Serious Fire Caused by Methanol Sprayed from Duct-Tape Repaired Hose

In a recent incident, personnel were transferring methanol from a chemical transporter tank connected by a hose to a storage tank. When the transporter was lifted by a crane to gravity feed the storage tank, methanol began spraying out a hole in the hose. The methanol ignited on the top deck. Methanol that was sprayed over the side also ignited on the hot exhaust of a compressor located immediately below the transfer point on the second deck.

The bright sunlight and the invisible nature of burning methanol delayed the recognition of the fire. When the fire was recognized, it was compounded by the breaking of the transfer tank’s sight glass when a crewman attempted to kick the valve closed. The fire spread as PSV valves on two other chemical transport tanks began relieving.

After twenty-two 30-lb hand-held chemical fire extinguishers and two 125-lb wheeled units were expended, and the firewater system utilized, fires on both decks were contained. One man received second-degree burns. After the fires were extinguished, it was discovered that the hose used to feed methanol from the transporter to the storage tank was split and had been repaired with duct tape prior to the operation.

The MMS recommends to Operators the following:

- Inspect the critical elements of transfer systems for all flammable products prior to beginning operations. If defective elements are found, do not use those elements. Replace the defective elements before proceeding with the operation.

- Make every effort to avoid transferring flammable products directly over ignition sources such as compressors.

- Create a written procedure for the transfer of flammable products to be used by all personnel, including contractors. Ensure a JSA meeting addresses the procedure and all hazards prior to such operations.