



EPR Compliance Assessment Report

Report ID: BU2357IP/0198419

This form will report compliance with your permit as determined by an NRW officer

Site	Mostyn Chemical Works	Permit Ref	BU2357IP
Operator/ Permit holder	Warwick International Limited		
Date	23/12/2013	Time in	Out
What parts of the permit were assessed	Schedule 1 - Notification of abnormal emission. Low pH discharge to Dee Estuary.		
Assessment	Report/data review	EPR Activity:	Installation: X Waste Op: Water Discharge:
Recipient's name/position	Peter Bryant - Site SHE Manager		
Officer's name	Ian Oakes	Date issued	21/01/2014

Section 1 - Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations. A detailed explanation and any action you may need to take are given in the "Detailed Assessment of Compliance" (section 3). This summary details where we believe any non-compliance with the permit has occurred, the relevant condition and how the non-compliance has been categorised using our Compliance Classification Scheme (CCS). CCS scores can be consolidated or suspended, where appropriate, to reflect the impact of some non-compliances more accurately. For more details of our CCS scheme, contact your local office.

Permit Conditions and Compliance Summary			Condition(s) breached
a) Permitted activities	1. Specified by permit	A	
b) Infrastructure	1. Engineering for prevention & control of pollution	N	
	2. Closure & decommissioning	N	
	3. Site drainage engineering (clean & foul)	N	
	4. Containment of stored materials	N	
	5. Plant and equipment	N	
c) General management	1. Staff competency/ training	N	
	2. Management system & operating procedures	C3	2.1
	3. Materials acceptance	N	
	4. Storage handling, labelling, segregation	N	
d) Incident management	1. Site security	N	
	2. Accident, emergency & incident planning	N	
e) Emissions	1. Air	N	
	2. Land & Groundwater	N	
	3. Surface water	C3	2.2.2.4, T 2.2.5
	4. Sewer	N	
	5. Waste	N	
f) Amenity	1. Odour	N	
	2. Noise	N	
	3. Dust/fibres/particulates	N	
	4. Pests, birds & scavengers	N	
	5. Deposits on road	N	
g) Monitoring and records, maintenance and reporting	1. Monitoring of emissions & environment	N	
	2. Records of activity, site diary, journal & events	N	
	3. Maintenance records	N	
	4. Reporting & notification	N	
h) Resource efficiency	1. Efficient use of raw materials	N	
	2. Energy	N	

KEY: C1, C2, C3, C4 = CCS breach category (* suspended scores are marked with an asterisk),

A = Assessed (no evidence of non-compliance), N = Not assessed, NA = Not Applicable, O = Ongoing non-compliance – not scored

Number of breaches recorded

2

Total compliance score

(see section 5 for scoring scheme)

8

If the Total No Breaches is greater than zero, then please see Section 3 for details of our proposed enforcement response

Section 2 – Compliance Assessment Report Detail

This section contains a report of our findings and will usually include information on:

- the part(s) of the permit that were assessed (e.g. maintenance, training, combustion plant, etc)
- where the type of assessment was 'Data Review' details of the report/results triggering the assessment
- any non-compliances identified
- any non-compliances with directly applicable legislation
- details of any multiple non-compliances
- information on the compliance score accrued inc. details of suspended or consolidated scores.
- details of advice given
- any other areas of concern
- all actions requested
- any examples of good practice.
- a reference to photos taken

This report should be clear, comprehensive, unambiguous and normally completed within 14 days of an assessment.

Compliance:

The site has been scored for the management of the issues associated with clearing the blockages and the dilution and alkali addition (2 - 10%) for failing to meet the discharge consent (CCS3) and for the discharge itself at pH 4.6 and 1515 m3. Refer to Actions below. The discharge is not considered to have had a significant environmental impact.

The following is a duplication of the incident Part B - Further, more accurate information.....

Part A form, Ref. NO. 23/12/2013 submitted to Natural Resources Wales 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.

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.

NB:In this document 'Natural Resources Wales' means the Natural Resources Body for Wales established by Article 3 of the Natural Resources Body for Wales (Establishment) Order 2012.

