

## **Resolution to Protect Citizens and First Responders from the Dangers of Supercritical Carbon Dioxide Pipeline Ruptures**

Whereas, [pipeline developer] has proposed to construct a large high-pressure supercritical carbon dioxide pipeline through [county] for a total of [#] miles;

Whereas, no supercritical carbon dioxide pipelines currently exist in [county];

Whereas, carbon dioxide gas in high concentrations can asphyxiate and at lower concentrations can intoxicate humans and livestock, thereby creating a risk of injury or even death;

Whereas, a rupture of the [pipeline] has the potential to release a large quantity of carbon dioxide gas at high concentration levels over a potentially large geographic area within [county];

Whereas, carbon dioxide gas is colorless and odorless and may not be detected by human senses, making exposure difficult to detect and avoid and danger zones challenging to define;

Whereas, carbon dioxide gas can intoxicate citizens and first responders and cause disorientation and confusion, limiting the potential for self-evacuation by citizens and making first responder rescue operations challenging;

Whereas, carbon dioxide gas is heavier than air and can settle in low lying areas and closed structures for significant periods of time;

Whereas, high concentrations of carbon dioxide following a rupture of the [pipeline] could cause internal combustion engines in motor vehicles to malfunction or even stop operating, limiting the ability of citizens to use their trucks and cars to self-evacuate, and limiting the ability of first responders to use rescue vehicles;

Whereas, emergency alert systems exist, such as Amber alerts and automatic phone calls, that should be used to alert [county] residents within the danger zone for a rupture of the [pipeline];

Whereas, computer modeling is available to estimate the distance that carbon dioxide can disperse from a pipeline rupture assuming a range of weather conditions and topographies, but such modelling has not been provided to [county] for use by its commissioners, first responders, and residents, such that [county] has no reliable information about the geographic extent of the potential danger zone following a rupture of the [pipeline];

Whereas, large high-pressure supercritical carbon dioxide pipelines may rupture with substantial force as the supercritical carbon dioxide depressurizes into a gas, producing explosive running ductile fracturing for extensive distances unless stopped through use of sufficiently strong pipe steel or crack arrestors, putting nearby citizens and properties in danger;

Whereas, [state] has enacted statutes and issued regulations that provide state and county emergency planning agencies with authority to plan and prepare for a wide range of emergencies, including release of large quantities of supercritical carbon dioxide; and

Whereas, [county] first responders should not bear the cost of the specialized emergency response equipment, training, and other resources uniquely necessary for response to a supercritical carbon dioxide pipeline rupture;

Now therefore, be it resolved:

That [county] requests that [state]'s emergency planning, first response, and pipeline permitting agencies take the following actions:

- investigate the risks of and emergency planning needed for a potential rupture of the [pipeline] in [county], and in cooperation with [county] first responders prepare an emergency response plan for [county] in the event of such rupture;
- conduct or direct [pipeline developer] to conduct CO2 dispersion computer modeling to identify the possible extent of CO2 intoxication and asphyxiation zones from a rupture of [pipeline] in [county], taking into account a range of weather conditions and the county's topography, to ensure that [county] can define a danger zone for a rupture of the [pipeline] for emergency planning, response, and rescue purposes;
- identify and recommend emergency response training, equipment, and communication needs of [county] to respond to a rupture of the [pipeline] and require that [pipeline developer] bear the cost of such needs;
- identify and recommend emergency communication resources needed to alert [county] residents, businesses, and first responders in the event of a rupture of the [pipeline], such as automated alert phone calls and text messaging, and require that [pipeline developer] bear the costs of implementing any new alert system or modifying existing alert systems deemed necessary by [county];
- ensure that to the maximum extent allowed by law, [state] agencies condition their permit approvals by including a requirement that [pipeline developer] pay for all training, equipment, and communication needs of [county] to respond to a rupture of the [pipeline]; and
- not grant any state permits for [pipeline] before completion of all actions requested by this resolution.