FUELS INDUSTRY
Association of South Africa

SAPREF – Mogas LOPC
October 2024

2024

INCIDENT DESCRIPTION

Description of Incident: On 16th Oct 2024, at approximately 23h35, during a planned Ship to Shore discharge of a gasoline vessel into shore Tanks that had started on dayshift, an additional MOGAS Rundown line (Leg 1) was commissioned to increase the rate. Approximately 35 minutes later, the field operator discovered MOGAS flowing out of the MOGAS Rundown line (Leg 2) that had been commissioned upstream. The discharge to this line was subsequently isolated.

There was carryover of product to the stormwater system which resulted in an impact to the bay between Berths 7-10.

Estimated 250m3 of gasoline was released into the atmosphere (Air, Soil, Water).

There were no injuries during the incident.

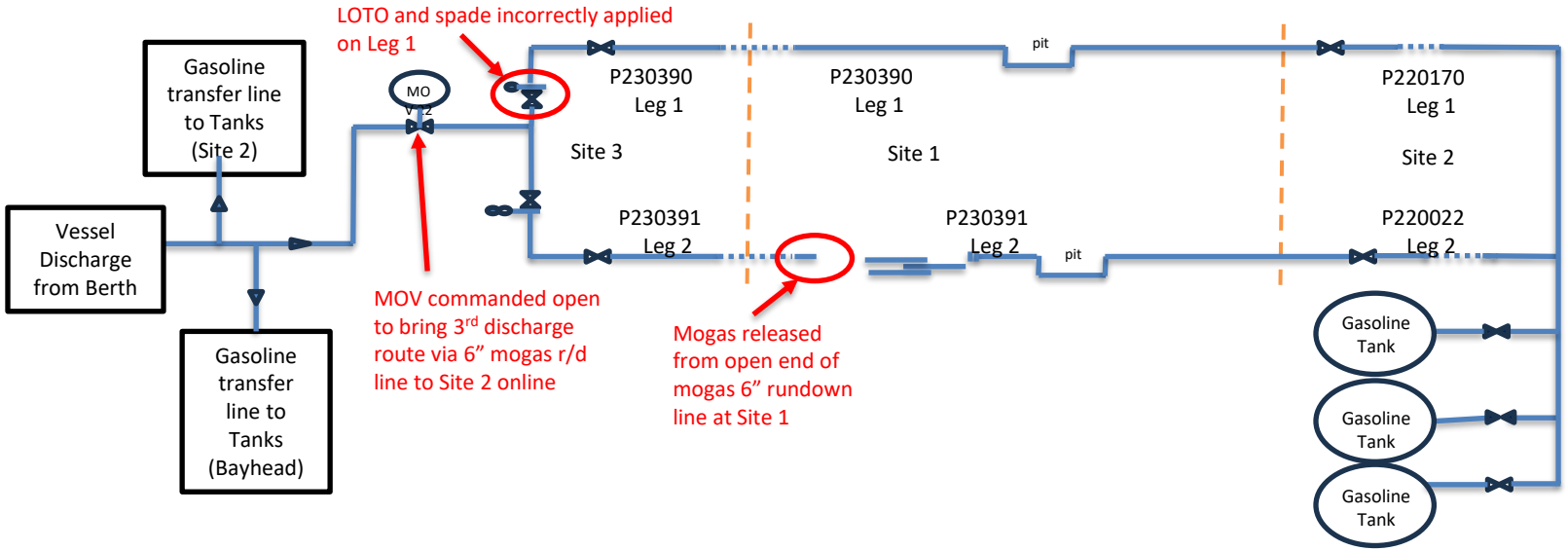

Figure 1: Simplified process flow during mogas discharging

INCIDENT UNDERLYING AND ROOT CAUSE

Main Causes:

- An incorrect MOGAS line was isolated and decontaminated in preparation for maintenance activity.
- The verification of the isolations prior to cold cutting commencing was ineffective
- MOGAS vessel discharged product into an open- ended pipe resulting a release of MOGAS.

Contributing Factors:

Management System

- There is no consistent method of line identification utilized across the inspection, maintenance and operations teams which increases the likelihood of human error when identifying lines.

Poor Process Safety Awareness

- The process safety awareness of the personnel involved in planning, executing, and supervising the cold cutting activity was insufficient to enable personnel to recognize and understand the risk and implications on isolations applied to the line, when mogas was found to be present in the line.

Ineffective implementation of procedure:

- Multiple checks/verification steps are detailed in the LOTO, spading and control of work procedures to verify isolation design against field application, but these requirements were not followed as intended by the procedures.

INCIDENT LEARNINGS

- There needs to be more than one way of confirming line ups, whether for maintenance or for operations.
- Application of Stop Work Authority and escalation paths must be clear to all site staff and contractors
- Field verifications of drawings, scopes and plans must be done independently of the initiator and action parties for Plant Change Requests.
- Application of all Site Procedures must be adhered to 100% by all users.