



Department of Environmental Protection

Lawton Chiles
Governor

Twin Towers Office Building
2600 Blair Stone Road
Tallahassee, Florida 32399-2400

Virginia B. Wetherell
Secretary

December 22, 1998

Certified Return Receipt: Z 333 662 263

Mr. Steve Holmes
Mepco
17 N.E. 1st Avenue,
Pompano Beach, Florida 33060

File No. EQ-351

RE: DEP Approval of the Amust Dual Floor and Monitoring System
pursuant to Rule 62-761.850, Florida Administrative Code
(F.A.C.)

Dear Mr. Holmes:

The Bureau of Petroleum Storage Systems has concluded its review of the Equipment Approval request dated October 22, 1998, that was submitted for the above referenced equipment.

Based on information provided by the Mepco, the Department finds that the applicant's Amust Dual Floor and Monitoring System, as described in Exhibit A, will provide environmental protection substantially equivalent to that provided by compliance with the requirements established in Rule 62-761.510, Table AST item U(1), F.A.C.

Pursuant to Rule 62-761.850, F.A.C., the request for the use of the above referenced product is Approved as a method of secondary containment inside a field-erected tank in the State of Florida provided that:

- (a) The primary floor containment membrane is the new flexible membrane;
- (b) The secondary containment is the metal tank floor. The tank floor and the rest of the storage tank shall be inspected and repaired in accordance API 653 requirements as specified in 62-761.510, Table AST item T(3), and Rule 62-761.700(3)(b), F.A.C., for frequency and reinspection of the storage tank. The determination of the integrity of the installation of the lining of the steel tank floor shall be done upon inspection of the steel tank floor at the time of examination per API 653 requirements. The entire storage shall be evaluated in accordance API 653;

- (c) The interstitial airspace is monitored for the presence of liquids. This port shall be monitored continuously using vacuum as specified in Exhibit A, item 5, or an FDEP approved leak detection system shall be installed;
- (d) An initial vacuum test for the breach of integrity requirement shall be completed upon installation of the system. The vacuum shall be employed continuously, or the system shall be tested every two years using vacuum for systems installed with continuous release detection; and
- (e) The cathodic protection system shall be designed, installed, operated, and maintained in accordance with Chapter 62-761, F.A.C. requirements for storage tank systems in contact with soil or water.

Please be advised that the Department's rules are subject to change. If the above rules are modified in the future, this order may be modified or rescinded. Additionally, if the product(s) fails, and therefore does not provide substantially equivalent environmental protection, the department may rescind this order.

The Department's Order shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57, Florida Statutes ("F.S."), within 21 days of receipt of this Order. Persons who have filed such a petition may seek to mediate the dispute, and choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement. The procedures for petitioning for a hearing and pursuing mediation are set forth below.

Persons affected by this Order have the following options:

If you choose to accept the above decision by the Department about equipment approval you do not have to do anything. This Order is final and effective as of the date on the top of the first page of this Order.

If you choose to challenge the decision, you may do one of the following:

1. file a petition for administrative hearing with the Department's Office of General Counsel within 21 days of receipt of this Order;

OR

2. file a request for an extension of time to file a petition for hearing with the Department's Office of General Counsel within 21 days of receipt of this Order; such a request should be made if you wish to meet with the Department in an attempt to resolve any disputes without first filing a petition for hearing.

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation under section 120.573, F.S. within 10 days after the deadline for filing a petition.

How to Request an Extension of Time to File a Petition for Hearing

For good cause shown, pursuant to Rule 62-110.106(4), Florida Administrative Code ("F.A.C."), the Department may grant a request for an extension of time to file a petition for hearing. Such a request must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000, within 21 days of receipt of this Order. Petitioner, if different from the applicant, shall mail a copy of the request to the applicant at the time of filing. Timely filing a request for an extension of time tolls the time period within which a petition for administrative hearing must be made.

How to File a Petition for Administrative Hearing

A person whose substantial interests are affected by this Order may petition for an administrative proceeding (hearing) under sections 120.569 and 120.57, F.S. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, MS 35, Tallahassee, Florida, 32399-3000, within 21 days of receipt of this Order. Petitioner, if different from the applicant, shall mail a copy of the petition to the applicant applicant, at the time of filing. Failure to file a petition within this time period shall waive the right of anyone who may request an administrative hearing under sections 120.569 and 120.57, F.S.

