

**GREENPEACE**

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# **GREENPEACE SECURITY INSPECTION REPORT**

**FACILITY: TEXAS OPERATIONS, FREEPORT, TX**

**COMPANY: THE DOW CHEMICAL COMPANY**

**FINDING: FAILURE TO PREVENT CATASTROPHIC RISKS**

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**FINDING: FAILURE TO PREVENT CATASTROPHIC RISKS**

**According to Dow's own reports to the Environmental Protection Agency's (EPA) Risk Management Program, its Texas Operations in Freeport, TX puts 130,000 people at risk due to the bulk use and storage of phosgene gas, a compound used as a chemical weapon in World War I. The facility also has up to 7.6 million lbs of chlorine gas on site that could endanger a similar or larger population in the case of a catastrophic release.** It is clear that this Dow facility has failed to take advantage of safer available chemical processes that would prevent a catastrophic release of phosgene or chlorine gas resulting from a terrorist attack or accidental release.

### UNNECESSARY RISKS

These risks existed long before September 11, 2001, and no amount of fences, security cameras, or guards can fully secure a facility that has an inherent risk of a catastrophic release of a lethal gas.

Dow is well aware of safer chemical processes that would reduce or eliminate these risks, considering that more than 284 chemical facilities have converted since 1999. **In 2008, Dow announced a partnership with K2 Pure Solutions (k2pure.com) to use a safer just-in-time process to manufacture chlorine on site at its Pittsburgh, CA plant.** This process eliminates the risks inherent in shipping or storing large quantities of chlorine. In November of 2009, Clorox announced it will be converting all of its U.S. facilities that use chlorine gas to safer processes.

Accidents happen all too frequently, as was the case with the fatal explosion in 2005 at the BP refinery in Texas City, TX that killed 15 workers; a costly reminder of the catastrophic risks inherent in many chemical processes.

### DOW FACILITY IN FREEPORT

The Texas Operations facility in Freeport, TX is Dow's largest chemical manufacturing site and one of the largest in the world. The three major complexes — Plant A, Plant B and Oyster Creek — span more than 5,000 acres and contain 65 production plants that manufacture 32 billion pounds of products each year. Half of the products manufactured at these sites use chlorine somewhere in the process. **Both chlorine and phosgene could be made and used with a just-in-time process that would eliminate the need for the bulk storage and transport in rail cars, which make this facility high-risk. The worst-case scenario reported by Dow to the EPA is the potential release of 23,000 lbs phosgene, but the Department of Homeland Security (DHS) warned in a Federal Register notice that a terrorist attack, "may involve effects that are more severe than expected with accidental risk."**





## SECURITY INSPECTIONS

The DHS began to inspect “high risk” chemical plants this year. However, they testified at a March 3rd Senate hearing that they will inspect fewer than five percent of all 4,997 high-risk plants by the end of 2010. The DHS will also not confirm which plants they will inspect or whether those plants are violating any rules. Under current law, the DHS is barred from requiring the use of safer chemical processes that would eliminate potentially fatal consequences of a terrorist attack or accident.

The Dow Freeport facility has only addressed security concerns with conventional methods such as guards, gates, and security cameras, but these measures are unlikely to stop a potential terrorist attack. In June of 2007, DuPont CEO Charles O. Holliday commented on security saying, **“I feel very comfortable that we’ve taken all the reasonable steps, but obviously if someone wants to fly an airplane into a plant, it’s very hard to guard against it.”** Sen. Joe Lieberman, chair of the Senate Homeland Security and Government Affairs Committee, has said that **using safer chemical processes is “the only fool-proof way to defeat a terrorist determined to strike a chemical facility.”**

There are several security gaps under current law, but these loopholes would be closed if permanent legislation (H.R. 2868) passed by the U.S. House of Representatives last November is enacted this fall. **Dow is a member of lobbying groups, such as the Society of Chemical Manufacturers and Affiliates, American Petroleum Institute, and the American Chemistry Council, which lobbied against H.R. 2868 as well as complementary legislation in the Senate.** In a March 27, 2009 letter to Dow’s CEO Andrew Liveris about the potential catastrophic liability that Dow’s plants pose,

Greenpeace urged Dow to switch to safer chemical processes and break from this lobby by joining other businesses, such as the railroads, in supporting legislation that would prevent disasters. On July 28th, the Senate Homeland Security and Governmental Accountability Committee considered H.R. 2868. It was substituted with an amendment preserving the current law, and lauded by the chemical industry. If made law, this policy would handcuff the government’s ability to set standards until 2013.

