

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

Site	Sully Polymerisation Plant EA/EPR/UP3836SS/V003				Permit Ref	UP3836SS		
Operator/ Permit holder	Zeon Chemicals Europe Ltd							
Date	05/02/2015				Time in	09:00	Out	14:00
What parts of the permit were assessed	Inspection and site handover: 18th June 2014; routine monitoring: Apr - Sep 2014; MMF Update; IP Update							
Assessment	Site Inspection	EPR Activity:	Installation	X	Waste Op		Water Discharge	
Recipient's name/position	Martin Davies HSE Manager							
Officer's name	Andi Kemp, Tony Leakey				Date issued	06/02/2015		

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	C3	2.3.1
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	N	
	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	C3	3.1.2
	2. Land & Groundwater	N	
	3. Surface water	N	
	4. Sewer	C3	3.1.2
	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	3	Total compliance score (see section 5 for scoring scheme)	12
-----------------------------	---	--	----

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.

Purpose of Compliance Assessment

The purpose of this report is to provide assessment on recent routine monitoring submissions; provide feedback from June 2014 inspection; update on Improvement Programme; actions from previous CAR1; discuss the butadiene monitoring exercise with NRW mobile monitoring facility; notification of suspended solids permit breach Sep 2014.

Improvement Item Update

IP1

Thermal oxidiser operation – Submission received 22/11/13 – deemed complete CAR1 25th Apr 2014 – **AK to check records and actual implementation on site.**

IP2

Plans to reduce acrylonitrile and butadiene emissions – signed off complete on CAR1 issued on 15th Aug 2012 - **AK to look at the submissions and in the light of the most recent MMF exercise (Dec 2013 – Apr 2014) and Zeon submission 25th Sep 2014, seek evidence that reduced emissions can be sustained and no AQS are threatened.**

IP3

On line metering at S1 – **AK to follow up on latest submission – 17th Jan 2014. See CAR1 April 2014. Item not complete.**

IP4

Site infrastructure improvements - **AK to follow up on latest submission – 18th Feb 2014. See CAR1 April 2014. Item not complete.**

IP5

Optimisation of ETP to meet Sector Guidance benchmarks. Due Sep 2015.

Previous CAR1s

The following CAR1s have been referred to.

Inspection – 26th Sep 2013 (Jane Hall):

- TOC monitor in place but not yet operational – see IP3.
- On site analysis of the passive tubes recommended. Reduction in acrylonitrile and butadiene monitoring. **Two actions relating to:** tanker offloading details and reviewing results with passive diffusion tube monitoring –**AK needs to check these along with actions as a result of the Dec 2013 – Apr 2014 MMF campaign.**
- Improvements to PPM cover over night shifts and affecting cover on days **to be reviewed.**
- Infrastructure improvements required – linked to IP4 and SPMP.

Emissions and IP update 25th Apr 2014 (Tony Leakey):

- Acrylonitrile point source emission breaches – **Action: investigation required. Need update on this.**

- ETP breaches noted.
- IP3 – TOC correlation with COD – **ongoing. Item not complete.**
- IP4 – **Written report required. Item not complete.**

Routine Monitoring Submissions

Permit condition 3.3.1 requires the monitoring of certain parameters at certain emission points, with limits not to be exceeded – condition 3.1.2. The emission points, parameters and ELVs are listed in Tables S3.1 – S3.5. The results are to be reported to the regulator in accordance with condition 4.2.3.

Routine submissions for quarters: Apr – Jun and Jul – Sep 2014 have been submitted on time.

Briefly the quarterly submission should include: A1, A3 – A7, A11, A12, A17 – A19 (Table S3.1); S1 (Table S3.2); ambient monitoring (Table S3.4); thermal oxidiser availability % and temperature and monthly mass and time of venting @ A1 and A2 of butadiene, i.e. Process Parameters (Table S3.5).

Apr – Jun 2014

The air emission points have been submitted; sewer emissions have been submitted; thermal oxidiser and A1 and A2 venting have been submitted; ambient monitoring has been submitted.

All limits have been complied with except where discussed below:

Air

A6 – butadiene 0.14kg/hr breaching limit of 0.1kg/hr (exceeding after taking on board method uncertainty). **This was notified on a Schedule 5 notice but no reason was identified.**

Action 1 – please provide explanation.