Pursuant to chapter 98-200, Laws of Florida and rule 28-106.201, F.A.C., a petition for administrative hearing shall contain the following information:

- a) The name, address, and telephone number of each petitioner, the name, address, and telephone number of the petitioner's representative;
- b) A statement of how and when each petitioner received notice of the Department's action or proposed action;

- c) An explanation of how each petitioner's substantial interests are or will be affected by the Department's action or proposed action;
- d) A statement of the material facts disputed by the petitioner, or a statement that there are no disputed facts;
- e) A statement of the ultimate facts alleged, including a statement of the specific facts the petitioner contends warrant reversal or modification of the Department's action or proposed action;
- f) A statement of the specific rules or statutes the petitioner contends requires reversal or modification of the Department's action or proposed action; and
- g) A statement of the relief sought by the petitioner, stating precisely the action petitioner wishes the Department to take with respect to the Department's action or proposed action.

How to Pursue Mediation

In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation. The election may be accomplished by filing with the Department a mediation agreement with all parties to the proceeding (i.e., the applicant, the Department, and any person who has filed a timely and sufficient petition for hearing). The agreement must contain all the information required by rule 28-106.404, F.A.C. The agreement must be received by the clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 35, Tallahassee, Florida, 32399-3000 within 10 days after the deadline for filing a petition, as set forth above. Choosing mediation will not adversely affect the right to a hearing if mediation does not result in a settlement.

Pursuant to rule 28-106.404, F.A.C., an agreement to mediate must include the following:

- (i) The name, address, and telephone number of the persons who may attend the mediation;
- (ii) The name, address, and telephone number of the mediator agreed to by the parties;
- (iii) How the costs and fees associated with the mediation will be allocated (the Bureau of Petroleum Storage Systems will not pay any of the costs of mediation);
- (iv) The agreement of the parties regarding the confidentiality of discussions and documents introduced during mediation to the extent authorized by law;
- (v) The date, time, and place of the first mediation session;

- (vi) The name of the party's representative who shall have authority to settle or recommend settlement; and
- (vii) The signature of the parties.

As provided in section 120.573, F.S., the timely agreement of all parties to mediate will toll the time limitations imposed by sections 120.569 and 120.57, F.S., for holding an administrative hearing and issuing a final order. Unless otherwise agreed by the parties, the mediation must be concluded within sixty days of the execution of the agreement. If mediation results in settlement of the administrative dispute, the Department must enter a final order incorporating the agreement of the parties. Persons seeking to protect their substantial interests that would be affected by such a modified final decision must file their petitions within 21 days of receipt of this notice, or they shall be deemed to have waived their right to a proceeding under sections 120.569 and 120.57, F.S. If mediation terminates without settlement of the dispute, the Department shall notify all parties in writing that the administrative hearing processes under sections 120.569 and 120.57, F.S., are resumed.

This Order is final and effective as of the date on the top of the first page of this Order. Timely filing a petition for administrative hearing postpones the date this Order takes effect until the Department issues either a final order pursuant to an administrative hearing or mediation settlement, or an order responding to supplemental information provided pursuant to meetings with the Department.

Judicial Review

Any party to this Order has the right to seek judicial review of it under section 120.68, F.S., by filing a notice of appeal under rule 9.110 of the Florida Rules of Appellate Procedure with the clerk of the Department in the Office of General Counsel, Mail Station 35, 3900 Commonwealth Boulevard, Tallahassee, Florida 32399-3000, and by filing a copy of the notice of appeal accompanied by the applicable filing fees with the appropriate district court of appeal. The notice of appeal must be filed within thirty days after this order is filed with the clerk of the Department (see below).

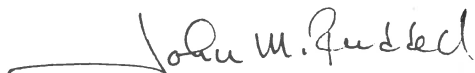
Questions

Any questions regarding the Department's review of your equipment approval should be directed to Farid Moghadam at (850) 488-3935. Questions regarding legal issues should be

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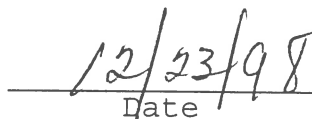
referred to the Department's Office of General Counsel at (850) 488-9314. Contact with any of the above does not constitute a petition for administrative hearing (or time extension) or agreement to mediate.

Sincerely,



John M. Ruddell, Director
Division of Waste Management

FILING AND ACKNOWLEDGMENT
FILED, on this date, pursuant to §120.52
Florida Statutes, with the designated
Department Clerk, receipt of which is
hereby acknowledged.


Clerk
Date



1 800 880-5878

PATENTS PENDING**DESCRIPTION OF AMUST™ DUAL FLOOR AND MONITORING
SYSTEM FOR UPGRADING EXISTING ABOVEGROUND
STORAGE TANK FLOORS IN THE STATE OF FLORIDA UNDER
FDEP RULE 62-761****AMUST™ DUAL FLOOR & MONITORING SYSTEM DESCRIPTION**

The AMUST™ Dual Floor & Monitoring System is designed to create a new interstitial space into an existing aboveground storage tank using a simple and cost-effective flexible membrane. The new interstitial space is bounded on the bottom by the existing steel tank floor. The space is bounded on the top by the new primary containment flexible membrane constructed of materials compatible with the liquid to be stored as established by Underwriters Laboratory.

