

Compliance Assessment Report

Report ID:
CAR_NRW0026907

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

Site	Newport Chemical Complex EPR/BR9715IB	Permit Ref	BR9715IB			
Operator/Permit holder	Solutia UK Ltd					
Regime	Installations					
Date of assessment	15/11/2016	Time in	09:00	Out	17:00	
Assessment type	Report/Data Review					
Parts of the permit assessed	IBC storage, IC update, NOx Issues					
Lead officer's name	Kemp, Andi					
Accompanied by						
Recipient's name/position	Steve Thomas/ Environment Specialist	Date issued	07/02/2017			

Section 1 – Compliance Assessment Summary

This is based on the requirements of the permit under the Environmental Permitting Regulations or the licence under the Water Resources Act 1991 as amended by the Water Act 2003. A detailed explanation is captured in "Compliance Assessment Report Detail" (Section 2) and any actions you may need to take are given in the "Action(s)" (section 4). 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	CCS Category	Condition(s) breached
A1 - Infrastructure - Specified by permit	C3	2.1.1
	C3	2.1.1
E1 - Infrastructure - Air	C3	2.2.1.3
E3 - Infrastructure - Surface water	C3	2.2.2.4

KEY: See Section 5 for breach categories, suspended scores will be indicated as such.

A = Assessed or assessed in part (no evidence of non-compliance), **X** = Action only,

O = Ongoing non-compliance, not scored.

Number of breaches recorded	4	Total compliance score (see section 5 for scoring scheme)	16
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If the Number of breaches recorded is greater than zero, please see Section 3 for 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 (eg. 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 advice given
- Any other areas of concern
- Any actions requested
- Any examples of good practice
- A reference to photos taken

Eastman EPR Compliance Assessment Nov 2016

The purpose of this compliance assessment is to progress actions and comments raised in the previous CAR1 (19th July 2016: NRW0025275) including meetings and inspections from 31st October, 4th & 15th November 2016. Particularly the following areas of compliance work are covered in this assessment:

- Actions from the previous CAR1.
- Most recent OPRA review.
- Environmental Management System status.
- New NRW incident number.
- Raising non compliance scores for certain previously suspended non compliances.
- Recent notifications.
- Confirming what former Improvement Conditions are to be deemed closed and what work from these will form ongoing future regulatory work.
- TH3 Commissioning update.
- IC30 update.
- IC33: options and implementation for further reduction of pentachlorophenol in emissions to surface water.
- Environmental assessment of current NOx emissions from boiler 16 – post gas turbine removal.
- Phased plans for pollution prevention infrastructure improvements with regard to storage of raw materials, finished product and empty / partially empty / waste in IBCs and other intermediate containers.

An Operator Monitoring Assessment for water and air emissions took place in May 2016 (water) and September 2016 (air), which will be written up separately and not included here.

Previous Actions

Action 1 Eastman 14th July 2016

This concerned the operator supplying relevant information with regard to IC33 – location and extent of pollution. As part of satisfying IC33 (PCP contamination) the operator had previously submitted a PCP Reduction Study (June 2015, 934422, report 2), followed on 4th Sep 2015 with a proposal for undertaking further field trials (ref: 934422-98). Both these documents were produced on behalf of Eastman by CRA Europe. These documents and additional documentation received since are assessed under a separate heading for IC33 below. **Action closed, but IC33 deadline extended until 31st Mar 2017 see also Action 3, 16th Jan 2017 below.**

Action 2 Eastman 14th July 2016

This relates to an update on the NOx emissions issues at boiler 16 and was due for completion by 30th Sep 2016. On 4th Nov 2016 a meeting was held on site, where the operator presented the most up to date situation on boiler 16 NOx emissions. This aspect is written up separately under the heading for NOx emissions at boiler 16. There were pending CCS non compliances in the previous CAR1 form – these will now be applied – see the section on the NOx issue. The operator has yet to supply all the information on the various proposals that may be options. Included in this extended action (refer to original wording and this additional wording), the operator should be re-assessing the environmental impact of these elevated levels of NOx, using for example the H1 tool or directly model a range of releases. **Action closed. See new Action 4, 16th Jan 2017 below.**

