

CASE STUDY

Marsh Hawk TRV's offer **superior performance** to help you meet stricter environmental standards.

Background

New regulations by the EPA (New Source Performance Standards) require owners and operators to find and repair leaks which result in fugitive emissions of both methane and VOCs. Methane and VOCs cannot be emitted in any quantity unless burned in a flare system. Violations have resulted in significant fines and facility shutdowns. Common compliance issues include leaking thief hatches and other relief devices

At a typical Bakken wellsite, a mixture of oil, gas, and water is extracted from the ground through the wellhead to a separator or heater treater. The mixture is separated into hydrocarbon liquids, gas, and water. The produced hydrocarbons are sent to storage tanks at atmospheric pressure, when entering the low-pressure storage tanks the gases (methane & VOC's) in the oil flash off.

Each tank in oil field batteries are outfitted with a thief hatch to allow tank access and to protect each tank from overpressure or excessive vacuum. Typically tanks in these oil field batteries are manifolded together with a one way check valve at the end of the manifold continuing out to a flare system. If each tank has a good seal at the thief hatch the gasses coming off the tanks travel down the manifold through the one way check valve and to the flare system. If any or all of the tank thief hatches are leaking a low flare or no flare will result.

Challenge

- Eliminating thief hatch leakage of methane and VOC's.
- Allowing flashed gas to travel to the flare system and not into the atmosphere.
- Maintaining protection from overpressure or excessive vacuum.

Solution

The answer is the Marsh Hawk (TRV) Tank Relief Vent. The Marsh Hawk offers superior performance in normal and cold conditions with a bubble-tight standard Viton seal. The Marsh Hawk also protects tanks from overpressure or excessive vacuum while maintaining tank access.

Benefit

The Marsh Hawk design is operationally more efficient eliminating flutter and maintaining low leak rates. Our single spring adjustable pressure setting, guided release and seating adds to the bubble tight design. A single gasket for both pressure and vacuum further decreases maintenance costs.

Although Marsh Hawk's have higher up front cost than traditional thief hatches long term benefits far outweigh these initial costs

- Reduced maintenance cost with a single gasket for both pressure and vacuum
- Lower priced OEM replacement gasket & lower priced OEM pressure and vacuum springs
- Pressure spacers can be added and subtracted vs purchasing new spring for new settings
- Accurate pressure settings with bubble-tight seal equals less time spent on site
- Reduced emissions and maintaining EPA flaring regulations



What users in the Bakken are saying:

On Cost-of-ownership "OEM replacement gaskets and springs for traditional thief hatches are so expensive that not having to purchase them in the first year of owning a Marsh Hawk has easily closed the gap on overall cost"

On Performance "Our experience with the Marsh Hawk's vs traditional thief hatches we used for years was night and day difference in fact the majority of the traditional thief hatches leaked right out of the box"

On Maintenance "Our Maintenance efforts have decreased after installing Marsh Hawk's, some sites 2 years later still have the original gaskets"