



U. S. Chemical Safety and Hazard Investigation Board RECOMMENDATIONS STATUS CHANGE SUMMARY

Report:	Third Coast Petroleum Products Facility Fire
Recommendation Number:	2002-03-I-TX-R2
Date Issued:	March 6, 2003
Recipient:	National Fire Protection Association (NFPA)
New Status:	Closed – Acceptable Alternative Action
Date of Status Change:	July 5, 2017

Recommendation Text:

Revise NFPA 30, the Flammable and Combustible Liquids Code, to address the following issues:

- *For facilities that are not staffed around the clock, specify circumstances where automatic fire detection is needed.*
- *Narrow exemptions for Class IIIB liquids.*
- *Expand fire protection analysis requirements to include all areas of a facility where there may be flammable or combustible fire risks.*

Board Status Change Decision:

A. Rationale for Recommendation

On the night of May 1, 2002, a fire erupted at the Third Coast Industries (Third Coast) facility near Friendswood, Texas. The facility blended and packaged motor oils, hydraulic oils, and other highly flammable liquids. Firefighters arrived at the scene within minutes but were unable to control the fire. The facility burned for 24 hours and consumed 1.2 million gallons of combustible and flammable liquids, destroying the entire site. One hundred nearby residents were evacuated, a local school was closed, and significant environmental cleanup was needed.

The United States Chemical Safety and Hazard Investigation Board (CSB) investigation concluded that the facility did not have sufficient fire protection measures in place to detect or control a fire. The facility was not equipped with smoke/fire detection equipment or alarms, was not staffed at night, and there was no source of water for manual or automatic fire suppression. The facility's warehouse walls also did not meet fire-resistant ratings. Inadequate drainage and containment allowed burning liquids to flow through the facility.

At the time of the incident, Third Coast was not legally obligated to comply with the NFPA 30 *Flammable and Combustible Liquids Code* because it was not required by Texas state or Brazoria county regulations. The CSB reviewed the NFPA 30 code because it is a well-recognized consensus standard adopted in many jurisdictions and applies to facilities like Third Coast who store Class I, II, and Class III¹ flammable liquids. The CSB found areas that the

¹ As defined in NFPA 30, the different classes of flammable liquids are distinguished by flash points. Class I having the lowest flash point of 73 F or below; Class II is a flash point at or above 100 F; Class IIIA has a flash point at or above 140 F; Class IIIB has a flash point at or above 200 F.

NFPA 30 code (2000)² could improve, such as specifying fire protection requirements for unattended facilities; expanding on fire hazard analysis requirements; and narrowing the exemptions for Class IIIB flammable liquids.

B. Response to the Recommendation

NFPA made the following changes to the NFPA 30 Code in response to the CSB Recommendation:

- Revised in Section 6.6, “Detection and Alarm Systems and Procedures,” to require an approved means for prompt notification within the plant and local authorities when there is a fire or other emergency³.
- Revised in Section 6.4, “Hazard Analysis”, to provide more specific requirements for the analysis. The analysis now must evaluate the following:
 - Fire and explosion hazards of the operation;
 - Emergency relief for the process vessels and consideration of the chemical properties of the materials;
 - Facility design requirements for operations such as, processing, dispensing, handling, transfer and use, and others;
 - Local conditions such as exposure to and from adjacent property, and natural disasters; and,
 - Local emergency response capabilities.

The NFPA 30 Code also requires that a hazard analysis be repeated when there are changes anywhere with the process, operations, procedures, or assignments (i.e. Management of Change procedures to identify and control safety hazards that may result from changes).

Over two revision cycles, the NFPA also determined that exemptions for Class IIIB liquids that were extant at the time of the Board’s recommendation were found to be acceptable and appropriate given the difficulty in igniting a release of such liquids. The NFPA Technical Committees conceded that fires involving Class IIIB liquids are challenging, but they also pointed out that, almost always, their involvement is the result of an already-existing accidental fire or act of incendiarism.

C. Board Analysis and Decision

Based on the NFPA’s response, the CSB Board voted to change the status of CSB Recommendation No. 2002-03-I-TX-R2 to: “**Closed – Acceptable Alternative Action.**”

² At the time of the incident, the 2000 edition of the NFPA 30 code would have been applicable.

³ The annex of this code requirement explains that: “One method of complying with this requirement could be through the installation of an automatic and/or manual fire alarm system as covered in NFPA 72, National Fire Alarm and Signaling Code.”