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15/09/2014

Mr I Oakes
Natural Resources Wales
Chester Road
Buckley
Flintshire
CH7 3AJ

Dear Mr Oakes

PART B REPORT (SCHEDULE 1) – PPC PERMIT NUMBER BU 2357

Please find enclosed further information provided as an additional Part B report for the following
Part A notifications:-

Part A ref. No's. 07/09/2014

Yours sincerely
FOR WARWICK CHEMICALS

MR PETER BRYANT
HEALTH SAFETY & ENVIRONMENT MANAGER

	DATE	TIME
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Part B Notification (schedule 1) in accordance with condition 5 (5.1.1 and 5.1.2) of PPC Permit BU 2357.

REFERENCES

Part A form, Ref. N°. 07/09/2014 submitted to the Environment Agency on 12/09/2014.

Further, more accurate information on the matters for notification under Part A.

Weekend inspection of Tank Farm 2 identified that there had been a leak from one of the transfer lines from one of the raw material storage tanks into Plant 6. This line contained acetic acid/acetic anhydride mixture used for flushing the transfer lines in Plant 6. The line-flushes are carried out by operator request starting a pump for a pre-determined period of time.

There was no noticeable smells other than very local to the bunded area. All the equipment in the bund is explosion proof. The flash point of this type of mixture, without any water content, is above 50°C.

Early estimations put the loss of containment at about 10 to 12 tonne. An accurate figure of the loss has been difficult to calculate more accurately as the raw material storage tank is being continually filled from two separate sources and is intermittently being pumped from, to provide line-flushes in the production plants.

Inspection of the Tank Farm the day before had identified an amount of water in the bund but not enough to warrant putting on the steam ejector to pump it out. This quantity of water further complicated the assessment of the quantity of material lost.

Once the on-site response team had isolated the pipeline and pump the leaking flange was identified. The maintenance fitter changed the gasket and replaced the bolts/nuts on the flange with stainless steel ones. The original bolts/nuts had been mild steel and, as a result of seepage through the gasket over a period of time, the bolts had become 'waisted' leading to one of the bolts to fail allowing the flanges to separate enough to cause a visible leak.

Initial analysis of the material in the bund gave a result of 82% acetic acid, 15% acetic anhydride and 3% water. Further analysis was carried out giving a result of 95% acetic acid, 0% acetic anhydride and 4% water – the assumption being that any acetic anhydride had now been converted to acetic acid by any water present.

A vacuum tanker was brought onto site and the contents of the bund were sucked into the tanker. This material has now been recycled back into a compatible process stream.

Measures taken (or intended to be taken) to prevent a recurrence of the incident.

The pipelines from the storage tanks in the tank farm are to be inspected to determine the condition of the flanged joints. The recommendation is that any flanged joint found with mild steel bolts/nuts is re-made using stainless steel bolts/nuts to prevent a reoccurrence of this type of incident.

Observations of the bund following the incident have shown that there was no loss of material from the bunded area; the walls, joints and floor appear to be of sound construction. A leak would have been evident from a resultant pink/white residue at the leak point.

The operation of the tank farm and the frequency of monitoring is thought to be suitable and sufficient. The operation of the tank farm ejector unit, for the removal of any material from the bund, is also thought to be suitable as it relies on a manual operation and therefore the operator will be present to make a determination of the contents and the risk that they pose before they are discharged.

Measures taken (or intended to be taken) to rectify, limit or prevent any pollution of the environment or harm which has been or may be caused by the emission.

It is thought that no measurable environmental damage has occurred as a result of this incident.

Dates of unauthorised emissions from the installation in the previous 24 months.

20/09/12, 28/11/12, 13/01/2013, 06/05/2013, 09/10/2013, 07/11/2013, 23/12/2013, 20/02/2014, 22/02/2014, 26/02/2014, 19/06/2014, 20/07/2014, 21/07/2014, 22/07/2014, 19/08/2014.