

Compliance Assessment Report CAR_NRW0043222

Permit being assessed: BU2349IL.
For: Alyn Works, **held by:** Synthite Limited
At: Denbigh Road, Mold, Flintshire, CH7 1BT.

Type of assessment: Report/Data Review,
Reason: Routine.
On: 31/12/2023.
Parts of permit assessed: See Below.

NRW Lead Officer: Philip Harper.
Report sent to: Jayme Mountford, Technical Manager, on 01/02/2024.

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

Part of permitted activity assessed (compliance criteria)	Assessment result	Permit condition
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	3.1.2
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	3.1.2
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	3.1.2
IR3A - Emissions and monitoring - Emissions to water, air or land	C3 Minor	3.1.2
IR4C - Information - Notification	C3 Minor	4.3.5
IR1A - Management - General management	C3 Minor	1.1.1

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

Total non-compliances recorded	Total non-compliance score
6	24

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
IR3A	See actions in main text	31/03/2024

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IR3A	See actions in main text	31/03/2024
IR3A	See actions in main text	31/03/2024
IR3A	See actions in main text	31/03/2024
IR4C	See actions in main text	09/02/2024
IR1A	See actions in main text	Already completed

Compliance 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.

At this time, we are issuing you with a warning for the non-compliance recorded above. Warnings may influence future enforcement response for continued or further non-compliance.

This statement does not stop us from taking additional enforcement action if further relevant information comes to light or offences continue.

4. Details of our assessment

Quarterly Monitoring – Q3 (July – September), due 30th September 2023

Quarter 3 monitoring data for Synthite Limited, Mold Chemicals (Alyn Works), Denbigh Road, Mold, Flintshire, CH7 1BF was submitted to Natural Resources Wales in accordance with permit condition 4.2.3.

Emissions to Water

Monitoring for water emissions has been undertaken in accordance with the environmental permit, the following observations have been made.

Formaldehyde

A maximum formaldehyde value of 0.25 mg/L has been reported against the permitted emission limit of 0.25 mg/L. Whilst within the permitted limits, this value is at the permitted limit.

Action 1: Perform an investigation into formaldehyde levels at W1 and implement findings to reduce levels.

Emissions to Air

Emission Point A11

Formaldehyde

Monitoring for formaldehyde at A11 was undertaken on the 13th July 2023 with a result of 19.9 mg/m³. This

value is in breach of the permitted formaldehyde limit at A11 which is 5 mg/m³.

A category 3 score has been applied against permit condition 3.1.2 ((IR3A) Emissions to water, air or land).

A schedule 5 notification was received on the 28th July 2023 on detection of the breach. The operator stated that further investigation would be required to identify the cause of the breach.

Action 2: Report findings of the investigation to NRW by the **31th March 2024**.

Emission Point A15

Formaldehyde

Monitoring for formaldehyde at A15 was undertaken on the 13th July 2023 with a result of 8.6 mg/m³. This value is in breach of the permitted formaldehyde limit at A15 which is 5 mg/m³.

A category 3 score has been applied against permit condition 3.1.2 ((IR3A) Emissions to water, air or land).

A schedule 5 notification was received on the 22nd August 2023 on detection of the breach.

Action 3: Investigate the cause of the breach and complete part B of the schedule 5 notification with submission by the **31st March January 2024**.

Emission Point A16

Formaldehyde

Monitoring for formaldehyde at A16 (exit gas boiler) was undertaken on the 3rd August 2023 with a results of 191 mg/m³. This is a breach against the permitted formaldehyde limit at A16 which is 5 mg/m³.

A category 3 score has been applied against permit condition 3.1.2 ((IR3A) Emissions to water, air or land).

Total volatile organic compound (TVOC)

Monitoring for TVOC at A16 was undertaken on the 3rd August 2023. A result of 179 mg/m³ was provided. This is a breach against the permitted limit of 40 mg/m³.

A category 3 score has been applied against permit condition 3.1.2 ((IR3A) Emissions to water, air or land).

A schedule 5 notification which was received from the operator provided the following information regarding the breaches; "The effect of reducing the air intake into the tail gas – air mixture was investigated. The air intake into the boiler was reduced to, in theory, increase the hydrogen content from the tail gas in the tail gas – air mixture, to encourage a higher combustion temperature of the tail gas. The operating conditions reverted back to normal operating conditions after the process optimisation investigation, that yielded an unfavourable effect on the formaldehyde and TVOC emissions."

The schedule 5 notification shows that a trial was conducted during the monitoring campaign at A16 in an effort to bring the plant into compliance during normal operation.

