



Cape Fear Firebird

The Light of Save the Cape

August 18, 2015

This is a very safe process and I don't think the community has anything to worry about.

~ Thomas Meth, Enviva cofounder

If there is a wrong way to do something, then someone will do it.

~ Capt. Edward A. Murphy, Jr., USAF

The Big Bang Theory

We have stood on the sidelines while large environmental groups have opposed the wood pellet storage and handling facilities under construction at the State Port in Wilmington. We regarded the project as a natural fit for a local port, serving eastern North Carolina agribusiness. Much better use of State resources than the grand plans of the Ports Authority to spend hundreds of millions to compete for container traffic with the larger, deeper, better located ports in Norfolk, Charleston, and Savannah, in complete disregard of geography and economics. Or the needs of our State's commerce.

But a recent massive warehouse explosion at a port in China caused us to think about those 170-foot high domes being built at Wilmington to store wood pellets for shipment to Europe. Lots of wood pellets: 45,000 metric tons in each dome. Just 200 feet from Sunset Park, a residential community. Is there a safety issue? Yes, there is. A big one.

Wood pellets are a fuel, being adopted on a large scale in Europe as a substitute for coal in power generation. They are, of course, combustible. And the dust raised in the handling of those pellets, when confined, is explosive.

Explosion risk for dusty environments is often illustrated with an "explosion pentagon," showing the five factors creating explosions: *fuel, ignition, dispersion, oxygen, confinement*. The domes at Wilmington will have four of the five factors present at all times—all except an ignition source. And the domes will have conveyors and other machinery, which are regarded by OSHA as potential sources of ignition.



Enviva, the company building and operating the wood pellet domes, doth protest that the process is safe. Too much, methinks. As the industry grows from serving domestic stoves to supplying Europe with fuel for power generation, fires and explosions have occurred—in Canada, Texas, and Georgia. Nothing really big. Not yet. But none of those places had 90,000 tons on hand.

What can go wrong? Murphy's law and experience tell us they do. In 2010, at the State Port at Morehead City, a fork truck operator punctured nine containers of a load of PETN, an industrial explosive, putting the entire town at risk. In 2001, at Sunny Point, the ship *Edward A. Carter*, fully-loaded with ammunition, caught fire because a crew member bypassed a safety device when refueling. The ship didn't explode, but two sailors died. Only the heroism of local firefighters saved us.