

UKOPA SAFETY ALERT

JCB Impact on above ground section of High Pressure Pipeline

Initial actions and investigation:

18th February 2010

- An approved refinery contractor collided with the pipeline above ground section with a JCB on the 18th February during excavation works. Activities were alleged to have been restricted to hand digging only, however, the contractor used the JCB to 'drag' spoil to an area away from the excavation and in doing so, the boom 'elbow' collided with the side of the pipeline.
- Resultant impact caused coatings damage down to bare metal and horizontal displacement across the vertical support.
- Pipeline isolated - Block valve (Refinery south terminal) closed.
- Pressure reduced on Pipeline to 10bar.
- Inspection carried out by joint team from Refinery, Operator and Land management contractor.
- Ultrasonic thickness, and magnetic particle tests carried out by specialist.
- Initial results from tests reveal no evidence of cracks. Minimum thickness measured at 7.3mm, average thickness measured at 7.6mm.

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19th February 2010

- X-Ray carried out on impact area and two circumferential adjacent butt welds.
- No crack like indications noted.
- Further inspections carried out by pipeline inspectors, mechanical engineers and fitness for service engineer.
- No concerns relating to horizontal displacement or impact.
- Pipeline lifted back to original position.
- Normal operations resumed approximately 24 hours from incident.
- HSE notified.
- Refinery to conduct appropriate investigation.

Conclusion Summary:

- Refinery contractor's risk assessment had only identified risks associated with hand digging type excavation and not use of machinery.
- The use of the JCB to 'drag' spoil from the excavation site was not subjected to further risk assessment.
- The contractor advised that they were aware of the local hazards but the driver and banksman failed to recognise the full movement range of the JCB.

Learning Lessons:

- Ensure that the contractor's risk assessment and method statement covers complete range of activities.
- Any change of working method must be reassessed for additional risks / mitigations.
- Ensure that appropriate levels of competence are demonstrated for the task in hand.
- Ensure that equipment used is suitable for task in hand.

HSE investigation outstanding.

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