

Compliance Assessment Report CAR_NRW0040747

Permit being assessed: BL5644IK.

For: Sensient Flavors Ltd, held by Sensient Flavors Ltd

At: Sensient Flavours, Felinfach, Lampeter, Ceredigion, SA48 8AG.

Type of assessment carried out: Report/Data Review, Reason: Other.

On 09/12/2022.

Parts of permit assessed: Please see details

NRW Lead Officer: Ieuan Davies.

Report sent to: Tim Pink, EHS Manager on 13/12/2022.

1. Summary of our findings (full details in section 4)

Part of permitted activity assessed (criteria)	Assessment result	Permit condition
C2 - General Management - Management system and operating procedures	C2 Significant	1.1.1
G1 - Monitoring and Records, Maintenance and Reporting - Monitoring of emissions and environment	C3 Minor	3.5.1
G4 - Monitoring and Records, Maintenance and Reporting - Reporting and notification to Natural Resources Wales	C3 Minor	4.3.1

Result types are explained in more detail in the 'Important Information' section below.

Total number of non-compliances recorded	Total non-compliance score
3	39

How we use the non-compliance score to calculate your annual fee is explained in the 'Important Information' section below.

2. What action is required?

Criteria	Action needed	Complete by
C2	Sensient must ensure appropriate management procedures are in place to appraise Contractor reports and react to their discoveries.	31/01/2023
G1	Sensient must ensure the appropriate monitoring equipment, techniques, personnel and organisations are employed to undertake the emissions monitoring programme. Sensient must also ensure the appropriate person/s are notified of all emission monitoring results, enabling an immediate reaction to regain compliance and limit environmental impact if results are out of compliance.	31/01/2023
G4	Sensient must immediately notify NRW of which they did not	31/01/2023

Criteria	Action needed	Complete by
	comply. Sensient must ensure that any future events as stated in condition 4.3.1 must be notified immediately and without delay.	

Action criteria codes are listed in the 'Important information' section below.

3. What will happen next?

Any non-compliance we have identified and recorded on this form is an offence. It can result in criminal prosecution and/or suspension or revocation of your permit.

You are non-compliant with your permit.

We are currently considering taking enforcement action against you for the non-compliance recorded above. We will contact you in due course.

4. Details of our assessment

Introduction

This is a part review of Sensient' monitoring submissions made by the operator in 2022.

Sensient are required to conduct quarterly monitoring at emission points listed in Table 3.1 Point source emissions to air – emission limits and monitoring requirements, however, are required to submit results on a 6 monthly basis.

Point Source Emissions to Air Parameters (Air 1 Form) as required by condition 3.5.1 (a)

- The Q1 (January to March 2022) submissions included the results for all quarterly parameters required over this period and appear to be within permitted limits.
- The Q2 (April to June 2022) submissions included the results for all quarterly parameters required over this period with the majority appearing to be within permitted limit. However, Sensient submitted a late notification of an emission limit breach from Quarter 2. Please see discussion under heading Schedule 5 Submissions.

Schedule 5 Submissions

Background on Permit Requirements

Condition 3.5.1 of the Operators permit states:

The operator shall, unless otherwise agreed in writing by Natural Resources Wales, undertake the monitoring specified in the following tables in schedule 3 to this permit:

- point source emissions specified in tables S3.1;*

The following table is a part of *Schedule 3 Emissions and monitoring* extracted from the Operators environmental permit:

