

# Texas Commission on Environmental Quality

## Interoffice Memorandum

**To:** Commissioners **Date:** August 12, 2011

**Thru:** Melissa Chao, Acting Chief Clerk  
Mark R. Vickery, P.G., Executive Director

**From:**  L'Oreal Stepney, P.E.  
Office of Water

**Subject:** Consideration of a Petition for Rulemaking

**Docket No:** 2011-1164-RUL

**Project No:** 2011-049-PET-NR

**Who Submitted the Petition:**

Eric J. Dupré submitted the petition to the commission on July 11, 2011.

**What the Petitioner Requests:**

The petitioner requests that the commission amend 30 TAC §217.55 (Manholes and Related Structures) and §217.60 (Lift Station, Wet Well, and Dry Well Designs) to include design criteria to rehabilitate existing manholes, lift stations, and other wastewater treatment plant structures. The current rules only address design criteria for new facilities and do not address rehabilitation needs for these structures. The petitioner states that corrosion is the leading cause of premature failure of concrete and masonry structures and Chapter 217 is missing key minimal design standards to help correct this issue found all over the State of Texas in every county.

As text for the proposed rules, the petitioner provides the following language to be included:

Manhole and Lift Stations Rehabilitation

"Surface of preparation is the first step in a successful application of Manhole Mortar product. Surface shall be hydroblasted to clean, remove loose debris, and to etch the surface back to solid substrate up to ¼ "anything beyond ¼" is not surface prep but hydro demolition a different scope of work. Once that is completed the next step is to moisten the surface of the substrate with water just enough to be damp or **SSD** Saturated Surface Dry. Then the structure is ready to have Manhole Mortar applied to it. Once all gases have reached a safe level naturally or by supplied fresh air the Nozzelmen shall conform to **OSHA** confined space regulations and lowered into place to be able to start spray applying the product to the substrate surface at its proscribed thickness not to exceed 4 inches in a single application. Once surface area has been completely sprayed by the Nozzelmen it will then be steel trowel out having a sealed smooth surface. If a top coating of Epoxy is to be applied to this surface it will receive a brushed tooled finish to allow the epoxy to anchor onto it (see epoxy manufactures recommendation, ASTM, or SSPC standards). Once all these steps have been executed properly the mortar will have already begun to cure and will increase in strength within 24 hours, 7 days, and peak at 28 days. In order to be considered an approved equal product must meet or exceed physical properties

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shown on the Manhole Mortar Data sheet. The information subsequent to this paragraph goes into further technical details of the entire process which conform to **ASTM F2551** guidelines for using a cementitious liner system to rehab manholes. This specification can also be applied to other structures such as Lift Stations and/or other deteriorated concrete or masonry structures."

#### Protective Coatings

"All concrete/metal structures exposed to H<sub>2</sub>S and other harsh corrosive materials shall be coated with an epoxy coating in order to resist premature failure and maintains design thickness without compromise."

#### **Recommended Action and Justification:**

TCEQ recognizes that there is a need to add design criteria to rehabilitate existing manholes and lift stations to minimize premature failure of such infrastructure due to corrosion, the current rules do not prohibit adding these requirements. Under the existing rules (Chapter 217), the owner of a new collection system must ensure that the structural life cycles of such infrastructure last at least 50 years. Without such requirements, some infrastructure may last closer to 15 years or even less, depending on the configuration of the systems and the concentration of pollutants in the waste streams. Infrastructure associated with the discharge from long force mains is especially vulnerable to corrosion due to low pH.

It should be noted that the current design criteria is mainly intended for new construction and is silent on the rehabilitation of existing infrastructure, leaving such responsibility to the owner and engineer to determine how to fix the problems. Currently, the commission does not review and/or approve routine maintenance of the collection systems. The only section within the existing criteria that deals with collection system rehabilitation is the portion that deals with trenchless pipe installation, which defines the technologies that may be used for lining existing collection system pipes. The petitioner is asking that the commission consider expanding this section of the rule to also include manholes and lift stations.

Because of the importance of these changes, the Executive Director recommends that the petition be denied at this time and the staff addresses the issue presented by the petitioner, along with other potential revisions, through a comprehensive stakeholder process.

#### **Applicable Law:**

- Texas Government Code, §2001.021, which establishes the procedures by which an interested person may petition a state agency for the adoption of a rule;
- 30 TAC §20.15, which provides such procedures specific to the commission;
- Texas Water Code (TWC), §5.013, which establishes the general jurisdiction of the commission over other areas of responsibility as assigned to the commission under the TWC and other laws of the state;

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- TWC, §5.102, which establishes the commission's authority necessary to carry out its jurisdiction;
- TWC, §5.103 and §5.105, which authorize the commission to adopt rules and policies necessary to carry out its responsibilities and duties under TWC, §5.013;
- TWC, §7.002, which authorizes the commission to enforce provisions of the TWC;
- TWC, §26.027, which authorized the commission to issue permits;
- TWC, §26.034, which provides the commission's authority to adopt rules for the approval of disposal system plans; and
- TWC, §26.121, which provides the commission's authority to prohibit unauthorized discharges.

**Agency contacts:**

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Kathy Humphreys, Staff Attorney, 239-3417

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**Attachment**

Petition

cc: Chief Clerk, 2 copies  
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