Action 3 Eastman 14th July

This concerned the operator explaining what appeared to be a breach of the COD limit to surface water from W2 for the quarter Jul – Sep 2015. Upon discussion with the operator on Nov 4th 2016, the operator asserts that measurements taken for W2 are at the point before the effluent is fed into the west lagoon south, i.e. the final lagoon before discharge to the estuary via W1 – so that the effluent passing W2 was not being directly released. It is not unusual for a permit to have more process based parameters (i.e. at W2) and final end of pipe parameters (i.e. at W1) and indeed have limits applicable to both points. Technically COD does have a separate limit for W2, but due to uncertainties with the various parameters at W1 and W2 and the fact that to a certain degree the operator cannot fully control the surface water quality, this exceedance will not count as a non compliance on this occasion. It has been recognised that (in conversations leading up to the decision that requires the site to apply for a permit variation), there are anomalies with regard to what parameters are set for W1 and / or W2, why and what basis. On that basis this apparent exceedance will not constitute a breach of the limits on this occasion – this is also reinforced by the fact that with the 4% analytical uncertainty applied, this result is only just an exceedance of the limit and no impact would have occurred at the receptor. What needs to be addressed here is the validity and basis for limits set at W2 and W1 and either confirmation that W2 limits apply only if being directly released downstream of W1 or as separate process limits in their own right, or set new requirements out in a permit variation.

The set up is currently that W2 is supposed to reflect site surface water from some areas of the site, additionally with legacy ground contaminants. This stream is surface water from TH2 and TH3 areas, plus the former Santobrite area – according to plan supplied by operator earlier this year – and which consequently may need changing. Other surface water from Dequest and Santicizer enter the ERAP tank, then primary effluent, before entering either pH adjust or the final lagoon (west tank south) and ultimately W1 discharge to the estuary. The Surface Water Collection, should then go to the West Tank south and then W1, or to pH correction before West Tank north, then W1 via West Tank south, or a third option is into the East Holding tank, which can feed either of the west tanks. Surface water at the Surface Water Collection point can also bypass the east and west tanks and enter below W1 into the long sea outfall line. This configuration and the various surface water sources and effluents from primary treatment, the bio-treatment plant and the formose plant, needs to be discussed at the permit variation – so the correct parameters and limits can be put in the permit, recognising the various sampling points.

Action closed.

Action 4 Eastman 14th July

On the 31st August 2016 the operator submitted a response to this action concerning the operational status of TH3. Refer to the July 2016 CAR1 where the actual commissioning plan, an August 2015 update, plus various email correspondence querying, for example fugitive emissions, are filed.

This August 2016 update confirms that all the services (steam, nitrogen, water etc.) are all live and that water – batching was completed by 04/16. The operator commissioned applying a south to north procedure – this is essentially adding chemicals in to the back end of the process (using unrefined product from TH2 furnaces), i.e. the autoclaves and biphenyl columns, before culminating in firing up the TH3 furnaces. This is because, the downstream processes must be tested and operational before TH3 furnaces can be used for pyrolysis of benzene. The downstream aspects were commissioned between 02/2016 and 06/2016.

The benzene side of the plant (furnaces and transfer lines) started their commissioning process in mid August 2016 – see the notification section, where the operator notified of a gasket failure leading to a minor leak of benzene into a bunded area.

By autumn of 2016 TH3 was ready to be used for production – although international economics related to oil prices has seen a slackening of demand and Eastman are considering mothballing TH2 and producing Thermanol products from TH3 alone. **Action closed.**

In the coming regulatory year (2017 / 2018) NRW will expect confirmation that fugitive emission sniffer tests demonstrate that the plant can operate in this regard as expected. ST has confirmed that only one location monitored (end cap on a heat exchanger) detected benzene. A qualitative report describing this work and the results is to be submitted.

