agents. Acute exposure can severely irritate the eyes, skin, and nose, and can cause headaches, nausea, dizziness, unconsciousness, and death. Chronic exposure can damage the developing fetus, and may cause spontaneous abortions in women and sperm abnormalities in men. Repeat exposures can also cause nervous system damage including tingling, weakness, and severe mood, personality, and mental changes that can be long lasting (for months or years).

**CHLORINE**
Chlorine is a greenish-yellow gas with a strong, irritating odor. It is used in making other chemicals, as a disinfectant, in bleaching, and for purifying water and sewage. Acute exposure can severely burn the eyes and skin, causing permanent damage, and may cause throat irritation, tearing, coughing, nose bleeds, chest pain, fluid build-up in the lungs (pulmonary edema), and death. Chronic exposure can damage the teeth, and irritate the lungs, causing bronchitis, coughing, and shortness of breath. A single high exposure can permanently damage the lungs.

**CHLOROFORM**
Chloroform is a colorless liquid used in making dyes, drugs, and pesticides. Acute exposure to chloroform can irritate and burn the skin, eyes, nose, and throat, and cause dizziness, lightheadedness, headache, confusion, and irregular heartbeat which may lead to death. Chloroform is a probable carcinogen and is suspected of causing birth defects. Chronic chloroform exposure can damage the skin, liver, kidneys, and nervous system.

**DIMETHYL DICHLOROSILANE**
Dimethyl dichlorosilane is a colorless liquid that is flammable and corrosive. It is used to make silicones. Direct contact can severely irritate and burn the skin and eyes. Breathing dimethyl dichlorisilane can irritate the lungs, including fluid build-up (pulmonary edema) at high exposures.

**EPICHLOROHYDRIN**
Epichlorihydrin is a reactive colorless liquid with a slightly irritating, chloroform-like odor. It is used to make plastics, resins, and glycerin. Acute exposure to epichlorohydrin vapor irritates the eyes, nose, bronchial tubes, and lungs. High levels can chemically burn the lungs or cause dangerous fluid build-up, which may lead to death. Eye contact may cause permanent damage, and skin contact can cause painful blistering which may be delayed in onset for minutes or hours. Chronic exposure can damage the kidneys, liver, and lungs. Epichlorohydrin is a probable human carcinogen, and may decrease fertility in males.

**ETHYLENE OXIDE**
Ethylene is a colorless gas that is highly flammable, reactive, and explosive. It is used to make antifreeze, polyesters, and detergents, and is used for industrial sterilization. Acute exposure can irritate the eyes, skin, nose, throat, and lungs, and may cause shortness of breath, headache, nausea, vomiting, diarrhea, drowsiness, weakness, and loss of muscle control. Higher exposure levels may cause loss of consciousness, fluid in the lungs (pulmonary edema), and death. Chronic exposure to ethylene oxide may cause cancer and birth defects, as well as damage to the liver, kidneys, and nervous system.

**ETHYLENEDIAMINE**
Ethylenediamine is a flammable and corrosive colorless liquid with an ammonia-like odor. It is used as a solvent, a stabilizer for rubber latex, and in antifreeze solutions. Breathing ethylenediamine can irritate the nose, throat, and lungs, and contact can irritate and blister the skin, leading to recurrent skin allergy. High exposure may cause liver, kidney and lung damage, including lung allergy.

**FORMALDEHYDE**
Formaldehyde is a flammable, colorless gas with a pungent, suffocating odor. It is used in manufacturing plastics and other chemicals, such as adhesive resins in particleboard, plywood, foam insulation, and other products. Acute exposure irritates and burns the skin, eyes, nose, mouth, and throat. Higher levels can cause a build-up of fluid in the lungs (pulmonary edema) or spasm in the windpipe, either of which may be fatal. Chronic exposure may cause both an asthma-like allergy and bronchitis with symptoms of coughing and shortness of breath. Formaldehyde causes cancer of the nasal passages in animals and is considered a probable human carcinogen.

**HYDROCHLORIC ACID (HYDROGEN CHLORIDE)**
Hydrochloric acid is a corrosive colorless to slightly yellow gas with a strong odor. It is used in metal processing, analytical chemistry, and in making other chemicals. Acute exposure to hydrochloric acid can cause severe burns of the skin and eyes, leading to permanent damage and blindness. Breathing hydrochloric acid vapor irritates the mouth, nose, throat, and lungs, causing coughing, shortness of breath, fluid build-up in the lungs (pulmonary edema), and possibly death. Chronic exposure damages the lungs and may erode the teeth.

**HYDROCYANIC ACID (HYDROGEN CYANIDE)**
Hydrocyanic acid is a flammable and reactive pale blue liquid or gas with a bitter, almond-like odor. The gas is used in industry to kill rodents and insects. The liquid is used in making other chemicals such as acrylates and acrylonitrile. Acute exposure can irritate and burn the skin, eyes, and throat, and can cause dizziness, headache, and nausea. High levels can lead rapidly to convulsions or sudden death. Chronic exposure damages the thyroid gland and nervous system.

