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## LPG in Worlds Market

### Oklahoma Fractionator Outage May Weigh on US Inventory Build

Earlier in July, ONEOK shut its 210,000 b/d fractionator plant in Medford, Oklahoma following a fire and explosion. The company told local media that the accident damaged some processing equipment and towers. The plant is still shut and could be months before restart.

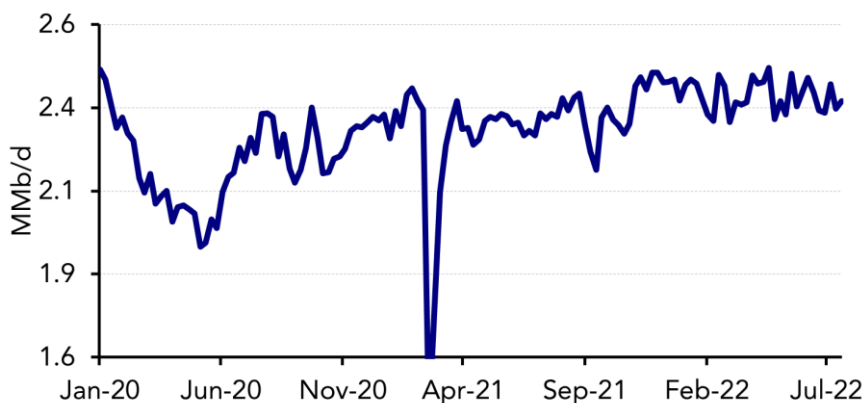
ONEOK will investigate the accident thoroughly and repair will take some time. Additionally, an accident like this may require approval from regulators like FERC or PHMSA as well as third party validation before restarting.

Some market players have said the unit will not be operational before 1Q 2023. ONEOK told Poten that there is no update at this time.

Average operating rates at ONEOK's fractionators in the Midcontinent were above 90% before the outage. Which implies the outage will reduce about 64,000 b/d propane, 20,000 b/d butane and 12,000 b/d iso-butane production.

At an operating rate of 90%, the Medford fractionator supplies about 3.5% of US propane. Each month the plant is shut as many as five VLGCs worth of LPG may be lost, provided the mixed LPG stream is not fractionated elsewhere in the US.

#### US weekly propane and propylene inventory



The EIA reported US propane and propylene production in the week ending July 15 (week following the accident) was 2.35 MMb/d, 3% lower than the previous week. The drop could be caused by the outage.

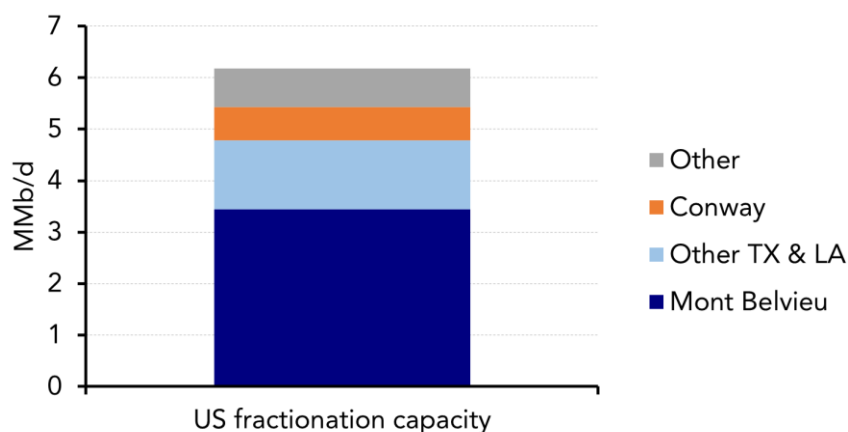
The Medford plant has a much bigger impact in the Midwest market as it accounts for more than 40% of ONEOK's Midwest fractionation capacity of 520,000 b/d. ONEOK itself is a major player in the region accounting for nearly 80% Midwest fractionation volume of 650,000 b/d.

As long as the Medford fractionator is shut, ONEOK has to either store most of the mixed NGL stream at its Conway, Kansas storage hub, utilize spare capacity in the region or send it to the USGC for storage and/or fractionate at other fractionation plant with spare capacity.

ONEOK's Sterling and Arbuckle pipeline can be utilized to ship the mixed NGL stream to Mont Belvieu to ONEOK's fractionators in the USGC or to plants operated by other midstream companies.

ONEOK currently has four fractionators at Mont Belvieu with 425,000 b/d capacity and is building a fifth unit with 125,000 b/d capacity that will start in 3Q 2023. The company's Mont Belvieu fractionators generally run at 85-90% utilization rate

### US fractionation capacity



The good news is there is spare fractionation capacity at Mont Belvieu from other midstream companies. For example, Targa Resource has 840,000 b/d fractionation capacity at its Mont Belvieu complex. The company reported it processed a record 737,200 b/d in 2Q 2022. Energy Transfer has about 1 MMb/d fractionation capacity and reported fractionation volume of 938,000 b/d in 2Q. Enterprise Products which hold the largest capacity at Mont Belvieu with 1.56 MMb/d also has some spare capacity.