Action 1 Eastman 16th January 2017: *Eastman to provide the above report, which is part of the commissioning plan of TH3.* **Due: 31st March 2017.**

Action 5 Eastman 14th July

A response was received off Eastman on 31st August 2016 and confirmed that the temporary agreement covering D2010 off-loading operation has now ceased (as of end of July 2015). During this agreement NRW has not been made aware of any incidents concerning this operation. **Action closed.**

OPRA

In 2016 NRW looked at Eastman's OPRA profile to ensure it still represented the overall site risk and that the output OPRA score for subsistence fee charging and regulatory effort, was still accurate.

Steve Thomas (ST) Environment Specialist reviewed the OPRA profile based on comments made by AK (NRW) and NRW is now satisfied that the profile reflects the site, its activities, emissions, location and management.

Environmental Management System Update

NRW recognises and encourages Eastman's commitment to environmental management and is pleased to see a successful registration under the EMAS scheme incorporating ISO14001. This is valid until May 2017.

NRW Incident Reporting Number

Eastman were asked by email to include the new NRW Incident Hotline number into their documentation, especially accident management plans as required by the environmental permit. The new number is 03000 65 3000.

Non compliance scores for certain previously suspended non compliances

In the July 2016 CAR1 warning of potential non compliances was issued. These concerned the COD breach at W2 – see above – not deemed at this time as non compliant; the releases of NO_x from Boiler 16 (Stack A4) in exceedance of the 150mg/m³ (non GT) ELV; potential score for the D2010 catch vent release of HCl / acetic acid vapour; surface water release during the cease discharge period Jan 2016.

These are described below under notifications or separately for the NO_x issue at Boiler 16.

Under the OPRA and Charging schemes non compliances for a calendar year are totalled and the appropriate adjustment made on the subsistence invoice for the next regulatory year, i.e. non compliances totalled 1st Jan – 31st Dec 2016 will affect the charges for regulatory year Apr 2017 – Mar 2018. The four non compliance scores below generate a Band C for compliance, which means the base OPRA score is multiplied by 110% for the 2017 invoice. These four non compliances have been recorded as all falling in 2016. The D2010 catch vent and cease discharge events were actually in 2016; the two scores (actual breach and root cause) for the NO_x issues were finally deemed non compliant in 2016. NRW had notification of potential NO_x issues late in 2015, but the full story and extent was not revealed until 2016.

Recent notifications

NRW formally requested that Eastman use the Schedule 1 notification form, as per permit condition 5.1.1, to notify the regulator that there has been a breach of a permit limit – in this case NOx emissions at Boiler 16 – see separate heading further on.

On the 12th August 2016 ST submitted a Schedule 1 notice for a 14 Lt loss of benzene to a concrete area from a failed gasket. This occurred during commissioning, so site personnel were there immediately to identify, stop and rectify. The root cause was found to be heat damage to the gasket between the flanges at a pipework join. The heat damage came from steam trace heating. It turns out that an error at the design stage led to the gasket specification in accordance with the associated flow meter requirements, but neglecting the impact of the trace heating. The Part B Schedule 1 form includes details on the investigation and the actions taken. Design specifications, locations of similar gaskets on the TH3 plant and review of their performance characteristics under elevated temperatures, have been reassessed and replacements made. There are no non compliances associated with this minor failure.

Observation 1 NRW 16th January 2016: *This type of event and confirmation of the actions taken to prevent this type of failure, will be continually looked at in the regulatory cycle with a view to ensure management system deficiencies are not leading to numerous such failures, beyond what may be expected during commissioning, start up and testing periods.*

On the July 2016 CAR1 a notification from 4th Jan 2016 bursting disc event was discussed, where HCl / acetic acid vapour was released. At the time non compliance scores were suspended. Upon review of the event and the actions taken and required modifications and the two off site complaints (odour), a non compliance score will be recorded for this event.

