

**ROGERS WATER UTILITIES SEWER SYSTEM
ROGERS, ARKANSAS**

**SPECIFICATIONS FOR PROTECTIVE
MANHOLE COATINGS AND WET WELL LINERS
DECEMBER 2004**

1. **SCOPE**

This specification covers concrete surfaces of manholes and lift station wet wells that require resistance to deterioration due to hydrogen sulfite (H₂S) and by-products thereof.

2. **GENERAL REQUIREMENTS FOR MANHOLE COATINGS**

- a. All manholes (proposed or existing) with force main (proposed or existing) discharging into them shall be coated. Other manholes may be coated if specified on the construction plans.
- b. Coating material shall be cement based, poly fiber reinforced, shrinkage, compensated, and enhanced with chemical admixtures and silicious aggregates.
- c. Coating cementitious material shall meet ASTM C109 compressive strength of 9,000 psi and ASTM C293 flexural strength of 1,100 psi. Coating material shall not exceed a permeability value of 400 coulombs as tested by the methods established in the AASHTO T-277 specification.
- d. Coating material shall be capable of a placement thickness of ½ inch to 4 inch in one pass monolithic application. Proposed manholes shall receive a ½ inch coating application and existing manholes shall receive a minimum 1 inch coating application.
- e. Coatings shall be applied in accordance with the manufacturer's recommendations, including surface preparation as specified.

3. **GENERAL REQUIREMENTS FOR WET WELL LININGS**

- a. Wet wells shall be lined if specified on the construction plans.
- b. Lining material shall be a 100% solvent free solids, ultra high build epoxy lining formulated with high physical strength and broad range chemical resistance.

**PROTECTIVE MANHOLE
COATINGS AND WET WELL LINERS
03-11 SPECIFICATIONS**

- c. Lining material shall meet ASTM D695/*ASTM C579* compressive strength of 18,000 psi/*6,800 psi* and ASTM D790/*ASTM C580* flexural strength of 13,000 psi/*4,600 psi*.
- d. Lining material shall be capable of a maximum placement thickness of 200 mils in one pass monolithic application. Wet well lining material shall be applied to a minimum thickness of 60 mils.
- e. Coatings shall be applied in accordance with the manufacturer's recommendations, including surface preparation as specified.

4. **QUALITY ASSURANCE**

- a. The Rogers Water Utilities may, at no cost to the manufacturer, subject random manhole coatings and wet well linings to testing by an independent laboratory for compliance with these standards. Any visible defect or failure to meet the quality standards herein will be grounds for rejecting.
- b. All manhole coatings and wet well linings shall be domestically manufactured.

The following manufactures are approved for manhole coatings and wet well linings.

APPROVED MANHOLE COATING MANUFACTURERS LIST

<u>Manufacturer</u>	<u>Product Number</u>
Quadex, Inc.	Quadex
Strong Company, Inc.	Strong Seal MS-2A

APPROVED WET WELL LINER MANUFACTURERS LIST

<u>Manufacturer</u>	<u>Product Number</u>
Raven Lining Systems	Raven 405
Sauereisen, Inc.	210RS