

Compliance Assessment Report

CAR_NRW0034679

Permit number	BP3135EB	Operator name	Sensient Flavors Ltd & Volac International Ltd
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Site name	Felinfach Effluent Treatment Plant
Site address	Felinfach Industrial Estate, Lampeter, Ceredigion SA48 8AG
Type of assessment	Report/Data Review Site Returns 2020

Date of assessment	31/12/2020	Time in	N/A	Time out	N/A
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Parts of permit assessed	1 Management; 3 Emissions & Monitoring; 4 Information
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NRW Lead officer	Douglas Cowie	Accompanied by	N/A
Report sent to – Name and position	Byron Williams WWTP Manager	Date	05/02/2021

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

Part of permitted activity assessed (use action criteria below)	Assessment result	Permit condition
E3 Emissions – Surface water	Assessed or assessed in part (A)	3.1.1 3.1.2
E5 Emissions – Waste	Assessed or assessed in part (A)	1.4.1
G1 Monitoring and records, maintenance and reporting – Monitoring of emissions and environment	Assessed or assessed in part, no evidence of non-compliance found. Action Only (X)	3.5.1
G2 Monitoring and records, maintenance and reporting – Records of activity, site diary/journal/events	Assessed or assessed in part (A)	3.5.2 4.1.1
G4 Monitoring and records, maintenance and reporting – Reporting and notification to Natural Resources Wales	Assessed or assessed in part, no evidence of non-compliance found. Action Only (X)	4.2.1 4.2.2 4.2.3 4.2.5
H1 Resource efficiency – Efficient use of raw materials	Assessed or assessed in part (A)	1.3.1 1.4.1
H2 Resource efficiency – Energy efficiency	Assessed or assessed in part (A)	1.2.1

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

Total number of non-compliances recorded	Total non-compliance score
0	0

2. What action is required?

Criteria	Action needed	Complete by
G1	Action 34679/01: The Consortium must verify the reported maximum flow result and clarify the method used to measure maximum flow rate in litres/second at emission point W1.	01/03/2021
G1	Action 34679/02: The Consortium should adopt 24-hour flow proportional daily composite sampling for BOD and Colour during 2021, in line with the permit requirements.	01/06/2021
G4	Action 34679/03: Please can the missing sample time and measurement uncertainty information be forwarded to the regulating officer by the date specified. We can accept a revised Form Water1 (2020 return) for this purpose. Please be clear if the results have been reported 'as measured' or if the uncertainty has been removed.	01/03/2021

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 prosecutions and/or suspension or revocation of your permit.

No non-compliances were identified during this assessment.

4. Details of our assessment

Site description

The Felinfach Effluent Treatment Plant (ETP) is located at Felinfach Industrial Estate, Ceredigion and processes and treats effluent from two nearby manufacturing sites: Sensient Flavors Ltd and Volac International Ltd. The ETP is operated jointly by a Consortium of Sensient and Volac and is permitted as an installation under Section 5.4 (The disposal, recovery or a mix of disposal and recovery of non-hazardous waste) of the Environmental Permitting Regulations (EPR).

The permitted installation comprises: a primary effluent treatment unit with balance tank; a dissolved air flotation (DAF) plant; anoxic pre-mixing (selector tank); a conventional activated sludge unit and gravity sludge settlement tanks. The treated effluent is discharged into the coastal waters of Cardigan Bay.

Purpose of visit/assessment

Monitoring returns and reports for the following period(s) have been assessed in this CAR form:

- 2020 annual returns: emissions to water (other than sewer)
- 2020 Q1 – Q4 waste returns
- 2020 annual performance report

The relevant permit conditions are listed under Sections 1.2, 1.3, 1.4, 3.1, 3.5, 4.1 & 4.2 of the Consortium's permit.

Compliance assessment

Table S4.1 of the permit states that the annual reporting period for emissions to water begins on 1 August. Following dialogue with the operator, we have agreed to harmonise this reporting requirement with annual performance reporting which is due by 31 January each year. This approach is consistent with the reporting frequency normally applied within EPR installation permits and it aligns with other similar annual reporting requirements e.g. Pollutant Release & Transfer Register (PRTR).

In accordance with condition 4.2.3, this report formally confirms the change to the reporting period for annual emissions to water which begins on 1 January each year. Table S4.1 will be updated accordingly as part of a future permit variation. The water emissions return should be submitted to NRW by 28 January each year.

Emissions to water (other than sewer) and land

The operator submitted the 2020 annual monitoring return on 25 January 2021 in the agreed reporting format (Form Water1).

The permit requires the operator to monitor the following parameters:

Parameter	Emission Limit Value	Reference Period	Monitoring frequency
Total volume of treated effluent	2750 m ³ /day	24 hours	Continuous
Maximum flow rate	37 l/s	Instantaneous	Continuous
pH range	6 – 9	Instantaneous	Continuous
Chemical Oxygen Demand (COD)	(no limit set)	24-hour flow proportional composite sample	Daily
Biological Oxygen Demand (BOD)	100 mg/l	24-hour flow proportional composite sample	Monthly
Total Suspended Solids	150 mg/l	24-hour flow proportional composite sample	Daily
Colour (Pt-Co scale)	(no limit set)	24-hour flow proportional composite sample	Monthly

We have assessed the operator's annual submission and note that the results recorded at W1 in 2020 are within the permitted limits.

Specific observations and comments:

1. For pH, it is assumed that the reported result has been expressed as the 'minimum – maximum' measured values in 2020. The reported figures are within the permitted (range) limit.
2. The reported result for maximum flow rate seems quite low (0.031 litres/second against an emission limit of 37 litres/second) and is recorded as 'daily' on the return.

The permit requires continuous monitoring for this parameter in accordance with MCERTS flow measurement standards.