Temperature setting adjustments had to be implemented into the system controls to guard against runaway temperature increase from abnormal reactions and this indicates at the time of the event the operator did not have full control of these particular reaction conditions.

Non Compliance: *A CCS3 minor non compliance has been recorded against permit condition 2.1.1 (Table 2.1.1) In Process Controls.*

The last (two previous incidents occurred on 14th Sep 2015 & 28th Nov 2015) release of surface water / legacy contaminants outside the +/- 2hrs either side of low tide cease discharge period, was in Jan 2016. Upon review of the infrastructure available on site, the ability to forecast to a degree heavy and prolonged rainfall conditions, progress made / not made with regard to segregating surface water only and removing legacy contaminants, the regulator deems it appropriate to apply a minor non compliance for this event. This decision is supported by the extant legacy contaminants still being flushed from the site – see IC33 below.

Non Compliance: *A CCS3 minor non compliance has been recorded against permit condition 2.2.2.4 (Table 2.2.5 note c) Emissions to Water.*

Recommendations from July 2016 CAR1

Recommendation 1 Eastman 19th July 2016

This concerned formalising the situation where discharges are made outside cease discharge period. The cease discharge period is a condition of the permit and originally was to be extended to +/- 3 hours either side of low tide, upon completion of IC9, which dealt with the segregation of surface water. The potential outcome here was a more concentrated (with legacy contaminants) surface water stream, hence only discharging over a reduced period either side of low tide and therefore benefiting from dilution closer to either side of high tide. Legacy contaminants are still being dealt with under the extant IC33 – see further on. Depending on the speed and direction of concluding this – and improving the quality of the surface water discharge – there could be scope to refine the discharge times. Until that time the operator is reminded to forecast and plan around maintenance activities involving the surface water system, lagoons and pumps, with regard to clashes with heavy rainfall conditions. A contingency plan should be developed, that is invoked when it is anticipated that discharges (to maintain plant safety) may need to be made outside the cease discharge period. This plan should have the objective of avoiding or minimising such discharges and if they have to be made, following advance notification to the regulator, predictions of duration and likely pollution concentrations should be made. Ideally uncontaminated site surface water should be segregated and either harvested for some kind of re-use or discharged downstream of W1. The capacity to monitor quickly certain parameters in the surface water stream (e.g. pH, COD / TOC) would ideally be required and built into the permit, post completion of IC33, where legacy contaminants should have been effectively removed from surface water.

Recommendation 2 Eastman 19th July 2016

This concerned the HCl / acetic release from the D2010 process catch vent as discussed and regarded as non compliant above. This kind of event, along with the gasket failure on TH3 during commissioning, and the foreseeability and control around such aspects, will be built into the Compliance Assessment Plan for the coming regulatory year. The regulatory officer will deliver this work by selecting some key process aspects with environmental significance and examine the selection, design specification, installation, operation and maintenance around the component. Such work would cover the management and procedural elements applied at the plant. Indicative examples could include: critical pumps and seals, pressure relief and remotely operated shut off valves, process monitoring, pipeline joins and connections, design selection and management of change.

Confirming what former Improvement Conditions are to be deemed closed and what work from these will form ongoing future regulatory work

In the July 2016 CAR1 all the former Improvement Conditions (except IC30 – IC33) were reviewed in terms of their history and status. Eleven of these ICs were deemed to be not signed off, although there were responses from the operator and communications from the regulator – it is these 11 that will be drawn to a close presently.

IC3 – The cooling water system and its performance with regard to current BAT will be a future regulatory topic – IC3 closed.

IC10 – Work was carried out in this regard. CLP has now updated the hazard categories. Work linked to eliminating legacy contaminants (PCBs, PCP, Hg, Cd) and the closing of Santicizer and reduction of phenol in effluent, mean that this IC can be regarded as complete – IC10 closed.

