



## HEATED DRYING SLAB PROJECT WINS INDUSTRY AWARD

*Use of PEX Pipe Provides Heating Bed at  
 Wastewater Treatment Facility*

IRVING, Texas - In what is being described as an 'application first', a sludge drying facility has been named Project of the Year by the Plastics Pipe Institute, Inc. (PPI). The non-profit organization presented its Building and Construction Division's award to member company Viega LLC for use of its Climate Mat product to provide an innovative heated drying slab at the Big Bear Area Regional Wastewater Agency (BBARWA) plant in Big Bear, California.



"As far as we know," stated Tony Radoszewski, president of PPI, "this is the first time PEX tubing has been used to dry treated sludge. And when you think about it, this is a very clever idea. Drying the sludge before it is trucked to the composting facility removes water to make it lighter, which saves a significant amount of money in transportation."

The project used approximately 22,500 linear feet of 5/8 inch ViegaPEX™ Barrier crosslinked polyethylene tubing at nine-inch centers to make up the Climate Mats and cover the 16,500 square-foot slab area. The six-foot-wide mat came in rolls that were 144 feet long with 20 foot-long leaders. Before the slab was poured, the pre-engineered mat system was rolled out and installed in less than a day.

Prior to the new structure, the agency used asphalt-lined drying beds, but this operation was limited to summer months and the sludge still retained nearly 75 percent of the water.

"The BBARWA facility is electrically powered by diesel generators producing 1,000°F (530°C) exhaust," explained Lance MacNevin, P.Eng. director of engineering, Building and Construction Division of PPI. "But the heat from the exhaust was never harnessed. The idea was to capture the heat already being generated and redirect it into a glycol solution to heat the new drying slab and reduce the amount of water content in the waste sludge. A special heat exchanger captures the 1000°F exhaust heat and transfers it to the supply water at more than 140°F for use in the heated slab in this unique cogeneration application.



Some 22,500 linear feet of Viega PEX Barrier tubing was installed in less than one day using Viega Climate Mat.



"The elevated temperatures needed for this kind of heated slab application favored PEX as the material of choice, as this tubing can handle continuous operation of 180°F at 100 psi. With its inherent toughness and resistance to typical jobsite handling, plus flexibility for ease of installation, PEX was well suited for this project.



Fabricated mats of PEX pipe were delivered to the project and numbered to correspond with the design for connection to the correct manifolds.

"This project demonstrates that Climate Mat heating systems can be installed quickly and easily in uncommon applications," he continued. "The new system is projected to reduce transportation and fuel costs by \$225,000 annually as well as lessen the overall carbon footprint of the operation. The total facility cost \$1.8 million with only a small portion of that for the Climate Mats, which means the expense will be recouped in eight years. Those are the reasons why this project was voted by our members to receive the Project of the Year Award for our Building and Construction Division."



Now in full operation, the new facility dries sludge to reduce the cost of transporting it to the composting facility by \$225,000 annually.

PPI's Radoszewski said, "Within a few months, it became clear that this unique application of radiant heating was a resounding success. It was reported that the system was performing beyond expectations, and even better in the low-humidity winter months. Waste treatment facilities across the nation using outside drying beds may understand how much this system – heated slabs supplied by PEX tubing – has to offer them. When they do, I'm certain they will likely explore PEX plastic piping for their own operations."

For additional information, visit:  
[www.plasticpipe.org](http://www.plasticpipe.org).

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#### **About PPI:**

The Plastics Pipe Institute Inc. (PPI) is the major trade association representing all segments of the plastic pipe industry and is dedicated to promoting plastics as the material of choice for pipe applications. PPI is the premier technical, engineering and industry knowledge resource publishing data for use in development and design of plastic pipe systems. Additionally, PPI collaborates with industry organizations that set standards for manufacturing practices and installation methods.