



# Tech notes



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Pre-engineered Package Lift Stations  
for Wastewater and Stormwater

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## THIS EDITION OF

**TECH NOTES** takes a look at industrial uses for Romtec Utilities' pre-engineered lift stations. Increasingly strict environmental regulations at all levels—EPA, state and local—are making the control of groundwater a high priority at industrial sites of all kinds.

In Richmond, Calif., International-Matex Tank Terminals recently undertook a remediation project that featured the use of slurry walls and a Romtec Utility lift station.

Lift stations can be useful assets in any industrial situation that involves water treatment.

IMTT chose the innovative combination of an underground slurry wall and a Romtec lift station over a more traditional plastic liner, which was more expensive and required a higher level of maintenance.

## Industrial applications for lift stations



A crane is used to unload and place precast concrete wet well base.

### IMTT's tank terminal in Richmond, Calif.

IMTT (International-Matex Tank Terminals) is a leading provider of bulk liquid handling services. The company operates 10 tank terminals in the United States and Canada, all located near major distribution centers.

IMTT is one of many smaller tank companies operating as bulk liquid storage terminals. The tanks are available to wholesalers looking to store a variety of liquids, from alcohols to chemicals to vegetable oil.

"Think of us as a public storage company," says Gregory N. Wees, Engineering, Maintenance & Computer Systems

Manager of IMTT. "We offer rental space here."

An innovative remediation project being constructed at IMTT's Richmond, Calif. tank terminal uses cutting-edge techniques to ensure that the site meets state, local and federal environmental regulations.

The 25-acre Richmond site, located along a deep-water tanker berth on the east shore of San Francisco Bay, includes 46 tanks ranging in size from 10,000 gallons to 100,000 barrels, with a total capacity of 670,000 barrels.

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Romtec Utilities is a Dedicated Integrator of submersible pumps and lift station equipment manufactured by ITT Flygt, the world's leading manufacturer of pumps and monitoring systems.



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# ROMTEC UTILITIES

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## Pre-engineered Package Lift Stations for Wastewater and Stormwater

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The tanks meet all standards for emissions, spill control and inspection compliance.

To prevent existing in-ground contaminants from flowing into the bay, the IMTT remediation project seals the site so all groundwater can be collected and filtered. The Walnut Creek, Calif., office of MWH provided engineering services to IMTT.

After considering alternatives, engineers chose a hydraulic barrier around the site, coupled with groundwater collection, pumping and filtration.

The project features a two-foot-wide slurry wall constructed by RECON, Remedial Construction Services. The wall reaches down into a clay layer between 5' and 10' below the surface grade. The combination of the impervious clay base and slurry wall effectively contains all precipitation within the tank terminal site.

To capture the groundwater, a network of drains flow into a pre-engineered lift station supplied by Romtec Utilities. The lift station features a 6' diameter concrete wet well, equipped with two ITT Flygt submersible pumps. Contaminated groundwater draining into the wet well will be pumped through valves into a holding tank and oil-water separator, where contaminants will be removed before being discharged into the bay. Sonnikson and Stordahl Construction, Inc. of Martinez, Calif. installed the lift station and provided all related concrete and mechanical construction.

One of the options considered by IMTT was the traditional system of site lining. For this method, it would have been necessary to excavate the

25-acre site to a depth of 4 inches and then bury a thick plastic cover at that depth. Complicating that alternative was a network of above and underground piping that makes digging difficult.

"It would have cost about a third more to install the liner than to do the slurry wall-pump station," Wees says. "And there would have been a lot more maintenance, since the liner is prone to tearing."

A little more work remains to complete the slurry wall around the project, but the lift station is now operational. "It works better than I thought it would," Wees says. "The lift station went in on time and works very well."

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Second section of wet well is placed on base.



Final wet well section is pre-cast top slab with access hatch.

### FOR MORE INFORMATION:

The pre-engineered package lift stations developed by Romtec Utilities works as effectively for stormwater applications as it for wastewater situations. Municipalities get a solid, tested design tailored to their specifications, best-in-class components, and skilled customer service. For more information, call Romtec Utilities at 541-496-3541 or visit our website at [www.romtecutilities.com](http://www.romtecutilities.com).