



CASE STUDY LEAK SEAL

Emergency Leak Repair at Lift Station

A local leak seal contractor successfully executed an emergency repair operation at a Tennessee Valley Authority (TVA) lift station in New Johnsonville, Tennessee. What began as a new construction project quickly required an urgent repair when significant leakage was discovered at multiple joint locations immediately after installation. The contractor's rapid response and innovative solution prevented extensive water loss and potential environmental impacts.

Initial Assessment

The investigation began when facility managers discovered several critical issues:

- Structural weaknesses detected in multiple joint locations
- Massive water loss occurring within 24 hours of installation
- Thousands of gallons of water escaping through compromised joints
- Environmental concerns due to uncontrolled water discharge

The severity of the situation demanded emergency intervention to prevent continued water loss and potential damage to surrounding infrastructure.

Proposed Solution

After technical evaluation, Spetec PUR F400 was selected as the optimal solution due to its superior characteristics:

- Rapid-curing formulation for quick deployment
- Excellent adhesion properties for joint sealing
- Water-reactive chemistry suitable for wet conditions
- High structural strength for long-term durability
- Environmental compatibility for water infrastructure

Procedures

1. Complete dewatering of the lift station
2. Technical team rappelled into the structure
3. Systematic injection of Spetec F400 at all compromised joints
4. Progressive sealing to ensure complete joint stabilization

Results and Conclusion

- The emergency repair proved successful on multiple fronts:
- Complete elimination of water loss through compromised joints
- Restoration of structural integrity to all sealed areas
- The system returned to full operational status within 24 hours
- Long-term solution achieved with minimal downtime
- Cost-effective resolution compared to alternative repair methods

The project demonstrated the effectiveness of chemical grout injection as a rapid response to critical infrastructure leaks. It successfully prevented ongoing water loss while providing a durable, long-term repair solution.

