



Approval # 980056-U

Safety & Buildings Division
201 West Washington Avenue
P.O. Box 2689
Madison, WI 53701-2689

Wisconsin Material Approval

Material

MTCF Statistical Analysis Model

Manufacturer

Corrpro Companies, Inc.
931 West Albion Ave.
Schamberg IL 60193

SCOPE OF EVALUATION

The Corrpro MTCF Statistical Analysis Model was evaluated for use in an evaluation conducted in accordance with ASTM ES-40 to assess tanks for corrosion holes prior to upgrading with cathodic protection in accordance with **s. ILHR 10.52 (2)(b) 4.**

DESCRIPTION AND USE

The MTCF Statistical Analysis Model is a part of the Corrpro MTCF Soil Testing Methodology, a non-invasive procedure for the assessment of buried steel tanks prior to the addition of cathodic protection.

Non invasive evaluations conducted under ASTM ES-40 in accordance with **s. ILHR 10.52 (2)(b) 4.** Include the following phases:

Phase I - A preliminary survey is performed to determine the physical characteristics and the operational procedures used by the owner or operator for each tank. Included in this phase is a precision test to establish that the tank is not leaking prior to upgrade.

Phase II - In-field data gathering necessary for the integrity evaluation of each tank is performed in this phase.

Phase III - Data analysis and preparation of tank-specific recommendations are developed during this phase. The purpose of the analysis is to identify those tanks that are or are not suitable for upgrading with cathodic protection in accordance with the criteria specified in section 9.2.3 of ASTM ES-40. The recommendations for appropriateness for upgrading with cathodic protection are based on an evaluation of all data gathered in phases I and II, and through the use of the Corpro MTCF Statistical Analysis Model.

TESTS AND RESULTS

The MTCF Statistical Analysis Model was evaluated by an independent third party and was found to conform to the criteria provided in ASTM ES 40-94 as added to and amended by the EPA/OUST Guidance Memorandum dated July 25, 1997 and requirements imposed by the department.

LIMITATIONS OF APPROVAL

It should be noted that ASTM ES-40 does not apply to piping. Approved use of the MTCF Statistical Analysis Model is limited to the evaluation of tanks.

This Material Approval is related only to the acceptability of the MTCF Statistical Analysis Model, which is a part of the Corpro MTCF Soil Testing Methodology, as a "tool" needed under the ASTM ES-40 standard. The appropriate application of all aspects of the ASTM ES-40 standard will be subject to review and approval by the department for each tank that is evaluated for upgrading.

In applying the ASTM ES-40 standard, the following additional requirements shall be observed:

The phase II assessment and the final report shall include an evaluation for the presence of hydrocarbons in the soil samples.

Hydrocarbon analysis shall consist of the collection and testing of one soil sample from each MTCF drill hole boring in accordance with the collection procedures in WDNR Administrative Code NR 720 and PUBL-Sw 130 93. The samples will be collected by an underground storage tank site assessor, certified by the State of Wisconsin, to perform UST site assessments. The assessor will assist in sample collection, field screening, sample preservation, lab analysis and the sub surface hydrocarbon analysis report.

The above hydrocarbon sampling may be waived under the following conditions:

- A. The tank bed under the MTCF analysis is currently undertaking remedial action to address a previously discovered release.
- B. The UST system under MTCF analysis has been assessed within the previous twelve months for hydrocarbon analysis and no release has been discovered.

Any site that waives the hydrocarbon analysis must include the certified documentation in the MTCF analysis.

The following items must be included in the assessment:, the MTCF report which includes: facility and UST background information, detailed sketch reflecting sampling locations, soil resistivity, soil potentials, electrical continuity between tanks, pipes and other underground structures, groundwater level, soil pH, soil moisture, soil type, potential for stray current interference, potential for bacterial corrosion, age of tank at MTCF, and a soil hydrocarbon analysis.

The final report shall also include the ages of the tank at the ends of the .05/.95 conditional probability widow. Tanks that are within the conditional probability window must be determined to be suitable for upgrade by another approved method such as the NLP Standard 632 Internal Inspection of Steel Tanks For Upgrading With Cathodic Protection Without Lining. This method must incorporate the use of ultra-sound assessment.

The Department shall be notified of tank systems that do not qualify for cathodic protection upgrade using the ES-40 or NLP Standard 632 assessment.

The precision test conforming to ES-40-9.2.3.5 for tanks 10 years old or older, shall be a test conducted no more than 4 months previous to the completion of the Phase Two assessment procedures and shall include the piping. SIR tightness assessment methodology may not be used to demonstrate tightness.

The corrosion protection upgrade of the UST system shall commence no later than 6 months after the completion of the assessment.

Upgraded tanks shall be monitored for releases every 30 days in accordance with one of the methods listed in **s. ILHR 10.61(4) to (8)** and approved in accordance with **s. ILHR 10.125**. The monthly monitoring shall begin within 1 month of the installation of the corrosion protection.

Six months after the installation of cathodic protection, a precision test shall be conducted with a method meeting the requirements of **s. ILHR 10.61(3)** and approved in accordance with **s. ILHR 10.125**.

All provisions of **Chapter ILHR 10** including the plan submittal requirements of **s. ILHR 10.10** and any other requirements the Department specifies in accordance with **s. ILHR 10.52** must also be complied with.

This approval will be valid through December 31, 2003, unless 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 not specified in this document.

Reviewed by: _____

Approval Date: _____ By: _____

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