

## Tekkem Slaking System - Olathe, Kansas

# Project Profile



The City obtains untreated “raw water” from two sources. The City’s primary source of water is from wells along the Kansas River alluvial aquifer, which is pumped to Water Plant No. 2 for Processing. Lake Olathe serves as a supplemental source of water, to meet high demands and is treated at Water Plant No. 1. In 2006, the City delivered approximately 4.97 billion gallons of drinking water to Olathe residents, businesses, and visitors, all of which was treated at Water Plant No. 2.

After recent completion of a plant wide upgrade the facility has a Design Rate of 25 MGD. One Tekkem Slaking System is located inside the existing 12 foot diameter silo to the far right in the above photograph. Lime for this slaker is also stored in the middle 12 foot diameter silo and is conveyed by a single screw conveyor to the Tekkem Slaker in the adjacent silo. The second Tekkem Slaking System is completely installed in the skirted area of the new 14 foot diameter silo.

Each Tekkem Skaking System as two rubber lined slurry pumps, one duty and one standby. These pumps then transport the lime slurry from each Slurry Aging Tank via an RDP supplied loop system. There are four slurry dosing points with an RDP supplied Pinch Valve and Magnetic Flow meter for each dosing point.

### **Above:**

*At Water Plant No. 2 there are 3 existing 12’ dia. Silos: 2 for lime and 1 for soda ash and 1 new 14’ dia. x 85’ tall 220 ton lime silo with spiral access stairway.*

**Location:**  
**Olathe, Kansas**  
**Water Plant No. 2**

**Engineer:**  
**Carollo Engineers**

**Permitted Plant Flow:**  
**25 MGD**

**Installation Date:**  
**2005**



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**Left:** Three 12 foot diameter storage silos with original access stairway. RDP furnished a new spiral stairway, in the background, from the top of the existing stairway to the top of the new 14 foot diameter silo.



**Left:** Existing softening basin is one of four dosing points for the lime slurry.



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### ***Above and Below:***

*The entire loop system piping, between dosing assemblies, is jacketed and insulated to prevent freezing. Dosing points are individually heat traced for additional protection from freezing.*





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### ***Above:***

*The 85 foot tall x 14 foot diameter RDP silo was delivered as a shop welded silo. Note that shown in the bottom two photographs that the silo was 95% finish painted and the spiral stairway was installed, all by the Contractor, prior to setting the silo on the foundation.*



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