Figure 1. Typical Fire Scenario for a Carbon Dioxide System in a Tower Parking or Floor Machinery Parking Facility

Figure 2. Typical Fire Scenario for a Carbon Dioxide System in a Large Marine Engine Room

1. Engine Room Fire
2. Personnel Egress
   - Manually Pull Vessel Fire Alarm or General Alarm
   - Manually Shut Down Fuel Oil via Remote Trips
   - Manually Close Vents and Doors
   - Notify Vessel Master
   - Head Count of Personnel
3. Master or Chief Engineer Grants Permission to Activate System
4. Manually Release CO\(_2\) from Pilot Cylinders
5. Manually Activate System by Operating Second Mechanism that Allows CO\(_2\) Pilot Gas to Enter the Pilot Control System. (Pilot Operated Time Delay Will Not Allow Gas to Flow to Protected Space until Pneumatic Chamber Pressurizes inside Time Delay. This is a Key Feature of Marine CO\(_2\) Systems.)
   - Initiate Time Delay
   - CO\(_2\) Powered Audible Alarm (Typically Operates for 3 Minutes)
   - Power Ventilation Shuts Down
   - Alarm on Bridge (Optional)
6. Time Delay Completed
7. Stop Valve in CO\(_2\) Delivery Piping Opens and CO\(_2\) Discharges into Protected Space

Source: Gustafson 1998.