Schedule 3 – Emissions and monitoring

Table S3.1 Point source emissions to air – emission limits and monitoring requirements						
Emission point ref. & location	Source	Parameter	Limit (including unit)	Reference period	Monitoring frequency	Monitoring standard or method
A1 Point A1 (304-466-001) on site plan 400-000-025-010	Hydrochloric acid bulk tank scrubber	Gaseous chlorides (as HCl)	10mg m ⁻³	Hourly	Quarterly	
A2 Point A2 (102-466-004) on site plan 400-000-025-010	Hydrolysis Reactor scrubber	Gaseous chlorides (as HCl)	No Limit Set	Hourly	Quarterly	Monitoring methods used shall be in accordance with Environment Agency document "Technical Guidance Note M2 Monitoring of stack emissions to air".
		Particulate	20mg m ⁻³	Hourly	Quarterly	
		Volatile Organic Compounds (as Carbon)	No Limit Set	Hourly	Quarterly	
A3 Point A3 (102-466-001) on site plan 400-000-025-010	Neutraliser scrubber	Gaseous chlorides (as HCl)	No Limit Set	Hourly	Quarterly	
		Particulate	20mg m ⁻³	Hourly	Quarterly	
		Ammonia	20mg m ⁻³	Hourly	Quarterly	
A4 Point A4 (103-466-001) on site plan 400-000-025-010	Filter press scrubber (pH adjustment)	Volatile Organic Compounds (as Carbon)	No Limit Set	Hourly	Quarterly	
		Particulate	20mg m ⁻³	Hourly	Quarterly	
		Ammonia	No Limit Set	Hourly	Quarterly	
A5 Point A5 (107-466-001) on site plan 400-000-025-010	Reaction flavour scrubber (reaction flavours)	Volatile Organic Compounds (as Carbon)	40mg m ⁻³	Hourly	Quarterly	
		Particulate	20mg m ⁻³	Hourly	Quarterly	
		Ammonia	No Limit Set	Hourly	Quarterly	

Schedule 3 – Emissions and monitoring above details Emission Limit Values (ELVs) monitored via extractive quarterly monitoring. To maintain compliance with the Operators environmental permit the ELVs specified above shall not be exceeded as stated in condition 3.1.2 - *the limits given in Schedule 3 shall not be exceeded.*

In accordance with the Operators environmental permit, Natural Resources Wales (NRW) must be notified of all permit breaches as per the following condition/s:

1. *The Operator shall,*

- (a) In the event that the operation of the activities gives rise to an incident or accident which significantly affects or may significantly affect the environment, the operator must immediately—
- (i) inform Natural Resources Wales,
 - (ii) take the measures necessary to limit the environmental consequences of such an incident or accident, and
 - (iii) take the measures necessary to prevent further possible incidents or accidents;
- (b) in the event of a breach of any permit condition the operator must immediately—
- (i) inform Natural Resources Wales, and
 - (ii) take the measures necessary to ensure that compliance is restored within the shortest possible time;
- (c) in the event of a breach of permit condition which poses an immediate danger to human health or threatens to cause an immediate significant adverse effect on the environment, the operator must immediately suspend the operation of the activities or the relevant part of it until compliance with the permit conditions has been restored.

4.3.2 Any information provided under condition 4.3.1(a)(i), or 4.3.1 (b)(i) where the information relates to the breach of a limit specified in the permit, shall be confirmed by sending the information listed in schedule 5 to this permit within the time period specified in that schedule.

A1 HCl Emission Limit Breach

Natural Resources Wales received a notification via email on the 15th August 2022 (Received Official Schedule 5 Part A Notification on the 26th August 2022) of a permit Emission Limit Value (ELV) breach of HCl at Sensient' emission point A1 on the 12th May 2022. The facilities permitted emission limit is 10mg/m³ with a reported figure of 19688mg/m³.

Discussion

Sensient undertake monitoring of emission point A1 during delivery of Hydrochloric Acid due to the

displacement of air in the vessel head space through a scrubber which utilises Sodium Hydroxide to neutralise acid fume. On the 12th May 2022 a delivery of HCl was scheduled and as such Sensient arranged for the monitoring Contractor to conduct extractive emissions testing. The Contractor notified a member of Sensient' engineering team, however, the incident was not escalated to a senior member of Sensient' management team. On collating emission results for Q2 the breach was detected by EHS management which in turn notified NRW.

On receipt of Sensient' notification, NRW requested further information and investigation/s into the breach and extractive monitoring at emission point A1. Due to the delay in observing and escalating the breach the investigations have been a historic analysis of reports and procedures by Sensient and the Contractor. The investigation/s outcomes are summarised below:

- *Records show that the scrubbing system was functioning correctly ahead of the HCl delivery.*
- *The scrubbing system at emission point A1 is automatic with alarms and checked daily, there were no indications of issues.*
- *The usual reading from the testing is 0.1 to 1.5mg/m³, on the 12th May 2022 the reading from Element was 19688 mg/m³.*
- *The controls that are in place to ensure deliveries do not cause HCl emission Sensient, Felinfach cannot understand or explain the anomalous levels.*

