



Jeb Bush  
Governor

## Department of Environmental Protection

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

June 21, 2002

David B. Struhls  
Secretary

RECEIVED

JUL 16 2002

PORT TAMPA

Certified return receipt  
7000 0600 0026 4127 2580

Mr. David A. Meaux  
1507 East Frieco Drive  
La Place, Louisiana 70068

Re: AP581TPA  
Alternate Procedures & Requirements  
Motiva Enterprises, LLC Terminal  
6500 Commerce Street  
Tampa, Florida  
FDEP Facility ID#298629070

RECEIVED  
FEB 2 2002  
EPC/Port Tampa Division

Dear Mr. Meaux:

The Bureau of Petroleum Storage Systems has concluded its review of the Alternate Procedure request dated January 17, 2002, that was submitted for the above referenced facility and enclosed as Exhibit A. The request is for an exemption from the cathodic protection (CP) requirements of Rule 62-761.700 (1)(b), Florida Administrative Code (F.A.C), which details the requirements for operation, maintenance, testing and inspection of these systems. This is for the CP system for the interstice only, and not the CP system for the outer shell of Tank Number 8 at this facility. This tank has a double floor interstice that was constructed with a sacrificial anode type of CP system. The anode strips have depleted to the point where the system no longer meets the NACE minimum electromotive force requirements. The applicant has applied a corrosion inhibiting powder into the interstice (see Exhibit A for attributes). This will help to minimize the corrosion in the interstice.

The applicant has determined that it is not feasible to repair the CP system until the time that the floor needs to be replaced. This point in time is normally determined

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and/or projected from API 653 internal tank inspections. In order to get a more concise reading of the corrosion inside the interstices, the tank has been fitted with a corrosion metering probe (see Exhibit A for attributes). The probe has an accuracy rating of plus or minus 0.25 mil. The applicant will monitor this rate continuously and compare that reading to that which was projected by the API 653 internal inspection that was conducted during 1999. The applicant will then determine the time for re-entering the tank for the next API 653 inspection or floor replacement. This point in time will be determined using the worst case scenario between the probe readings and the API 653 projection.

Pursuant to Rule 62-761.850, F.A.C., the Department approves the Alternate Procedure request. The operation of this system will be conducted in accordance with the Operations and Maintenance Manual prepared by Corrpro Companies, Inc., dated March 31, 2002 and referenced to this AP581TPA. Approval for this request is based upon the fact that the method used will produce an equal or better corrosion monitoring capability than that which would occur by relying solely on the API 653 projection. In addition, the tank has secondary containment, and the interstitial monitoring system should detect a problem in the interstice before any product could be released to the environment.

The Department's Order shall become final unless a timely petition for an administrative hearing is filed under sections 120.569 and 120.57, 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 this Order, 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.



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If you choose to challenge the decision or request an Extension of Time to File a Petition for Hearing, you may do one of the following:

1. File a petition for administrative hearing with the Department's Agency Clerk in the 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 Agency Clerk in the 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.

OR

3. In addition to requesting an administrative hearing, any petitioner may elect to pursue mediation under section 120.573, F.S., and must negotiate an agreement to mediate 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), 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) with the Agency Clerk in the Office of General Counsel of the Department at 3900 Commonwealth Boulevard, Mail Station 33, 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.



Florida Department of Environmental Protection  
Twin Towers Office Bldg., 2600 Blair Stone Road • Tallahassee, Florida 32399-2400

DEP Form # 62-761.900(4)

Form Title: Alternative Requirement or Procedure Form

Effective Date: July 13, 1998

## Alternative Requirement or Procedure Form

AP# 581TPA

Please print or type, fill out completely, and attach additional sheets for multiple facilities.

### Section 1

Facility ID No: 298629070

County: Hillsborough

Facility Name: Motive Enterprises, LLC - Port Tampa Terminal

Facility Location: 6500 Commerce St. Tampa, FL 33316

### Section 2

Applicant's Name:

David A. Meaux - Project Coordinator

Address: 1507 E. Frisco Dr. La Placa, GA 30068

Applicant's Telephone Number (905) 652-1652

### Section 3

Cite citation within Chapter 62-761, F.A.C. that an Alternative Procedure is being requested for: F.A.C. 62-761.700 (1) (b)

Difference between the Chapter 62-761, F.A.C. requirement and the Alternative Procedure Request: The AP provides corrosion control of the interstices of double steel AST's without using Cathodic Protection.

