



Department of Commerce

Safety & Buildings Division

201 West Washington Avenue

P.O. Box 2658

Madison, WI 53701

Approval #

990070-U (Replaces 940061-U)

## Wisconsin Material Approval

Material

STP-MLD, STP-MLD-E and STP-MLD-D  
Pipeline Leak Detectors

Manufacturer

FE Petro, Inc.  
4805 Voges Road  
McFarland, Wisconsin 53558

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### SCOPE OF EVALUATION

The STP-MLD series of line leak detectors manufactured by FE Petro, Inc. were evaluated for use as automatic line leak detectors for hourly monitoring in accordance with **s. Comm 10.615 (1)** of the Wisconsin Administrative Flammable and Combustible Liquids Code.

### DESCRIPTION AND USE

The STP-MLD leak detector is a mechanical system that incorporates a poppet valve and metering pin. When the pump is activated, fuel is metered into the line to raise the pressure. If the pressure rises above 12-19 psi, the poppet valve opens and full flow into the line occurs. If the pressure fails to rise above 12-19 psi, fuel flow in the line is restricted to approximately 2 gal/ min.

The "E" configuration is used on flexible piping.

The "D" configuration is used for diesel lines.

The STP-MLD series uses a preset threshold and a single test to determine pipeline leakage. The system declares a leak if the preset leak detection threshold of 3 gallons per hour is exceeded.

The system may be used on pipelines containing gasoline, gasoline/alcohol mixtures, diesel, aviation fuel, #4 fuel oil and some solvents.

The system may be used with trapped vapor present in the line.

The safe maximum operating pressure for this system is 50 psi.

There is no required waiting time between a product delivery and the use of this leak detection equipment.

#### TESTS AND RESULTS

All three variations of the STP-MLD Line Leak Detector are certified as capable of detecting a three-gallon per hour leak with a probability of greater than 95 percent and a probability of leak alarm of less than 5 percent.

#### LIMITATIONS OF APPROVAL

The STP-MLD was evaluated using fiberglass piping 3 inches in diameter and 175 feet long. The volume of product in any pipeline to be tested with the STP-MLD shall be less than twice the volume of that rigid pipeline used in the evaluation.

The operating instructions and test procedures specified by FE Petro, Inc. shall be used to conduct all tests. The equipment shall not be modified by the end user.

The STP-MLD-E may be used on flexible lines that contain up to 50 gallons. This is equivalent to approximately 540 feet of nominal 2-inch Enviroflex.

The STP-MLD-D may be used on rigid lines containing diesel fuel that contain up to 340 gallons of product. This is equivalent to 800 feet of 3-inch rigid line.

This approval will be valid through December 31, 2004, unless manufacturing modifications are made to the product or a re-examination is deemed necessary by the department. The Wisconsin Material Approval Number must be provided when plans that include this product are submitted for review.

#### DISCLAIMER

The Department is in no way endorsing or advertising this product. This approval addresses only the specified applications for the product and does not waive any code requirement unless specified in this document.

Reviewed by: \_\_\_\_\_

Approval Date: \_\_\_\_\_ By: \_\_\_\_\_

Duane Hubeler, P.E.  
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