MP-188 Incident April 28-29th, 2011.

Incident Description

18:32 hrs. - On the evening of April 28th, 2011 the Plains Control Centre SCADA (Supervisory Control & Data Acquisition) system recorded the inlet PCV (Pressure Control Valve) at Nipisi having gone closed. The control center operator responded to the event by calling out field operations to verify operation of the control valve. The control centre operator also noted low flow conditions into the Nipisi terminal.

SCADA indicated the following events near the time of the closure of the PCV. Increase in flow rate and decrease in discharge pressure at the Cadotte terminal. EVI terminal discharge pressure decreased. Nipisi terminal inlet flow rate decreased to zero flow and pressure decreased.

18:35 PLM(**P**ipeline **M**onitoring – Leak detection) alarmed – alarm acknowledged by operator, (SCADA system alarms appear on the SCADA screen, the alarm is acknowledged by selecting this alarm on the SCADA screen and single clicking on the alarm with the use of the SCADA mouse.)

18:36 PLM alarmed – SCADA recorded - alarm acknowledged by operator

18:38 PLM alarmed – SCADA recorded - alarm acknowledged by operator

19:00 PLM alarmed – SCADA recorded - alarm acknowledged by operator

19:00 SimSuite leak detection alarmed – SCADA recorded - alarm acknowledged by operator

19:22 North end of Rainbow Pipeline was shutdown by Control centre operator (CCO)

19:41 PLM alarmed – SCADA recorded - not acknowledged at this time

19:54 PLM alarmed– SCADA recorded - not acknowledged at this time

19:57hrs. Plains operator (███████) arrived at Slave Lake office to log into the Nipisi terminal PLC remotely to first assess the operation of the control valve. During this time the line was restarted in order to run tests on the control valve and test readings back to the control centre.

SCADA indicated the following- control valve position was showing 45% that was set by field operator (███). EVI and Cadotte crude injection was restarted, flow increased into Nipisi.

Following this initial assessment of the control valve operation and related pressure problems, local field operator (███████████) then proceeded to the Nipisi terminal for visual inspection of the site. Travel time approx. 1-1.5 hours.

20:04 PLM alarmed– SCADA recorded - not acknowledged at this time

20:05 PLM alarmed– SCADA recorded - not acknowledged at this time

20:06 SCADA recorded – SCADA recorded Operator acknowledged and the 4 prior PLM alarms

20:09 hrs. The control centre operator stated that the pipeline was shut down during the period that the Plains operator was in transit from Slave Lake to the Nipisi terminal.

20:23 PLM alarmed– SCADA recorded - not acknowledged at this time

20:38 PLM alarmed– SCADA recorded - not acknowledged at this time

SCADA indicated the following @21:00 EVI terminal crude injection was restarted at 90m3/hr. it ran for a period of 10 minutes.

21:01 PLM alarmed – SCADA recorded - operator acknowledge alarm as well as two prior PLM alarms

21:02 PLM alarmed – SCADA recorded - alarm acknowledged by operator

21:19 PLM alarmed– SCADA recorded - not acknowledged at this time

SCADA indicated the following @21:20 EVI terminal crude injection was restarted, it ran for a period of 15 minutes.

21:25 PLM alarmed – SCADA recorded - operator acknowledge alarm and one prior PLM alarm

21:48 PLM alarmed– SCADA recorded - not acknowledged at this time

21:50 – Control Centre operator sent out first Outage Notification –via email to Notification distribution list

22:26 PLM alarmed– SCADA recorded - not acknowledged at this time

22:30hrs. – Field operator (███ ████████) arrived at Nipisi site and the control valve was confirmed to be functioning, the local pressure transmitter was also looked at and initial indication was that it was functioning.

The injection from Cadotte was restarted to validate valve operation and pressure transmitter readings. The pipeline pressures were not returning to normal, flow rates at Cadotte were above previous rates and flow rate into Nipisi terminal had dropped off. EVI and Utikima flow rates were increased in an effort to re-establish line pressures.

22:33 PLM alarmed – SCADA recorded - operator acknowledged alarm and two prior PLM alarms

22:37 PLM alarmed – SCADA recorded - operator acknowledged

22:57 SimSuite leak detection alarmed – SCADA recorded - operator acknowledged

SCADA was indicating the following – starting @23:46 – many setpoint adjustments were made on the PCV at Nipisi by the control centre operator.

SCADA was indicating the following @00:14 – PCV at Nipisi shows closed, flow rate into Nipisi decreases to zero. Crude injection flow was increased at EVI

00:45 hrs.- Control Centre operator (████████)made a call to the control centre supervisor (███ ██████) to inform him of the situation. The control centre operator reported concerns about metering, pressure transmitter problems, back pressure valve and PLM alarms. The control centre supervisor

asked if the SimSuite leak detection system was indicating a problem. The control centre operator stated that there were no concerns with SimSuite.

Following the discussion, the decision was made to leave the line running a while longer to see if pressures would increase further as pressures seemed to be building at the Nipisi terminal.

01:03 - SimSuite leak detection alarmed – SCADA recorded - operator acknowledged

SCADA indicated the following @02:00– Cadotte injection was completed. Line from Rainbow Terminal was restarted for approx. 30 minutes.

02:43- SimSuite leak detection alarmed – SCADA recorded - operator acknowledged

02:50hrs.-The pipeline was shutdown due to continued pressure concerns and flow fluctuations.

03:00hrs. - Calls to operations (Area Supervisor ▆▆▆▆▆▆▆▆/ Control Centre Supervisor ▆▆▆ ▆▆▆▆▆) were made to update them of the pipeline operation being discontinued.

03:50hrs. Updated Outage Notification sent out - via email to Notification distribution list

NOTE – all times are M.S.T (SCADA) times and not M.D.T.

(SCADA time is Alberta local time minus one hour)