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Operator/ Permit	Warwick International Limited	Date	23/12/2013

Section 3- Enforcement Response		Only one of the boxes below should be ticked	
You must take immediate action to rectify any non-compliance and prevent repetition. Non-compliance with your permit conditions constitutes an offence and can result in criminal prosecutions and/or suspension or revocation of a permit. Please read the detailed assessment in Section 2 and the steps you need to take in Section 4 below.			
Other than the provision of advice and guidance, at present we do not intend to take further enforcement action in respect of the non-compliance identified above. This does not preclude us from taking enforcement action if further relevant information comes to light or advice isn't followed.		☐	
In respect of the above non-compliance you have been issued with a warning. At present we do not intend to take further enforcement action. This does not preclude us from taking additional enforcement action if further relevant information comes to light or offences continue.		☒	
We will now consider what enforcement action is appropriate and notify you, referencing this form.		☐	

Section 4- Action(s)			
Where non-compliance has been detected and an enforcement response has been selected above, this section summarises the steps you need to take to return to compliance and also provides timescales for this to be done.			
Criteria Ref.	CCS Category	Action Required/Advised	Due Date
See Section 1 above			
C2	C3	Review processes for clearing blockages within the plant and drainage systems.	31/3/2014
E3	C3	Review caustic addition for abnormal events to achieve neutralisation prior to discharge.	31/3/2014

Section 5 - Compliance notes for the Operator

To ensure you correct actual or potential non-compliance we may

- advise on corrective actions verbally or in writing
- require you to take specific actions in writing
- issue a notice
- require you to review your procedures or management system
- change some of the conditions of your permit
- decide to undertake a full review of your permit

Any breach of a permit condition is an offence and we may take legal action against you.

● We will normally provide advice and guidance to assist you to come back into compliance either after an offence is committed or where we consider that an offence is likely to be committed. This is without prejudice to any other enforcement response that we consider may be required.

● Enforcement action can include the issue of a formal caution, prosecution, the service of a notice and or suspension or revocation of the permit.

See our Enforcement and Civil Sanctions guidance for further information

This report does not relieve the site operator of the responsibility to

- ensure you comply with the conditions of the permit at all times and prevent pollution of the environment
- ensure you comply with other legislative provisions which may apply.

Non-compliance scores and categories

CCS category	Description	Score
C1	A non-compliance which could have a major environmental effect	60
C2	A non-compliance which could have a significant environmental effect	31
C3	A non-compliance which could have a minor environmental effect	4
C4	A non-compliance which has no potential environmental effect	0.1

Operational Risk Appraisal (Opra) - Compliance assessment findings may affect your Opra score and/or your charges. This score influences the resource we use to assess permit compliance.

Section 6 – General Information

Data protection notice

The information on this form will be processed by the Natural Resources Wales (NRW) to fulfill its regulatory and monitoring functions and to maintain the relevant public register(s). The NRW may also use and/or disclose it in connection with:

- offering/providing you with its literature/services relating to environmental matters
- consulting with the public, public bodies and other organisations (e.g. Health and Safety Executive, local authorities) on environmental issues
- carrying out statistical analysis, research and development on environmental issues
- providing public register information to enquirers
- investigating possible breaches of environmental law and taking any resulting action
- preventing breaches of environmental law
- assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental Information Regulations request.

The NRW may pass it on to its agents/representatives to do these things on its behalf. You should ensure that any persons named on this form are informed of the contents of this data protection notice.

Disclosure of information

The NRW will provide a copy of this report to the public register(s). However, if you consider that any information contained in this report should not be released to the public register(s) on the grounds of commercial confidentiality, you must write to your local area office within twenty working days of receipt of this form indicating which information it concerns and why it should not be released, giving your reasons in full.

Customer charter

What can I do if I disagree with this compliance assessment report?

If you are unable to resolve the issue with your site officer, you should firstly discuss the matter with the officer's line managers. If you wish to raise your dispute further through our official Complaints and Commendations procedure, phone our general enquiry number 0300 065 3000 (Mon to Fri 08.00–18.00) and ask for the Customer Contact team or send an email to enquiries@naturalresourceswales.gov.uk. If you are still dissatisfied you can make a complaint to the Public Services Ombudsman for Wales. For advice on how to complain to the Ombudsman phone their helpline on 0845 607 0987.

