



TENANT DIRECTIVE

BWI: 215.2
Date: November 24, 2014
Distribution: D

**TITLE: GLYCOL ABOVE-GROUND STORAGE TANK STANDARDS
FOR DESIGN, LOCATION AND OPERATION**

I. REFERENCES

- A. This Directive supersedes Tenant Directive 215.2 dated October 22, 1999
- B. National Fire Protection Association (NFPA) 1 Fire Code
- C. NFPA 10, Fire Extinguishers
- D. NFPA 70, National Electric Code
- E. NFPA 704, Identification of Fire Hazards, Signs/Signal System
- F. COMAR 29.06.01, Fire Prevention Code
- G. Discharge Permit Number 12-SW, MDE's General Permit for Stormwater Discharge Associated with Industrial Facilities
- H. COMAR 26.08.04, Regulations Pertaining to NPDES Permits
- I. COMAR 26.17.02, Regulations Pertaining to Stormwater Management
- J. 40 CFR 122, 123, 124, and 125 – Regulations pertaining to NPDES
- K. BWI Tenant Directive 215.1, Aircraft Deicing Procedures at Baltimore/Washington International Thurgood Marshall Airport
- L. BWI Tenant Directive 007.1, Building and Installation Permits at Baltimore/Washington International Thurgood Marshall Airport
- M. BWI Tenant Directive 502.1, Hazardous Fuel/Oil, Material and Sewage Spills

II. DIRECTIVE STATEMENT

- A. Request for Glycol Above-Ground Storage Tank Systems (Glycol ASTs) locations must be approved prior to installation by Maryland Aviation Administration (MAA) in accordance with BWI Tenant Directive 007.1, Building and Installation Permits at Baltimore/Washington International Thurgood Marshall Airport, and the current Airport Layout Plan (ALP).
- B. The MAA permits the installation of Glycol ASTs only at locations where gate deicing is permitted: 15R Pad Glycol Tank Storage Area, 28 Pad Glycol Storage Area, and 15L Pad Glycol Tank Storage Area. Refer to BWI Tenant Directive 215.1, Aircraft Deicing Procedures at Baltimore/Washington International Thurgood Marshall Airport, for additional details on pad location. Additionally, installation of Glycol ASTs shall not interfere with:
 - 1. Emergency terminal exits;
 - 2. Fire protection equipment;
 - 3. Vehicle traffic;
 - 4. Other airport operations; and
 - 5. Line of sight concerns from the BWI Air Traffic Control Tower.
- C. This Directive is applicable to all tenants that operate Glycol ASTs at Baltimore/Washington International Thurgood Marshall Airport (BWI Marshall).
- D. Applicable tenants will have eight months from the Directive issue date to fully comply with all Directive requirements.
- E. All Glycol ASTs, both permanent and temporary, located at BWI Marshall are required to comply with the standards contained in this Directive for design, location and operation.
- F. Beginning with the date of this Directive, the MAA will not approve the installation of any Glycol AST unless it meets or exceeds MAA's design standards.
- G. All Glycol ASTs, including those installed prior to the date of this Directive, must meet or exceed MAA's design standards or be removed at the owner's expense.
- H. Transport trailer tanks are not permitted for permanent glycol storage.

III. REQUIREMENTS

- A. All Glycol ASTs located at BWI Marshall shall be: 1) double-walled steel, or 2) single-walled steel with steel containment (i.e. steel dike).
- B. Glycol ASTs must be installed and maintained in accordance with the manufacturer's recommendations. This includes, but is not limited to, commissioning, usage, venting and ongoing maintenance.
- C. Single-walled steel Glycol ASTs may be allowed on a short-term basis. Requests for short-term use must be submitted to the MAA Division of Environmental Compliance for approval.
- D. All Glycol ASTs regardless of capacity shall be surrounded with a containment structure capable of holding 110 percent of the total tank volume. The structure shall be maintained in good condition and should be empty and free of liquid in order to meet the intent of the design. Collision protection is required and may be obtained by the design of the containment structure. The containment structure shall include a lockable drain valve.
- E. The tank owner must submit a Spill Control Plan to the MAA Division of Environmental Compliance. The spill plan must be developed according to BWI Tenant Directive 502.1, Hazardous Fuel/Oil, Material and Sewage Spills, to address any possible spills or leaks that may occur.
- F. The tank must be placed on concrete pads of sufficient strength to support the Glycol AST's weight when full of liquid, including any structural support.
- G. All Glycol ASTs shall be constructed with normal venting that maintains interior gauge pressure less than 2.5 pounds per square inch, in accordance with UL-142 construction standards. Failure to provide adequate normal venting may result in damage to the shell/head of the AST or rupture of the system.
- H. All Glycol ASTs shall have the following label sets affixed to all sides of the Glycol AST system. A reduction in labeling may be allowed if the side or sides are not accessible to first responders.
 - 1. Capacity
 - 2. Contents
 - 3. NFPA 704
 - 4. Emergency Response Contacts

- I. Corrosion of steel Glycol ASTs results in decreased service lives; therefore, tenants shall inspect and maintain exterior Glycol AST coatings in a manner to eliminate surficial corrosion.

IV. PROCEDURES

- A. During glycol transfer both to and from the Glycol ASTs, an operator must be present at the point of transfer during active transfer operations. The operator must ensure the receiving tank has sufficient ullage to accept the quantity to be transferred by manually sticking the receiving tank prior to delivery.
- B. Operation of Glycol AST equipment must be secure from tampering and unauthorized use and must be limited to personnel trained by the tenant to its company's standards.
- C. Glycol AST hoses must be in good working order and be securely fastened in an upright manner to prevent any leaking. Hoses and valves shall be fuel rated (e.g., UL listed). Operators shall close ball valve(s) at transfer pump or tank base after transfer is complete but prior to disconnection from tanker. Hoses shall be inspected on a periodic basis and replaced if the Operator observes excessive wear or cracking that could lead to a leak or rupture.
- D. All leaks and spills must be addressed immediately by the tank owner. Immediate measures must be taken to prevent the migration of spilled material into stormwater drains. The MAA Airport Operations Center must be notified immediately of a leak or spill by telephoning 410-859-7018.

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