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Incident Investigation Summary

Responsible Manager: Andrew Fishburn
Incident Reference No: 35305/09/NG
Person Responsible for National Implementation: Tony Stonehewer

Release of gas at Thornton Curtis C Offtake due to a failed isolation

What happened?
During the removal of an orifice plate to investigate a meter suspect fault a remotely operable valve being used as part of the isolation unexpectedly opened. This resulted in the maintenance team being exposed to a release of gas to atmosphere at approximately 55barg via the orifice plate carrier. The team immediately left the site to a safe area. Following a risk assessment the team then re-entered the site and isolated the release of gas by closing a manual valve adjacent to the remote valve which had opened.

Why Did This Happen?
The immediate cause of this incident is that the actuator switch was in the "REMOTE" position whilst intrusive work was being carried out on the metering stream. The valve therefore was under the control of the flow computer which sent a signal to open the valve.

Learning points
Isolation of remotely operable valves: (refer to Safety and Engineering Bulletin EB080)
Where a stream is to be isolated by a remotely operable valve, always close the valve in local control at the valve and not remotely even when the control building is on the site.
Remotely operable valves or valves with stream selection shall be further disabled by the following method:

1. Electrically-powered:
The power to the actuator system is turned off (electrically isolated) and locked shut, e.g. **stop-locked** in the off position. (see photo)

2. Gas-powered
The gas supply to the valve actuator shall be isolated and vented. The power gas isolation valve shall be closed and where possible locked and a section of pipe work removed to ensure the actuator is physically isolated from the gas supply. The system shall be vented downstream of any pressure vessel, the vessel may also be vented however the operator shall check to ensure there is no residual gas within the actuator or the vessel. Reference should be made to Management Procedure T/PM/Maint/2 Part 3, T/PM/TR/17 and Work Procedure T/PR/Maint/2317

3. Response to emergency situation
T/PM/EM/76 (Management Procedure for Managing Gas Release Emergencies and Damage on the Above 7 Bar Gas Transmission System) provides guidance on how to manage and respond to incidents involving high pressure releases of gas.

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Circulation: Transmission MD Gas, Distribution Operations Network Maintenance, Metering I&C.
Issue Date: 26th March 2010 **Review Date: 26th March 2011**

For further information regarding this bulletin please contact or the Responsible Manager detailed above.