IC11 – Work was carried out on the reduction of chloromethanes – this will be revisited in the future – IC11 closed.

IC12 – This concerned the site Closure Plan (permit conditions: 2.11.1.3 & 2.11.2), an update of which is required, which should address these points: i) formal letter covering what you plan to do and what version you are amending; ii) agreeing date for submission of final plan later in the year; iii) outline of how you dealt with the Santicizer decommissioning and dismantling. The Closure Plan should cover how closure and cessation of activities is built into the design of plant and infrastructure; and Closure is considered during plant upgrades. Essentially a systematic process to manage taking the plant off line, dealing with raw materials, waste, tank, vessel and pipeline contents, washing, degassing, protecting GW monitoring wells, protecting unsurfaced ground, managing staff doing tasks they ordinarily would not. Your plan should contain procedures for recording evidence and verifying the work has been carried out without causing pollution and deterioration of site condition. Thought needs to go into disposal options for waste streams. IC 12 closed.

Action 2 Eastman 16th January 2017: Site to address the update on the closure plan. Due: (i) & (ii) 31st March 2017; (iii) as date to be agreed in (ii).

IC13 – The recent water and air OMA will contain actions and recommendations relating to MCerts provision of various aspects of monitoring, e.g. flow, composite samplers, laboratory analysis. IC13 closed.

IC15 – Work with regard to PCB impact and reduction is being dealt with by future remediation proposals and ongoing management and protection of the site condition – refer to guidance H5 and the European Commission Guidance concerning baseline reports under Article 22(2) of Directive 2010/75/EU on industrial emissions (2014/C 136/03). IC15 closed.

IC16 – Re. ambient monitoring of benzene at the fence line, applying guidance M8. This will be a future regulatory topic in addition to more detailed work on fugitive emissions, sources, quantification and reduction. IC16 closed.

IC17 – Same as IC16 but concerning biphenyl. IC17 closed.

IC20 – Boiler 16 commissioned, then permit variation to allow for GT modification, then the GT removed in 2015 – currently assessing boiler 16 and recent emissions and future ELVs under a separate topic – IC20 closed.

IC21 – Work and the effluent treatment system has moved on since this IC. The type and efficiency and operation of the effluent treatment system will be a future regulatory topic. IC21 closed.

IC25 – This concerned the post installation assessment of the biological effluent treatment system. Now that Santicizer plant has closed the effect on the effluent and the operation of the BETP is being reassessed. Like IC21 the ETP will be a future regulatory topic. See also responses to complete IC31 & IC32. IC25 closed.

TH3 Commissioning update

See Action 4 July 2016 response above and new Action 1, 16th Jan 2017 associated with it.

IC30 Update – Carbon water exchange project

In the July 2016 CAR1 the Regulatory Officer requested an update from Eastman on this DECC project. On 29th November 2016 ST submitted a covering letter and an accompanying report on the Carbon eXchange & Conversion (CxC) project and at the same time made an application to regard this report and the project results as Commercial in Confidence. This application NRW determined favourably in a EPR Regulation 55(1) &(2) notice (7th Dec 2016).

This research project has finished its stage at Eastman, with no immediate plans to put in a full scale version. The equipment will be dismantled and the activity that was included in the V006 variation to allow this activity, will be removed during the forthcoming permit variation exercise. IC30 is deemed closed.

IC33 Update - options and implementation for further reduction of pentachlorophenol in emissions to surface water

The progress so far has involved Eastman engaging CRA to review options. In 2015 reports on this were submitted, which recommended some form of in situ remediation, but lab and field feasibility trials ahead of full scale project. Subsequent to this, ST has been investigating more passive measures, such as a form of reed bed, for which a report was prepared in Oct 2016.

