

U.S. Chemical Safety and Hazard Investigation Board



Public Hearing

Bethune Point Wastewater Treatment Plant
City of Daytona Beach, Florida

December 14, 2006





Agenda

- **Investigators' Report**
- **Expert Panel**
- **Public Comment**



Investigators' Report

- The Incident
- Investigation Overview
- Incident Animation
- Major Findings
- Board Questions for Investigators



The Incident

- **January 11, 2006**
- **Methanol Tank Explosion and Fire**
- **Two Workers Died**
- **One Worker Critically Injured**



The Incident





Investigation Overview

- **Began January 13, 2006**
- **Investigation Elements**
 - photo documentation
 - interviews
 - physical evidence collection
 - documentation review
 - similar incident review
 - regulatory analysis



Investigation Overview

- **Full Cooperation of City Departments**
 - Fire
 - Police
 - Utilities
 - Support Services
- **Assistance and Cooperation of State Fire Marshal's Office**



Incident Animation





Major Findings

- **Severely Corroded Flame Arrester**
- **Improper Use of Plastic Piping**
- **Ineffective Safety Programs**
- **Other Chemical Incidents In Florida**
- **Lack of Public Employee Safety Coverage**



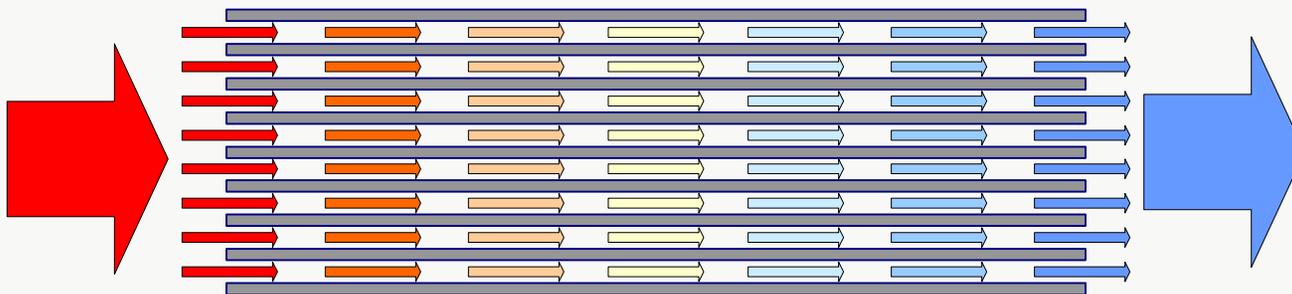
Flame Arrester





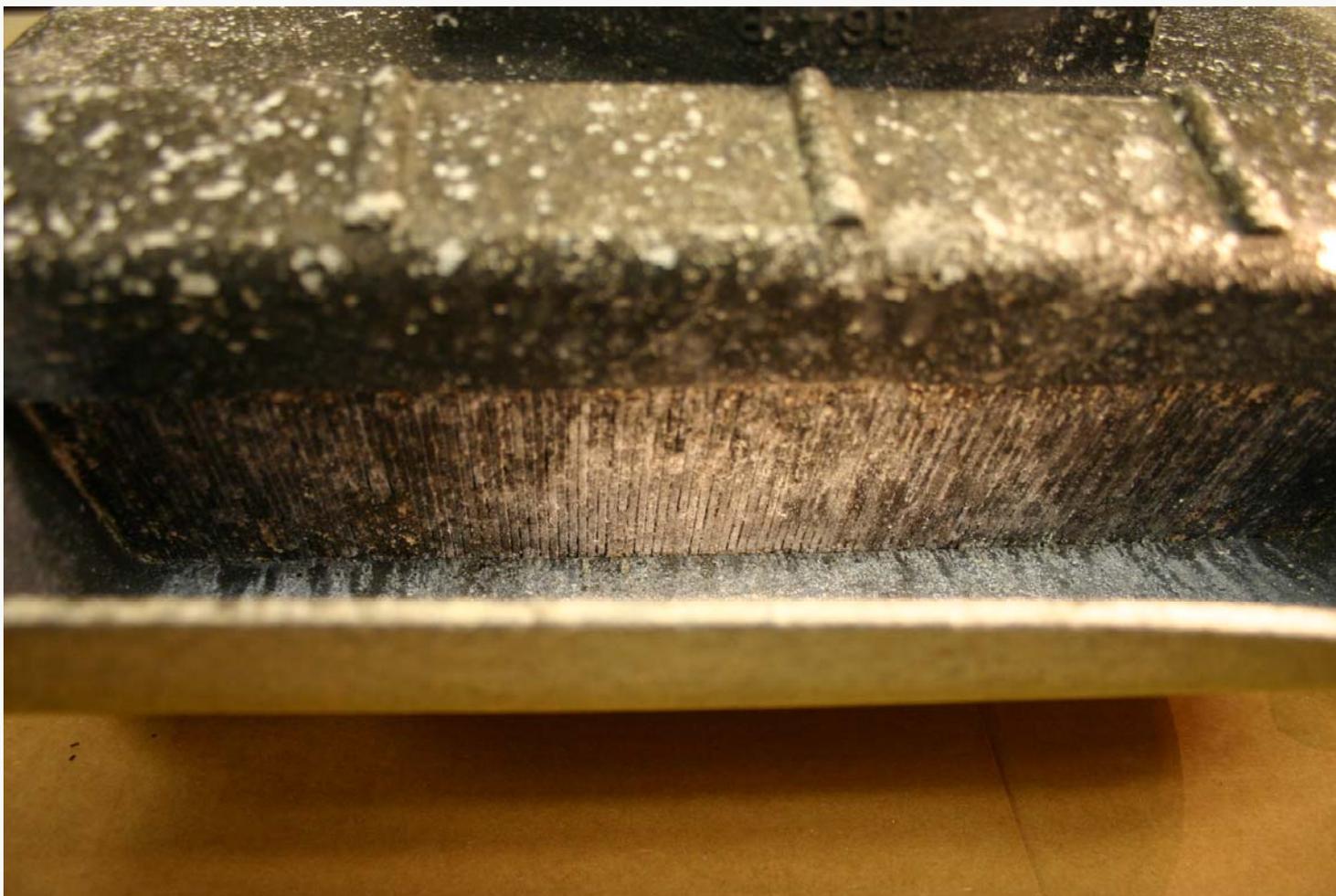
Flame Arrester

- A safety device that prevents ignition inside a tank from an external fire





Flame Arrester





Flame Arrester





Flame Arrester

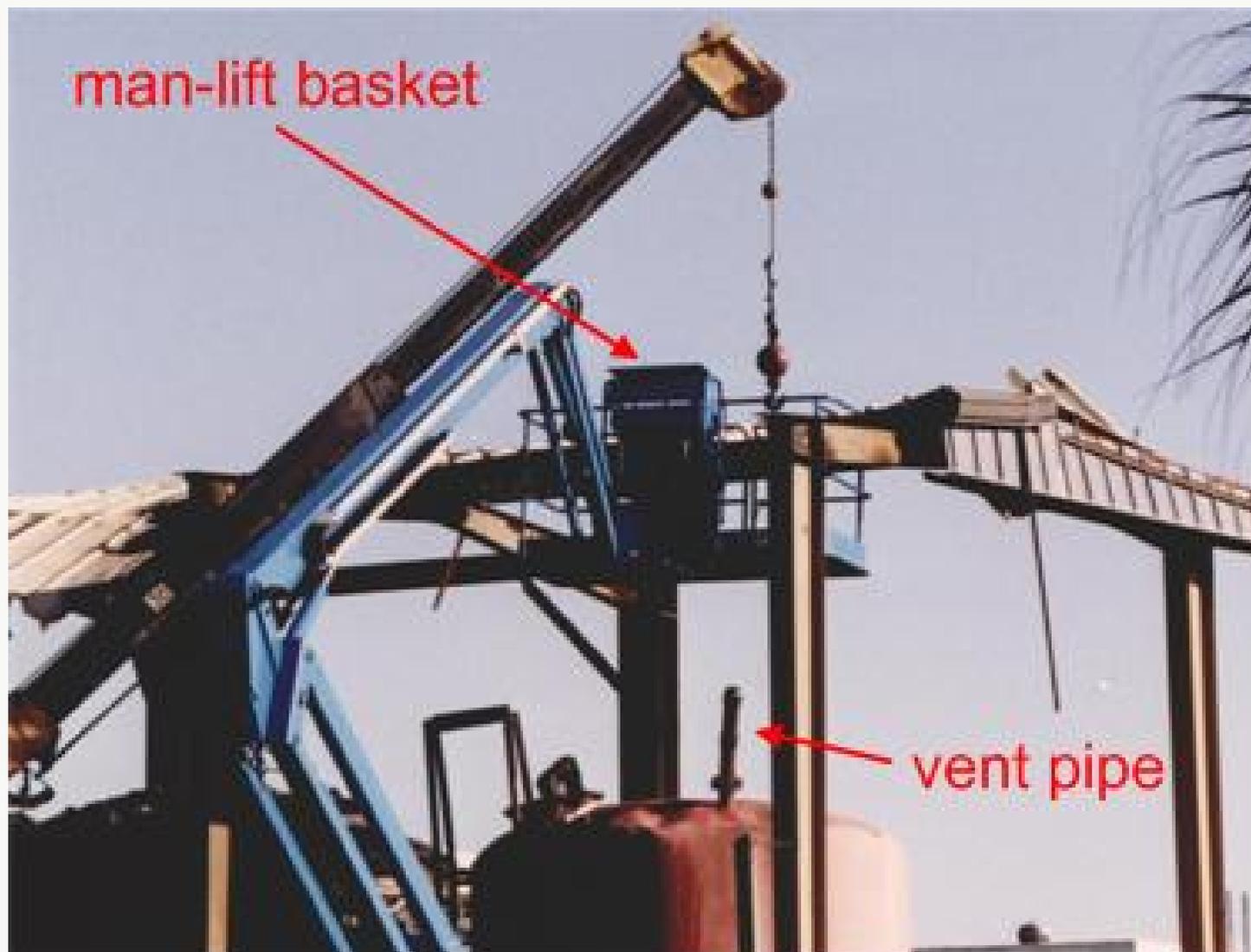
- Flame arrester was made of aluminum
- Methanol is known to corrode aluminum
- City unaware of the need to clean & inspect
- Flame arrester was not cleaned or inspected since its installation in 1993



Plastic Pipe









Plastic Pipe

- **Camp Dresser & McKee specified plastic pipe and valves for the Methanol System**
- **NFPA 30 “Flammable and Combustible Liquids Code” requires tank valves and their connections to storage tanks be steel**



Plastic Pipe

- OSHA Standard 1910.106 “Flammable and Combustible Liquids” allows plastic pipe only when “necessary”
- Since:
 - the tank was steel
 - steel pipe is commonly used for flammable liquids
 - methanol is compatible with steel
- Plastic pipe was not “necessary”