**Last year, Dow provided Greenpeace legislative language showing that Dow could support a policy requiring safer chemical processes. Instead, Dow is now leading industry trade groups supporting policy that continues to handcuff the DHS from requiring the use of safer chemical processes that will protect our communities from chemical catastrophes.**

The only sure way to safeguard employees and surrounding communities from accidents or terrorism at high-risk chemical plants is through prevention. In this regard, **Dow has failed to secure its Texas Operations against catastrophic accidents or terrorism. Compounding this failure at the plant level, Dow has backed away from supporting a policy in Congress that would eliminate these catastrophic risks at the highest risk chemical facilities.**





## **Plant Production & Functions:**

Chlorine manufacturing and specialty chemicals

# **RISK ASSESSMENT**

## **Worst-Case Scenario according to EPA reports:**

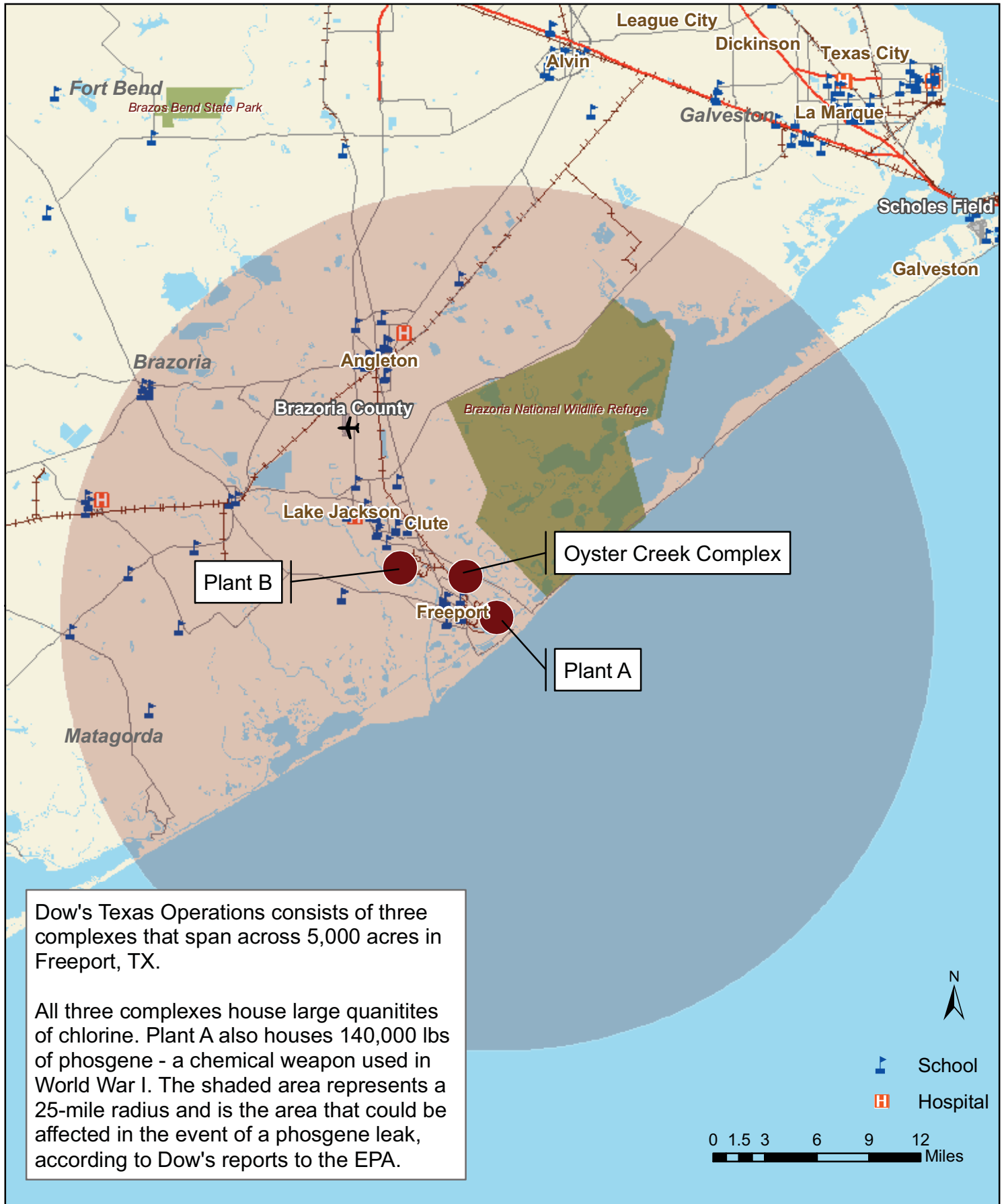
- Release of 23,000 lbs of phosgene
- Potential impacts of a release could be felt up to 25-miles from the plant
- Population within 25 miles is 131,000 people