However, the company expects capacity will max out by early-2023, according to a recent investor presentation. The midstream company is building their 12th fractionator at Mont Belvieu, which is expected to come online in 3Q 2023, until then fractionation capacity will be tight. Energy Transfer and Targa is also building one fractionator each at their Mont Belvieu complex with a startup date in 3Q 2023 and 2Q 2024, respectively.

Even if the mixed NGL stream from the Midwest is fractionated in USGC, a prolonged outage of the Medford plant could lead to lower propane supply in the US Midwest as there is very limited pipeline capacity between Mont Belvieu and Conway. Propane can be shipped via truck from USGC to Midwest which will require a higher price in Conway compared to Mont Belvieu.

## Inventory could be misleading

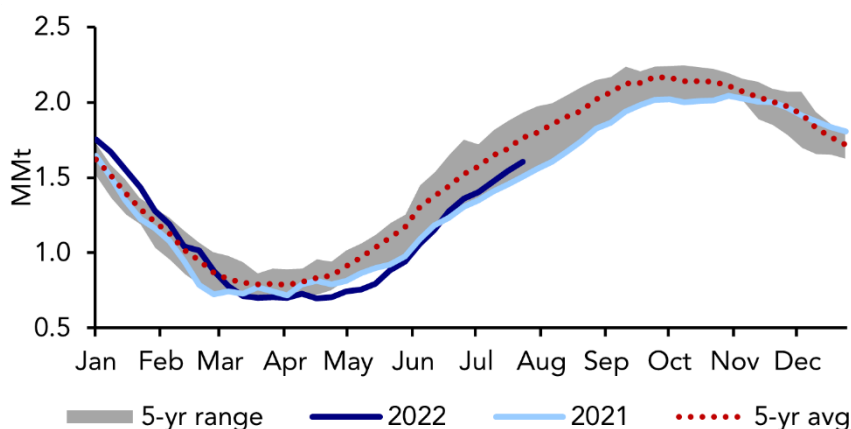
US Midwest propane inventory fell below the five-year minimum in April and May of this year. Production growth has helped inventory to rise higher than last year since June but is still below the five-year average. The region usually builds inventory ahead of the peak demand season that start in October due to crop drying and heating in the winter months. The fractionator outage will most likely tighten supply this winter in the Midwest.

Market players in the US also track the propane price spread between Conway, Kansas and Mont Belvieu, TX to gauge whether products will be stored at Conway or flow to USGC where it can be stored, exported or sold to chemical plants. Usually, a 3-4 cents/gal discount at Conway is required to cover the shipping cost.

The spread between Conway and Mont Belvieu TET propane averaged just under 6 cents before the accident, according to OPIS. The spread narrowed to under 2 cents/gal and even traded near parity on some occasions

between July 11-15, the week after the accident. The spread rose to 4 cents/gal towards end July after EIA reported normal inventory builds in the Midcontinent during the two weeks following the outage.

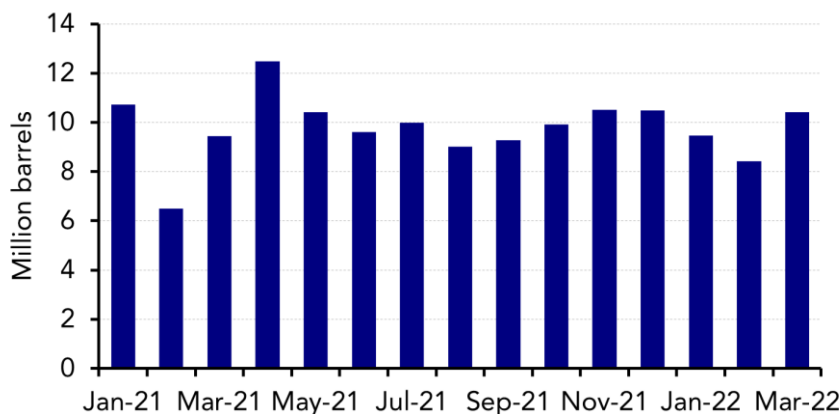
### US Midwest weekly propane inventory



However, keep in mind the weekly propane inventory data from the EIA includes purity propane as well as estimated percentage of propane in the mixed NGL stream. Which means that if the outage forces ONEOK to store mixed NGLs in Conway it will still increase the reported propane inventory number, but a significant amount will not be readily available for distribution and consumption as purity product which can become an issue when demand for purity product starts to rise from October.

A prolonged outage could narrow price spreads once again and affect pipeline flow of propane from Conway to Mont Belvieu as well. The weekly USGC inventory data could also include the mixed NGLs from Conway.

### Pipeline propane flows from PADD 2 to PADD 3



The USGC received 86.8 million barrels of LPG (equivalent to 157 VLGC cargoes) from the Midwest from July to December of 2021, of which 59 million barrels (equivalent to 107 VLGC) was propane, according to the EIA. Given the inventory at USGC is also near the five-year minimum this can become an issue if the winter is colder than normal.