Sensient then requested that test house contractor to re examine their findings, summarised below:

- *Due to the levels of HCl detected in hindsight it appears there is a possibility that HCL droplets/splash could have been sampled directly or has resulted from some sort of contamination from site.*
- *Because of the passive flow it is possible that concentrated gases were drawn into the sample system.*
- *A droplet containing concentrated HCl could have entered the unfiltered sample system and be trapped by the absorber solution.*

It is accepted that the significantly high result of HCl sampled on the 12th of May is not consistent with previous and later dated monitoring at emission point A1. Post breach, extractive monitoring was undertaken on the 9th August 2022 and 21st October 2022 with respective results 0.34mg/m³ and <0.015mg/m³ results which are within the permitted limit. The information presented in the Contractors investigation report (26th October 22) is not consistent with the initial sampling report (12th May 22) submitted to NRW. The Contractor investigation report indicates that they have not followed the specified procedure for sampling (BS EN 1911) at Sensient on the 12th May 2022 despite not reporting any deviations in their sampling report. Based on this information it is also accepted that the figure reported for HCl emissions monitoring from A1 during Quarter 2 is incorrect. However, there were management failures by Sensient in determining the correct procedural action to regain compliance with their environmental permit.

Action: This is unacceptable by an MCERTS contractor not to identify a significant deviation in procedure. Sensient must ensure appropriate management procedures are in place to appraise Contractor reports and react to their discoveries. As a result NRW will require a detailed OMA to be carried out in next 6-12 months.

There appears to have been a series of management failures regarding this breach at Sensient. Following the detection of an emission limit breach a retest should be conducted as soon as possible to ensure Sensient regain compliance. Due to the lack of escalation of the monitoring result a retest was not conducted in a timely manner.

Action: Sensient must ensure the appropriate person/s are notified of all emission monitoring

results, enabling an immediate reaction to regain compliance and limit environmental impact if results are out of compliance. NRW request Sensient undertake a review of their internal notification's procedure and provide a copy to NRW.

Action: As per condition 4.3.1 Sensient must immediately notify NRW of which they did not comply. Sensient must ensure that any future events as stated in condition 4.3.1 must be notified immediately and without delay. NRW request Sensient undertake a review of their external notification's procedure and provide a copy to NRW.

Compliance

There appears to be a wider issue regarding Operator competence and general management of the facility at Sensient. The lack of escalation to investigate and resolve this particular breach in a timely manner raises concerns which need to be addressed by Sensient prior to the upcoming OMA to provide reassurance to NRW. As per Operational instruction 534_10 (Compliance Classification Scheme) & Operational Guidance Note 113 a score of C2 – Significant has been attributed to the deficiency in maintaining effective operating procedures which has the potential to have a significant impact or effect on the environment, people and/or property.

Taking into consideration Sensient' Root Cause Analysis and the Contractors Technical Investigation a non-compliance score of CCS3 has been attributed to the deviation from monitoring method/standard as referenced in Sensient environmental permit.

Condition 4.3.1 requires the Operator to immediately notify NRW on detection of any breach of permit. This three-month delay in notification is not immediate and as such will be scored accordingly. As per Compliance Classification Scheme (CCS) a score of CCS 3 has been attributed to the delayed notification.

ENDS

If you have any queries about this report, or to discuss completion of any actions, please contact the NRW Officer named above.

Important information

Legal status of this report

Your permit is issued to you under the Environmental Permitting Regulations. You have a responsibility to comply with the conditions of your permit and prevent pollution/harm of the environment. You must also ensure that you comply with any other relevant legislation that may apply to your site's operations.

This report explains the findings of our assessment and any action you are required to take. We categorise non-compliance using our guidance for assessing non-compliance at regulated sites.

When we find potential non-compliance/s we will normally give you advice on how to maintain compliance.

To correct non-compliance, we may:

- require you to take specific actions
- issue a notice
- review the conditions of your permit.

Any advice and guidance we give will be without prejudice to any other enforcement response that we consider may be required.

