



20/01/2014

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 notification:-

Part A ref. No. 23/12/2013

Yours sincerely
FOR WARWICK CHEMICALS

MR PETER BRYANT
HEALTH SAFETY & ENVIRONMENT MANAGER

	INITIALS	DATE
OK FOR PUBLIC REGISTER	<i>[Signature]</i>	21/1/14
COPIED TO PUBLIC REGISTER	JB	EDRM

TITLE :	Part 'B' Report Form			ISSUE NO.	15.0
REF :	RCF20	AREA:	SITE	DATE OF ISSUE:	08.05.13
RELATED DOCUMENT:	WI 903 App C			PAGE:	2 of 3
FILENAME:	23rd December 2013 Part B Form additional .doc			Last printed 20/01/2014 13:28:00 Created on 20/01/2014 11:49:00	



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°. 23/12/2013 submitted to the Environment Agency on 24/12/2013.

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

Initial investigation report submitted on 6th January 2014 is below in italics ...

The process modifications carried out in Plant 5 as part of the Olympian project meant that the double diaphragm air pumps that were used to pump the TAED slurry from the crystallisers in Plant 5 to the slurry tanks next to the Filter Dryer plant were replaced with electric centrifugal pumps. Once a batch in the crystalliser was complete it was pumped to the slurry tank followed by a quick line flush of acetic anhydride. The air pumps that were used were left to run continually and in doing so the material in the slurry transfer line was effectively 'pulsed' and not allowed to settle keeping any solid material in suspension. The change to centrifugal pumps was accompanied by an increase in the line flush quantity followed by a short purge of nitrogen to clear the line of any solid material. The change in the operation of Plant 5 allowed for a greater degree of automation and more accurate batch timing which resulted in consistent scheduling of batch transfers to the Filter Dryer plant. This transfer frequency meant that a batch was being transferred to the slurry tank every 50 - 55 minutes. The 'static time' in the transfer line between batches was not long enough to cause any blockage problems, material coming out of solution.

However, in this situation, when the time between transfers has been extended due to the production rate being slowed down there has been the opportunity for the material to begin to solidify in the pipework and eventually cause a blockage.

Capture of any material during a line cleaning process is always difficult and is very dependent on where the blockage is. Historically, slurry tank transfer line blockages are rarely found within the Plant and therefore cannot be captured within the Plant drainage system, but these are captured within the site drainage system and then treated.

From a 'transfer line blockage frequency' point of view there has been one other transfer line blockage problem within the last six months. This was due to a menu change with the process producing a batch that had a very high solid content. This line blockage was cleared very quickly and only required one section of line to be opened. There were no issues with the waste water system during this cleaning operation.

Following a shutdown on the DAED plant and subsequent slowdown of the TAED production in Plant 5 there were a number of transfer line blockages as a result of TAED dropping out of solution. The main reason for the blockage was the reduction in transfer rate frequency and the reduction in the line wash that keeps the line clear. As a result of the blockages the lines had to be dismantled and jetted out. This activity resulted in a quantity of material being discharged to the site drainage system resulting in a lowering of the overall pH of the waste water. Sodium hydroxide solution was added to the site system to balance the pH and to bring it back within the internal limits of 5.2 and 8.5.

An early test carried out on the material being held in the tank gave a high COD reading. The response to this was to dilute the tank contents with Mostyn water.

Following this dilution another hold, or pre-discharge, sample from Tank 2 gave a result of:

*Solids – 85mg/l
pCOD – 5838 mg/l
pH – 5.8*

All these results were within the emission consent limits so the discharge was authorised by the Plant operator.

Further investigation has shown that the monitoring equipment located in the discharge pipeline had detected that the pH was below the emission limit and had shut the discharge valve. Owing to the weather conditions at the time (heavy rain) and the plant operations (the other waste water hold tank was full) this discharge had to be completed so the decision to override the discharge valve (following the internal procedure) was made and the discharge was allowed to continue.

When the composite discharge sample was analysed the resultant pH was 4.6, below the consent limit.

TITLE :	Part 'B' Report Form			ISSUE NO.	15.0
REF :	RCF20	AREA:	SITE	DATE OF ISSUE:	08.05.13
RELATED DOCUMENT:	WI 903 App C			PAGE:	3 of 3
FILENAME:	23rd December 2013 Part B Form additional .doc			Last printed 20/01/2014 13:28:00 Created on 20/01/2014 11:49:00	



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

Information about this incident will be disseminated amongst the operators on each shift. Discussions are being held with regard to revising the shut-down procedure for any plant equipment and the requirement to ensure that any pipework associated with the equipment is suitably flushed or cleaned out. The revised procedure would also apply to any situation when the production rate had slowed down for any protracted period.

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.

14&15/01/2012, 6&7/08/2012, 20/09/2012, 28/11/2012, 13/01/2013, 06/05/2013, 09/10/2013, 07/11/2013.

