

# Louisiana Hazardous Substances Emergency Events Surveillance Calcasieu Industrial Corridor Factsheet

## What is the Calcasieu Industrial Corridor?

The Calcasieu Industrial Corridor (CIC) includes all of Calcasieu Parish. Calcasieu Parish is one of Louisiana's most highly industrialized areas<sup>1</sup>. Prior to Hurricanes Katrina and Rita in 2005, approximately 4% of the population of Louisiana was living within this parish (184,961 people<sup>2</sup>) with a population density of 173.8 persons per square mile<sup>2</sup>.

## What is the Louisiana Hazardous Substances Emergency Events Surveillance (Louisiana HSEES) System?

The Louisiana Hazardous Substances Emergency Events Surveillance (Louisiana HSEES) System is an active, public health surveillance system that collects information on the acute release of hazardous substances throughout the state of Louisiana. The Louisiana HSEES system is funded through a cooperative agreement with the Agency for Toxic Substances and Disease Registry (ATSDR). The goal of the Louisiana HSEES System is to reduce acute releases of hazardous substances and to decrease injuries and fatalities that occur during these releases. An event in the HSEES System is defined as:

- An uncontrolled or illegal release of one or more hazardous substances;
- Substance releases that must be removed, cleaned up, or neutralized according to federal, state, or local law;
- Threatened releases of qualifying amounts that lead to public health action (for example, evacuation);
- Extremely hazardous chemical releases, regardless of the reportable quantity are also included.

A victim is defined as an individual who experiences at least one documented adverse health effect within 24 hours after the event. Also included are all victims involved in an event who

die, even if death occurs more than 24 hours after an event occurs.

Data in Louisiana have been collected since January 1, 2001. Data are derived from both mandatory and voluntary reporting; the level of participation from industries and citizens can skew the number of incidents reported in either direction

## Total Events

From 2001-2004, there were 415 events in the Calcasieu Industrial Corridor which met HSEES criteria, representing 15% of all events entered into the Louisiana HSEES system<sup>3</sup>. Two of these events involved threatened releases. Approximately 95% (n=394) of events occurred at fixed-facilities, and approximately 5% (n=21) occurred in transportation events. Fixed-facility events occurred most frequently in November (n=43; 11%), between 6:00 am and 11:59 am (n=118, 30%), and on Friday (n=68; 17%). Transportation events also occurred most frequently in May or July (n=4 each; 19% each), between 6:00 am and 11:59 am (n=9, 43%), and on Tuesday (n=5; 24%).

## Events by Industry

Events occurred most frequently in manufacturing<sup>4</sup> (91%; n=379) and transportation (4%; n=15) industries. Of the manufacturing events, 99% (n=376) were fixed-facility events.

## Victims

Of the 415 events occurring in the CIC, there were 5 events (1% of all events) involving 8 victims. Seven (87%) victims were employees, and 1 (12%) was a member of the general public.

## Victims and Adverse Health Effects

The most frequent adverse health effects experienced by victims were respiratory irritation (38%; n=3) and chemical related burns (25%, n=2).

<sup>1</sup> Louisiana Department of Environmental Quality. Based on 2003 Toxic Release Inventory.

<sup>2</sup> U.S. Census Bureau. Based on estimated 2004 population.

<sup>3</sup> Parish was unknown for 10 events statewide.

<sup>4</sup> Manufacturing includes Standard Industrial Classification Codes 100-392. Transportation includes Standard Industrial Classification Codes 400-432.

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One fatality occurred in the CIC when a car collided with an insecticide truck. The truck overturned causing the insecticide tank to dislodge. The driver of the truck died as a result of the accident, not the insecticide.

### ***Victims by Industry***

Two (40%) events with victims in the CIC occurred in the manufacturing industry and involved 4 victims, representing 50% of victims in the CIC. Two (40%) events involving victims occurred in the transportation industry; 2 victims were injured during these events, representing 25% of victims in the CIC.

### ***Substances***

More than one chemical substance may be released during one event. A total of 682 substances were threatened or released in the CIC, comprising 12% of substances involved in events throughout the state. Approximately 91% (n=621) of releases involved releases to the air, and 7% (n=45) were spills.

Sulfur dioxide was the most frequently released substance (Table 1).

**Table 1. Substances Most Frequently Involved in CIC Events**

Rank	Chemical Standard Name	No. of Threatened/ Actual Releases*
1	Sulfur dioxide	115 (16.9%)
2	Nitrogen oxides (NOX)	104 (15.2%)
3	Benzene	71 (10.4%)
4	Hydrogen Sulfide	38 (5.6%)
5	Butadiene	42 (6.2%)

\*Note: Parish was unknown for 10 events statewide.

