



CAL FIRE

Office of the State Fire Marshal

Pipeline Safety Division

Carbon Dioxide Pipeline Regulations

Doug Allen, Supervising Pipeline Safety Engineer

What we regulate

- Safety of over 5,000 miles of intrastate hazardous liquid transportation pipelines.
- Pipelines between the production and distribution networks in public area, including offshore pipelines.
 - Crude, gasoline, diesel, jet fuel, highly volatile liquids, ethanol, CO₂

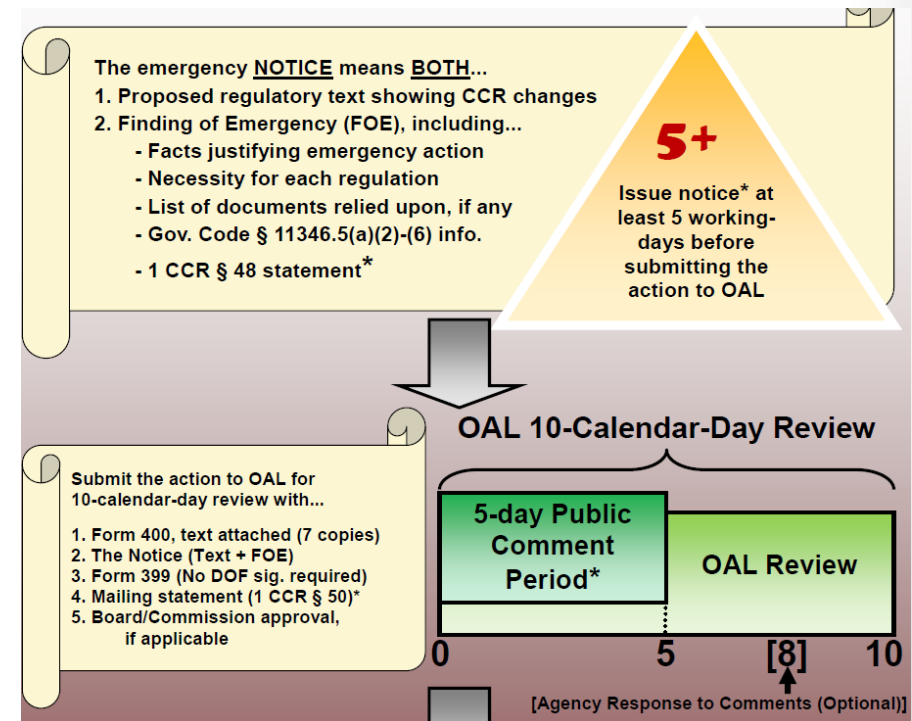
Background

- January 10, 2025 - US DOT PHMSA drafted minimum federal safety standards for transportation of CO2 by pipeline (RIN 2137-AF60).
 - These regulations were never adopted.
- SB 614 - OSFM to adopt CO2 Pipeline regulations by July 1, 2026
 - These are emergency regulations, which are different than the typical regulatory process.

OSFM CARBON DIOXIDE PIPELINE REGULATION

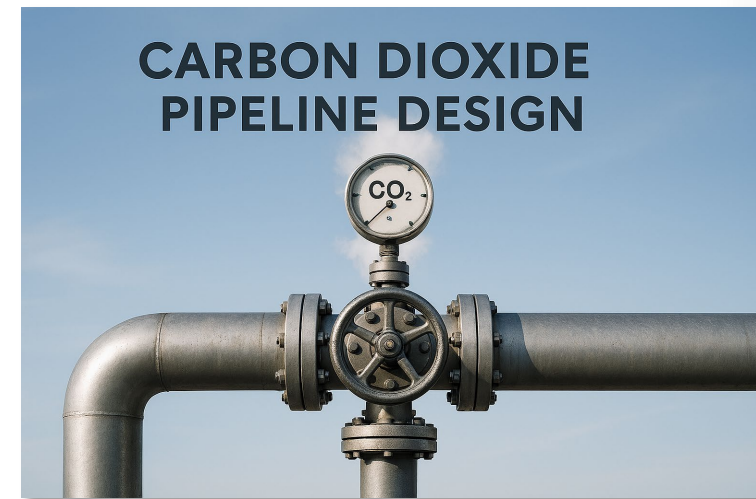
Emergency Rulemaking Adoption Timeline

- January 2026:
 - CO2 Workgroup Kickoff Meeting
- February 2026:
 - Pipeline Safety Advisory Committee Meeting
- June 2026:
 - Submission of Emergency Notice Package to OAL
- July 1, 2026:
 - Adopt Regulations



CO2 Pipeline Regulations Design Requirements

- All new material
- Material toughness
- Leak detection (CPM and a continuous externally based LDS)
- Fixed vapor detection, alarm systems



CO2 Pipeline Regulations

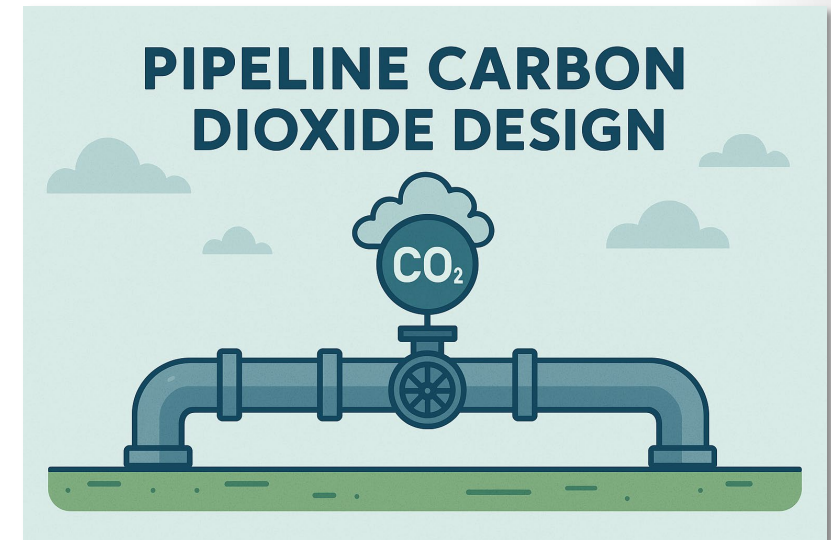
Construction Requirements

- Geotechnical analysis
- Min. 48" of cover
- Avoid sensitive receptors – As far as practicable
 - Vapor dispersion analysis
 - Training services
 - Emergency preparedness materials



Additional Requirements

- Emergency Response Training
- Land Movement
- Depth of Cover Survey
- Internal Corrosion Control



CO2 Pipeline Regulations

[Article 9. Carbon Dioxide Pipelines](#)

- Differences between the 2025 PHMSA draft regulations and the OSFM CO2 Pipeline regulations.
 - Phase for CO2 Transport
 - All new pipelines
 - Focus on protecting sensitive receptors
 - Requires extra cover over buried pipelines
 - Two types of leak detection systems
 - Pipeline Engagement Program

OSFM CARBON DIOXIDE PIPELINE REGULATION

OSFM Inspection Process

- Construction Notice
- Review Emergency Planning Zone Inventory and Map
- Coordinate with Lead Permitting Agency
- Conduct Construction and Safety Program Inspections

