

3M™ Scotchkote™ Pipe Renewal Liner 2400

Pipe Rehabilitation Case Study: Same Day Return to Service

City of Moline, Moline IL

November 2013

Project Background:

- Pipe/Asset Owner: City of Moline
- Pipe History/Age: Installed in Mid-1950s
- Pipe Material: Unlined Cast Iron
- Pipe Diameter: 6 inch (150 mm)
- Pipe Length: 1,440 linear feet

Project Issues and Objectives:

- Water Main Issues:
 - Severe tuberculation & corrosion
 - 7 failures (5 since 2000)
 - Repeated service disruptions
- Client Project Objectives
 - Long term water main repair
 - Limit future repairs
 - Reduce brown water issues

Project Outcome:

- Lining Solution: Scotchkote Liner 2400
- Cleaning Method: Forced Air Vortex Aggregate Cleaning (FAVAC)
- Project Timeframe: 5 days, 290-330 ft/day
- Total Volume of Lining Material: 624 liters

Application Contractor:

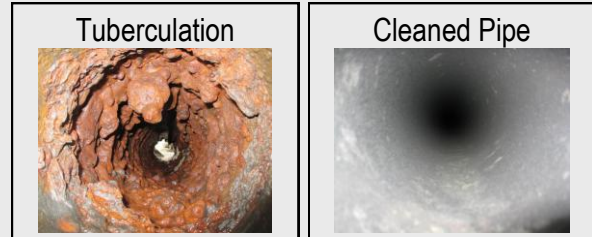
- Cleaning: Envirolitics Engineering Inc.
- Lining: 3M Company
- Excavations, Disinfection, Reinstatement: City of Moline Illinois

Customer Comments / Reaction:

"The City of Moline had 5 sections of water main where residents experienced severe water discoloration due to tuberculation and periodic service interruptions due to water main breaks. 3M's Scotchkote Liner 2400 was the perfect solution to address the dual application of improving water quality and pipe integrity. The ability to return water service in the same day (with boil water notices) was of particular benefit to our customers and significantly reduced project cost by eliminating the need for bypass lines."

Greg Swanson-Utilities General Manager
Moline Water Division

As-Found Condition (Pre Cleaning & Lining)



Same Day Return to Service

Scotchkote Liner 2400 enabled same day return to service due to its quick cure properties.

- CCTV in 10 minutes
- Reinstated in 1 hour for flushing
- Typical outage time 7am- 6pm, returned by 7pm
- Boil orders issued to affected customers until bacteria test results are satisfactory
- No bypass piping provided significant cost savings
- Waterless *Tomahawk™* System cleaning method dries pipe without use of swabs or squeegees, dust-free debris capture high quality surface prep



As-Left Condition (Post Lining)

Features a unique polyurea formula, which resurfaces existing infrastructure, thereby serving to:

- Restore pipe internal diameter & increase water flow
- Minimize water loss throughout the system
- Structurally enhances pipe to AWWA M-28 Class IV
- NSF/ANSI 61 certified, BPA free, contains no VOCs

