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Evaluation Project

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MASTEP Technology Review

Technology Name: Arkal Pressurized Stormwater Filtration System

Studies Reviewed:

- Environmental Technology Verification Report - Stormwater Source Area Treatment Device - Arkal Pressurized Stormwater Filtration System, 2004

Date: January 25, 2008

Reviewer: Jerry Schoen

Rating: 2

Brief rationale for rating: This was a well-conducted study but it did not monitor a sufficient amount of rainfall to meet TARP requirements.

TARP Requirements Not Met:

- At least 50% of annual rainfall must be sampled (only 26% was sampled)
- Minimum of 15" of precipitation must be sampled (only 7.48" were sampled)

Other Comments:

- Removal efficiencies were reported as a range of event mean concentrations and as a summation of loads. SOL removal rates are given below.
- TSS: 82% removal; SSC 82%; total zinc 58%; total phosphorus 55%; TKN 26%; Dissolved phosphorus 13%; nitrate and nitrite -76%; TDS -190%; total magnesium -190%; total calcium -210%.
- The report states that the negative efficiencies for TDS, total calcium, and total magnesium were attributed to groundwater infiltration into the storm sewer system through cracks or poorly sealed joints.
- Rainfall amounts during the 16 month study were not sufficient to produce system bypass at any time.
- Quality control results were reported. Few quality control samples appear to have been taken. This seems to be a problem with many stormwater studies.