



# Cold Chain Distribution

## Great Valley, PA

*The most advanced cold-chain distribution operation in the world.*

Jason Margolis/PRI



### THE CLIENT

Wyeth Pharmaceuticals



### THE CHALLENGE

Wyeth Pharmaceuticals needed to create a cold-chain distribution network for its FluMist influenza vaccine. The vaccine, delivered as a nasal spray mist (no-shot), must be frozen at the point of manufacture and kept at -22°F to remain stable. Because of strict regulatory requirements, Wyeth could not use existing distribution chain applications not even ice cream storage.

They needed a fail-safe operation that could receive trucks loaded with pallets of frozen vaccine and keep them at -22°F through depalletizing, pick/pack, manifesting, and reloading for shipment to doctors' offices and pharmacies throughout the country.



**“** PULSE was the material handling design and system integration firm we used for our FluMist cold-chain DC in Louisville. We also have several pending projects with them in our Knoxville DC. There are a multitude of design firms out there with varying levels of expertise, some good...some bad...we have had great experiences with PULSE and if you are looking for a qualified firm then I would suggest them... **”**

*- James Cafone, Sr. Director Distribution  
Wyeth Pharmaceuticals, Great Valley, PA*

## THE SOLUTION

Wyeth hired WEPCO, Inc. to design and implement many of the systems used to solve the FluMist problem. WEPCO tested prototypes in its own facility, and then drew up floor plans that the 86,000 square foot center was built around. Much of the equipment had to be custom designed to ensure that the vaccine was never exposed to ambient temperatures, including a freezer dock door system, conveyors to transport pallets of the vaccine through freezer tunnels, and robots dressed in space-age parkas to keep them warm enough to function well.

A huge challenge was how to keep humans out of the harsh cold-storage environment, so most of the process was automated. When human interaction was required, eight custom-designed airlocks were constructed so workers in a 65°F pick/pack room could have access to the cases of FluMist. Dennis Gniazdowski, FluMist distribution center project director, explained, We have less than 90 seconds to complete the pack-out process, including picking the doses, packing them in a special expanded polystyrene (EPS) foam shipping box with dry ice and dunnage, and sealing the lid. All of the steps are automatically measured by timers, scales, photo eyes and bar-code scanners so we can monitor the process for compliance.



To protect from catastrophic loss of the DC's entire inventory, WEPCO built in redundant equipment at all phases of the operation. That included double conveyor lines, double freezers, double picking zones, double material handling equipment, and two separate electric power feeds from two different substations. Although this drove up construction costs, the value of the inventory justified the investment.

## ABOUT PULSE

PULSE is a full system integrator working diligently to provide a customized solution for every client. Combining design expertise, seamless integration with intentional transparency to provide clients with scalable engineered solutions.

Cultivating over 45 years of material handling experience, they specifically help companies leverage the right mix of technology (digital and physical) in their facilities. Their team ingrains Industry 4.0 Thinking into the design philosophy at every level to deliver truly agnostic solutions that adapt to continuous evolving customer requirements.

## CONTACT US TODAY!

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