Questions: (i) can you explain how the result of butadiene at A1 is arrived at. (ii) Does “ND” mean below limit of detection for butadiene at A3 and A4 and acrylonitrile at A3. (iii) What is Substance B ELV as per former IP7 for A17, A18, A19.

Action 2 – please provide explanation.

Sewer

All results compliant.

Process Parameters

Thermal oxidiser % availability 94.7% below limit of 97% post completion of IP1. **No explanation given.**

Question: (i) I take it the thermal oxidiser temperature is inspected at site and only records when unit is firing.

Action 3 – please provide explanation.

Ambient Monitoring

Ambient monitoring has been submitted on Boundary1 form. **As pointed out in CAR1 24th Oct 2013, the ambient monitoring, as per Table S3.4, should be submitted on a spreadsheet provided by Jane Hall.** Boundary1 form is for reporting monitoring in response to complaints – see Table S3.5.

The locations and extent of diffusion tube analysis is to be discussed at next site inspection – linked to MMF response.

Jul – Sep 2014

The air emission points have been submitted; sewer emissions have been submitted; thermal oxidiser and A1 and A2 venting have been submitted; ambient monitoring has been submitted.

All limits have been complied with except where discussed below:

Air

A6 – butadiene 0.16kg/hr breaching limit of 0.1kg/hr (exceeding after taking on board method uncertainty). **This was notified on a Schedule 5 notice and the transfer system was being looked at.**

Action 4 – please provide an update.

Sewer

Maximum value for total suspended solids at S1 was 143mg/l against a limit of 100mg/l and with the calculated uncertainty applied, is still a breach of the limit. **This was notified on a Schedule 5 notice and a temporary filter press was being hired.**

Action 5 – please provide an update.

Process Parameters

Thermal oxidiser % availability 96.8% below limit of 97% post completion of IP1. **Will be discussed at next site inspection.**

Ambient Monitoring

See point raised under Ambient Monitoring above in Apr – Jun 2014 submission.

Action 5 – please provide evidence that the method uncertainty applied is accurate for these methods and at the target concentrations.

Other Schedule 5 Notifications

The site notified NRW on the required form and followed up an investigation of a suspended solids exceedance at S1 on 11th Sep 2014. The value recorded was significantly above the limit: reported – 6036mg/l; permit limit – 100mg/l. An exchange of emails took place between AK and James Hooper of Zeon. The actions detailed on the notification included: stopping the discharge as soon as it was noticed; sampling every two hours as the plant recovered; ETP settings adjusted (not sure what, when or how); a temporary filter press being hired (permanent installation aimed for in Q1 2015).

Action 6 – please provide an update on actions taken, ETP adjustment (what) and follow up sampling.

June 2014 Inspection

On 18th June 2014 AK and AWL (NRW) attended site with the prime aim to conduct a simple routine visual inspection and introduce AK as the new NRW inspector. In attendance from Zeon were Martin Davies (HSE Manager), James Hooper (Ops Director), two Japanese colleagues on a site visit and a relatively new employee (Environmental Engineer) who was researching the Effluent Treatment Plant.

MD gave an update on:

- Recent sales performance.
- Use of mercaptans leading to on site odour complaints.
- Age of some areas of the plant
- Upgrades, refurbishment and / or replacements of reactors, refrigeration and condensers.
- Work being undertaken at the ETP, especially COD / TOC correlation; solids filter and sludge dewatering.
- TO – online around 94%, aiming (and permit limit) of 97%. PPM checklist for TO submitted.

These areas are all going to be taken forward in the next meeting as site progress update is due on a number of matters. A closer look at condition of site infrastructure (and how this may be dealt with under COMAH) will take place during next inspection, along with operation, monitoring and control of ETP and tanker offloading of butadiene.

Site Response to Draft MMF Report (Dec 2013 – April 2014)

The above report was detailed and comprehensive and had the campaign run for 12 months (and all other things being equal), it is suggesting that the predicted ambient concentrations of 1,3 – butadiene would have been around 3.54ug/m³ against an AQS Annual Average of 2.5ug/m. This is at the location of the MMF, which was at Momentive / Hexion on the boundary with ZCL.

