

# LPG Loading Facility Feedstock Lines

**Update 2021: BPS' Technology improves ESG and reduces OPEX**

**Targa Resources - Galena Park Facility, Houston, TX USA, 2019 - 2021**



**\$72,000 ANNUAL  
COST SAVINGS**

## Problem

Butane and Low Ethane Propane (LEP) feedstocks contain sub micron Black Powder contamination that leads to costly unplanned maintenance and repairs. Previously, the Black Powder was removed using inefficient conventional bag filters, requiring over 50 filter change-outs each month. In addition, these bag filters are ineffective at removing Black Powder particles under 10 microns. This enables contamination to flow through the loading process causing damage to pumps, compressors, cooling systems and loading equipment.



Butane saturated sock filters have pyrophoric properties and are prone to auto ignition. The regular filter change-outs required 3 personnel to carefully remove the filters and immediately soak them in a water tank for 2 days prior to being air dried. Due to safety risks involved, personnel were required to wear full PPE, including Tyvek suits and respirators. The bag filters and contaminated water were treated as hazardous waste requiring costly disposal and tank re-fills.

When handling LEP, there is no threat of pyrophoric ignition, eliminating the need for soaking tanks. However, this feedstock line was experiencing the same costly contamination issues and maintenance intervals.



## Solution

BPS Magnetic Separators were installed on each feedstock line before the conventional filters.

## Result

BPS technology employs a cleanable magnetic array inside a stainless-steel vessel that removes Black Powder down to and below 1 micron. The lack of a cloth media to absorb hydrocarbon fluids resulted in a dry contamination with minimal pyrophoric properties, eliminating the requirement of Tyvek suits and respirators on the butane feedstock. The presence of benzene in LEP persists however, and still requires full PPE. This dry Black Powder can be collected and stored safely at the facility until disposal is warranted.

Since installation of the BPS Magnetic Separator in 2019, Targa has yet to perform a sock filter change-out on the butane system. This has eliminated \$72,000 annually in filter maintenance labour, purchasing and inventory management. The Magnetic Separator has allowed the terminal to completely bypass the sock filters in the butane process, only to be utilized when the BPS units are being cleaned during scheduled maintenance. The LEP filter changes have been drastically reduced as the BPS Magnetic Separator removes most of the contamination before reaching the sock filters. The BPS units can be in operation for several months before cleaning is required due to their larger holding capacity.

By extending maintenance intervals and eliminating exposure to open hydrocarbon vessels during the maintenance process, Targa was able to reduce touch points, opportunity for exposure and injury, and their environmental footprint. They experienced a significant increase in operational efficiency and reliability while significantly reducing costs related to downtime, inventory, labour and disposal.