The NRW position, as declared in an email to ST (Nicola Newton cc'd) on 7th November 2016, is that some intervention will be necessary, despite initial decreasing mass being released with surface water since 1994 and the drivers for this are:

- PCP is a priority hazardous substance under the Water Framework Directive
- PCP is also monitored under the OSPAR convention – on protection of the North Atlantic; objective to effectively reduce to zero discharges of the relevant substances
- Satisfactory protection of the ground & groundwater, i.e. Site Condition Report, on a lifetime records approach and working towards removal of existing contamination
- Possible future surrender site condition data
- Possible obligations under the Contaminated Land Regulations and the planning (contaminated land) regime, now and with any future developments
- Plateauing of annual mass releases: 1999 est. 15kg; beyond 2004 est. 5kg – continued discharge at this level since
- Permit ELVs: weekly mass limit – 250g; concentration – 15ug/l. Maximum in 2014 / 2015 data was 230g weekly mass and 12.5ug/l weekly composite concentration

All in all, this shows that the existing source term is still causing releases of PCP near the ELVs and this doesn't appear to be decreasing. The proactive capping work that Eastman have conducted (around 2008

/ 09) has reduced flushing, but cannot lead to further decreases of the contaminant source plume. Some sort of further in situ treatment or passive treatment system seems to be the most sensible way forward.

There are many variables that Eastman will have to consider when making a decision – bearing in mind that the goal now as far as NRW are concerned, taking on board the broad objective of IC33 “...costs and benefits of further measures to reduce emissions of PCP.....and the date by which these improvements will be implemented.”, is to reduce and effectively remove the PCP contamination from entering surface water and ideally removing it from the soil matrix. Eastman considerations may include:

- where will the soil matrix for reed bed treatment come from
- can Eastman accommodate the semi-permanent nature of a reed bed structure
- can a flow of contaminated water be generated
- would the reeds need to be harvested and replanted periodically
- have all potential by products been assessed, from either reductive dechlorination or reed beds
- method of validating progress to targets
- establishing remediation targets

On the basis that the reed bed trials appeared to indicate successful treatment, NRW sees no negative aspects to employing this as a solution to removing PCP from the ground / GW. It is now up to Eastman to conduct any further work as deemed necessary, but with minimal delay, as IC33 has been extended beyond its original date of 30th June 2015.

In terms of remediation target, if complete removal is not pursued or deemed achievable, NRW suggests, due to the nature of PCP and the objectives of both OSPAR and the WfD, that the operator aims to get as close to the EQS of 0.4ug/l in treated GW (before entry into the wider surface water system, lagoons and estuary), as possible – with justification for any target above the EQS. BS EN 12673 has a reported analytical range of 0.1ug/l – 1mg/l.

Action 3 Eastman 16th January 2017: (i) Site to present the selected option and remediation targets and implementation timetable – to be agreed with NRW. (ii) Site to fulfil the implementation timetable as agreed by NRW in (i), including evidence that the project has been successful. Due: (i) 31st March 2017 & (ii) As agreed in (i).

Environmental assessment of current NOx emissions from boiler 16 – post gas turbine removal

Since the removal of the GT from boiler 16, the NOx levels have risen above the 150mg/m³ pre GT limit. The limit installed in the V006 permit variation was 75mg/m³ with GT fitted. In Nov 2016 ST presented some options and costings, dependant on what ELVs would be acceptable. From these presentations it has been revealed that significant re-engineering of the combustion system to accommodate the GT was not reversed engineered upon removal of the GT – hence the combustion conditions (air mixing, fuel / air ratio, residence time, burner positions etc.) are not delivering the former pre GT ELV of <150mg/m³. This

is a foreseeable situation and this should have been taken into account before the GT was removed.

