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Please fill in your manuscript title.	GOSP Environmental Initiatives to Minimise Flaring	
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Abstract

Objectives/Scope:

The objective of this paper is to showcase three initiatives, which have been implemented at different Gas Oil Separation Plants (GOSP), and played important roles in flare minimization as well as GOSP environmental stewardship. These initiatives follow:

1. Installation of ultrasonic flare flowmeters technology.
2. Reroute of Water Oil Separator (WOSEP) gas out process line from flare header to Low Pressure Production Trap (LPPT).
3. Installation of new gas process line and controller between High Pressure Test Trap (HPTT) and LPPT.

Methods, Procedures, Process:

The ultrasonic flare flowmeters were installed on the flare headers at different GOSPs, downstream existing thermal dispersion type flowmeters. The aim of the new flowmeter is to provide accurate as well as wide range of reading for the flaring rate figures.

In addition, new gas process lines were installed from the HPTT and WOSEP to the LPPT to capture the gas rate into the production as possible, instead of dumping the gas to the flare. Hence reduction of flare emissions can be recognized as well.

Results, Observations, Conclusions:

As a result of installing the ultrasonic flowmeter technology, the new flowmeter will avail capturing both normal and upset flare conditions in which gas flow exceeds 1.5 MMSCFD. Moreover, the scenarios where the gas flow rate goes high can be anticipated during startup/shutdown activities, plant/equipment trips, valves leaking conditions, etc.

In addition and due to the installation of new PCVs on the test traps, this upgrade enabled recovering of additional rates of gas flow processed from HPTT up the LPPT pressure setting, which is typically at 50 PSIG. The test trap activities include pipeline depressurizing, well reviving, and daily well testing activities.

Similarly and due to simple enhancement of WOSEP gas out destination, all of the gas processed through the WOSEP as blanketing gas can be recovered to the LPPT by making use of differential pressures between the two (2) vessels process (i.e., WOSEP at 70 PSIG and LPPT at 50 PSIG) and without introducing additional control loops.

Novel/Additive Information:

The aforementioned items representing some efforts to reduce flaring as well as provide efficient and cost-effective solutions to address environmental concerns. Additional benefits for the implementation of these items can also be recognized in promoting the plant gas process efficiency, as well as generating additional revenues from the hydrocarbon resources. Finally, the mentioned upgrades on this paper may also be applied at a wide range of different oil/gas processing facilities.