## **True Worst-Case Scenarios:**

- Up to 184,000 lbs of phosgene is stored on site with potential for release
- Up to 7.6 million lbs of chlorine gas is stored on site with potential for release

# DOW CHEMICAL COMPANY - TEXAS OPERATIONS

## 2301 NORTH BRAZOSPORT BLVD., FREEPORT, TX



Dow's Texas Operations consists of three complexes that span across 5,000 acres in Freeport, TX.

All three complexes house large quantities of chlorine. Plant A also houses 140,000 lbs of phosgene - a chemical weapon used in World War I. The shaded area represents a 25-mile radius and is the area that could be affected in the event of a phosgene leak, according to Dow's reports to the EPA.





The photo shows the Plant A complex, which houses large chlorine and phosgene facilities. In total, this complex could contain nearly 4 million lbs of chlorine and 140,000 lbs of phosgene in pipelines, railcars, or other containers.

This photo shows the Plant B complex, the largest of the three complexes at Dow's Texas Operations. The complex houses at least 26 different facilities that contain dangerous chemicals, including 3.7 million lbs of chlorine, 290,000 lbs of sulfur dioxide, and 44,000 lbs of phosgene – which are all toxic inhalation hazards.



This photo shows the Oyster Creek complex, which houses multiple chlorine facilities. Chlorine is manufactured here and used to produce precursors to PVC and other products.





This photo shows the PMDI (polymeric methylene diphenyl diisocyanate) plant at Dow Chemical Company's Texas Operations facility in Freeport, TX on Aug 24, 2010. The worst case scenario reported to the EPA is a catastrophic release of 23,000 lbs of phosgene. This facility has up to 140,000 lbs of phosgene on site and is inherently dangerous due to its storage of large amounts of toxic gas.

This photo shows a chlorine liquefaction facility at Dow Chemical Company's Texas Operations facility in Freeport, TX on Aug 24, 2010. Chlorine is a lethal gas and this facility can contain 3,800,000 lbs chlorine gas. This facility is inherently dangerous due to its storage of large amounts of toxic gas. Dow could use safer alternatives that would eliminate the need for bulk storage of chlorine and other toxic gases.



Rail cars like these are used to ship toxic gases around the facility and to other locations. A toxic gas like chlorine or phosgene released from just one of these rail cars could spread up to 25 miles, killing or injuring those who breathe it in.



**GREENPEACE**  
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Greenpeace is an independent campaigning organization that acts to expose global environmental problems and achieve solutions that are essential to a green and peaceful future.

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