NRW has taken the current emissions release into consideration and used an emissions screening tool, which incorporates the AERMOD air dispersion model, to run an impact assessment on a release concentration of 230mg/m³. Using existing known parameters of:

- stack height 30m
- proximity of adjacent building and dimensions (leading to effective stack height less than actual stack height)
- stack and building co-ordinates
- efflux velocity of 11.2 m/s
- emission temperature of 105 deg C
- cross sectional area of stack
- volumetric flow rate leading to release rate of 4.56g/s
- Welsh meteorological data
- background NO_x level rounded up to 20ug/m³
- long term AQS – 40ug/m³; short term AQS – 200ug/m³

The results of the emissions impact assessment show:

- the process contribution (release rate after immediate dispersion) are above the “not significant” screening % of the AQS
- taking into account background concentrations, the LT Predicted Environmental Concentration (PEC) is 61% of the AQS – defined as medium risk
- it is background concentrations that dominate LT releases
- the short term PEC is much lower as the ST AQS is much higher than the LT AQS

These results indicate that the sites contribution to NO_x levels are moderate compared to the AQS and when combined with existing background, account for 61% of the AQS of 40ug/m³ in the long term scenario.

The next thing to look at though is what is BAT for the boiler, its age and fuel used. This is especially important on top of emissions assessment, as NO_x (from other industries and traffic) is a significant air pollutant and a critical factor for terrestrial ecosystems through nitrogen deposition.

When considering BAT, the target range of potentially applicable NO_x emission levels as derived from current legislation has to be considered. Below are ranges taken from:

- LCP BRef – existing gas fired boilers – 50 – 100mg/m³
- IED Annex V LCP gas fired (>50MW thermal input) – 100mg/m³
- MCPD – existing gas fired (>5MW) – 200mg/m³; new – 100mg/m³

LCP is defined as combustion units >50MW, so these BAT AELs are not in themselves legal standards for boiler 16 with a thermal rating of around 28MW, however, they do serve as a guide for larger non LCP combustion activities when the regulator is setting permit ELVs. The MCP is defined as >1MW, with standards for existing boilers >5MW not coming into force until 2025. The regulators are still working on guidance for implementing the MCPD and in the meantime will use existing known BAT achievable levels to set limits.

Based on the current measured NO_x levels of >200mg/m³, which exceeds even the MCPD level for existing gas fired boilers, and looking at what is achievable technology wise, where the future standards are going (100mg/m³), the lag time for MCPD ELVs and what Eastman themselves have achieved previously: 75mg/m³ GT; 150mg/m³ non GT, the regulator has come to the following decision.

The ELV for NO_x at the current boiler 16 must return to 150mg/m³ as soon as possible and non compliances will be scored for the current exceedances (combined as one event, until the boiler is reconfigured) of the default limit pre GT mode of 150mg/m³.

Non Compliance: *A CCS3 minor non compliance has been recorded against permit condition 2.2.1.3 (Table 2.2.2) Emission Limits to Air.*

Non Compliance: *A CCS3 minor non compliance has been recorded against permit condition 2.1.1 (Table 2.1.1) In Process Controls.*

These non compliances reflect the simple breach of a limit, but also reflect the foreseeable situation of the operators decision to remove the GT without factoring in the potential changes to emissions, knowing what engineering changes were made to accommodate the GT. Had several combustion units and / or larger units been operating, the emissions may have been such that the AQS could have been threatened. If the situation is not resolved within a timescale agreed with the regulator, the non compliances can be elevated.

Action 4 Eastman 16th January 2017: (i) *Site to propose how and when they will return boiler 16 NO_x emissions to no more than 150mg/m³.* (ii) *Implement the agreed proposal from (i).* **Due: (i) 31st March 2017; (ii) as agreed in (i).**

Phased plans for pollution prevention infrastructure improvements with regard to storage of raw materials, finished product and empty / partially empty / waste in IBCs and other intermediate containers

The site have already identified this as a potential issue and commissioned T Woodley (Eastman) to assess the then current situation. The report T Woodley produced describes what is stored where and in what containers and whether, under CLP the contents are hazardous to the environment or toxic.

Action 5 Eastman 16th January 2017: Site to forward on the T Woodley report. Due: 28th February 2017.

