

***Air Products Supports Large
U.S. Energy Producer Restart
LNG Terminal***

***Air Products' APEX Services made it
happen safely and on time while saving
the customer money.***



Everything's cool with
Air Products EXpress Services
(APEX): By delivering 60 loads
of liquid nitrogen in 16
hours—twice—Air Products
kept the restart of a major
liquefied natural gas (LNG)
marine terminal flowing safely
and smoothly.



Faced with a growing demand for natural gas, one of the nation's largest energy producers turned to Air Products to help support the timely, safe and efficient restart of a mothballed liquefied natural gas (LNG) receiving terminal at Cove Point, Maryland. Air Products made it happen—on time and without a hitch—thanks to extensive production and delivery resources, operational expertise and minute-to-minute coordination between Air Products' APEX Services, the customer and the shipping company hired to deliver the first load of LNG from Trinidad.

Put Safety First

The turnaround was tight—approximately a month between awarding the business and arrival of the first shipment of LNG. In between, the customer wanted to eliminate any flammability hazard by verifying the integrity of equipment and piping that hadn't been used in 20 years. Within days, Air Products delivered the first shipment of 375,000 gallons of liquid nitrogen to simulate LNG flow through the 1.5-mile-long, 32-inch-diameter insulated stainless steel pipeline from the ship to the permanent storage tanks.

"I've never worked with an organization where every contact, from top to bottom, was as professional and courteous. Without exception, the Air Products people were 'top shelf,' which in pipeliner terms means it doesn't get any better."

—quote by our customer, one of USA's largest energy producers

Timing Was Critical

Satisfied that the lines could safely handle LNG, the customer needed a second 375,000-gallon load of liquid nitrogen to cool the lines to the -260°F (-162°C) temperature necessary to prevent the first shipment of LNG from vaporizing during offloading. If the nitrogen arrived late, the shipping company charged \$50,000/day demurrage while the ship waited at the pier. If the nitrogen arrived too early, the lines would begin to warm up in as little as an hour or two. To coordinate on-time product delivery, Air Products established an Express Services office on-site and staffed it around the clock.

Extensive Resources Made It Possible

With production plants and distribution terminals across the Northeast, Southeast and Gulf Coast, Air Products coordinated the resources necessary to meet the customer's needs for high volume and tight turnaround without impacting other customers' delivery schedules. Equally important, the Air Products technicians had the experience and knowledge to address challenges that ranged from 100-degree weather and tornados to a schedule that changed frequently as the customer faced the unanticipated realities of bringing the mothballed terminal back online.

"We worked around the clock to help the customer meet their deadline and get the terminal online so they could start to recoup their investment."

*Paul Davis,
Air Products' APEX Services
Manager*

A limited staging area posed another test. To accommodate the space constraints, Air Products engineers synchronized tanker traffic and developed a custom manifold that allowed them to unload the liquid nitrogen from four delivery tankers into four Air Products APEX specialty pumpers simultaneously. They unloaded four tankers per hour around the clock without interrupting product flow. Despite the difficult conditions, Air Products completed the operation on time and with no safety incidents.

Experience Made the Difference

Air Products was no stranger to Cove Point. We provided similar services when the terminal was commissioned in the 1970s, and we have supplied similar facilities around the world, including the LNG marine terminal at Elba

Island, Georgia, which was recommissioned in 2001. The Elba Island facility is 250 miles from the nearest source of nitrogen, but the plant's owner knew from experience that Air Products could do the job. Air Products saved the day when an alternate supplier couldn't deliver during start-up 25 years ago. What's more, we also engineer LNG heat exchangers designed to lower the cost of producing LNG, using new technology that provides scale and efficiency advantages.

United States, Europe and Asia—Air Products is always ready to help its customers in the energy industry do whatever it takes to meet the growing demand for natural gas.



tell me more

For More Information

If you would like additional information on Air Products' APEX Industrial Nitrogen Services, please contact 1-800-APEXGAS (1-800-273-9427).

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