Please write a brief description of the proposed Alternative Procedure. (If you need additional space, please attach a separate sheet):

through the use of a constantly-monitored probe installed between the floors, the precise corrosion rate in mils per year is determined. This rate is then utilized to calculate the remaining safe operating life of the bottom floor which is used to calculate the next inspection interval. The calculated interval supersedes the normally-accepted interval per API 653 since it reflects the highest determined corrosion rate.

### Section 4

Please provide a brief demonstration of how the proposed procedure protects the lands, surface waters, or groundwaters of the State versus (1991.)

#### EXHIBIT A

equivalent degree of protection for the same space, please attach a separate sheet.

The Alternative Procedure provides a method of establishing the next out-of-service inspection date required to prevent product release, thereby protecting the lands, surface waters, or groundwaters of the State. See attached sheet "Attachment A")

### Section 5

David A. Meaux

Applicant's Name (Print or Type)

David A. Meaux

Applicant's Signature

January 17, 2004

Date

DEP Form 62-761.900



## **"Attachment A"**

**January 17, 2002**

### **Alternate Procedure for Corrosion Control in the Interstices of Double Bottom Aboveground Storage Tanks**

#### **History**

In the interstitial space between floors on aboveground storage tanks designed with double steel floors, over time, the originally installed cathodic protection system eventually yields inadequate levels of cathodic protection to comply with industry accepted NACE protection criteria. This diminishing level of protection is usually due to depletion of anodes.

Since regulation currently requires that corrosion protection be maintained by adequate cathodic protection levels, it is often necessary to replace these systems. Due to design constraints, this is usually possible only by elevating the tank, removing the original floor, installing a new cathodic protection system, and reconstructing the bottom of the tank. Another method involves removal of the internal floor, retrofitting with new cathodic protection equipment, and re-installing the internal floor.

Either of these methods is extremely costly and, on large diameter storage tanks, is economically prohibitive.

#### **Alternative Procedure**

The procedure described herein involves installation of corrosion probes in existing radial monitor tubes extending under the primary floor from the perimeter into the space between the two floors.

These probes are devices which are placed in close proximity to the surface which is subject to corrosion (i.e. bottom side of the primary tank floor). Attached monitoring equipment measures the precise corrosion rate of the probe which is in the same environment as the corroding surface of interest.

Note: The probes have been successfully used in the pipeline industry for years.

Data from the probe is transmitted to a data collection point where annual corrosion rate (mils per year) is calculated. The calculated corrosion rate is then used to determine the remaining safe operating life (RSOL) as required by API 653. The RSOL is utilized to

determine the maximum operating interval until the next out of service inspection based on remaining floor thickness data acquired by the last API 653 floor inspection (Examples below):

Example No. 1 A floor with a corrosion rate of 5 mils per year as measured by the probe with a corrosion allowance determined by API 653 inspection of 100 mils would yield a remaining safe operating life of 20 years- 20 years/ 5 mils per year). In this case, the normally allowed API 653 maximum interval of 20 years can be used.

Example No. 2 A floor with a corrosion rate of 3 mils per year as measured by the probe with a corrosion allowance determined by API 653 of 50 mils would yield a remaining safe operating life of only 16.6 years. In this example, the next API 653 internal inspection would be less than the normal API 20 year interval. In this case, tank would be taken out of service earlier in order to protect the integrity of the asset and the environment.

#### **Equivalent Protection of the Outside Environment as Required by State of Florida**

The procedure described herein provides corrosion control through precise measurement of corrosion, if present, which enables safe inspection intervals. Accurate prediction of corrosion thresholds allows safe operation of the asset while preventing unexpected failures and resulting leaks and groundwater contamination. Also, the presence of the sealed interstice provides additional assurance of environmental protection.

The normally utilized cathodic protection approach, which is always used where feasible, provides theoretical protection as proposed by industry standards (NACE).

This alternative procedure provides constantly monitored, accurate data which assures protection of at least equal level to that provided by cathodic protection.

#### **Additional Advantages**

1. In addition to the corrosion measuring probe which is the heart of the system, the procedure also involves injection of a vapor phase, environmentally safe inhibitor which, over time, establishes a chemical interface between the interstitial material (sand, concrete, etc.) and the under side the tank floor which reduces or mitigates corrosion resulting in increased safe operating life.
2. The usual practice of periodic visual (for hydrocarbon liquid) and electronic surveillance (for hydrocarbon vapors) of the interstitial space through existing radial leak monitor ports at the tank perimeter also continues to be performed.

EXHIBIT A