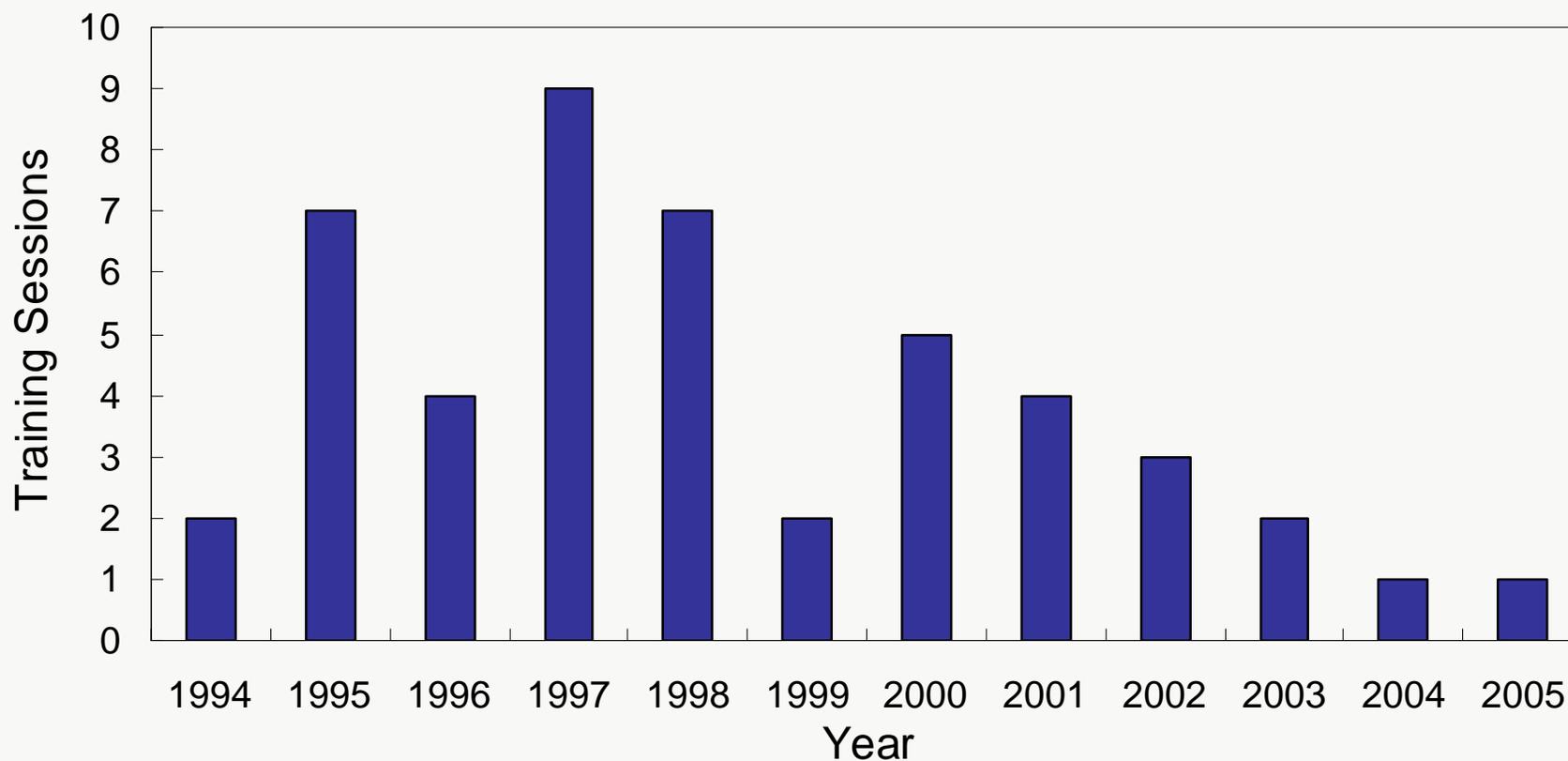


Bethune Point Safety Programs

- **Right-to-Know or Hazard Communication training program**
 - only 7 sessions in 12 years
 - not since 2002
 - no training on methanol hazards



Bethune Point Safety Programs





Bethune Point Safety Programs

- Hot work (welding, torch cutting, grinding) is a recognized workplace hazard
- No city program written or otherwise existed to control hot work



Florida Public Facility Incidents

- Public employees do many of same hazardous work as private sector
- 34 Chemical incidents at Florida public facilities in last 5 years resulting in:
 - 2 Fatalities
 - 10 Injuries
 - 23 Medical evaluations for exposure
 - 16 Community and/or facility evacuations

