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BUTANE-PROPANE NEWS

Propane industry publications since 1939

November 2008



From California to Canada—

The Ultimate Road Trip



Total Energy Tank Move Tests Limits of Transporting Large Containers

Hauling three 108,000-gal. tanks the 1800 miles or so from Compton, Calif. near Los Angeles to the Empress gas processing plant in Southeast Alberta, Canada proved more than just a bit of a challenge for Total Energy Corp. (North Salem, N.Y.) this summer, both in terms of time and expense.

The approved route—from California to Nevada, around the Great Salt Lake in Utah, then north through Idaho, Wyoming, and Montana and on to the U.S.-Canadian border—was straightforward enough. But just getting out of California proved the most difficult leg of the journey, according to Frank Kovacs, Total Energy's vice president of operations.

The tanks were loaded at a Compton storage yard June 16 and 17, and they were expected to arrive at Provident Energy's facility at Empress June 26, in plenty of time for the tanks to be installed on piers and piped for butane service before winter temperatures set in. Calgary-based Provident has among its operations NGL extraction, fractionation, storage, transportation, and marketing. The last of the tanks finally arrived in early September.

"It took a lot just for us just to get to the California-Nevada border," Kovacs notes. "There were four separate leap-frog moves just to leave the state, and we had a three and a half week delay before we could get out of Compton." He adds that the lion's share of the delays were caused by the unavail-

ability, or sporadic availability, of California Highway Patrol (CHP) escorts, which are required by law. That meant the tanks stood stranded in staging areas while personnel waited for CHP officers. Only one truck was allowed to move per day.

Most of the moves through California were at night, although some legs of the journey occurred in the afternoon outside of city limits. After taking five weeks to reach the Nevada border, the first truck reached the Utah state line in just one and a half days.

The 116-ft-long, 13½-ft-wide, 320,000-lb tanks were hauled on 20-ft trailers equipped with eight-wheel steerable dollies and trunnion axles owned by Total Energy Transport, a wholly-owned subsidiary of Total Energy based in Russelville, Ark.

Kovacs notes the three tanks have an interesting, if somewhat unlucky, recent history. They were originally sourced from Chevron's Gaviota, Calif. plant by a Nigerian energy company that planned to ship them from the Port of Long Beach to the West African nation. "They somehow ended up in a storage yard in Compton for two years when plans to export them apparently fell through, and they were eventually sold at a loss to Total Energy."

The good news is that the tanks finally arrived and were installed on piers at their new home at Empress, the long road from Compton to Alberta notwithstanding.—*John Needham*

Just loading tanks this large for transport is a well-choreographed process...



Photographs by Richard Dougal

New vs. Used Tanks

Many factors go into the decision of whether to buy new tanks or used, but according to Dean Palin, project manager for Provident Energy Ltd. (Calgary), it was the (relative) immediate availability of these used tanks from Total Energy that was the deciding factor to go with used tanks in the Empress plant storage expansion. He anticipated a lead time of at least 12-15 months for new tanks, and unknown price increases due to surcharges because of the volatility of steel prices.

Delivery time for new tanks is dependent on a production schedule, and if additional tanks are ordered later, their prices and delivery times would be subject to a new contract and new production schedules.



1—First step—safety meeting

Working with tanks this large is a team effort, with safety paramount. As soon as the two cranes were positioned, one at either end of the first tank to be loaded, a safety meeting was held with the crane operators, truckers, and riggers to establish job duties, and who would be allowed in the work area.



2—Set the dollies

The dollies were transported “piggyback,” so one of the cranes was used to lift and place the rear dolly in its final position. The alignment and spacing of the dollies are checked and double-checked to ensure that the tank will fit properly. The rear dolly is independently steerable.



3—Position the transport saddles

Custom-made saddles to match the radius of the aluminum-clad, polycrystalline-coated tanks are positioned on the dolly trunnions, then checked and double-checked for spacing and alignment. Positioning is critical so the head of the tank won't hit the trailer frame due to changes in road grade.



4—Add the yokes

Steel cable loops, or “yokes,” are positioned carefully at each end of the tank for lifting. Each loop goes through a pulley block that the crane lifts, allowing the tank to be rotated 90° to present a smooth top surface with no protuberances, a requirement for highway transport.



5—Lift and rotate

The tank is lifted, rotated, and positioned over the dollies...a “pick and roll,” in crane operator’s parlance. (Note the position of the manway in these two photos as the tank is rotated).



6—Set it down, rig it, and go.

The tank is slowly lowered onto the transport saddles on the trunnions. After a final check of alignment, the riggers chain the tank to the dollies, and connect the lights.