

Hexion Annual Environmental Review 2019

Introduction: Permit condition 4.2.1 requires an annual report covering the previous year to include:

- (a) a review of the results of the monitoring and assessment carried out in accordance with this permit against the relevant assumptions, parameters and results in the assessment of the impact of the emissions submitted with the application;
- (b) where the operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
- (c) the annual production /treatment data set out in schedule 5 table S5.2;
- (d) the performance parameters set out in schedule 5 table S5.3 using the forms specified in table S5.4 of that schedule; and
- (e) details of any contamination or decontamination of the site which has occurred.

Overview:

2019 consolidated production with an output slightly less than the prior year. This allows for some useful year-on-year comparisons.

There were significant decreases in utility and effluent figures. This is explained further in the sections below.

All emission limits on the site IPPC permit were met.

A theft event resulted in a small oil spill which reached Sully Brook. An external response company was used to ensure effective remedial action and minimise any environmental effects.

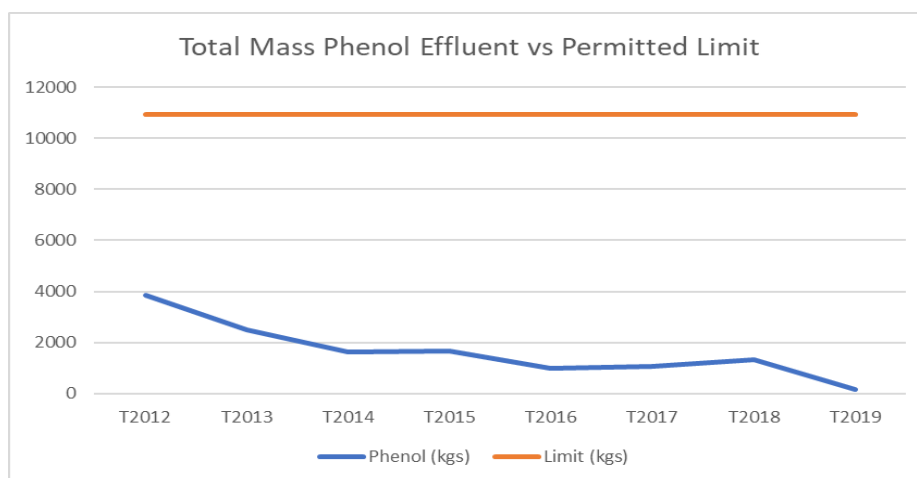
The site continued with its accreditation to the ISO14001:2015 standard and underwent 3 days of auditing from BSI.

(a) Monitoring and Assessment:

Monitoring of waterborne emissions consists of weekly composite samples from the effluent treatment plant (ETP). These were within the permitted limits throughout the year.

The graph below shows that the mass of phenol discharged from the ETP in 2019 decreased by approximately 89%. This was due to a change in product mix which reduced the load on the ETP. The product mix is generally seasonal and changes in market conditions mean this improvement cannot be claimed as permanent.

The improved training of out of hours personnel in the management of the ETP contributed to better performance. Measured chemical oxygen demand (COD) also decreased significantly (42%).



The amount of methanol and formaldehyde also significantly reduced although these started from a much lower value.

Quarterly air monitoring on the scrubber and annual monitoring on the boilers gave results within the permitted limits.

(b) Targets:

Steady progress was achieved in the 2019 Environmental Targets. A couple of items were delayed until 2020/Q1 and have now been completed.

Description	2019 Progress
1 - Fugitive emissions monitoring – further development	Full report by year end. Readings taken to cover approx. 80% of emissions. Report due for Pollution Inventory entry submission in March
2 – Review Needs and Expectations table with ISO9001 Manager	Reviewed at Management Review meeting
3 – Review Significant Aspects Register	Scheduled for Q4 – Delayed to Q1
4 – Derive 2020 targets from revised Significant Aspects Register	Scheduled for December – Delayed to Q1
5 - Zero permit exceedances	0
6 - On-time measurement and reporting (2018 annual / 2019 quarterly / CIA / Pollution)	On-time to end of June with agreed change of date with NRW following the

Inventory / Packaging Waste / Scrubber quarterly / Boiler Annual)	network outage (100%). All submissions and monitoring on time.
7 - Internal audits – complete 2019 audit cycle	10 out of 21 planned audits complete plus 18 permit isolation audits
8 - External and internal audit actions – on time closure	Internal 19 out of 26 actions closed, 7 over-due. External – 15 / 16 actions closed out on time
9 – Track monthly environmental KPIs from Plant Monthly Report	On Plant Monthly Report

The amount of water consumed per tonne of resin produced reduced from 3.09 m³/tonne to 1.88 m³/tonne. A significant part of this was due to less usage at the ETP – a reduction of 48000 m³.

Electricity usage reduced by 5%. Utility usage is monitored at a management level on a monthly basis while engineering support staff review the data more frequently. Part of the electricity savings are due to a programme of replacing faulty light fittings with more efficient LED.

(c) and **(d)** are covered by submission of the annual returns to NRW

(e) Contamination / De-contamination: A theft event resulted in a small oil spill which reached Sully Brook. An external response company was used to ensure effective remedial action and minimise any environmental effects. Waste from contaminated booms and soil was removed as part of the mixed hazardous waste collection.