**HYDROFLUORIC ACID (HYDROGEN FLUORIDE)**
Hydrofluoric acid is a corrosive colorless fuming liquid or gas with a strong irritating odor. It is used in etching glass and in making other chemicals, including gasoline. Breathing the vapor causes extreme respiratory irritation (with cough, fever, chills, and tightness) that may be fatal. Contact can severely burn the skin and eyes, resulting in permanent eye damage or blindness. Long term exposure may damage the liver and kidneys, and causes fluorosis, with symptoms of weight loss, malaise, anemia, and osteosclerosis.

**PROPYLENE OXIDE**
Propylene oxide is a flammable and reactive liquid that is clear or colorless. It is used as a fumigant and in making lubricants, detergents, and other chemicals. Acute exposure can severely burn the skin and eyes. Inhaling the vapor can irritate the nose, throat, and lungs, and cause difficulty breathing. Exposure can lead to headache, dizziness, and passing out. Propylene oxide is a probable carcinogen and a mutagen (capable of causing mutations in genetic material).

**SULFUR DIOXIDE**
Sulfur dioxide is a colorless gas with a sharp pungent odor. It may be shipped and stored as a compressed liquefied gas. Sulfur dioxide is used in the manufacture of sulfuric acid, sulfur trioxide, and sulfites; in solvent extraction; and as a refrigerant, among other uses. Acute exposure irritates the eyes and air passages. High exposures to the skin and eyes can cause severe burns and blindness, and breathing high levels can lead to death.

**SULFURIC ACID**
Sulfuric acid is an oily liquid that is highly corrosive. It is used in fertilizers, chemicals, dyes, petroleum refining, etching and analytical chemistry, and in making iron, steel, and industrial explosives. Breathing sulfuric acid can irritate the lungs; high levels can cause death through a dangerous build-up of fluid in the lungs (pulmonary edema). Contact can severely burn the skin and eyes. Repeat exposure can cause erosion and pitting of the teeth, stomach upset, nose bleeds, tearing of the eyes, emphysema, and bronchitis.

**TITANIUM TETRACHLORIDE**
Titanium tetrachloride is a colorless to light yellow liquid that has a penetrating acid odor. It is used to make titanium pigments, iridescent glass, artificial pearls, and as a catalyst in polymerization. Titanium tetrachloride is highly irritating to the skin, eyes, and mucous membranes. Acute exposure can burn the skin, eyes, throat, and lungs. Chronic exposure can lead to chronic bronchitis, wheezing, and build-up of fluid in the lungs.

**TOLUENE-2,4-DIISOCYANATE**
Toluene-2,4-Diisocyanate is a colorless to pale yellow liquid with a strong fruity odor. It is used to make polyurethane foams, elastomers, and coatings. Contact can irritate and burn the eyes and skin, and breathing vapor can irritate the nose, throat, and lungs, leading to coughing, chest tightness, and shortness of breath. High levels can lead to fluid in the lungs (pulmonary edema). Chronic exposure may cause concentration and memory problems. Toluene-2,4-Diisocyanate is a probable carcinogen.

**VINYL ACETATE**
Vinyl acetate is a flammable and reactive colorless liquid with a sharp sweet odor. It is used in making polyvinyl resins. Acute exposure to vinyl acetate can irritate the eyes, nose, throat, and skin, and cause shortness of breath. High levels can cause fatigue, irritability and dizziness. Prolonged contact can blister and burn the skin.

* Extremely hazardous substances are defined by the U.S. EPA under the Clean Air Act, Section 112(r).

# Appendix D

## Questions for Local Governments to Ask Chemical Facilities About Y2K-Readiness[1]

1. Has your facility established an overall program to manage Y2K-readiness, including contingency plans? What is the name, address, and phone number of the responsible person?

2. Have you obtained any independent, third-party verification of your Y2K remediation and testing program? If so, by which entity or entities?

   - Independent Contractor/Consultant
   - Major Customers
   - State Government
   - Other

3. Have you identified periods or specific dates of increased risk for Y2K-related problems at your facility? If so, please identify them.

4. Are you planning a "safety holiday" (temporary shutdown of high-risk operations), or significantly scaled-back operations to protect against potential Y2K problems during any or all of these high-risk dates? If not, why not?

5. In case of Y2K-related plant shutdowns, are you committed to maintaining employee pay and benefits?

6. Do you intend to inform, or have you already informed:

   a. the community, and
   b. the EPA, and
   c. emergency responders,

   of potential risks (including worst-case scenarios) associated with Y2K problems? If so, describe how.

7. Are you willing to release the Community Impact Section (of the off-site consequence analysis) of your Risk Management Plan which addresses the potential worst-case accident scenarios at your facility?

[1] Compiled by NJ Work Environment Council, Public Research Works, and Texans United.

# Twenty Key Questions for a Chemical Company Near You

Starting in 1999, some 66,000 facilities that use extremely hazardous substances will be required by the Clean Air Act, section 112(r), to disclose to workers and the public what could go wrong in chemical accidents, from the most-likely accidents to worst-case scenarios. The scenarios are part of larger Risk Management Plans, and are typically shown on a map as a worst-case circle or "vulnerability zone" around a facility.