On several inspections NRW and the HSE have commented on the following:

- IBCs without sufficient labelling to identify as raw material or waste – product seemed to be labelled adequately
- various containers stored around the site on substandard infrastructure, i.e. large cracks in concrete, no sloping flooring or kerbs and sills for containment purposes in some areas – one area near the warehouse to the west of the site was appropriately engineered and in good condition, additionally the warehousing storage engineering standards appeared sufficient
- additional to the previous point, some containers were stored with their taps missing the cover caps and pointing over unsurfaced ground
- it was difficult to tell if any containers had waste in them and this issue needs thorough exploring in terms of how containers with residual contents are classified and handled with regard to the hauliers waste carrier credentials, destination, fate and appropriate paperwork

The operator was exploring infrastructure improvements and with the recent Santicizer closure this offered up a potential area for storage – albeit this alternative project was stated as having a longer lead time.

Before the regulator agrees any timescale the following must be implemented on site and supported by written operational instructions to take effect as soon as possible – i.e. the operator to implement the points below immediately: 1, 2, 3 & 5; and points 4 & 6, all records and procedures up to date by 30th June 2017.

1. all intermediate storage containers must be stored on concrete areas with taps facing the containment and no risk of spill or leak onto unsurfaced made ground
2. the screw caps should be left in place when the containers are not being used
3. any infrastructure that is damaged to the extent that containment of spills is compromised (large unsealed cracks in the flooring or kerbs, kerbs / sills missing, sloping in the direction of unprotected unsurfaced ground) should not be used
4. labelling to clearly show what is stored where: raw material, out of spec / waste, empties, finished product, samples for QA/QC testing; labelling to include what hazard the contents exhibit complete with CLP pictograms
5. adequate spill prevention, mitigation and clean up equipment proximate to storage areas
6. records stored centrally (in the event of an accident or incident on site) which show what areas are being used generally for what storage, this would assist in incident response and environmental protection

Action 6 Eastman 16th January 2017: (i) Site to implement the above bullet points by the dates given above – NRW will require evidence that procedures have been amended to reflect the above; (ii) Site to submit to NRW their procedures for returning empty IBCs (to whom), waste in IBCs (to whom) and whether this adheres to the Duty of Care (waste carriers) and Hazardous Waste Regulations; (iii) Eastman to propose what improvements they plan to make to the storage infrastructure to ensure environmental protection

and a timeline for implementation. NRW will accept a phased plan based on dealing with higher risks first as long as implementation of the bullet points as mentioned in (i) is complete. Due: (i) 1,2, 3 & 5 immediately; 4 & 6 by 30th June 2017; (ii) 30th June 2017 (iii) 31st Mar 2017.

END

EPR Compliance Assessment Report

**Report ID:
CAR_NRW0026907**

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

Site	Newport Chemical Complex EPR/BR9715IB	Permit Ref	BR9715IB
Operator/Permit holder	Solutia UK Ltd	Date	15/11/2016

Section 3 – Enforcement Response

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.

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.

Section 4 – Action(s)

This section summarises the actions identified during the assessment along with the timescales for when they will need to be completed.

Criteria Ref.	CCS Category	Action required/advised	Due Date
See Section 1 above			
A1	C3	Select an option to bring boiler emissions back <150mg/m ³	31/03/2017
E1	C3	Permit variation to set new limit, but site to make re-engineering changes to bring NO _x releases to <150mg/m ³	31/03/2017
E3	C3	Review agreement by way of possible permit variation and draw up contingency plan	16/01/2017
A1	C3	Follow up inspections and operator reviews	16/01/2017

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 verbally or 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 that 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 fulfil 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 (eg. 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
- Assessing customer service satisfaction and improving its service
- Freedom of Information Act/Environmental 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 fifteen 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 officer's line managers using the informal appeals procedure. 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.

Welsh Language

If you would like this form in Welsh please contact your Regulatory Officer.