

Trouble Shooting Production Platform Upset Problems

Recently, a small flash fire occurred when condensate carried over into a platform's flare scrubber due to a malfunction of the Low Pressure Separator Level Safety High (LSH). Operating personnel were attempting to restore production, but were unable to do so when they could not locate the appropriate production vessel's first out indicator to correct the problem. The platform was shut-in by a LSH on the wet oil tank. A hydrocarbon mist was observed coming from the flare scrubber vent, and the wind blew the mist back to the generator's hot exhaust piping igniting the mist. The flash fire was quickly extinguished utilizing one handheld fire extinguisher. No personnel were injured, no pollution occurred, and the only damage resulted in scorched paint on the top of the generator.

The investigation revealed that a malfunction of the Low Pressure Separator LSH allowed condensate to carry over into the flare scrubber. The flare scrubber filled with fluid and the discharged hydrocarbon was wind-blown to the generator's hot exhaust piping resulting in a flash fire.

Therefore, MMS recommends the following:

- When restoring platform production, trouble-shoot possible LSH set point problems on upstream production vessels.
- Clean the sight glasses on all vessels in order to clearly verify fluid levels.
- When trouble shooting upset problems on production platforms, closely monitor fluid accumulation in the flare scrubber. Fluid levels can be confirmed with use of an effective sight glass.
- Relocation of flare piping may be required in order to vent away from ignition sources.
- Operators are to be reminded that only the minimum number of safety devices shall be taken out of service when returning the platform to production following an upset.

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