Assessment results and non-compliance categories (used in section 1):

Assessment result	Description
Assessed (A)	Assessed or assessed in part, no evidence of non-compliance found
Action only (X)	Action only relating to the activity assessment
Ongoing (O)	Ongoing non-compliance, not scored

Non-compliance category	Description	Score
C1 Major	Potential to have a major, serious, persistent and/or extensive impact or effect on the environment, people and/or property	60
C2 Significant	Potential to have a significant impact or effect on the environment, people and/or property	31
C3 Minor	Potential to have a minor or minimal impact or effect on the environment, people and/or property	4
C4 No environmental impact	Non-compliance at a regulated site that cannot foreseeably have any impact on the environment, people and/or property	0.1

How we use assessment scores

The number and severity of non-compliances recorded in a year will affect your annual subsistence fee the following year. A non-compliance factor is added to your site's Operator

Performance Risk Appraisal (OPRA) score when we calculate your fee to reflect the additional resource we use to assess permit compliance.

What are suspended scores?

In line with our guidance, we may suspend scores for up to six months to allow time for remedial action to be taken. Suspended scores will be re-instated if the action is not completed.

Full list of Industry and Waste action criteria (used in section 1 and 2):

A: Permitted activities

- A1 Specified by permit

B: Infrastructure

- B1 Infrastructure – Engineering for prevention and control of emissions
- B2 Infrastructure – Closure and decommissioning
- B3 Infrastructure – Site drainage engineering (clean and foul)
- B4 Infrastructure – Containment of stored materials
- B5 Infrastructure – Plant and equipment

C: General management

- C1 General management – Staff competency/training
- C2 General management – Management system and operating procedures
- C3 General management – Materials acceptance
- C4 General management – Storage, handling, labelling and segregation

D: Incident management

- D1 Incident management – Site security
- D2 Incident management – Accidents, emergency and incident planning

E: Emissions

- E1 Emissions – Air
- E2 Emissions – Land and groundwater
- E3 Emissions – Surface water
- E4 Emissions – Sewer
- E5 Emissions – Waste

F: Amenity

- F1 Amenity – Odour
- F2 Amenity – Noise
- F3 Amenity – Dust/fibres/particulates and litter
- F4 Amenity – Pests/birds and scavengers
- F5 Amenity – Deposits on road

G: Monitoring and records, maintenance and reporting

- G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment
- G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events
- G3 Monitoring and records, maintenance and reporting – Maintenance records
- G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales

H: Resources efficiency

- H1 Resource efficiency – Efficient use of raw materials
- H2 Resource efficiency – Energy efficiency

Enforcement response

Any permit condition non-compliance is an offence and we may take legal action against you. Action we take can include prosecution, serving a notice on you and/or suspension or revocation of your permit. See our Enforcement and Sanctions Guidance for further information.

Data protection notice

You should make sure that anyone named in this report knows that the information it contains will be processed by Natural Resources Wales to fulfil its regulatory and monitoring functions and to maintain the relevant public register(s).

We may also use and/or disclose the report in connection with:

- offering or providing you with our literature or 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
- assessing customer service satisfaction and improving our service
- Freedom of Information Act or Environmental Information Regulations requests.

We may also pass it on to our agents or representatives to do these things on our behalf.

Disclosure of information – this report will be available to view on-line

If you think this report contains commercially confidential information that should not be placed on our public register, you must contact your local Natural Resources Wales office within **fifteen working days** of receiving this report, using the contact details in the accompanying email or letter. You must give a full explanation of why it should not be added to our public register, including specifying which information is commercially confidential. We will assess your request and respond to you within 20 working days to let you know if we agree to your request.

What do I do if I disagree with the report or have a complaint?

If you disagree with this compliance assessment report, you should contact the lead officer without delay to discuss your concerns.

If you are unable to resolve the issue with the lead officer or their line manager you should contact our Customer Contact team on 0300 065 3000 (Monday to Friday 08:00 – 18:00), or email enquiries@naturalresourceswales.gov.uk for details of how to raise your dispute further through our Complaints and Commendations procedure.

If you are dissatisfied with our response, you can contact the Public Services Ombudsman for Wales by phone on 0300 7900203 or by email at ask@ombudsman.wales

Welsh Language Standards

We are committed to establishing Natural Resources Wales as a naturally bilingual organisation. We will provide compliance reports in your preferred language.