

<b>PROJECT</b>	Precast Concrete Plant – Septic & Sewage Units
<b>DATE</b>	July 2006
<b>CUSTOMER</b>	Fairfield Precast Concrete
<b>INDUSTRY</b>	Precast/Prestressed
<b>LOCATION</b>	Fairfield, Iowa
<b>PRODUCTS</b>	Penetron Admix®

**CASE SUMMARY**

The customer was looking for a way to enhance the performance of their precast concrete septic and sewage units to reduce cracking and provide a lasting waterproofing solution. After a series of tests using both Penetron® and Penetron Admix®, they made the decision to include Penetron Admix® as part of their normal concrete design mix.

During a quality control review, they identified a few tanks that had developed some early stage shrinkage cracks. One of the tanks was filled with water and left for observation to confirm the benefits of Penetron Admix® in their concrete.

Initially, while there was no noticeable drop in the water level, a number of leaks became apparent, showing themselves as continuous, dripping leaks. After three days the leaks had been reduced to a slow seepage with moisture creeping down the face of the tank 3-4 inches before evaporating. At this time, crystals were plainly visible as they began to fill in the cracks. After seven days all leaks had stopped completely as crystal growth continued in the cracks, self-healing them until there was no moisture. The customer also noted that the shrinkage cracks that were also appearing in the precast concrete lids of these tanks had also lessened through the use of Penetron Admix®.





**DAY 1: Leaks appear as the tank is filled**



**DAY 3: Crystals begin to grow filling the cracks**



**DAY 7: All cracks have self-healed and leaks completely stopped**

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