The new interstitial space is connected to the AMUST™ Monitoring Processor for optional continuous vacuum-based monitoring and to a sensor probe leak detection port per American Petroleum Institute (API) requirements. The upgraded tank meets the DEP Rule 62-761 in the following ways:

1. DUAL CONTAINMENT:

The upgraded tank is now equipped with two liquid tight surfaces. The primary containment is the new flexible membrane and the secondary containment is the existing steel tank floor. The existing tank floor is inspected per API requirements for integrity verification. The existing tank floor will be cathodically protected with sacrificial anodes or an impressed current system which is designed, constructed and installed in accordance with API RP 651 and NACE Standard Number RP-0285-85. The new primary floor is corrosion resistant by design and the flexibility provides for long term performance without risk of stress cracking from heavy liquid loads.

2. LEAK DETECTION:

The newly created interstitial space is monitored for leaks in two ways. The AMUST™ Monitoring Processor can be operated continuously to maintain a constant range of negative pressure and thereby identify a leak in either the primary or secondary floor on a continuous basis. The AMUST™ Dual Floor & Monitoring system can also be operated using sensor probes located in the interstitial space which will identify the

Manufactured Environmental Products Company

26 Marlwood Lane • Palm Beach Gardens, FL 33418 • Phone: 561.624.1180 • Fax: 561.630.8459

presence of any liquid which may accumulate. This system will work in conjunction with the AMUST™ Monitoring Processor to confirm the presence of a leak should a sensor identify the presence of liquid.

3. EXISTING TANK CONDITION AND INSPECTIONS:

The AMUST Dual Floor upgrade requires that the existing tank be inspected for structural integrity and must be able to pass the AMUST™ vacuum integrity test. Therefore, the existing tank must meet Florida DEP requirements and as such meet the criteria set forth in API Standard 653 - Tank Inspection, Repair, Alteration & Reconstruction. The standard sets forth inspection criteria and associated repairs required to ensure the integrity of the existing floor and compliance with applicable rules. Once a tank floor has met the standards set forth under API 653, the tank floor is a candidate for upgrade using the AMUST™ Dual Floor & Monitoring System.

Additionally, more detailed vacuum testing of welded seams and any repaired areas will be recorded to ensure the existing floor will pass the AMUST™ vacuum integrity certification. Any sharp edges or protrusions will be ground smooth or coated to protect the flexible membrane.

4. FLEXIBLE MEMBRANE FABRICATION AND INSTALLATION:

Installation of the AMUST™ Dual Floor & Monitoring System will be accomplished as follows:

- Once the existing tank floor has met the applicable standards or specifications for being an upgrade candidate, the Vythene™ flexible membrane material will be inserted into the tanks through the existing tank manways. All OSHA guidelines for safe entry and work practices will be strictly adhered to and will be the responsibility of the licensed contractor performing the upgrade.
- The flexible membrane, which attaches to the tank sidewall at the 12"-24" height level, will be prefabricated to match the existing tank diameter. Such sidewall components will also be inserted into the tank through an existing tank manways. The method of attachment will be a function of the existing tank material and the tank operator preference. All methods for attachment will meet the criteria set forth under API 653 for steel tanks or API Specification 12P for fiberglass reinforced plastic.
- The rolls of Vythene™ material will be field welded in the tank and all seams will be inspected using a modified AMUST™ vacuum box during installation.
- Internal tank equipment will be accommodated using a variety of methods applicable to the specific item of equipment. For example, floating roof legs will be supported on the bladder using ½" steel 24" diameter reinforcement plates which are located beneath the leg on the bladder surface. The plates will be attached to the bladder to

ensure they remain in their designated location. Other tank equipment accommodations will be similarly attached to the bladder material.

5. INTERSTITIAL SPACE INTEGRITY VERIFICATION:

The integrity of the newly created interstitial space is established during initial system installation and prior to the acceptance of the product to be stored. As established by independent third party testing, the AMUST™ Monitoring Processor is capable of detecting an air leak into the interstitial space of a tank in as little as 18 seconds. Liquid leaks were detected within 30 minutes. The near immediate response time for an air leak provides for initial integrity verification of both the primary and secondary floors during the tank upgrade process. As described above, once the tank is operational, the AMUST™ System can be operated continuously or can be activated at any time to verify integrity if liquid probes are being used in the interstitial space. No more than a two year interval will pass between integrity checks.