Elevated emissions values for formaldehyde and TVOC at A16 were observed for 90 minutes, during which

time NRW did not received any complaints regarding air quality from the site.

Air emissions at A16 are routinely over the permitted emission limit and whilst NRW supports the operator in conducting trials with a view to bring the site into compliance, the operator should notify NRW that a trial will take place, what parameters are going to be investigated and when the trial will take place to ensure that environmentally protective controls have been implemented.

This is further reinforced by permit condition 4.3.5 which states the following;

“Where the operator proposes to make a change in the nature or functioning, or an extension of the activities, which may have consequences for the environment and the change is not otherwise the subject of an application for approval under the Regulations or this permit:

(a) Natural Resources Wales shall be notified at least 14 days before making the change;

and

(b) the notification shall contain a description of the proposed change in operation”

A category 3 score has been applied against permit condition 4.3.5 ((IR4C) Notification).

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Failure to inform Natural Resources Wales that trial was to take place during monitoring indicates that the environmental management system is not robust enough in detailing how trials are to be undertaken at site.

Action 4: Natural Resources Wales request that sections of the environmental system which provide instruction for the following activities are submitted to Natural Resources Wales for review by the 9th February 2024;

- Procedures concerning change management for site operations.
- Procedures concerning the notification to Natural Resources Wales.
- Procedures concerning the undertaking of trials.

Action 5: Submit outstanding part B notifications by the 19th January 2024.

Action 6: Inform Natural Resources Wales of future abatement trials prior to commencement.

Emission Point A17

Oxides of nitrogen (NO and NO₂ expressed as NO₂).

Monitoring for NO_x at A17 was undertaken on the 6th July 2023. A result of 165 mg/m³ was provided. This result is in breach of the permitted limit for NO_x at A17 which is 150 mg/m³.

A category 3 score has been applied against permit condition 3.1.2 ((IR3A) Emissions to water, air or land).

A schedule 5 notification, corresponding to the formaldehyde and TVOC emission breach was received on the 17th of July 2023. The notification states;

“Saacke is due on site to service boiler 2 the first week in August 2023. For Atesta to test the emissions from

boiler 2, it was started manually, because the natural gas boilers operate when there is no tail gas from the Silver process during Silver plant shut downs."

Action 7: Report routine monitoring data for both operational gas fired boilers following service by the **31st March 2023**.

Management System

The permit breaches highlighted within this CAR form can be attributed to the failure to operate the site in accordance with a suitable management system for example;

- Continued permit breaches in relation to emissions limit exceedances.
- Failure to notify Natural Resources Wales that operating conditions were to be changed as part of a planned abatement trial.
- Failure to ensure that the environmental management system is adequate to prevent permit breaches.

The breaches highlighted demonstrate a lack of awareness of the requirements of the sites environmental permit. This increases the potential risk of significant environmental harm being caused by the site.

A category 3 score has been applied against permit condition 1.1.1a under C2 Management system and operating procedures.

Kind Regards

Phil Harper

Senior Industry and Waste Regulation Officer NE

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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.

If your assessment result in Section 1 is suspended, what does this mean?

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 compliance criteria (used in section 1 and 2):

1. Management

- IR1A – General management
- IR1B – Finance (only applicable to Landfill)
- IR1C – Energy efficiency
- IR1D - Efficient use of raw materials
- IR1E - Avoidance, recovery and disposal of wastes produced by the activities
- IR1F - Multiple operator installations

2. Operations

- IR2A – Permitted activities
- IR2B – The site
- IR2C – Operating techniques
- IR2D – Technical requirements
- IR2E – Improvement programme
- IR2F – Pre-operational conditions
- IR2G – Landfill engineering (only applicable to Landfill)
- IR2H – Waste acceptance (only applicable to Landfill)
- IR2I – Leachate levels (only applicable to Landfill)
- IR2J – Closure and aftercare (only applicable to Landfill)
- IR2K – Landfill gas management (only applicable to Landfill)

3. Emission and Monitoring

- IR3A – Emissions to water, air or land
- IR3B – Emissions of substances not controlled by emission limits
- IR3C – Odour
- IR3D – Noise and vibration
- IR3E – Monitoring
- IR3F – Pests
- IR3G – Air quality management plans
- IR3H – Monitoring for the purposes of the Industrial Emissions Directive (this heading includes Large Combustion Plants)
- IR3I – Fire

4. Information

- IR4A – Records
- IR4B – Reporting
- IR4C – Notification

Enforcement response

Any non-compliance with a permit condition 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 twenty 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 to 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.