In communities across the country, the chemical industry is promoting "community dialogues" (public relations events) to release hazard information. Below are twenty sample questions that every plant manager should be able to answer—even if no PR event is planned for your area. Remember that the primary goal is to *prevent* chemical hazards, rather than to find better ways to respond to accidents.

## Questions for companies:

1 What chemicals do you have on-site that can hurt my family where we live, work, or play?

2 How many people could be killed or hurt in the worst-case circle around your facility (including all neighborhoods, schools, hospitals, nursing homes, office buildings, highways, jails, sports arenas, and shopping malls)?

3 How confident can I be that sensors and alarms will alert us to a chemical release, particularly at night?

4 If there is a release, how will I get information to protect my family?

5 What if property values go down because we live in your worst-case circle—will you negotiate buyouts or otherwise compensate us?

6 Do you have enough insurance—and how much—to cover potential losses within the worst-case release zone? Were you ever denied liability insurance for safety reasons?

7 What practical steps are you taking against potential sabotage, such as reducing hazards, widening buffer zones, and increasing site security?

8 What steps have you taken to fix "year 2000" computer problems that could cause a release?

9 How many victims (including contaminated victims) can local fire fighters, emergency medical services, and hospitals handle in a worst-case release?

10 What truck, rail, or barge routes do you use to ship chemicals through the community?

11 Is your worst-case scenario distance shorter than EPA's (using EPA's reference table of worst-case dispersion distances)? If so, why?

12 Can we inspect your facility with an expert of our choosing?

13 Will you put supporting documents in the local library (such as process hazards analyses, offsite consequences analyses, safety audits, and hazard reduction plans)?

### Hazard reduction questions:

14 What safety changes do you plan to reduce chemical hazards?
Will you make inherent safety changes such as:
a. Substituting less hazardous chemicals?
b. Reducing storage quantities and shipping?
c. Switching to ambient temperatures and pressures?
d. Simplifying processes to anticipate errors?
Will you make other safety changes such as:
e. Using safer shipping and handling?
f. Installing secondary containment?
g. Adding automatic sensors and shutoffs?
h. Adding devices to neutralize or destroy leaks?

15 On what schedule do you plan to make these safety changes?

16 How much will these changes reduce the worst-case vulnerability zone?

### "Shelter in place" questions:

17 If you are telling people to "shelter in place," do you have any real life examples that sheltering works in a major release?

18 How long will it take (in minutes) for:
...you to find a leak?
...you to decide to report?
...you to notify the fire department?
...the fire chief to arrive on-scene?
...the chief to order protective action?
...responders to notify the public?
...workers & neighbors to shelter-in-place?
...workers and neighbors to evacuate?
...all of these events added together?

19 How long will it take (in minutes) for:
...a toxic cloud to reach my house (school, library, hospital, etc.)?
...toxic gases to filter into places where people "shelter in place"?

20 Given these time estimates, how big is the zone where neither sheltering nor evacuation will work?

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# Federal Databases of Chemical Fires, Spills, and Explosions

**Seven major Federal databases track fires, spills, and explosions involving hazardous chemicals. Incompatibility among these systems makes it difficult to form a complete national picture of accidental releases.**


**Incident Reporting Information System (IRIS)**
*National Response Center*
Content: 330,000 initial incident reports since 1982
Access: (202) 267-2185; FOIA required*
Notes: Incidents involving releases are also in ERNS


**Emergency Response Notification System (ERNS)**
*Environmental Protection Agency*
Content: 300,000 initial notification reports since 1986
Access: (202) 260-2342; assisted search
Notes: Also on RTK NET; (202) 234-8494 or http://rtk.net


**Accidental Release Information Program (ARIP)**
*Environmental Protection Agency*
Content: 4,800 verified reports on serious accidents since 1986
Access: (202) 260-8942; assisted search
Notes: Verified subset of ERNS data


**Hazardous Materials Incident Reporting System (HMIRS)**
*Department of Transportation*
Content: 220,000 transportation accidents since 1971
Access: (202) 366-4555; assisted search
Notes: $35 minimum for data search requests


**Hazardous Liquid Pipeline Accident Database (HLPAD)**
*Department of Transportation*
Content: 2,000 pipeline spills, fires, or explosions since 1985
Access: (202) 366-4569; FOIA required*
Notes: Costs apply for data searches


**Integrated Management Information System (IMIS)**
*Occupational Safety and Health Administration*
Content: 100+ injurious accidents *each year* from workplace inspections
Access: (202) 219-7008; two week response time
Notes: Injuries may not involve chemicals


**Hazardous Substances Emergency Events Surveillance (HSEES)**
*Agency for Toxic Substances and Disease Registry*
Content: 11,000+ releases with public health consequences since 1990
Phone: (404) 639-6203; no direct public access
Notes: Published reports available

* Freedom of Information Act (FOIA)