UREA DEF INSTALLATION

1. INTRODUCTION

1.1. Follow these Supplemental Instructions as well as all instructions covered in the most recent edition of Containment Solutions, Inc. (CSI) Tank Installation Instructions (Pub. No. INST 6001).

1.2. It is the responsibility of the owner, installer and operator to follow all requirements contained in the referenced installation instructions, and comply with all federal, state, provincial and local regulations that may apply to tank installation, operations and maintenance.

1.3. No instructions or procedures presented in the referenced installation instructions should be interpreted so as to put at risk any person's health or safety, or to harm any property or the environment.

2. REGULATION REFERENCES

2.1. Installation and use should be compliant with ISO 22241, PEI recommended practice 1100-10, and all applicable Federal, State, Local, or Provincial construction, safety and environmental codes and regulations.

2.2. ISO 22241 provides the Urea Diesel Exhaust Fluid (DEF) requirements including:

- Quality of the Urea DEF solution
- Applicable test methods
- Packaging transportation and storage requirements
- Refilling interface requirements.

2.3. Urea DEF solution must be handled and stored in compatible materials, kept free of contamination, and stored at temperatures that will not cause the solution to deteriorate. The use of contaminated or out of specification Urea DEF can cause filter problems, clogged injectors, deterioration of the selective catalytic reduction process, or poison the vehicle catalytic converters used in the exhaust system. Urea manufacturers may require a system inspection to insure that all components are Urea DEF compatible and that the tank and system have been properly cleaned, rinsed, and flushed before Urea DEF is delivered.

2.4. Double-wall tanks with annular space monitoring are recommended by the PEI practice and the EPA for the storage of Urea DEF solution.

2.5. For double-wall tanks, dry annular space monitoring is recommended so that the Urea DEF solution will not be contaminated by the monitoring fluid in the event of an inner wall leak.

2.6. Tanks must be vented in accordance with CSI Tank Installation Instructions.

2.7. Compressed air used to leak test the primary tank and piping should be dry, filtered, and oil free. The use of in-line water traps and desiccant filters is recommended. The introduction of oils or other contaminants into the tank may add difficulty in cleaning the tank to meet the requirements in ISO 22241 before Urea DEF is added to the tank.

3. INSTALLATION

3.1. Keep the primary tank free of any foreign matter such as fuel, oil, grease, detergent, debris, dust, dirt, pea gravel, thread sealant and any other substance.

3.2. All supplied gaskets are Urea DEF compatible. If blind flanges are provided that are not compatible with Urea DEF, the supplied gaskets will completely cover the surface of the blind flange to allow the blind flange to remain in place even if the flange is not used. Flanged connections equipped with a vent or a tank test manifold connection must be removed and replaced with urea compatible piping and flanges.

3.3. Connections to fiberglass flanged fittings must be with flat faced flanges. Raised face flanges may cause damage to the fiberglass flange when the connection is tightened.

3.4. Flat gaskets must be ⅛" thick with a durometer of 50 to 70. Teflon envelope or peroxide-cured EPDM gaskets are Urea DEF compatible.

3.5. The use of NPT threaded piping and tank fittings for Urea DEF is not recommended. Threaded connections are likely to weep urea solution forming urea crystals at the point of the leak. However, if NPT threaded fittings are used, Urea DEF compatible thread sealant is necessary to achieve a tight connection. Use only PTFE based pipe dope and do not use PTFE-based tape.

3.6. A product filter must be installed between the underground tank / piping and the dispensing point. The filter should be sized to insure that Urea DEF supplied to the dispenser nozzle meets the requirements of ISO 22241 and does not pass particulates that may clog the injector nozzles in the vehicle.

3.7. Tank has been cleaned at the factory with deionized or distilled water per ISO 22241-3 Section 4.3 and is ready for the final Urea DEF rinse (per that standard) before the tank is placed into service, All tank fittings were sealed prior to shipment to prevent contamination during shipment. The final Urea DEF rinse and the compatibility of all system components is the responsibility of the customer. If the tank becomes contaminated during installation, it should be cleaned per ISO 22241-3.

CONTAINMENT SOLUTIONS®