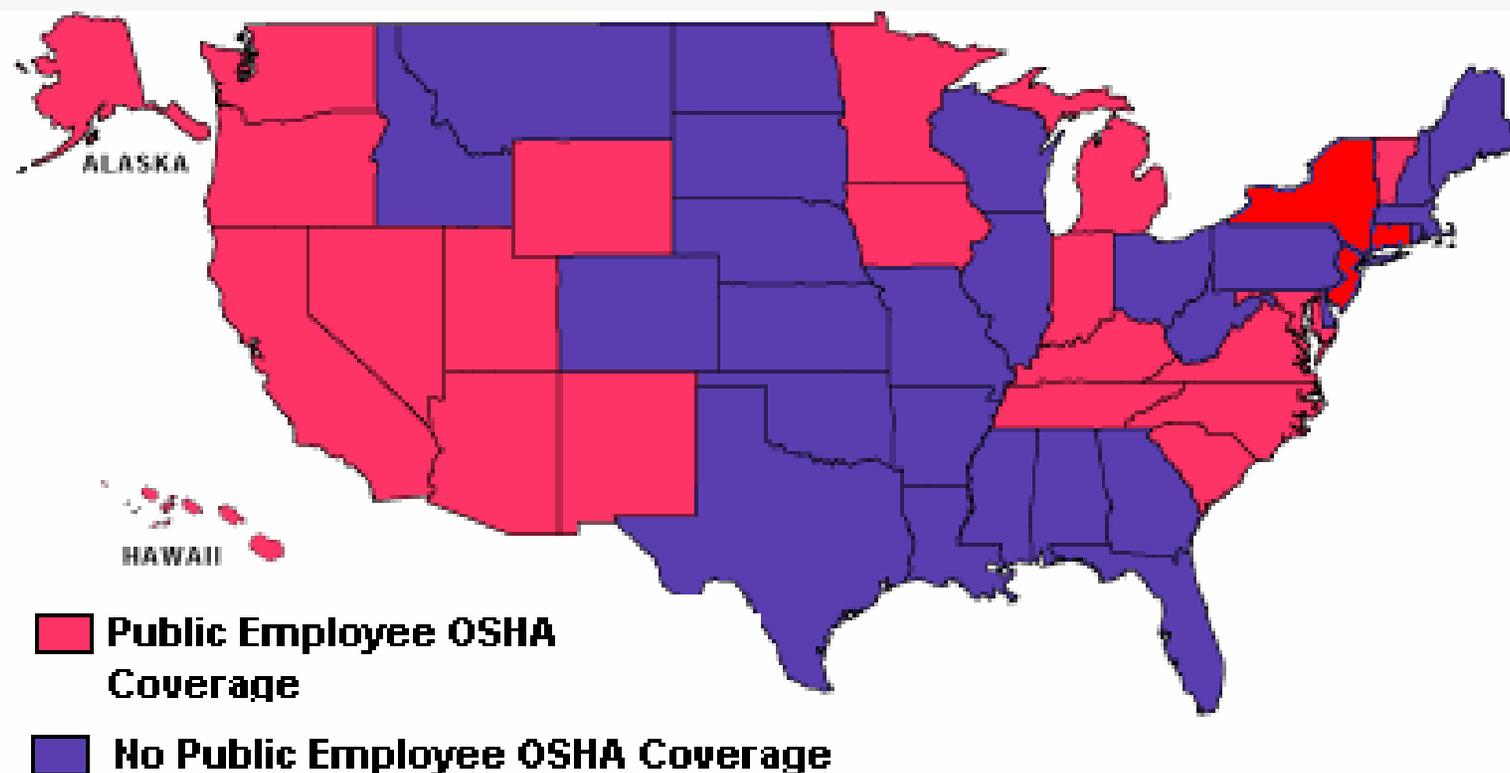


Public Employee Safety

- **Public employees are exempt from coverage under the OSH Act of 1970**
- **States have an option to provide coverage for public employees.**



States With Federally Approved Public Employee OSHA Coverage





Public Employee Safety

- Florida had a non-federally approved public employee program and Right-to-Know law
- The programs were eliminated in 2000



Public Employee Safety

Executive Order (No. 2000-292 September 25, 2000)

- **State Departments**: “*directed* to voluntarily comply” with OSHA standards
- **Cities, Counties**: “*requested* to review existing policies, practices and procedures ...and implement any...made necessary by the repeal...”



Public Employee Safety

Coverage	Federal OSHA	Florida Executive Order	
	State, Cities & Counties	State	Cities & Counties
Standards	✓	✓	Optional
Inspections	✓	✗	✗
Enforcement	✓	✗	✗
Training	✓	✓	Optional
Non-Retaliation	✓	✗	✗
Access to Records	✓	✗	✗



Public Employee Safety

- **Florida Consultation Program offers health and safety assistance to private small business owners**
- **The program is not allowed to offer any consultation to Florida's public employers**



Board Questions

- Questions for Investigators



Panel Discussion

- **American Federation of State, County and Municipal Employees**
- **American Industrial Hygiene Association**
- **American Society of Safety Engineers**



Board Questions

- Questions for Panel