सुरक्षा अलर्ट / SAFETY ALERT

OISD/SA/2026-27/P&E/09 **Date: 06.08.2026**

INTRODUCTION

Title: Fire in storm water channel and spreading to nearby areas

Location: Group Gathering Station cum Central Tank Farm

Loss/ Outcome: Asset losses including 48 barrels of de-emulsifier chemical, 4100 meters of electric cables, 15700 meters of instrument cables and junction boxes.

BRIEF OF INCIDENT

Welding job of supports for newly erected bypass line to eccentric orifice downstream of crude oil separator was being carried out in morning shift. At around 15 minutes before noon, contract personnel noticed fire in the adjacent storm water channel. They tried to extinguish the same with portable fire extinguishers. A company employee passing by the area noticed the fire and informed control room, which in turn informed the sub fire station. Contract personnel along with company operating staff laid firewater hose and started applying water in channel through fire hydrants. Fire spread through storm water channel to De-emulsifier drums in east, and to cables and junction boxes in north-west, both approximately 50-60 meters apart.

Fire team reached the location 13 minutes after fire was noticed and began firefighting with foam. Fire was extinguished 15 minutes later and cooling operation was continued for another 15 minutes.

OBSERVATIONS/ LAPSES

- The proposal of bypass line was initiated to avoid separator shutdowns during downstream leakage. Management of Change procedure was not followed; modification proposal was sent directly to contract & materials (C&M) department without engineering study or risk assessment.
- The indent for providing the bypass line to the eccentric orifice meter lacked engineering clarity, including line routing, required supports, drain/vent, isolation valve specifications etc.
- Laying and support work of new bypass line was completed 3 days back, but the supports were left with tag weld; final/ continuous weld was not done. No assessment was made to determine whether continuous/ stitch welding was necessary.
- Hot work permit (on hard copy despite availability of e-permit system) was issued on the day of incident to do the final welding of tag welded supports. Work permit was received by welder instead of contract supervisor.
- JSA (Job Safety Assessment) was not carried out, nor the toolbox talk was given to workers prior to the hot work job. Welding work was started without proper booth preparation to contain the sparks and weld spatter. No company employee was nominated to supervise the job.
- Storm water drains contained significant oil residue, even after the incident. Shift personnel routinely flushed lines during sampling, sending oil into drain system that emptied into the open storm water channel.

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- 30 days stock of flammable de-emulsifier chemical (48 HDPE and 93 Mild Steel barrels each containing 180 Kg chemical) was stored near pump house area adjacent to storm water drain without assessment of safe storage capacity and corresponding risks involved.
- As the fire spread through storm water drain and engulfed drum storage area, firewater was applied to douse fire and cool the drums, but the HDPE drums started cracking and bursting releasing more fuel to the fire. Fire water pushed the burning oil towards north-west side, further spreading the fire to cables and instrument junction box area. MS drums remained intact.
- Only three of the eight personnel entering the installation for welding possessed valid MVT (Mines Vocational Training) certificates.

CONCLUSION/ ROOT CAUSE

- JSA was not carried out prior to the commencement of welding job. Risk involved with presence of oil in the storm water channel adjacent to hot work location was not perceived. Proper booth to contain sparks and weld spatter was not prepared. Toolbox talk to convey the hazards and precautions was not given to workers.
- Large inventory of flammable chemical stored in process area without risk assessment added more fuel to the fire.
- Lack of training & emergency preparedness; contract workers and company shift employees were unaware of firefighting methods for pool fire and applied water, which resulted in further spreading of fire.
- Failure to follow the Management of Change procedure, absence of engineering assessment, inadequate planning and lack of supervision were the contributing factors to the incident.

RECOMMENDATIONS

- Management of Change procedure with feasibility study and risk assessment shall be followed for all changes.
- Hot work permit procedure and JSA as per OISD-STD-105 shall be followed for all critical activities involving spark or flame or other sources of ignition.
- Closed sampling system should be provided for all sample points with an objective to avoid/ minimize Hydrocarbon draining/ venting to atmosphere.
- Any Oil/ chemical/ water accumulation in storm water drain should be cleared, and proper housekeeping shall always be maintained.
- Large inventory of chemicals shall be stored in dedicated place away from process area with adequate safety measures arrived through hazard identification and risk assessment.
- Emergency preparedness and awareness shall be created through regular mock drills and practical firefighting training for company employees and contract workers.

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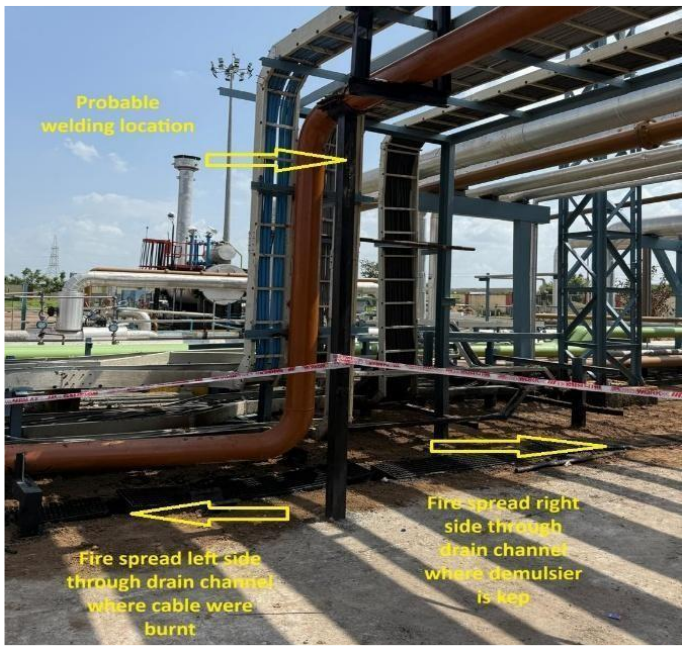
PHOTOGRAPHS



Hot work location and adjacent storm water channel

Oil available in the storm water channel and spilled beneath piping

De-emulsifier Storage area and affected barrels from blaze

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Instrumentation Junction Boxes burnt out due to Fire

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