06/06/2017

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 the information provided as a Part B report for the following Part A notification:-

Part A ref. No. 18/04/2017 - A

Yours sincerely
FOR WARWICK CHEMICALS

MR PETER BRYANT
HEALTH SAFETY, ENVIRONMENT & SECURITY MANAGER

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

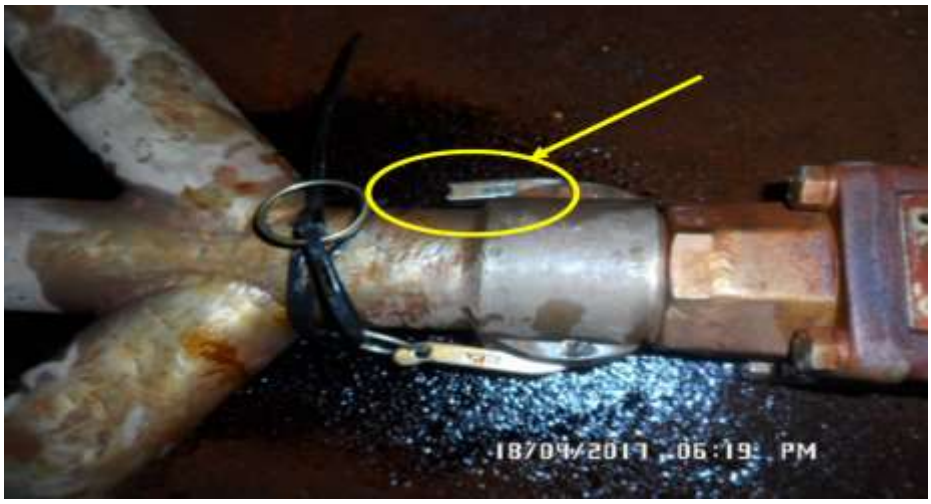
REFERENCES

Part A form, Ref. Nº. 18/04/2017 - A submitted to the Environment Agency on 19/04/2017.

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

Loss of approximately 900 Kg of material during the transfer from Reactor R6/7 to Crystalliser R6/8 in Plant 6. The loss of containment did not result to any personal injuries to Plant 6 operators or attending response team members. The material was a slurry, a mixture acetylated ethylene diamines (Di, Tri and Tetra) in solid and soluble form plus acetic acid and acetic anhydride at 57ºC, the material has a flash point of 51ºC.

R6/7 (Reactor) and R6/8 (Crystalliser) had been prepared for transfer of a batch of reacted AED liquors from R6/7 to R6/8.
Transfer from R6/7 is through flexible chemical hoses and steel adapter pieces connected together with cam lock fittings. The pump used is an air driven 'Wilden' pump. The temperature of the material is cooled to below 60ºC before transfer is commenced. The amount transferred is generally 10,000 Kg.
During routine plant operation the manufacturing operator saw a pool of black liquid under the base of R6/7 but did not see where the material was coming from. The manufacturing operator was unable to check further as the smell was too strong. The manufacturing operator made his way to the plant exit and activated the plant emergency shut down and set off the site emergency alarm. He announced over his site radio where the incident was and that it was a chemical leak. The source of the leak was later identified as coming from a damaged cam lock fitting that had become loose.



All discharge limits for the discharge of the waste water tank that contained the 'loss of containment' material were within consent.

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

All multi connections and chemical transfer hoses have been checked for any damaged/missing parts and, where found, have been repaired or replaced. The type of camlock fitting has been changed and it now has a built in moulding in which a K-pin can be fitted. This K-pin prevents the camlock arms from opening. The requirement for fitting the K-pins has been explained to the manufacturing operators and the requirement to continue to fit cable ties to the camlock arms is still in place. The equipment in Plant 6 has now been assessed for inclusion onto the COMAH critical equipment list and as a result will fall under more stringent maintenance checks/controls.

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. The spilled material was washed into the drainage system followed by copious amounts of water. The material was then adjusted for pH in the central collection chamber.
All discharge limits for the discharge of the waste water tank that contained the 'loss of containment' material were within consent.

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

16/09/2014, 22/01/2015, 02/04/2015, 02/03/2016, 12/03/2016, 23/04/2016, 19/07/2016, 11/08/2016.