Action 34679/01: The Consortium must verify the reported maximum flow result and clarify the method used to measure maximum flow rate in litres/second at emission point W1.

3. The reported result for COD is 534mg/l. It is recognised that occasional and temporary ETP instability can increase the concentration of pollutants within the treated effluent. This is not a compliance issue at present; however, a new emission limit for COD is likely to be imposed following the review of the installation permit against the revised Best Available Techniques Conclusions (BATc) for Waste Treatment activities.
4. The reported results for BOD and Colour appear to be derived from spot samples. The permit requires 24-hour flow proportional daily composite samples for these parameters, obtained on a monthly basis.

Action 34679/02: The Consortium should adopt 24-hour flow proportional daily composite sampling for BOD and Colour during 2021, in line with the permit requirements.

5. Some information is missing from Form Water1:
 - Sample time (for all discontinuous measurements)
 - Measurement uncertainty for Flow rate, BOD and total suspended solids

Action 34679/03: Please can the missing sample time and measurement uncertainty information be forwarded to the regulating officer by the date specified. We can accept a revised Form Water1 (2020 return) for this purpose. **Please be clear if the results have been reported 'as measured' or if the uncertainty has been removed.**

Monitoring results should be reported in the form $R \pm U$, where R is the result and U is the uncertainty associated with the result at the 95% confidence interval. Form Water1 provides separate columns for this purpose. There is further guidance regarding measurement uncertainty within section 6.7 of the following publication:

[Technical Guidance Note M18 \(Monitoring\) Monitoring of discharges to water and sewer](#)

For automatic sampling equipment, the following publication is also relevant:

[MCERTS: performance standards and test procedures for continuous water monitoring equipment - part 1 automatic sampling equipment - GOV.UK \(www.gov.uk\)](#)

Automatic sampling equipment used for the purpose of complying with environmental permitting requirements should be certified to MCERTS standard. Manufacturers of such equipment should supply information which can be used to calculate uncertainty values.

The operator has completed the monitoring previously required by Improvement Condition 2 (IC2) which included copper, lead, cadmium, mercury, phosphate, ammonia and nitrogen. The results will inform the ongoing review of the installation permit which has been triggered by the publication of revised Best Available Techniques Conclusions (BATc) for Waste Treatment activities.

New monitoring requirements will be introduced at the conclusion of the permit review, considering the relevant BATc and any local environmental considerations. Our previous report **CAR_NRW0035902** discusses this topic in more detail.

Waste emissions

Quarterly waste returns have been submitted to NRW for all four quarters in 2020 using the specified reporting form (E-Waste and MF Return Form – NRW version 7.5). These returns are routinely emailed to NRW's Waste Returns Team and the regulating officer is copied in.

Waste codes consistent with Table S2.2 of the permit have been used within the 'Waste Received' portion of the returns, reflecting the industrial processes which direct effluent to the permitted installation. Figures should always be reported in tonnes.

The returns also include a record of waste(s) removed from the installation for recovery elsewhere (recovery code R10: land treatment resulting in benefit to agriculture or ecological improvement).

Annual Performance

The operator submitted the 2020 annual performance return on 25 January 2021 in the agreed reporting format (Form Performance1).

Effluent Treatment Plant sludge collected for off-site recovery (m³/yr) is now recorded within the annual performance report. For future reports the operator should confirm the weight conversion factor used to derive equivalent tonnages figures for the sludge. Conversion from m³ to tonnes is necessary for quarterly waste reporting (see above).

The following important projects are relevant to the information within the annual return:

1. A new wastewater recovery plant has reduced the overall discharge volume at W1 by 39%, despite an increase in effluent throughput associated with increased production at Volac and Sensient. The recovered water reduces the overall water demand and the environmental footprint of these installations.
2. An ETP sludge dewatering project has progressed during 2019/20 and should result in a significant reduction in off-site waste (sludge) transfers from the installation.

The Consortium is also looking at options to divert rainwater from clean yards and building surfaces away from the primary effluent system, further reducing effluent throughput.

The annual performance report includes a commentary/interpretative review of the results of the monitoring and assessment carried out in accordance with the permit. Chart data has been included to support the conclusions within the report and identify data trends/patterns. Key events and developments during 2020 are discussed within the report.

The submitted information is also relevant to the requirements of permit conditions 1.2.1 (energy efficiency), 1.3.1 (raw materials efficiency) and 1.4.1 (wastes produced by the activities). Compliance with these permit conditions has only been partially assessed within this report. The wastewater recovery project is a particularly strong example of taking

appropriate measures to reduce environmental impact and use water efficiently. This will also be recognised when the permit is reviewed against the relevant BATc.

Summary and actions required

No permit non-compliances have been identified following our review of the monitoring submissions identified within this report.

Actions are identified for the operator's attention (see Section 2). A further assessment will be carried out once these actions have been completed and NRW has received the requested information.

Note: Novel Coronavirus (COVID-19)

At the time of this permit compliance assessment, an escalation in the threat posed by the novel coronavirus (COVID-19) pandemic has resulted in the imposition of several stringent measures across the United Kingdom.

The statutory measures to control and reduce the spread and impact of COVID-19 are having an impact on the site operator's activities and the regulator's duties. At the time of writing, all routine regulatory compliance visits have been suspended by NRW due to ongoing risks of COVID-19 infection and transmission. NRW currently employs a risk-based approach when deciding to deploy its resources.

Natural Resources Wales / Our response to the coronavirus pandemic

During this pandemic there will be an expectation that site operators continue to comply with their environmental permit conditions. Where the operator has identified an issue that is likely to result in permit non-compliance or increased environmental risk, the operator is expected to raise this with the regulator at the earliest opportunity.

END OF ASSESSMENT

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 in the aspects assessed.
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.