### ***Substances by Chemical Category***

The substances threatened or actually released in an event are classified into one of 16 chemical categories. Substances in the chemical categories “Other inorganic substances” (46%, n=190), “Multiple substance category” (25%, n=105), and

“Volatile organic compounds” (12%, n=51) were the three most frequently released chemical categories. None of the events involving these substances resulted in victims. In contrast, only 2% (n=10) of events were classified into the “Acids” substance category; however, 20% (n=2) of those events involved victims. The remaining 3 events with victims involved substance categories “Ammonia”, “Chlorine”, and “Pesticides”.

### ***Public Health Actions***

An order to evacuate was given in 10 events, and an order to shelter-in-place was given in 4 events. Of the 10 events in which an order to evacuate was given, one event involved victims. Of the 4 events in which an order to shelter-in-place was given, one event involved victims.

There were a total of 10 closures of either roads or waterways as a result of a threatened or actual release.

### **What safety precautions can residents take to prepare for and to prevent an event?**

- Attend community meetings sponsored by government, industry, and non-profit organizations in your area to learn about planning for chemical emergencies.
- Learn how directions are given during emergencies in your community. For example, are emergency notices broadcast on a specific radio station in your community?
- If you have children in school or family members in a nursing home, be familiar with the emergency response plan of the facility.
- If a school policy is not in place for responding to hazardous substance releases, work with school officials to develop a response plan in the event of an order to shelter-in-place or evacuate
- Teach children not to play around industrial sites and not to enter industrial facilities without permission and adult supervision since hazardous substances may be present.
- Do not use abandoned drums or containers one may encounter for target practice. If you

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encounter an abandoned drum or container which may have been used to store hazardous substances, report these items to the Louisiana State Police Hazardous Materials Hotline at 877-925-6595 or 225-925-6596. Do not attempt to open the container.

- Keep a battery operated radio ready in your home in case of an emergency.
- When possible, maintain sufficient supplies of required medications and health information in easily accessible locations in the event of an emergency.
- Ensure that younger and elderly household members are familiar with precautions to take during all types of emergencies.
- Develop a family emergency response plan outlining a set meeting location away from home where families can meet during an evacuation.
- Decide ahead of time if you will bring your pet with you in the event of an evacuation. Remember an evacuation may last for longer than 24 hours. Be prepared to take any pets with you that require daily care and have a place to safely board them.
- Know multiple evacuation routes out of your area.

### **What safety precautions can industries take to prevent releases and to prepare their communities for a chemical emergency?**

- When possible, share information with your community. Ensure that neighbors of industrial facilities are familiar with actions that may need to be taken during an emergency involving hazardous substances.
- Identify sensitive populations located in close proximity to the facility such as hospitals, schools, daycares, and nursing homes and work with these organizations to develop emergency response plans.
- Share as much information as possible with local emergency responders and your Local Emergency Planning Committee (LEPC). Consider participating in drills and

emergency response scenarios with emergency responders from within the community. Consider including representatives from local health care facilities, schools, daycares, and nursing homes in drills.

- Provide frequent and up-to-date training for company emergency responders. Train emergency responders within the company in the National Incident Management System (NIMS) and Incident Command.
- Create an environment in which employees feel safe to report minor injuries and “near miss” incidents without being penalized. Develop prevention activities based on these events involving minor injuries and “near misses” so that more severe injuries do not occur in the future.
- Develop appropriate safety control measures and structured equipment checklists.

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## Further Information

### ❖ General

- **Louisiana Office of Homeland Security and Emergency Preparedness**  
Website: <http://www.lope.state.la.us>
- **Chemical Emergencies**. Centers for Disease Control (CDC), Emergency Preparedness and Response.  
Website: <http://www.bt.cdc.gov/chemical>
- **Louisiana Emergency Alert System**, Louisiana Public Broadcasting.  
Website: <http://www.lpb.org/aboutlpb/technology/laeas/index.html>
- **The Emergency Alert System (EAS) Fact Sheet**, Federal Communications Commission.  
Website: <http://www.fcc.gov/eb/easfact.html>

### ❖ Shelter In Place

- **Protective Actions Fact Sheet Shelter In Place**, Louisiana Homeland Security and Emergency Preparedness.  
Website: <http://www.lope.state.la.us/factsheets/protecta.htm>
- **Facts About Sheltering in Place**, Centers for Disease Control (CDC).  
Website: <http://www.bt.cdc.gov/planning/shelteringfacts.asp>

### ❖ Evacuation

- **Chemical Agents: Facts About Evacuation**. Centers for Disease Control (CDC).  
Website: <http://www.bt.cdc.gov/planning/evacuationfacts.asp>
- **Safety Precautions When Returning Home**, Louisiana Homeland Security and Emergency Preparedness.  
Website: <http://www.lope.state.la.us/factsheets/returninghome.htm>



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