ZCL were asked to respond to the draft report, of which they were sent a copy. ZCL responded by 25th Sep 2014.

The immediate actions, mid term improvements and longer term objectives will be discussed in detail, underpinned by inspection of the relevant areas, during the next inspection – see below.

In particular, NRW will look at:

- TO operation and auto shut down.
- Identification of all fugitive and point source emissions.
- Off loading.
- Ambient monitoring and interpretation of results.

The report and comments from the regulator (supported by site response) need to be published at some stage. It needs to be noted that the actual point where a receptor is located and the AQS applies must be defined – is this the boundary between ZCL and the neighbouring installation? It has been judged that the nearest residential receptors are in an area where the AQS would not have been exceeded due to dilution and dispersal of the releases.

Items For Review at Next Inspection

- Thermal Oxidiser implementation of improvements – ref. to submission noted above in IP1 update.
- S1 monitoring, IP3 – **extension to be agreed.**
- Infrastructure report on implementation of Capex proposals, IP4 – **extension to be agreed.**
- Review of recent acrylonitrile and butadiene point source emission monitoring results, ambient passive diffusion tubes (**see actions below under Routine Monitoring Submissions**) and submission in response to Dec 2013 – Apr 2014 MMF study.
- Suspended solids issue from 11th Sep 2014 – RCI.
- Progress with IP5, ETP – deadline 1st Sep 2015.
- Outstanding Actions from previous CAR1s.
- Actions in this CAR1.
- Site condition, protection and groundwater and soil monitoring – under IED. Last SPMP review was June 2011 – submitted by GE Pearce (ZCL) 01/07/2011. See below.

The new consolidated permit was issued on 17th May 2012. Since then the permitted activities were varied administratively due to IED changing Schedule 1 (EPR) activity references – this variation was issued on 26th Mar 2013. Regulatory guidance was also amended in 2013 to reflect changes brought about by IED: RGN9 Surrender (Showing that land and groundwater are protected atInstallations) – v3 May 2013; H5 Site Condition Report – v3 April 2013. Reference should also be made to CAR1 26th Sep 2013.

IED will require your permit to be reviewed (the main driver will be the BAT Conclusions for your sector) and permit

conditions and / or improvement programme items added to provide: groundwater monitoring at least once every 5 years and soil monitoring at least once every 10 years. You gathered reference data at the commencement of the original permit (2006) and this forms a baseline report. Due to the use of hazardous substances (as defined by the CLP Regulation: EC 1272 / 2008) at the site and the risk of future contamination it is likely that the only way you could pass the surrender test would be to compare baseline data with monitoring data taken as part of a surrender application.

In between these two points is the lifetime records approach, which should be managed through your management system. Permit conditions such as 4.1.1(d)(ii) require certain records to be kept for the life of the permitted activities; 3.2.3 requires secondary containment in certain circumstances; and operating techniques incorporated into the permit via Table S1.2 will keep the operation of the site to agreed techniques submitted as part of your permit application(s). Improvement Item IP4 requires site infrastructure improvements that contribute to the protection of land, groundwater and surface water. We recommend you refer to guidance document H5 and produce a Site Condition Report using the template provided and update this throughout the life of the permitted facility. Paragraph 2 Article 22 IED indicates that a baseline report will be required for existing installations before their permits are reviewed after 7th Jan 2013. This could be a review of the existing baseline report and any data from previous annual monitoring – the outcomes of this review could be additional permit conditions and / or improvement programme items and perhaps ongoing monitoring at a frequency and at locations and for parameters driven by risk assessment.

END

 Cyfoeth Naturiol Cymru Natural Resources Wales	EPR Compliance Assessment Report	Report ID: UP3836SS/0231074	
This form will report compliance with your permit as determined by an NRW officer			
Site	Sully Polymerisation Plant EA/EPR/UP3836SS/V003	Permit	UP3836SS
Operator/ Permit	Zeon Chemicals Europe Ltd	Date	05/02/2015

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.		X
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			
A1	C3	Follow up as part of improvement programme.	N/A
E1	C3	Ongoing control of emissions being looked at.	N/A
E4	C3	The ETP is part of an improvement condition and is being followed up.	N/A

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.